A STUDY OF TURNOVER INTENTION AND EXIT CHOICE AMONG THE REGISTERED NURSES IN THE PRIVATE HOSPITALS IN PENINSULAR MALAYSIA

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Abstract

The study aimed to investigate the Peninsular Malaysian private hospital nurses' turnover intention and exit choice. Furthermore, the study aimed to determine the nurses' perceptions towards their nursing practice environment, professional commitment, and organisational commitment. Subsequently, the relationships among the variables were examined based on a conceptual framework constructed for the study. The study was a quantitative, cross-sectional inferential survey study. The participants of the study were private hospital registered nurses. The sampling of the study consisted of two phases: hospital sample was selected through simple random sampling while; nurse sample was selected through convenience sampling. A total of 820 participants (response rate 64%) from four private hospitals took part in the study. The statistical analyses consisted of t-test, hierarchical multiple regression, and partial correlation. In general, the analysis revealed moderate intent of turnover. Inter-organisational turnover intention was found to be the highest, while professional turnover intention was the lowest. As for exit choice, nursing related exit choices such as advancing in nursing education, practicing nursing in another country and organisation were the most preferred choices. In addition, the practice environment of the private hospitals was perceived as favourable environment in which the environment supported professional nursing practice. Furthermore, professional and organisational commitments were found to be at moderate level. Professional commitment was higher than organisational commitment. Moreover, the results testified that nursing practice environment, exit choice, professional, and organisational commitments were significant predictors for the overall turnover intention after controlling the socio-demographic variables. Nonetheless, multilevel analysis of the different forms of turnover intention revealed distinctive sets of predictors for the different forms of turnover intention. The analysis for the relationship of nurses'

commitment and practice environment on turnover intention found that organisational commitment and practice environment were significant predictors for organisational turnover intention. The study revealed that professional commitment did not influenced organisational turnover intention. Country and professional turnover intention was not influenced by practice environment. Conversely, country turnover intention was exclusively influenced by organisational commitment while, professional commitment influenced professional turnover intention. On the other hand, the analysis for the relationship of nurses' exit choice and practice environment on turnover intention revealed that nurses' exit choice (regardless nursing or non-nursing related exit choice) and nursing practice environment were significant predictors for organisational and country turnover intention. Furthermore, non-nursing related exit choice was the predictor for professional turnover intention. Nevertheless, commitment and exit choice did not demonstrate mediating effect in the relationship between nursing practice environment and turnover intention. In conclusion, the research findings clearly indicated the presence of turnover intention among the Peninsular Malaysian private hospital nurses. Nursing practice environment, commitment and exit choices were significant predictors of turnover intention. Henceforth, relevant and appropriate interventions towards improving practice environment and commitment were strongly recommended in order to reduce turnover intention. Furthermore, findings of exit choices were crucial in providing the direction towards nursing recruitment and retention strategies.

KAJIAN TERHADAP NIAT UNTUK TUKAR GANTI KERJA DAN PILIHAN KERJA DALAM KALANGAN JURURAWAT HOSPITAL SWASTA DI SEMENANJUNG MALAYSIA

Abstrak

Kajian ini bertujuan untuk menyelidik niat untuk tukar ganti kerja dan pilihan kerja dalam kalangan jururawat hospital swasta di Semenanjung Malaysia. Kajian ini juga bertujuan untuk meninjau persepsi jururawat terhadap keadaan tempat kerja, komitmen profesional, dan komitmen organisasi. Hubungan antara pembolehubah-pembolehubah kajian turut dikaji berdasarkan rangka konseptual kajian. Kaedah kuantitatif yang merangkumi kajian kaji selidik inferensi keratan rentas digunakan. Peserta-peserta kajian adalah terdiri daripada jururawat berdaftar hospital swasta. Persampelan kajian terdiri daripada dua fasa: persampelan hospital yang dipilih secara persampelan rawak; dan persampelan jururawat yang dipilih secara persampelan mudah. Seramai 820 peserta (kadar respon 64%) daripada empat hospital swasta memberi respon terhadap soal selidik. Statistik inferensi seperti ujian-t, regresi pelbagai hierarki, dan korelasi separa digunakan untuk analisa kajian. Hasil kajian menunjukkan bahawa niat untuk tukar ganti kerja adalah sederhana. Niat untuk tukar ganti organisasi merupakan niat yang paling tinggi, manakala niat untuk tukar ganti profesion merupakan niat yang paling rendah. Pilihan kerja yang berkaitan dengan kejururawatan seperti melanjutkan pendidikan dalam bidang kejururawatan, bekerja sebagai jururawat di lain organisasi dan negara merupakan pilihan kerja yang paling digemari oleh jururawat. Di samping itu, jururawat didapati mempunyai persepsi baik terhadap keadaan tempat kerja dimana keadaan tempat kerja didapati menyokong amalan kejururawatan profesional. Tambahan pula, tahap komitmen jururawat adalah sederhana di mana tahap komitmen profesional adalah lebih tinggi daripada komitmen organisasi. Kajian terhadap hubungan antara pembolehubah-

pembolehubah pula, didapati bahawa keadaan tempat kerja, komitmen, dan pilihan kerja adalah merupakan peramal bagi niat untuk tukar ganti kerja selepas pembolehubah sosio-demografi dikawal. Namun demikian, analisa tambahan mendapati perbezaan di antara pengaruh pembolehubah-pembolehubah dengan jenis niat untuk tukar ganti kerja. Analisa terhadap hubungan antara komitmen, keadaan tempat kerja, dan niat untuk tukar ganti kerja menunjukkan niat untuk tukar ganti organisasi dipengaruhi oleh komitmen organisasi dan keadaan tempat kerja. Komitmen profesional tidak mempengaruhi niat untuk tukar ganti organisasi. Niat untuk tukar ganti negara dan profesion tidak dipengaruhi oleh keadaan tempat kerja. Namun, niat untuk tukar ganti negara dipengaruhi oleh komitmen organisasi sementara, komitmen profesional mempengaruhi niat untuk tukar ganti profesion. Walau bagaimanapun, analisa terhadap hubungan antara pilihan kerja jururawat, keadaan tempat kerja, dan niat untuk tukar ganti kerja menunjukkan niat untuk tukar ganti organisasi dipengaruhi oleh pilihan kerja jururawat dan keadaan tempat kerja. Pilihan kerja yang tidak berkaitan dengan kejururawatan mempengaruhi niat untuk tukar ganti profesion. Walau bagaimanapun, dapatan kajian menunjukkan bahawa komitmen dan pilihan kerja bukan pengantara dalam hubungan antara keadaan tempat kerja dengan niat untuk tukar ganti kerja. Kesimpulannya, dapatan kajian ini jelas menunjukkan kehadiran niat untuk tukar ganti kerja dalam kalangan jururawat hospital swasta. Dapatan kajian mengesahkan bahawa keadaan tempat kerja, komitmen profesional, komitmen organisasi, dan pilihan kerja adalah peramal bagi niat untuk tukar ganti kerja. Seterusnya, strategi yang relevan dan sesuai untuk meningkatkan keadaan tempat kerja dan komitmen adalah disyorkan bagi mengurangkan niat untuk tukar ganti kerja dalam kalangan jururawat. Tambahan pula, pilihan kerja merupakan pentunjuk yang penting dalam perancangan strategi untuk pengambilan dan pengekalan tenaga kerja jururawat.

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AOC	:	Affective Organisational Commitment
APC	:	Affective Professional Commitment
APHM	:	Association of Private Hospitals of Malaysia
ATS	:	Anticipated Turnover Scale
COC	:	Continuance Organisational Commitment
Country TI	:	Country Turnover Intention
CPC	:	Continuance Professional Commitment
DV	:	Dependent Variable
EC	:	Exit Choice
ECQ	:	Exit Choice Questionnaire
EducS.	:	Educational Sponsorship
EFA	:	Exploratory Factor Analysis
Inter-organisational TI	:	Inter-organisational Turnover Intention
Intra-organisational TI	:	Intra-organisational Turnover Intention
IV	:	Independent Variable
KMO	:	Kaiser-Meyer-Olkin
MOOC	:	Massive Open Online Course
NOC	:	Normative Organisational Commitment
NPC	:	Normative Professional Commitment
NPE	:	Nursing Practice Environment
Nursing-EC	:	Nursing Related Exit Choice
Non-nursing-EC	:	Non-nursing Related Exit Choice
NWI-R	:	Nursing Work Index - Revised
OC	:	Organisational Commitment
OCS	:	Organisational Commitment Scale
OCQ	:	Organisational Commitment Questionnaire
PAF	:	Principal Axis Factoring
PC	:	Professional Commitment
PCA	:	Principal Component Analysis
PCS	:	Professional Commitment Scale

PES-NWI	:	Practice Environment Scale of the Nursing Work Index
P-P	:	Probability-probability
Professional TI	:	Professional Turnover Intention
Q-Q	:	Quantile-quantile
RN	:	Registered Nurse
S-W	:	Shapiro-Wilk
TI	:	Turnover Intention
TIQ	:	Turnover Intention Questionnaire
WHO	:	World Health Organisation

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CHAPTER 1

INTRODUCTION

Study Background

Nurses are the largest health service providers in any healthcare settings particularly in the hospital settings. Nevertheless, hospitals across many countries in the world are constantly experiencing shortage of nurses (Griffiths et al., 2016). Hospital nursing shortage has been associated with life-threatening outcomes such as increased in death rates (Aiken et al., 2014; Rafferty et al., 2007) and health care-associated infections such as urinary track and operating wound infections (Cimiotti, Aiken, Sloane, & Wu, 2012). In addition, Buerhaus, Donelan, Ulrich, and Norman (2005) drew attention to the effect of shortages of nurses towards the quality of hospital care. The inadequate of nurses' situation had resulted interruption and delayed in hospital processes such as answering/ attending to patient's needs (i.e., call bells), performing interventions (i.e., administration of medications, blood/ radiology tests) and discharging patients (Buerhaus et al., 2005). Additionally, the study revealed that nurses faced challenges in early identifications of complications and collaborative practice among healthcare practitioners as a result of nursing shortage (Buerhaus et al., 2005).

In the perspective of nurses' outcomes, recent studies highlighted that shortage of nurses had caused nurses to commit medication errors (Frith, Anderson, Tseng, & Fong, 2012; Patrician et al., 2011) and leave behind nursing care (such as constructing/ updating nursing care plan, providing patients with psychosocial care and educating patients/ caregivers) undone during their shift (Ausserhofer et al., 2014). Past studies also revealed that inadequate of nurse staffing may cause nurses to experience job

dissatisfaction and burnout (Rafferty et al., 2007). In a nutshell, hospital nursing shortage is a serious phenomenon and detrimental to both, patients as well as nurses.

In general, there are three indicators to estimate the status of nursing shortage (World Health Organisation, WHO, 2006). The first indicator is related to the ratio of nurses to doctors. The recommended ratio of nurses to doctors should be ranging between four and eight nurses per doctor (WHO, 2006). Nonetheless, based on the Ministry of Health Malaysia (2014) statistics, the ratio of nurses to doctors ranged between one and two per doctor. Thus, Malaysia failed to attain the recommended ratio of nurses to doctors.

On the other hand, the second indicator of nursing shortage is related to the critical shortage threshold of nurses per 10 000 populations. The minimum nurse per 10 000 populations threshold is recommended at 22.8 (WHO, 2006). In terms of the overall global perspective, the nurses per 10 000 populations threshold suggested no critical shortage, with a threshold of 29.0 per 10 000 populations (WHO, 2013). However, the nurses per 10 000 populations threshold for region of Africa, Eastern Mediterranean, and Western Pacific revealed critical shortages with threshold of 9.1, 15.9, and 19.5 per 10 000 populations respectively (WHO, 2013). Nevertheless, the South-East Asia region which encompassed Malaysia also revealed extremely critical shortage status with the nurses per 10 000 populations threshold stood at 9.9 per 10 000 populations (WHO, 2013).

In addition, the third indicator of nursing shortage is related to the nurse to population ratio. The WHO (2006) recommended that in order for a healthcare system to be able to operate efficiently and effectively, the acceptable nurse to population ratio is at 1:200. Nevertheless, based on the Ministry of Health Malaysia (2014) statistics, the Malaysian nurse to population ratio was at 1:333. Thus, Malaysia is still

under achieving the recommended nurse to population ratio. Consequently, the Ministry of Health Malaysia has established a target to attain approximately of 174, 000 registered nurses by the year 2020 in order to achieve the recommended nurse to population ratio of 1:200 (Choong, Lau, Kuek, & Lee, 2012).

Unfortunately, it is easier to be said than done. Nursing shortage is a global and continuous phenomenon. Numerous factors have been influencing the detrimental phenomenon and nurses' turnover has been identified as one of the critical determinants of nursing shortage (Hayes et al., 2012). Nurse turnover is seen as an endless essential phenomenon which contributed momentously to the worsening situation of nursing shortage of many countries (Hayes et al., 2012). Nurses all over the world were seen to quit and leave their units, hospitals, country and profession (Flinkman, Leino-Kilpi, & Salanterä, 2010; Gurková et al., 2013; Simon, Müller, & Hasselhorn, 2010). Majority of the nurses who had left their hospital or country would find themselves practicing nursing in another healthcare organisations and/ or country (Gurková et al., 2013). Nonetheless, nurses who chose to leave nursing profession were found to have their career direction been shifted (Gök & Kocaman, 2011). Careers outside nursing field such as psychology, law, education, and physiotherapy were the common preferred careers after leaving nursing profession (Gök & Kocaman, 2011).

In Malaysia, nurse turnover is viewed as an on-going phenomenon. The turnover rate was also found to be exceptionally high with approximately more than 50% within five years' duration (Choong et al., 2012). Moreover, the turnover rate was found to be intensified immensely between the year 2005 and 2010 which ranged from 400 to 1049 nurses (Choong et al., 2012). Additionally, approximately 25 000 of Malaysian nurses were found to be working abroad particularly in the Middle East

countries (Lee, Chitpakdee, & Chontawan, 2011). Henceforth, the literature evidences clearly highlighted the critical consequences of nursing shortage and its association with nurse turnover. Thus, investigations pertaining to nurses' turnover and its influential factors were timely and crucial in order to further manage the shortage situation and project future supply of nurses. Henceforward, the study aimed to examine nurses' turnover in the perspectives of turnover intention and its related predictors. The subsequent section of the chapter outlined the Malaysian healthcare system and nursing profession.

Malaysian healthcare system. In Malaysia, the health care system is generally divided into two categories: public and private sectors. Public sector is the largest health service provider which is predominantly governed by the Malaysian government. Furthermore, it was estimated that there were a total of 89, 167 registered nurses registered with the Nursing Board of Malaysia (Ministry of Health Malaysia, 2014). The report further stated that approximately 56, 503 of the country's registered nurses were working in the public sector such as in the government hospitals, medical institutions (i.e. leprosy, respiratory and psychiatric institutions), community/ health clinics, and "1Malaysia" clinics (Ministry of Health Malaysia, 2014). Thus, it is evident that the Ministry of Health remained as the main healthcare provider for the country.

Furthermore, a portion of these nurses are working at the public teaching university hospitals which are under the governance of the government. In general, there are three public teaching university hospitals in the country. These hospitals are attached with the medical faculty of the respective universities. Additionally, these teaching hospitals are under the purview of the Ministry of Education. These hospitals are consisted of the University of Malaya Medical Centre, *Pusat Perubatan Universiti*

Kebangsaan Malaysia, and *Hospital Universiti Sains Malaysia*. The teaching hospitals are attached with the medicine faculty of University of Malaya, *Universiti Kebangsaan Malaysia*, and *Universiti Sains Malaysia* respectively. The main functions of the public teaching university hospitals are to provide clinical education and training to the healthcare providers such as doctors and nurses besides, delivering medical services to the community. Thus, being part of a national health system, the public university hospitals play significant role in producing and training adequate as well as qualified healthcare professionals, including nursing professionals to meet the demand in providing quality clinical service. Nurses working in the public teaching hospitals have a clearer career pathway due to the support from the university. Post basic qualifications and advanced academic nursing programmes are readily available and accessible to eligible nurses.

On the other hand, the private healthcare sector particularly the private hospitals have also becoming key players in providing healthcare services. Private hospitals are expanding rapidly especially in the urban regions. This development is evident through the distributions of private hospitals across the country. Chain hospitals such as *Pantai*, Gleneagles, Columbia Asia, and KPJ Healthcare are expanding drastically across the country. The states of *Wilayah Persekutuan Kuala Lumpur* and *Selangor* (central region of Peninsular Malaysia) are found to have the highest number of private hospital while, *Perlis* (north region) and *Terengganu* (east region) do not have any private hospitals (Association of Private Hospitals of Malaysia, APHM, 2014; 2016). The urbanization effect of the *Wilayah Persekutuan Kuala Lumpur* and *Selangor* had resulted drastic increased in the population density of the states. Thus, these states have becoming the target locations for the private healthcare organisations. A trend analysis revealed the number of private hospitals

was found to be escalating from 116 in year 2013 to 137 in year 2016 (APHM, 2014; 2016). Consequently, the rapid expansion of private hospitals has placed higher demand for healthcare professionals' particularly nurses. Nevertheless, the statistics from the Ministry of Health, Malaysia (2014) revealed merely 26, 653 registered nurses were found to be working in the private sector. The nursing turnover in the private hospitals is rapid and dynamic due to the increased competition among the private hospitals and extrinsic factors from abroad such as Singapore, Australia, Saudi Arabia, Brunei, Dubai, and Bahrain. In brief, more registered nurses are needed in order to meet the high demand and continuous growing of private healthcare organisations.

Nursing profession in Malaysia. Similarly, with other parts of the world, nurses are recognized as the pillar of any healthcare organisations particularly the hospital settings. Nurses play significant role in ensuring smooth operation of the entire hospital be it out-patient or in-patient set-up. In Malaysia, majority of the nurses are female gendered in view of the historical and cultural influence (Barnett, Namasivayam, & Narudin, 2010; Birks, Chapman, & Francis, 2009). Malaysian hospital nurse workforce is generally consisted of skill mix which ranged from registered nurses, assistant nurses (i.e., nurses who have obtained an assistant nurse certificate qualification and their main role is to assist the registered nurses) and nurses' aides (i.e., nurses who do not have any formal nursing training but are trained on-site to assist the assistant nurses and registered nurses).

The target population of the study was private hospital registered nurses. Thus, the focus of the subsequent discussion would be on Malaysian hospital registered nurses. In Malaysia, majority of the registered nurses are nurses who have undergone a three-year diploma level of qualification in the nursing colleges which either operate

by the Ministry of Health, Malaysia or private nursing colleges. This cohort of registered nurses is predominantly serving their educational sponsorship contract bond which range between five and eight years. In view of the economical factor, majority of the registered nurses opted for the educational sponsorship when pursuing the programme. Henceforth, upon completion of the programme, they are required to serve their sponsorship bond. On the other hand, a minority group of registered nurses are educated through the four-year degree level nursing programme. The four-year nursing degree programme is known as the "pre-registration" nursing programme which simply meant that the students are not registered as qualified nurses when they are pursuing the degree. The entry requirement for the nursing diploma qualification programme is at the secondary school graduates level (those who have completed *Sijil Pelajaran Malaysia* or equivalent) while, degree qualification programme is at the high school graduates (those who have completed *Sijil Tinggi Pelajaran Malaysia* or equivalent) (Nursing Board Malaysia, 2010). Students who have completed these programmes are required to pass the Nursing Board of Malaysia licensure examination before being accepted to practice as registered nurses.

In the hospital setting, registered nurses contribute significantly in the areas of assessing patient needs, monitoring illness progress, developing/ updating patient care plans, providing direct patient care, and administering medications/ treatments. Commonly, graduates from these programmes will be offered staff nurse position. Subsequently, registered nurses are encouraged to pursue at least a specialty certification programme (such as Post Basic Certificate/ Advanced Diploma in midwifery, critical care, paediatric, and oncology) after gaining a minimum of one to two years of nursing experience. These programmes are commonly offered by the Ministry of Health, public universities, and few private higher educational institutions

(such as colleges, university colleges, and universities). In addition, diploma holder registered nurses are encouraged to pursue post-registration nursing degree programmes to further upgrade their qualifications. In this context, "post-registration" is referring to academic nursing programmes which are tailored for diploma holder registered nurses. Nurses who have completed the post-registration nursing degree programme are frequently promoted to the managerial or supervisory positions such as ward sisters, ward managers, clinical instructors or nurse educators.

Nonetheless, the former Ministry of Health, Director of Nursing, Dato' Hajah Fathilah Hj. Abdul Wahab (2011) had pointed out that Malaysian nursing workforce was still very much in a state of "shortage" particularly among the specialty and degree qualification registered nurses. As a whole, the current nursing workforce was dominated by diploma holder registered nurses and it was estimated that merely 38% of the total registered nurses having specialization qualifications, whereby 33% were from the public sector, and only 5% were from the private sector (Fathilah Hj. Abdul Wahab, 2011). This statement was alarming and warranted immediate action in encouraging and pushing registered nurses to upgrade their qualifications. Past studies have revealed the importance of nursing education on quality patient outcomes (Aiken et al., 2014). Hospital death rate was found to have significant reduction when patients were cared by nurses with bachelor's degree qualification (Aiken et al., 2014). Thus, nursing specialization and higher nursing academic qualifications were crucial in sustaining the nursing standards and providing competent nursing care. Henceforth, it is vital for the private healthcare organisations to incorporate this agenda in their strategic planning of the organisation for the benefit outcomes of the patients, nurses, and entire organisation. Relevant and appropriate strategies to support potential registered nurses in pursuing higher qualifications are highly commendable.

As the nursing profession is gaining much recognition within Malaysia and its region, master in nursing degree and PhD/doctorate in nursing degree programmes are also becoming available for registered nurses in some of the public as well as private universities in Malaysia. Graduates from the nursing postgraduate programmes are commonly being promoted to a higher nursing management position such as director of nursing. In terms of clinical setting, the registered nurses can take up the clinical nurse specialist role or become nurse researchers while. In the academia discipline, the registered nurses can take up the nursing academician role.

From the in-depth description pertaining to Malaysia nursing profession, it can be concluded that the nursing educational and career pathways have been critically articulated. Both, the public as well as private healthcare sectors can easily adopt these charted pathways in their nursing workforce management and planning. Furthermore, nurses can utilise the nursing education and career pathways articulation in planning for their nursing career. However, the phenomenon is changing whereby registered nurses of the current era are no longer following this trend of nursing education and career pathway articulations.

The provision of governmental educational loan/ financing scheme such as *Perbadanan Tabung Pendidikan Tinggi National* and flexibility in withdrawing Employees' Provident Fund for the purpose of financing nursing education has allowed nursing graduates to have the freedom in selecting their employer and career pathway because they are no longer obligated to serve the sponsorship bond. Henceforth, it is evident for these registered nurses, they have the freedom to pursue their nursing career according to their own preference which may include working in another country such as Saudi Arabia, Singapore and Australia believing that they would have a better nursing career prospect in those countries compared in Malaysia

(Barnett et al., 2010). "Brain drain" phenomenon is common among Malaysian registered nurses and it was estimated that about 20% of the Malaysian registered nurses were working out of the country especially in countries like Saudi Arabia and Australia (Ling, 2012). In general, countries like Singapore, United Kingdom, Australia, Brunei and Middle East countries (such as Saudi, Dubai and Bahrain) have becoming the preferred country in view of the high salary and rewarding remuneration package being offered.

On the other hand, registered nurses who are serving their sponsorship contract bond are still dominating the private hospital nursing workforce. Nonetheless, majority of these registered nurses choose to resign from their organisations upon completion of their bond (which is normally ranged between five and eight years). The trend of registered nurses resigning usually occurs in the month of January and July of every year where their contract completed. One of the reason which may contributed to the attrition rate is that Malaysian nurses are found to have experiencing less autonomy in clinical decision making and receiving inadequate support from their manager as well as physicians while they are striving to deliver quality patient care (Marzuki, Hassan, Wichaikhum, & Nantsupawat, 2012). On the other hand, extrinsic motivator such as salary may also influence nurses' intention to leave (Ramoo, Abdullah, & Chua, 2013).

In another perspective, some registered nurses even choose to terminate their bond just after servicing the hospitals for only few years. They are willing to pay back their bond (for those who are yet to complete their bond) in exchange for freedom in pursuing their career (either in nursing or non-nursing career) elsewhere. The reason that may cause this situation could be related to the level of preparedness or competent among the nursing graduates. The reformation effort by the Ministry of Education in

boosting the number of training colleges in the earlier decade has indirectly created a shift from hospital-based nursing training to educational institution-based nursing education (Ramoo et al., 2013). The educational institution-based nursing education tends to place more emphasis on theory component and cognitive processes compare to nursing practical skills. In addition, the lack of clinical and hospital placement sites also causes inadequate of clinical hands-on experience among the nursing students. Consequently, these nursing graduates experience lack of confidence in providing care to patient due to clinical incompetency and lead them to early career work stress and premature career exit. In addition, the huge production of registered nurses does not address the nursing shortage and high turnover phenomenon; instead, add on the burden and workload of the existing registered nurses to supervise the big number of newly qualified nurses who are lacking in clinical competency. This situation not only increases the turnover intention among the newly qualified registered nurses, but also among the existing registered nurses who are experienced and competent.

Henceforth, the current nursing situation relating to the working environment, changes in educational financial mode (i.e., sponsorship versus self-financing), and educational paradigm shift (i.e., hospital trained versus university trained) may have contributed to the worsening nurse turnover situation among the private healthcare organisations. Thus, the subsequent section of the chapter would further elaborate on the research problem of the study: nurses' turnover and turnover intention. Nurses' exit choice and related determinants of turnover intentions were also discussed.

Statement of the Problem

High registered nurses' turnover is indeed a critical phenomenon which cannot be taken lightly (Li & Jones, 2013; O'Brien-Pallas, Murphy, Shamian, Li, & Hayes, 2010). Past studies have reported on the impacts of its consequences towards the quality of patient care and organisational outcomes. The economists viewed nurses' turnover as a costly phenomenon. Cost of turnover can be grouped into three classifications namely: direct, indirect, and phase of employment costs (Li & Jones, 2013). The terms direct costs refer to the costs that are evidently attributed to registered nurses' turnover such as advertising during the hiring process for the unfilled positions and temporary replacement of registered nurses (Li & Jones, 2013; O'Brien-Pallas et al., 2010).

Contrariwise, indirect costs refer to the costs that incur after the recruitment of new registered nurses such as costs for conducting orientation and training programmes (Li & Jones, 2013). Costs which are resulted from decreased work productivity and morale among the remaining nursing staff are also categorized as indirect costs (Chen, Chu, Wang, & Lin, 2008; Li & Jones, 2013). In addition, the phrase "phase of employment costs" refers to costs which incur from the new nurses such as costs which have been invested by other staff through helping new registered nurses to improve the work productivity which is associated with inadequacy of staffing in a unit (Waldman, Kelly, Aurora, & Smith, 2004). Thus, phase of employment costs can be considered as both, direct and indirect costs (Waldman et al., 2004).

Furthermore, it was reported that nurse turnover costs contributed to more than one-fourth of the total turnover costs which was ranged between 3.4 and 5.8 percent of the yearly functional expenses (Waldman et al., 2004). Auerbach, Buerhaus, and

Staiger (2007) supported the report by indicated that the costs of nurse turnover were as high as three times of the yearly wages of the average registered nurses among the American hospitals. In Taiwan, the direct costs of turnover were frequently found to have exceeded at least five percent of the sum of the annual operating budget (Chen et al., 2008). Furthermore, the costs of professional premature exit among nurses were estimated to be as high as USD$856 million (Brewer, Kovner, Greene, Tukov-Shuser, & Djukic, 2012).

On the other hand, high nursing turnover is detrimental to both, the nurses' and patients' outcomes. Bae, Mark, and Fried (2010) investigated on the consequences of unit-level nurse turnover. The study revealed that unit-level nurse turnover was hazardous because of its ability to disrupt the established nurses' working relationships and teamwork spirit (Bae et al., 2010). The effect of turnover may cause the remaining staff feeling forsaken, de-motivating and considering of leaving their current work place (Bae et al., 2010). Additionally, high turnover also affects nurses' psychological well-being such as satisfaction towards work and burnout which may influence work productivity and indirectly jeopardise on patient safety (Bae et al., 2010; O'Brien Pallas et al., 2010).

Turnover intention and exit choice. The serious consequences of nurses' turnover have triggered nursing scholars to gauge turnover through turnover intention and exit choice studies. Turnover intention is referring to individuals' thought towards leaving or quitting while, turnover is referring to the actual act of leaving (Price & Mueller, 1981). On the other hand, exit choice is referring to the individuals' selections or destinations after leaving their work place (Homburg, van der Heijden, & Valkenburg, 2013).

Numerous turnover theories such as organisational equilibrium theory (March & Simon, 1958 cited in Tosi, 1984), causal model of turnover for nurses (Price & Mueller, 1981), and intermediate linkages model (Mobley, 1977) have testified the connection between turnover intention and turnover. Furthermore, numerous past studies have attested that turnover intention is the proximate antecedent of turnover (Steel & Lounsbury, 2009). Henceforth, investigating turnover intention is viewed as a priority to shed light for employee retention strategies.

In general, the literature pointed out that nurses' turnover intention differs from other profession in which nurses can have distinctive phases of turnover intention, starting from the unit-level, organisational-level, country-level, and professional-level (Gurková et al., 2013; Simon, Müller, & Hasselhorn, 2010). Unit-level turnover intention is also known as intra-organisational turnover intention which refers to intent to leave the current working unit or ward/ department. Organisational-level turnover intention is also known as inter-organisational turnover intention which refers to intent to leave organisation while; country-level refers to intent to leave country (country turnover intention); and professional-level refers to intent to leave nursing (professional turnover intention).

In the global perspective, inter-organisational turnover intention was found to be the highest across the different forms of turnover intention in numerous countries (Heinen et al., 2013). Conversely, intra-organisational, country, and professional turnover intention were found to be slightly lower in general (Galletta, Portoghese, & Pietronilla, 2011; Galletta, Portoghese, Battistelli, & Leiter, 2013; Gurková et al., 2013; Simon et al., 2010). The degree of turnover intention diverges across countries, for example a large scale study conducted among ten European countries found that approximately 19 to 49 percent of the nurses have inter-organisational turnover

intention, while five to 17 percent have professional turnover intention (Heinen et al., 2013). In separate studies, organisational and professional turnover intention also occurred among the newly qualified nurses (Rhéaume, Clément, & LeBel, 2011; Rudman, Gustavsson, & Hultell, 2013). In this context, the literature highlighted that majority of the nurses who have turnover intention have opted to work in another healthcare organisations (Homburg et al., 2013) while, some of the studies also revealed working abroad (Gurková et al., 2013; El-Jardali et al., 2011), and pursuing advanced education (Gök & Kocaman, 2011) as the nurses' exit choice.

In the Asia region, nurses' turnover intention studies were gaining much popularity over the years. In the past studies, nurses' who were working in China, Taiwan, Japan, and Hong Kong were found to have relatively high turnover intention (Choi, Cheung, & Pang, 2013; Lee, Dai, Park, & McCreary, 2013; Ohue, Moriyama, & Nakaya, 2011; Zhang et al., 2014). Similarly, to the global findings, majority of the Asian nurses were inclined to have higher inter-organisational turnover intention compared with other forms of turnover intention (Choi et al., 2013; Lee et al., 2013). A longitudinal investigation conducted among the Chinese nurses further testified that nurses developed professional turnover intention over time (Li et al., 2010). Furthermore, an investigation among the Japanese nurses revealed that approximately five percent of the newly qualified registered nurses left their employment as early as their first 15 months' duration of service (Suzuki et al., 2010). Nevertheless, studies on nurses' exit choice were scarce, therefore, more studies on this perspective is recommended to explore nurses' thought on their destinations after the current work place or profession.

In Malaysia, despite the detrimental state of nurses' turnover, studies on turnover intention and exit choice were rather limited. Thus far, the literature revealed

two past studies which were conducted in a public service hospital (Alam & Mohammad, 2010) and a public teaching university hospital (Ramoo et al., 2013). Public hospital nurses were found to have responded neutrally in terms of their turnover intention (Alam & Mohammad, 2010) while, approximately 40% of the public teaching university hospital nurses indicated inter-organisational turnover intention (Ramoo et al., 2013). Nevertheless, no studies have explored on Malaysian nurses' exit choice. The subsequent section discussed on the various variables which were found to have association with nurses' turnover intention.

Variables related to turnover intention. In general, past studies revealed that nurses' turnover intention was linked with numerous variables such as individual-, and work/ organisational-related variables (Hayes et al., 2012; Simon et al., 2010). In terms of individual-related variables, previous studies have identified that turnover intention was associated with age (Ramoo et al., 2013; Rhéaume et al., 2011), generational differences (LeVasseur, Wang, Matthews, & Boland, 2009; Takase, Oba, & Yamashita, 2009), dependent responsibilities which include caring for young children or family members (Estryn-Behar et al., 2007), transition period from educational setting to nursing practice among the newly qualified nurses (Rhéaume et al., 2011; Rudman et al., 2013; Takase, Nakayoshi, & Teraoka, 2012), and educational level (Nogueras, 2006).

In terms of work and organisational-related variables, studies have identified that turnover intention was associated with working environment which include the basis of providing quality of nursing care through adequate staffing, supportive managers, and collegiality among the healthcare providers (Kutney-Lee, Wu, Sloane, & Aiken, 2013). Furthermore, lack of recognition and involvement in hospital matters were also found to influence turnover intention (Kutney-Lee et al., 2013). In addition,

a comprehensive review on organisational variables revealed workplace location, work environment safety aspects, career opportunities, professional development, and extrinsic motivation were directly related to turnover (Currie & Hill, 2012).

Additionally, a multilevel analysis conducted by Simon et al. (2010) confirmed that organisational and professional turnover intention was influenced by distinctive determinants. The study found that professional turnover intention was strongly associated with individual-related and work-home interface variables. Nonetheless, organisational turnover intention was related to organisational-related variables such as the characteristics of working environment (Simon et al., 2010).

Furthermore, nurses' commitment was identified as important predictor of turnover intention (Steel & Lounsbury, 2009). Organisational commitment was another critical variable which has been attested as a significant predictor as well as mediator on turnover intention (Steel & Lounsbury, 2009; Liou & Grobe, 2008). Majority of the previous studies have examined organisational commitment based on the three-component conceptualization of commitments which were affective, normative and continuance components (Meyer, Allen, & Smith, 1993). The affective component revealed as a better predictor for turnover intent (Lu, Lin, Wu, Hsieh, & Chang, 2002). Nevertheless, recent studies examined the effect of professional commitment on intent of turnover. The findings revealed that commitment towards profession was a significant predictor on professional turnover intention (Chang et al., 2015; Nogueras, 2006).

As a summary, nurses' turnover intention is a serious global phenomenon. The phenomenon is detrimental to the outcomes of the nurses, patients, and entire healthcare system. In general, there are four different forms of turnover intention: intra-organisational, inter-organisational, country, and professional. Past literature

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testified that there were distinctive determinants for each of the different forms of turnover intention. Individual-related variables were found to predict on professional turnover intention; while work/ organisational-related variables were found to predict on inter-organisational turnover intention. However, empirical evidences on intra-organisational and country turnover intention were rather scarce.

In Malaysia, nursing profession is experiencing nurses' turnover all year round and the turnover rate is found to be exceptional high (Choong et al., 2012; Ling, 2012). Several nurses' turnover intention investigations had been carried out in the public hospitals. The investigations were primarily focusing on inter-organisational turnover intention. Private healthcare sector was the second major healthcare provider of the country (Ministry of Health Malaysia, 2014). Henceforth, in view of the expansion of private healthcare and limited studies, it was timely to gauge private hospital nurses' turnover intention and its related predicting and mediating determinants. The subsequent section would highlight the theoretical frameworks and conceptual framework of the study which guided the study in the perspective of psychological, economical, and sociological. Then, the conceptual framework of the study was elaborated.

Theoretical Framework

In general, turnover is influenced by interdisciplinary perspectives such as psychological, economical, and sociological (Mueller & Price, 1990; Steel & Lounsbury, 2009). In this study, three theoretical frameworks which adopted the interdisciplinary perspectives namely: intermediate linkages model (Mobley, 1977), organisation equilibrium theory (March & Simpson, 1958 cited in Tosi, 1984), and causal model of turnover (Price, 1977; Price & Mueller, 1981) were used to guide the

conduct of the study. The following section would elaborate the conceptualisation of turnover based on the theoretical frameworks and its respective perspectives. The theoretical framework based on psychological perspective was discussed first and followed by economical and sociological perspectives.

Psychological perspective. The psychological approaches were the most common approaches used to explain turnover behaviour and can be classified into content and process models (Maertz & Champion, 2004; Steel & Lounsbury, 2009). Furthermore, a review and systhesis on the psychological conceptual literature revealed that psychological trigger was indeed the chief explanation towards turnover (Steel & Lounsbury, 2009).

Turnover theories which focused on answering to the "why" were in search for the reasons that influence individual to leave or quit and these theories were referred as the content models (Maertz & Champion, 2004). Studies which adopted the content models of turnover were in general investigating numerous antecedents which were believed to have influenced turnover (Maertz & Champion, 2004).

On the other hand, turnover theories which focused on answering the "how" were in search for the process experienced by individuals in order to reach final decision to leave and these theories were referred as the process models (Maertz & Champion, 2004). Studies which adopted the process models of turnover were commonly aimed at investigating relationships or effects of affective variables leading to turnover. The intermediate linkage model (Mobley, 1977) was an example of process models of turnover.

Intermediate linkages model. Intermediate linkages model (Mobley, 1977) attempted to explain turnover behaviour through the investigation of satisfaction towards work and leaving intent. The model was expanded from the theory of

reasoned action (Fishbein's, 1967 cited in Steel & Lounsbury, 2009). The theory explained that individuals' behaviour was the end product of individuals' affection and thought process (Liou, 2009). Mobley (1977) adopted the turnover concept proposed by Fishbein (1967) and expanded the framework which was known as the intermediate linkages model (Mobley, 1982).

The model postulated that negative affective response was the main trigger that led individuals towards turnover thought or better known as turnover intention (Mobley, 1982). In this context, turnover was viewed as a decisional process (process models of turnover) in which the outcome of the cognitive evaluation towards existing job was crucial in determining the turnover decision (Mobley, 1982). The model suggested that dissatisfaction outcome will elicit thoughts of quitting and in this phase, individuals may continue to evaluate their existing job taking into consideration of expected utility of search as well as cost (Mobley, 1982). Furthermore, some may exhibit their intent to search, perform actual search, and evaluate for availability alternatives (Mobley, 1982). Subsequently, the available alternative would be further compared again with the existing job. Turnover intention was very much likely if the available alternative outweighed the cost and benefits of existing job (Mobley, 1982). Past studies and theories had testified that turnover intention was the immediate precursor of actual turnover (Mobley, 1982; Steel & Lounsbury, 2009).

Economical perspective. The economical perspective explained turnover in the context of cost-benefit assessment (Mueller & Price, 1990). In this context, individuals would not choose to leave their organisation if the existing benefits to costs ratio outweigh the external organisation (Mueller & Price, 1990). Henceforth, extrinsic motivators particularly salary and fringe benefits played significant role in this perspective (Mueller & Price, 1990; Steel & Lounsbury, 2009). Furthermore,

economic situation which take into the consideration of opportunity, competitiveness, and resilience of the job option may influence turnover if the job option superseded the existing extrinsic motivators (Mueller & Price, 1990; Steel & Lounsbury, 2009). Henceforth, organisation equilibrium theory (March & Simon, 1958 cited in Tosi, 1984) was an example of economical turnover theories.

Organisational equilibrium theory. The organisation equilibrium theory (March & Simpson, 1958) was one of the earliest economical turnover theories (Mobley, 1982). The theory explained that in general, employee in an organisation was facing with two different decisions which were decision to participate and produce (Tosi, 1984). Decision to participate played a prominent role in the explanation for employee turnover. Decision to participate referred to the equilibrium or balance of inducement utilities such as wages to the employee so that employee would continue to participate and contribute to the organisation (Tosi, 1984). The theory postulated that individuals were less likely to have the intent to move or quit if the balance of inducement utilities were above their participation and contribution with the provision there was low alternatives job availability (Tosi, 1984).

In addition, Tosi (1984) explained that employee intent to quit was not solely depended on the economical factor. Psychological factor such as organisational satisfaction and sense of belonging towards the member of the organisation were also determinants of turnover intent. The degree of turnover intention was posited to be influenced by two paths. The first path was on the employee's perception towards their aspiration to move or change. This perception is referring to the intent to quit the organisation (inter-organisational turnover intention). In this path, intent to leave for another organisation was influenced by the intensity of visibility within organisation, and intensity of perception towards availability of job option. The intensity of

visibility within organisation was influenced by whether the organisation was associated with prestige, growth rate, job status and individual visibility. On the other hand, intensity of perception towards availability of job option was related to the availability of jobs that fit the employee qualifications/ talents which were influenced by personal features such as sex, age, organisational tenure, and area of specialisation (Mobley, 1982).

The second path was on the perception towards movement within organisation or better known as perceived ease of movement. This perception is referring to intent to quit unit but remain in the organisation (intra-organisational turnover intention) (Mowday, Porter & Steers, 1982; Steel & Lounsbury, 2009). In this path, perceived ease of movement was influenced by job satisfaction and perceived opportunity for intra-organisational relocation/ mobility (Mobley, 1982). Both, economical and psychological factors influenced turnover intent, nevertheless, if the perception towards movement within organisation was not corrected, the employee would opt for a movement and change outside the organisation (inter-organisational turnover intention). Henceforth, it can be concluded that although employee had high inter-organisational turnover intention due to dissatisfaction towards the organisation, the employee may still choose to remain in the organisation if the perceived alternative job availability was low. This phenomenon was detrimental to the organisation because the employee with high inter-organisational turnover intention may not be productive for the organisation as long as their economical and psychological aspects were not corrected.

Sociological perspective. The expansion of psychological and economical turnover theories had led to the emergent of sociological turnover theories (Mueller & Price, 1990). The sociological turnover theories incorporated both, psychological

as well as economical perspectives in the investigation of turnover (Steel & Lounsbury, 2009). Furthermore, the sociologist suggested including the investigation of mediating and/ or moderating effects in the turnover relationships exploration (Steel & Lounsbury, 2009). In addition, majority of the turnover theories such as intermediate linkages model and organisation equilibrium theory were intended to explain the concept of turnover universally which means the framework may be adopted by any individuals (Steel & Lounsbury, 2009). Nevertheless, the sociological turnover theories advocated for exclusive theoretical framework based on the uniqueness of a collective individuals and occupation such as nurses (Steel & Lounsbury, 2009). Thus, the causal model of turnover (Price, 1977; Price & Mueller, 1981) was examples of sociological turnover theories which were constructed explicitly explained nurses' turnover.

Causal model of turnover for nurses. The turnover model was constructed to explain nurses' turnover process. The model proposed five main determinants of nurses' satisfaction which posed direct effect on turnover (Price, 1977 cited in Mobley, 1982). The determinants of the model were extrinsic factors (such as wage), routine nursing task, elements of interaction and management which were related to economic factors as well as characteristics of practice environment (organisational-related factors) (Mobley, 1982).

The model proposed positive associations of integration, instrumental communication, and formal communication on nurses' turnover (Price, 1977 cited in Mobley, 1982). This assumption reflected that employee have lower tendency of turnover when the working environment was found to be favourable or satisfactory which was characterised through collegiality, collaborative practice, and employee involvement in organisational affairs. On the other hand, centralisation was proposed

to have negative association on turnover which means turnover was more likely in

organisations which emphasized on high degree of bureaucracy (Price, 1977 cited in

Mobley, 1982). The model mapping was displayed in Figure 1.1.
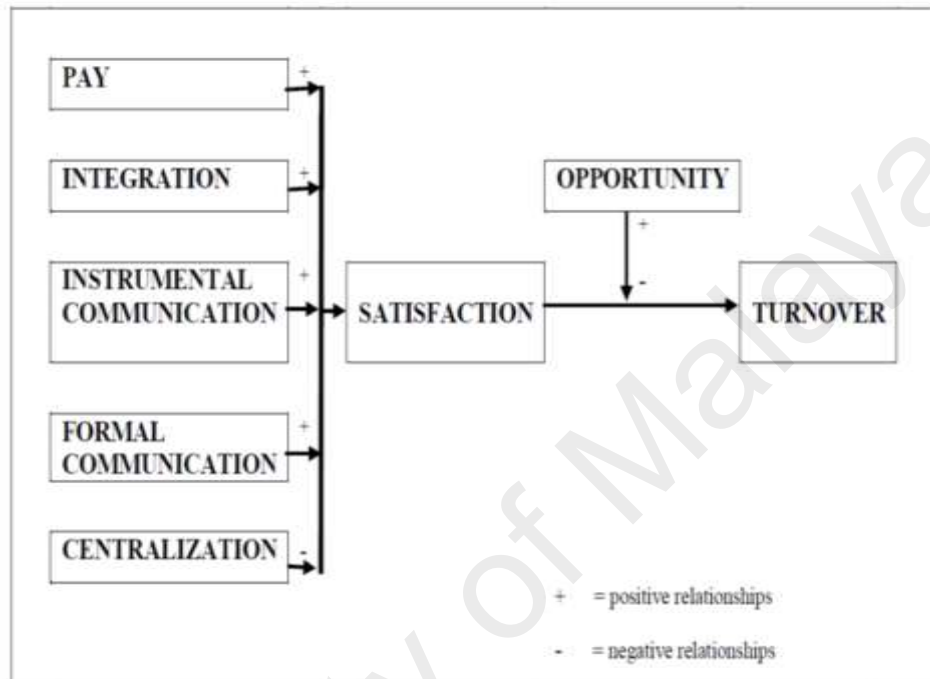
Figure 1.1. Model of turnover determinants and intervening variables (Price, 1977, p.547)

Furthermore, the framework postulated that opportunity was the variable that

poses indirect influence on turnover. In another words, the model postulated that the

relationship between the satisfaction towards organisation characteristics and turnover

was mediated through opportunity. In this context, the definition for satisfaction was

"the degree to which members have positive attitudinal orientation toward

membership in the organisation" while, opportunity was defined as "availability of

alternative roles (jobs) in the environment" (Price, 1977 cited in Mobley, 1982, p.

121). In this model, "opportunity" represented the economic factor which intervene the relationship between satisfaction and turnover.

Subsequently, the causal model of turnover was further expanded through the inclusion of additional determinants which were related to the nature of nursing job, career advancement in nursing profession (promotional opportunity), personal development (professionalism and training), and family-work interface (kinship responsibility) (Price & Mueller, 1981). In this model, job satisfaction was postulated as the intervening variables in the relationships between the determinants and intent to stay. On the other hand, the elements of personal development, and family-work interface were postulated to have direct on intent to stay (Price & Mueller, 1981). Nevertheless, based on the empirical findings, career advancement in nursing profession was attested to have direct effect on turnover instead of intervening effect as postulated in the earlier framework. Figure 1.2 depicted the theoretical model proposed by Price and Mueller (1981).
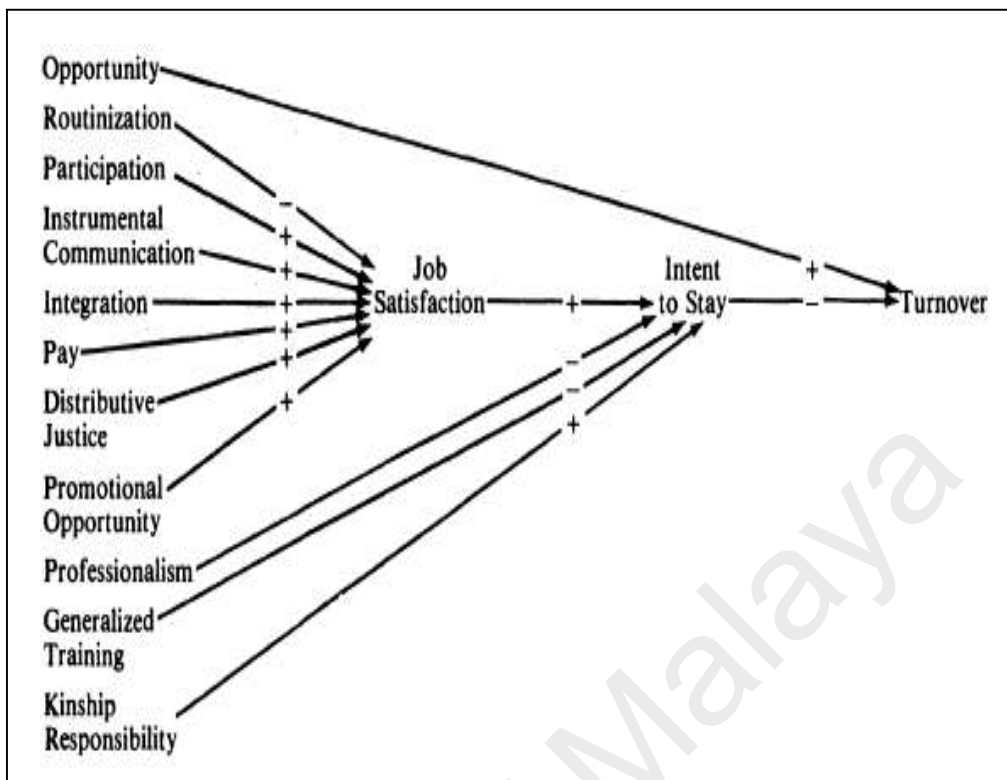
Figure 1.2. The causal model of turnover (Price & Mueller, 1981, p.547)

In addition, two psychological variables namely: satisfaction towards work and staying intent were included in the framework (Price & Mueller, 1981). In this context, job satisfaction represented the psychological factor of the affective response towards existing job. On the other hand, intent to stay represented the psychological factor of the outcome from the cognitive evaluation process. Intent to stay was viewed a dimension of commitment which was referring to the degree of willingness to be attached with the job/ organisation (Price & Mueller, 1981). Henceforth, based on the model, individual's satisfaction towards their job and extent of commitment were significant predictors of turnover.

Subsequently, numerous scholars have incorporated the concept of commitment particularly in the aspect of organisational commitment in the investigation of turnover (Steel & Lounsbury, 2009). Mowday, Steers, and Porter (1979, p.226) defined organisational commitment as "a strong belief in an acceptance

of the organisation's goals and values, a willingness to exert considerable effort on behalf of the organisation and a strong desire to maintain membership in the organisation". Numerous empirical analyses have established the link between commitment towards organisation and turnover intention (Liou, 2009; Mosadeghrad, Ferlie, & Rosenberg, 2008; Tett & Meyer, 1993). Furthermore, recent empirical analysis revealed the mediating effect of organisation commitment in turnover intention relationships (Han, Han, An, & Lim, 2015; Liou & Grobe, 2008).

In addition, professional commitment dimension was introduced in the recent studies. Professional commitment was defined as the philosophical acceptance and strong intrinsic willingness to be attached with the profession (Teng, Shyu, & Chang, 2007). In view of the escalating rate of professional turnover among nurses, recent studies investigated the effect of professional commitment on intent of turnover. Henceforth, empirical analysis revealed significant causal between professional obligation and turnover intent (Chang et al., 2015; Teng et al., 2007).

In summary, the empirical evidences have clearly highlighted the significant influence of the psychological, economic, and sociological perspectives on nurses' turnover intention. The intermediate linkages model (Mobley, 1977), organisation equilibrium theory (March & Simpson, 1958), and causal model of turnover (Price, 1977; Price & Mueller, 1981) were found to be relevant and appropriate in explaining nurses' turnover intention. Furthermore, the empirical findings testified the theoretical frameworks supported the construct of the conceptual framework of the study. The following section would elaborate on the conceptual framework and followed by statement of the study purpose, research objectives, questions, and hypotheses.

Conceptual Framework

The conceptual framework of the study was predominated by the sociological perspective. Nonetheless, the psychological and economical determinants were added to the framework. The study aimed to investigate nurses' turnover intention and its related predictors. In the study, turnover intention (TI) was the main criterion (dependent variable). Turnover intention was consisted of four different forms: intent to leave the current unit/ ward (intra-organisational TI); intent to leave hospital/ organisation (inter-organisational TI); intent to leave country (country TI); and profession (professional TI). Nurses' perception of nursing practice environment (NPE), professional commitment (PC), organisational commitment (OC), and exit choice (EC) were the predictors (independent variables). Additionally, exit choice can be classified into two classifications: nursing related exit choice (*nursing*-EC) and non-nursing related exit choice (*non-nursing*-EC).

There were eight research objectives included in the conceptual framework of the study. The first four research objectives were mainly investigating on the existing situation/ phenomenon of nursing practice environment, professional commitment, organizational commitment, turnover intention and exit choices among the registered nurses. The inclusion of these four research objectives were crucial to set a baseline reading for comparison in future studies as well as generate appropriate data for hypotheses testing. On the other hand, the remaining four research objectives were formulated for hypothesis testing of the proposed conceptual framework which proposed that turnover intention was influenced by psychological, economical, and sociological determinants. The conceptual framework of the study was displayed in Figure 1.3.
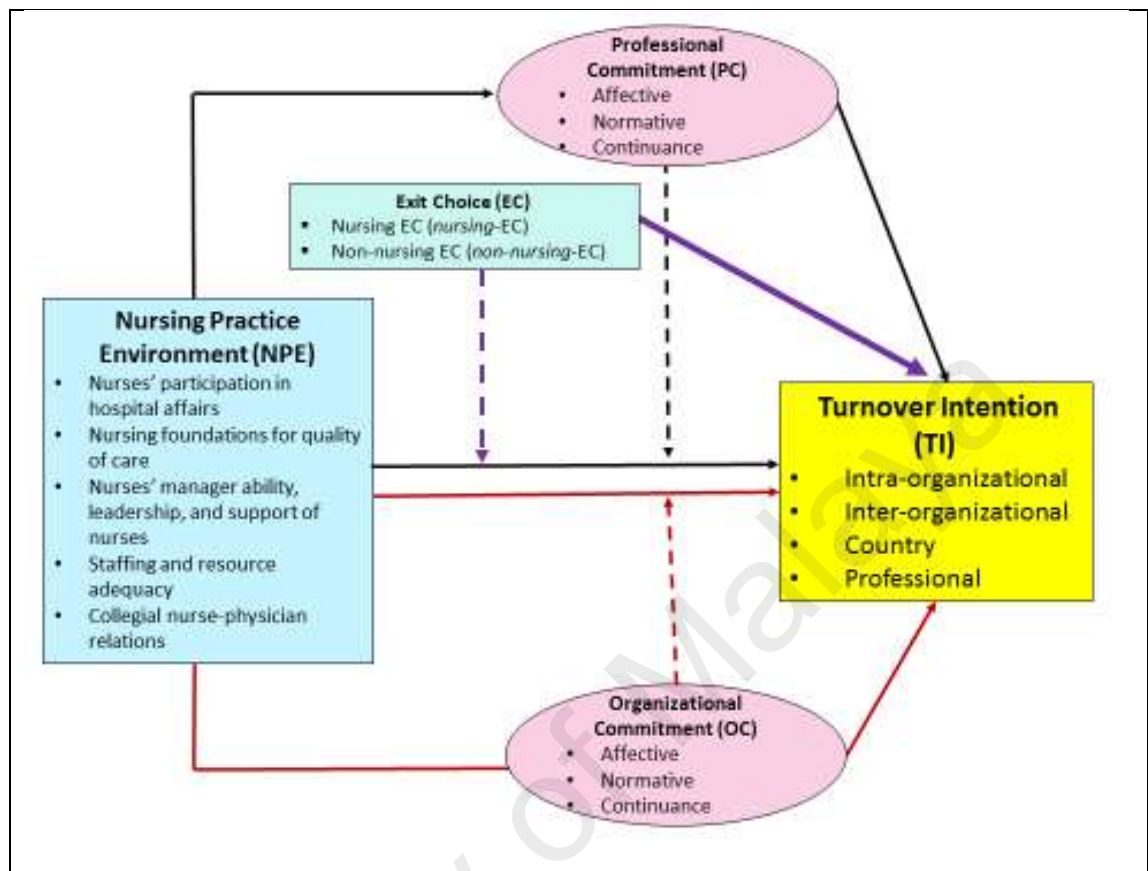
Figure 1.3. Conceptual framework

In the conceptual framework, the psychological determinants of the study were nurses' perception towards their nursing practice environment (NPE). The intermediate linkages model (Mobley, 1977) explained the psychological perspective of turnover intention through the "cognitive evaluation on existing job". Cognitive evaluation on job was triggered through affective and satisfaction responses of their working environment in terms of nursing practice environment. These responses led individuals to further evaluate their existing job based on the characteristics of their nursing practice environment. A favourable nursing practice environment inferred satisfaction towards their job (Leone et al., 2015; Zhang et al., 2014). The evaluation outcome of satisfaction with nursing practice environment or vice versa will then elicit

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the thought of quitting or intent of turnover. The model postulated that the significant predictor for turnover intention was nurses' perception towards their practice environment.

The economical determinant of the framework was exit choice. The organisation equilibrium theory (March & Simpson, 1958 cited in Tosi, 1984) explained the turnover intention through cost and benefit assessment between existing job and available alternative. In the conceptual framework, exit choice represented available alternative. The probability of turnover intention was high when the cost and benefit assessment of the exit choice outweighed existing job. Henceforth, there were two forms of turnover intention: perception towards the aspiration of movement or change (intra-organisational turnover intention), and perception towards movement within organisation (inter-organisational turnover intention) (March & Simpson, 1958 cited in Tosi, 1984). If the opportunity or available alternatives within organisation was limited and attraction from external organisation outweighed internal organisation, inter-organisational turnover intention would be more probable to occur. Nonetheless, if opportunity or available alternatives within organisation satisfied the employee, intra-organisational turnover intention would be more probable to occur. Thus, the model postulated that the significant predictor for turnover intention was nurses' exit choice.

Furthermore, the conceptual framework was modified from the causal model of turnover (Price, 1977; Price & Mueller, 1981) in which the turnover determinants were replaced with nursing practice environment in view of the characteristics of the determinants were synonymous with the features of nursing practice environment. Satisfaction towards nursing practice environment was consistent with job satisfaction (Leone et al., 2015; Zhang et al., 2014). Subsequently, "opportunity" variable was

replaced with exit choice in order to narrow down the specific nursing-related choices based on empirical findings (Homburg et al., 2013; Simon et al., 2010). Finally, as recommended in earlier empirical analysis, the dimension of commitment was adopted instead of intent of stay (Price & Mueller, 1981). Furthermore, the distinctive between professional commitment and organisational commitment were testified in view of the different forms of turnover intention. Therefore, based on the conceptual model, exit choice and commitment were postulated to have indirect influence on the relationship concerning satisfaction towards NPE and turnover intention.

Additionally, the conceptual framework attempted to explain turnover intention in two paths. The first path of the framework was focusing on the influence of commitment (professional and organisational) on turnover intention. It aimed to provide answers to the Hypotheses 1 and 2. Hypothesis 1 hypothesized that nursing practice environment, professional commitment and organisational commitment were significant predictors for turnover intention when the socio-demographic variables were controlled. Hypothesis 2 hypothesized that professional commitment and organisational commitment were the mediators in the relationship concerning satisfaction towards NPE and turnover intention.

The second path of the framework was focusing on the influence of exit choice on turnover intention. It aimed to provide answers to the Hypothesis 3 and Hypothesis 4. Hypothesis 3 hypothesized that exit choice had significant influence on turnover intention. Hypothesis 4 hypothesized that exit choice was the mediator in the relationship concerning satisfaction towards NPE and turnover intention. The subsequent section would outline the purpose of the study, research objectives, questions, and hypotheses.

Purpose of the Study

The study aimed to ascertain nurses' perceptions towards NPE, professional commitment, organisational commitment, turnover intention, and exit choice. Subsequently, the study sought to investigate the predicting value of nursing practice environment, professional commitment, organisational commitment, and exit choice on turnover intention. Then, the study investigated the mediating effect of professional commitment, organisational commitment, and exit choice on the relationship concerning satisfaction towards NPE and turnover intention.

Research Objectives

1. To describe the characteristics of nursing practice environment (NPE) as perceived by the Malaysian registered nurses (RNs).

2. To estimate the degree of professional commitment (PC) and organisational commitment (OC) among the Malaysian RNs.

3. To estimate the degree and proportion of turnover intention (TI) among the Malaysian RNs.

4. To determine the proportion of exit choice (EC) in terms of organisational, education, country and entrepreneurship among the Malaysian RNs.

5. To analyse whether NPE, PC and OC predict TI when controlling the socio-demographic variables.

6. To analyse the influence of PC and OC in the relationship between NPE and TI among the Malaysian RNs.

7. To examine whether EC contribute to TI among the Malaysian RNs.

8. To analyse the influence of EC in the relationship between NPE and TI among the Malaysian RNs.

Research Questions

1. What are the characteristics of nursing practice environment (NPE) as perceived by the Malaysian RNs?

2. What is the estimated degree of professional commitment (PC) and organisational commitment (OC) among the Malaysian RNs?

3. What is the estimated degree and proportion of turnover intention (TI) among the Malaysian RNs?

4. What is the proportion of exit choice (EC) in terms of organisational, education, country and entrepreneurship among the Malaysian RNs?

5. Do NPE, PC and OC predict TI when controlling the socio-demographic variables?

6. How do PC and OC influence the relationship between NPE and TI among the Malaysian RNs?

7. Do EC contribute to TI among the Malaysian RNs?

8. How does EC influence the relationship between NPE and TI among the Malaysian RNs?

Research Hypotheses

The hypotheses of the study were constructed based on the causal model of turnover for nurses (Price, 1977; Price & Mueller, 1981). The model suggested that turnover was influenced by the individuals' commitment and satisfaction towards a set of organisational-related variables which consisted of the characteristics of the working environment as well as economic factor (i.e., pay and availability of job alternatives). Both, satisfaction and commitment were considered as the outcome

from the cognitive evaluation towards the existing job which include both, organisational-, and economic-related variables.

Subsequently, the model postulated that commitment and economic factor were the mediators in the relationship between turnover and satisfaction (Price, 1977; Price & Mueller, 1981). Henceforth, four hypotheses were constructed to verify the relationships among the variables. The four hypotheses were stated as below.

Research hypothesis 1:

$H0_1$: NPE, PC and OC are not significant predictors for TI when socio-demographic variables are controlled.

H_1: NPE, PC and OC are significant predictors for TI when socio-demographic variables are controlled.

Research hypothesis 2:

$H0_2$: There is no significant change in the relationship between NPE and TI when moderated by PC and OC.

H_2: There is significant change in the relationship between NPE and TI when mediated by PC and OC.

Research hypothesis 3:

$H0_3$: There is no significant relationship between EC and TI.

H_3: There is significant relationship between EC and TI.

Research hypothesis 4:

$H0_4$: There is no significant change in the relationship between NPE and TI when moderated by EC.

H_4: There is significant change in the relationship between NPE and TI when mediated by EC.

Rationale of the Study

The literature evidences and theoretical frameworks revealed that majority of the turnover intention studies were generally focusing on inter-organisational turnover intention. Nonetheless, studies have highlighted the significance of investigating the various forms of turnover intention such as intra-organisational and professional turnover intention (Derycke et al., 2012, Heinen et al., 2013). Henceforth, according to the recommendations of former studies, the current study extended the investigation by examining the different forms of turnover intention which include intra-organisational and professional turnover intention. Furthermore, in view of the high prevalence rate of nurses leaving the country approximately 20% of the population (Ling, 2012), the current study also included country turnover intention in the investigation. In brief, the focus of the current study was on the overall nurses' intent of turnover as well as the four different forms of turnover intent: intra-organisational, inter-organisational, country, and professional.

In terms of conceptual framework, majority of the previous studies investigated nurses' turnover intention through the lens of a single perspective which was the psychological perspective. Nevertheless, integrated conceptual model has been recommended in order to view nurses' turnover intention in a more holistic approach. Thus, the conceptual framework of the current study was constructed based on interdisciplinary perspectives namely: psychology, economy, and sociology. Satisfaction towards nursing practice environment represented the psychological determinant of turnover intention. On the other hand, exit choice represented the alternative job availability which was introduced to strengthen the framework through the lens of the economist view. The integration of psychological and economical perspectives was seen in the current conceptual framework which had merged and

expanded the causal model of turnover for nurses (Price, 1977; Price & Mueller, 1981). Mediators (professional commitment, organisational commitment, and exit choice) examination was included in the framework which was recommended by the sociological stance (Steel & Lounsbury, 2009).

Furthermore, the investigation of the various forms of turnover intention and exit choice were crucial to provide direction for the hospital administrators in constructing appropriate management strategies in reducing and preventing early career exit among the registered nurses. The outcome of the investigation was useful for the enhancement/ construction of relevant measures or strategies to recruit and sustain the existing nursing workforce. In addition, the investigation of exit choice would shed light to the healthcare administrators, human resource personnel and nurse managers to better comprehend the phenomenon of nurses' turnover by addressing not only to the questions: "how" or "why" nurses' leave their employment or/ and profession but also "where" were they heading to after leaving (Simon et al., 2010). It was hope that the research findings may be able to support interventions to attract these nurses to resume or return to the organisation and nursing profession.

Additionally, majority of the past studies have been associating nurses' turnover intention with demographic/ individual-, organisational-related factors, work satisfaction, and commitment towards organisation. However, literature pertaining to the influence of nursing practice environment on nurses' turnover intention remained scarce in Malaysia. The term "practice environment" was first introduced to describe the common organisational characteristics in the "magnet hospitals" (Lake, 2002). Magnet hospitals were referring to the hospitals which had demonstrated the capacity to sustain nurses in the service (McClure, Poulin, Sovie, & Wandelt, 1983). In the late 1970s, while most of the hospitals in the United States were experiencing severe

shortages of nurses and failed to retain their professional nurses, there were few of the hospitals were identified as favourable work place and reported minimal attrition rate (Lake, 2002; Lake & Friese, 2006). Henceforth, in the early 1980s, a common set of organisational characteristics were emerged among the magnet hospitals which were found to be the attractive reasons for nurses to stay (Lake, 2002). The characteristics encompassed of flattening level of decision making at the unit level, capable nurse leaders, and intrinsic recognition for deserving staff, and sufficient staffing (Choi, Bakken, Larson, Du, & Stone, 2004; Lake, 2002; McClure et al., 1983). The characteristics highlighted in the nursing practice environment were rather similar with the determinants postulated in the causal model of turnover (Price, 1977; Price & Mueller, 1981). Henceforth, the inclusion of nurses' perception towards nursing practice environment in the turnover intention study was current and relevant to the phenomenon of the study.

Moreover, commitment had been identified as the supreme influence on nurses' turnover intention as well as actual turnover (Steel & Lounsbury, 2009). Majority of the previous turnover intention studies were found to be focusing on organisational commitment (Steel & Lounsbury, 2009). Individuals with higher commitment towards organisation were found to have inverse relationship on turnover intention (Han et al., 2015; Liou & Grobe, 2008). Conversely, limited investigations have delved into the influence of professional commitment on turnover intention. Nonetheless, professional commitment was gaining its popularity in turnover intention due to its explicit influence on nurses' professional turnover intent (Chang et al., 2015). Chang et al. (2015) revealed that professional commitment was a better predictor for nurses' professional turnover intention. Henceforth, in view of scarcity

body of knowledge on Malaysian nurses' professional commitment, the variable was included in the current study.

In the context of Malaysia, up to date, there were only three previous studies investigated on nurses' turnover and turnover intention (Alam & Mohammad, 2010; Omar, Majid, Halim, & Johari, 2013; Ramoo et al., 2013). Ramoo et al. (2013) conducted a study examining nurses' intent of turnover in one of the public teaching hospitals. The study found 40% of the registered nurses had organisational turnover intention within the coming three years. The remaining two studies investigated on the Ministry of Health public hospital nurses (Alam & Mohammad, 2010; Omar et al., 2013). All the three studies investigated the associations of satisfaction towards work and turnover intention. Henceforth, based on the previous Malaysian studies, it was found that the studies were limited to Malaysian nurses who were working in the governmental sector (i.e., public teaching hospital and government hospitals), and only focused on job satisfaction variable. Since there were two types of healthcare facilities in Malaysia; government as well as private, it was timely that current study sought to examine the Malaysian nurses' turnover intention from the perspective of the private hospital registered nurses.

Significance of the Study

Nurses' turnover intention is a significant problem that needs to be addressed. By examining the influence of nursing practice environment, commitment and exit choice on nurses' turnover intention behaviour may improve nurses' recruiting and sustaining strategies. Nurses' turnover intention is influenced by numerous factors. Higher education institutions particularly institutions that trained future healthcare providers such as doctors, nurses and allied healthcare professionals play significant

role in ensuring inter-professional education among members to produce a collegial and healthy practice environment. Concurrently, nurse educators (lecturers, tutors and clinical instructors) from the nursing school played crucial role in sowing the sense of commitment, belonging, and loyalty to the nursing profession among the nursing students. Hence, in the practicing areas particularly the hospitals, the administrators such as human resource and nursing leaders would play significant role in maintaining and attracting nurses to remain and be productive in their respective organisations and profession as a whole.

The rate at which registered nurses leaving the organisations and profession for the pursuit of other opportunities or careers has been a major and challenging phenomenon in most of the countries in the world including Malaysia. The impacts of high turnover rate among the registered nurses are extremely costly for the organisational, healthcare system as well as nursing profession. At the organisational level (in this context is referring to the hospital setting), maintaining acceptable nurse staffing is crucial for excellence provision of patient care. Therefore, it is very important for the administrators of the hospital such as the human resource personnel and nurse manager/ leaders to identify early the group of nurses with intention to leave because turnover intention is a leading indicator of actual turnover behaviour which may disrupt the morale of the remaining nurses (Price & Mueller, 1981). Information on nurses' turnover intention, exit choice, characteristics of nursing practice environment, and level of commitment is very important and useful for the hospital administrators in constructing appropriate measures strategies in addressing issues pertaining to practice environment and indirectly preventing actual turnover. Furthermore, the conduct of the study may shed light in reviewing and refining existing human resource/ management policies particularly in the areas of enhancing

the characteristics of nursing practice environment and boosting nurses' commitment (professional and organisational commitment).

In terms of national level, the Malaysian health (including nursing profession regulatory body) and education ministries play major role in ensuring that the country has equilibrium of nurses' supply and demand to meet the nation healthcare needs. Furthermore, enhancing and maintaining the country nursing standards is important in order to achieve quality health care service and delivery. Henceforth, information on the characteristics of the nursing practice environment and how these characteristics influence nurses' decision in leaving their employment and nursing profession would allow the authority panels to further investigate and explore ways in retaining the existing nursing workforce such as by imposing a standard nurse-to-patient ratio as one of the criteria for hospitals to obtain quality accreditation and other licensing approval. Additionally, the study information is useful for future nursing workforce planning and nursing education curriculum refinement/ development.

Moreover, past studies highlighted the importance of nursing education in ensuring optimum standards of patient care (Aiken et al., 2014). Nurses' who attained higher nursing academic qualification was found to have lower turnover intention particularly in professional turnover intent (Nogueras, 2006; Rudman et al., 2013). Early career exit among the newly qualified registered nurses are not uncommon nowadays. Henceforth, through this study, Nursing Board of Malaysia and nursing training institutions may have the opportunity to identify and evaluate the existing gaps in the current nursing curriculum in preparing the future generation nurses. Thus, review the current nursing education curriculum worth to be explored. Additionally, higher emphasis should be placed on nursing education. Besides looking into clinical competency, clinical placements and transition to practice, the essence of professional

commitment should be instilled among all nursing graduates. Appropriate strategies in nurturing the sense of belonging to the profession among nursing students which would lead to professional commitment should also be considered. Inclusion of inter-professional in the curriculum would be beneficial in enhancing the collegiality and collaborative practice among the healthcare professionals.

In terms of the conceptual framework of the study, the framework sought to testify nurses' turnover intention through integrated perspectives rather than on the traditional angle which focused on satisfaction towards job and organisational commitment. Furthermore, the current study opted to employ the constructs of the different forms of nurses' turnover intention and exit choice which were still under-explored by other researchers in the local region. Gauging this information could be useful in tracing and attracting registered nurses to resume/ return to the organisation and profession. Furthermore, the information was important for future nursing workforce projecting and planning. In conclusion, the conduct of the study was deemed to be significant towards nursing practice, management, education and research.

Study Limitations

The findings of the current study have conceded important information on Peninsular Malaysian private hospital nurses' turnover intention. However, there were some limitations of the study which required careful consideration when explaining the findings of the study. The first limitation was related to the conceptual framework. The conceptual framework of the study was constructed based on the existing turnover theories and supported with empirical evidences of previous studies. Henceforth, the validity of the framework was not rigorously cross-validated through longitudinal

studies. Nevertheless, based on the cross-sectional nature of the study design, the findings somehow able to establish and demonstrate associations among the study variables which were nurses' turnover intention, exit choice, nursing practice environment, professional commitment, and organisational commitment. However, causal-and-effect relationships were not able to be established through cross-sectional survey study design.

The second limitation was the study population. The study population was the registered nurses who were working in the Peninsular Malaysia private hospitals. Registered nurses who were working in the government hospitals, Sabah, and Sarawak were excluded. Henceforth, the findings cannot be generalized to those nurses' populations. Thus, further studies were recommended to involve the nurses who were working in the government hospitals as well as across the states of Sabah and Sarawak.

The third limitation was the use of self-reported questionnaire. The use of self-reported questionnaire in social science studies had been associated with common-method bias. Podsakoff, MacKenzie, Lee, and Podsakoff (2003) highlighted that common-methdod bias merged due to similar measurement context such as likert scale response format. Thus, researchers were advised to examine measures and data meticulously in order to avoid common-method bias. Podsakoff et al. (2003) recommended several strategies in reducing common-method bias. Firstly, it was recommended that the source of measurement for dependent variable should differ from the independent variables. In other word, the items of the measures between the dependent and independent variables need to be different such as in theoretical background, style of item writing, and response format. Secondly, all the study measures / questionnaires were required to be pilot tested and validated using

exploratory factor analysis (EFA). Thirdly, researchers should conduct rigorous data cleaning and screening prior to data analysis procedure. In the current study, the source for the scale of measurement of the dependent variable (turnover intention) differs from the independent variables. The researcher constructed the dependent variable measure based on existing literature and revised the response format. Panel of experts were engaged to confirm the validity and distinctive with the other questionnaire used in the study. Furthermore, the EFA were used to establish the construct validity of all the study measures. The results of the analysis supported the construct validity of the questionnaire. In addition, prior to data analysis, a thorough data cleaning and assumption testings were performed to the collected data. The meticulous steps had been conducted in the study and the results of the statistical analysis procedure affirmed the less likelihood of common-method bias in the study.

In the face of the limitations, the study had revealed several strengths that enhanced the certainty of the results. Firstly, the data gathered from the study was trustworthy because the study instruments were valid and reliable. All the study instruments were pilot tested thoroughly, and revealed acceptable reliability and validity as discussed in Chapter Three. Furthermore, items used in Turnover Intention Questionnaire (TIQ) and Exit Choice Questionnaire (ECQ) were modified from existing turnover intention measures which were found to be highly valid and reliable (Hasselhorn, Tackenberg, & Muller, 2003; Homburg et al., 2013). In addition, the Practice Environment Scale of the Nursing Work Index (PES-NWI; Lake, 2002), Professional Commitment Scale (PCS; Meyer et al., 1993), and Organisational Commitment Scale (OCS; Meyer et al., 1993) were instruments which have been used extensively worldwide including Asia region until to-date (Meyer et al., 2013; Liou & Cheng, 2009; Warshawsky & Havens, 2011). These instruments had undergone

rigorous psychometric analyses among worldwide population which include Asian nurses (Meyer et al., 2013; Liou & Cheng, 2009). Thus, the reliability and validity of the measures were attested.

Secondly, although probability sampling for nurse sample was not possible due to the restriction imposed by the study sites, the researcher was able to use simple random sampling to select the study sites (hospital sample). Nevertheless, the valid response rate ($n = 820$, 64%) of the study had achieved the minimum required sample size to support the sample adequacy. Furthermore, the sample size was sufficient to meet the assumptions for regressions analysis. Henceforth, the valid response rate of the sample was representative of the Peninsular Malaysia private hospital nurses.

Operational Definitions

Turnover intention. In the current study, turnover intention (TI) was referring to nurses' desire towards leaving or quitting in the past six months. Turnover intention consisted of desire to leave the present unit or ward (intra-organisational TI), hospital (inter-organisational TI), country (country TI), and nursing profession (professional TI) (Hasselhorn et al., 2003).

Exit choice. Exit choice (EC) was referring to nurses' intended plan and destination after leaving the current employment in the past six months. The exit choices consisted of advancing higher qualification, working in another country or organisation, and entrepreneurship (Hasselhorn et al., 2003; Homburg et al., 2013). Exit choice was classified into nursing related and vice versa: *nursing*-EC and *non-nursing*-EC, respectively. *Nursing*-EC was related to advancing higher nursing qualification and practicing nursing in another country or organisation. However, *non-nursing*-EC was related to advancing higher qualification outside nursing discipline,

working non-nursing job in another country or organisation, and starting own business (entrepreneurship).

Nursing practice environment. Nursing practice environment (NPE) was referring to the traits of the practice place that encourages or constraints the conduct of nursing practice (Lake, 2002). In this study, NPE was measured by the PES-NWI (Lake, 2002) which explained the ideal concept of NPE based on the degree of collegiality among healthcare providers, managerial support/ leadership and staffing. A favourable NPE was reflected in nurses' ability to deliver optimum standards of care and practise autonomy in the area of practice/ organisational affairs. PES-NWI consisted of five subscales: "nurse participation in hospital affairs" (NPHA); "nursing foundations for quality of care" (NFQC); "nurse manager ability, leadership, and support of nurses" (NMLS); "staffing and resource adequacy" (SRA); and "collegial nurse–physician relations" (CNPR).

Professional commitment. Professional commitment (PC) was referring to the degree of obligation towards ones' profession (Meyer et al., 1993). In this study, profession was referring to nursing profession. Professional commitment was measured by PCS (Meyer et al., 1993). The scale consisted of three domains: affective (APC, refers to the emotional connection); continuance (CPC, refers to attachment related to cost); and normative (NPC, refers to employee level of obligation).

Organisational commitment. Organisational commitment (OC) was referring to the degree of obligation towards ones' organisation (Meyer et al., 1993). In this study, organisational was referring to private hospitals. Organisational commitment was measured by OCS (Meyer et al., 1993). Similar to PCS, OCS consisted of three domains: affective (AOC), continuance (COC), and normative (NOC).

Registered nurses. Registered nurses (RNs) were defined as "candidates who have passed the licensure examination conducted by the Nursing Board of Malaysia, regardless of educational preparation" (Malaysia Nurses Act, 1950 cited in Ministry of Higher Education Malaysia, 2010, p.23). Registered nurses are required to maintain an annual practicing certificate through ongoing continuing education and clinical or administrative practice for a minimum fee paid by their respective employers. In the current study, registered nurses were referring to the Malaysian registered nurses who have valid annual practicing certificates, and currently working full-time with the position of staff nurses in the private hospitals located in the Peninsular Malaysia.

Private hospitals. Private hospitals were referring to the private hospitals located in the region of north, central, and south-east of the Peninsular Malaysia. The private hospitals were registered with the Association of Private Hospitals of Malaysia (APHM). In general, there were approximately 104 private hospitals registered with the association (APHM, 2014).

Summary

This chapter presented the study background and research problem. The study purposes, research objectives, research questions, hypotheses, theoretical frameworks, conceptual framework, significance of the study and operational definitions were also elaborated and discussed. The subsequent chapter would firstly highlight the conceptual definitions of relevant variables and then, provide a review of the past studies and relevant theoretical frameworks.

CHAPTER 2

LITERATURE REVIEW

Introduction

The earlier chapter discussed on turnover intention in the perspective of global as well as regional. The effects of the four independent variables namely: nursing practice environment, professional commitment, organisational commitment, and exit choice on nurses' turnover intention were also highlighted. In this chapter, the literature review was presented in three sections. The first section elaborated on the conceptual definitions of the relevant variables such as turnover, turnover intention, exit choice, nursing practice environment, commitment, professional commitment, and organisational commitment. Subsequently, significant findings of past studies were reviewed and appraised. Then, other relevant theoretical frameworks which have been used in guiding former studies were presented and discussed.

In terms of the review of past studies, the review was presented in seven sections. The first three sections were related to nurses' turnover intention, exit choice, and association of nurses' socio-demographic variables on turnover intention. The subsequent sections were related to the relationships among nurses' perception towards nursing practice environment, professional commitment, organisational commitment, exit choice, and turnover intention.

Conceptual Definitions

Nurses' turnover. Price and Mueller (1981) stated that the act of nurses who actually leaving or quitting an organisation was known as turnover. Turnover was frequently defined as voluntary mobility of employee whether moving out from

company or job (Coomber & Barriball, 2007; Price & Mueller, 1981). Price and Mueller (1981) further explained that dismisses, retirements, and death are excluded from the definition of turnover. These are examples of involuntary leaving (Price & Mueller, 1981). In addition, intra-organisation movements (movement within organisation boundary) such as transfers and promotions are not considered as voluntary turnover (Price & Mueller, 1981).

In the mathematical term, turnover was calculated according to the employee gain and loss ratio (Currie & Hill, 2012). In another word, turnover was commonly being determined in terms of the duration of the employees remain in their employment position (Currie & Hill, 2012). Furthermore, turnover can be calculated based on portion and is known as turnover rate. Bae et al. (2010) explained that the rate of turnover can be estimated by comparing the sum of nurses who had quitted during a stipulated duration and the mean number of nurses during the similar stipulated duration. In addition, Currie and Hill (2012) explained that elevated turnover rate reflected on shorter term of employment, while low turnover rate simply referred to longer duration of remaining in the employment. Hayes et al. (2012) added that turnover rate reflected the capability of the organisation in retaining its existing employee.

In the nursing perspective point of view, Morrell (2005) defined turnover as a withdrawal process. Withdrawal from the unit was believed to be the first stage of the process, and followed by organisation then, profession. Morrell (2005) explained that it was very crucial to determine the level of organisational turnover such as ward, hospital/ organisation or national nursing system level. According to Morrell (2005), nurses who left their employment but chose to remain in the nursing field, and move from one organisation to another was regarded as organisational turnover.

Nurses' turnover intention. Turnover and turnover intention were two distinctive concepts. Numerous empirical studies had attested that turnover intention was a significant predictor for actual turnover. Henceforth, in order to gauge actual turnover, numerous studies on turnover intention had been conducted over the decades. "Intent to leave", "intent to quit", and "turnover anticipation" were some of the common phrases been used to gauge nurses' turnover intention (Rhéaume et al., 2011). Henceforth, in view of the synonymous meanings, these phrases were used interchangeably in the discussion of turnover intention. In addition, turnover intention was referring to the perceptions of individuals toward leaving or quitting (Price & Mueller, 1981).

Mobley's intermediate linkages model stated that the intent to leave was part of the phases in the decision-making process which led to actual turnover behaviour (Mobley, 1982). Takase (2010) supported this notion by further elaborated that turnover intention was a multi-stage withdrawal process which initiated from the psychological component. Psychological component was referring to the appraisal of the employee towards their work. Negative appraisal triggered psychological and cognitive responses leading to actual turnover (Takase, 2010).

Nurses' exit choice. Exit choice was defined as nurses' plan or destination after leaving their current employment which could be moving to another ward/ unit or department within the same organisation (intra-organisation); organisation (inter-organisation); country, profession, and self-employment (Flinkman, Laine, Leino-Kilpi, Hasselhorn, & Salanterä, 2008; Homburg et al., 2013). Furthermore, Gök and Kocaman (2011) added that nurses' exit choice consisted of pursuing higher education which can be nursing related and vice versa.

Nursing practice environment. The theoretical foundation of NPE was from the sociology of organisations, occupations and work (Lake, 2002). In general, there were two models of work organisation: bureaucratic and professional models (Lake, 2002). The bureaucratic model stressed the domination exercised through hierarchical authority and formal regulation administration (Lake, 2002). This model was also known as the task-centred model. In a bureaucratic environment, decision making was more centralized and nurse-physician relationships were more hierarchical (Lake & Friese, 2006). On the other hand, the professional model which was goal-centred emphasized the credentials of individuals and collegiality among the professional staff (Lake, 2002). Furthermore, decision making was decentralized and nurse-physician relationships were more collegial in professional environment. In nursing practice, autonomous practice was the symbol which represented professional nursing. Henceforth, a professional NPE model was preferred compared to the bureaucratic model.

Over the years, a number of definitions and measurements have been constructed to define and evaluate NPE. The professional working environment model defined NPE as "the organisational characteristics of a work setting that facilitate or constrain professional nursing practice" (Lake, 2002, p.178). Other authors have also proposed relevant definitions such as according to Hoffart and Woods (1996), NPE was referring to a system environment that support professional nurses in dominating the delivery of nursing care based on the nursing professional practice model. In other words, NPE should be reflected through nurses being empowered with expanded autonomy and liability towards the work environment (Hoffart & Woods, 1996). Alternatively, Sleutel (2000, p.55), further elaborated that NPE was referring to "a set of concrete or abstract psychological features, such as job characteristics, autonomy,

and promotion opportunities perceived by job incumbents who compare these perceptions against a set of standards, values, or needs."

Commitment. Commitment was a psychological circumstance which can be typified based on the extent of relationship between employee and organisation (Mowday et al., 1979). The strength of the relationship implicated the employees' decision to continue with the organisation or vice versa (Meyer et al., 1993). Mowday et al. (1979) elaborated that highly commitment employees were more probable to keep on with the organisation and work towards organisational goals. Henceforth, the theory underlying commitment proposed that commitment was a predictor of certain behaviours such as turnover (Mowday et al., 1979).

Occupation related commitment consisted of three components: affective, continuance and normative (Meyer et al., 1993). Affective commitment influenced individual to stay put with the organisation/ occupation due to the strong desire to remain (i.e., satisfying job and opportunity to develop skills) (Meyer et al., 1993). Conversely, continuance commitment influenced individual to stay put through economical factor. Costs were associated with leaving particularly when nurses have invested in their profession such as time and effort invested in acquiring profession-specific skills (Meyer et al., 1993). Thus, nurses would find it costly if they change occupation. Lastly, normative commitment influenced individual to stay put due to the sense of responsibility to remain (Meyer et al., 1993). For example, individuals who have received financial support from the organisation to pursue a course may develop normative commitment (Meyer et al., 1993). Meyer, Stanley, and Vandenberg (2013) elaborated that the conceptualizations of commitment have moved from single-dimensional (which place high emphasis at the organisation to a multiple-component and multiple-foci dimensions). Meyer et al. (2013) added that the

model proposed by Meyer et al. (1993) could be applied to all commitments regardless of their focus such as organisation and occupation.

Professional commitment. In the literature pertaining to professional commitment, the terms occupation, and career were used interchangeably (Blau, 2003; Gardner, 1992; Nogueras, 2006). Although these terms were commonly used interchangeably, career commitment was frequently not being used in view of the ambiguity in the meaning of career which simply referring to "a planned pattern of work from entry into the workforce to retirement or as involvement in a particular job, organisation, occupation or profession" (Meyer et al., 1993, p.540). A profession can be defined as an occupation which requires professional-related education and training. For example, in order to qualify oneself to be called a nurse, he or she has to complete a nursing education.

Professional commitment was an important factor determining professional's work and attitude (Meyer et al., 1993) and was formed throughout the socialization process of an individual through experiences related to their profession (Lu, Chang, & Wu, 2007). In addition, professional commitment was viewed in three approaches: having faith in professional goals and values; contributing noteworthy efforts for the profession voluntarily; and the desire to belong in the profession (Lu et al., 2002). Gardner (1992) further affirmed that nurses' professional commitment was referring to the intent to develop a lifelong career in nursing.

Organisational commitment. The term organisational commitment had been defined and explained in numerous manner. In the perspective of organisation, Kanter (1968 cited in Mowday et al., 1979) suggested three different forms of commitment: continuance commitment (i.e., employee's dedication which requiring personal sacrifices to the survival of the organisation); cohesion commitment (i.e., affection to

organisation communal relationships); and control commitment (i.e., members' attachment to the norms of the organisation that cultivate behaviour in desired directions) which occur simultaneously.

On the other hand, Staw (1977 cited in Mowday et al., 1979) expanded the concepts of organisational commitment based on attitudinal and behavioural dimensions. Henceforth, the term organisational commitment can be used interchangeably with attitudinal commitment since both of the terms were referring to the relationship process between employee and organisation (Mowday et al., 1979). Conversely, behavioural commitment implied to the process where individual choose to stay in the organisation (Mowday et al., 1979). Hence, Mowday et al. (1979, p.226) defined organisational commitment as "a strong belief in an acceptance of the organisation's goals and values, a willingness to exert considerable effort on behalf of the organisation and a strong desire to maintain membership in the organisation".

In conlusion, numerous definitions were observed for the terms related to turnover, turnover intention and exit choice. Nonetheless, in the nursing perspective, turnover simply refers to actual act of leaving nursing unit, organization, and profession. On the other hand, turnover intention and exit choice referring to the thought of leaving and destination after leaving respectively. The subsequent section will be discussing on the findings of past studies.

Review of Past Studies

The subsequent section of the chapter elaborated and critically discussed relevant past studies on nurses' turnover intention, exit choice, perception towards NPE, professional commitment, and organisational commitment. The electronic databases were the chief sources used for the search of relevant past studies. The

keywords used for the search were turnover intention, intention to leave, anticipated turnover, exit choice, exit destination, professional commitment, occupation commitment, organisational commitment, nursing practice environment, and working environment. In addition, manual locating of relevant literature was performed based on the referencing list stated in the selected articles. Majority of the cited literature was selected based on its credibility being published in high impact factor and international ISI tier journals. Thus, the findings of the published literature were deemed to be at high level of validity and reliability. Furthermore, the scale of measurement used in the literature had undergone rigorous psychometric analysis and had been testified as highly reliable and valid instruments (e.g., PES-NWI, OCS, and PCS) which can be applied across many countries (Chiang & Lin, 2009; Liou & Cheng, 2009).

In addition, in view of the voluminous search outputs, the researcher had set few criteria in the selection of the literature for the review. The first criterion was related to the study population. In the study, private hospital registered nurses were the target population. Henceforth, the literature review focused on past studies conducted on hospital-based registered nurses. Former studies which were conducted in the non-hospital setup such as community care facilities, aged/ nursing home, rehabilitation center, and primary healthcare were excluded from the review. The exclusion was appropriate because the hierarchy of practice environment in the community settings were relatively more flatten compared with hospital setup which was usually more bureaucratic. Additionally, studies which had sampled the nurse managers and educators in the studies were excluded from the review in view of the differing in the nursing job scope. The second criterion was related to the year of publication. In order to ensure the literature review was current, relevant and

appropriate, research articles which were published since the year 2006 until to date (approximately ten years) were reviewed and appraised. However, earlier key studies which were significant in the literature were also included in the review.

Firstly, the literature review would be focusing on the different forms of turnover intention: intra-organisational, inter-organisational, country, and profession. Subsequently, former studies on nurses' exit choice were reviewed. Then, the final section would review past studies findings on the combination relationships that exist among the variables: turnover intention, exit choice, perception towards NPE, professional and organisational commitment among the hospital-based registered nurses.

Nurses' turnover intention. In general, there were four distinctive levels of turnover intention: intra-organisational, inter-organisational, country, and profession. The search of the literature revealed that majority of the past studies was related to the inter-organisational and professional turnover intention. Minimal studies were found to have investigated on intra-organisational and country turnover intention. In addition, the trend analysis revealed that single form of turnover intention was the focused of the earlier studies. Nonetheless, a shift in turnover intention studies were observed in the recent years in which multi-forms of turnover intention had been incorporated in the turnover intention studies. Comparative, longitudinal and qualitative studies had gained much popularity and significance in the recent studies.

Organisational turnover intention. In general, there were two types of organisational turnover intention: intra-organisational (i.e., intent of leaving the unit and yet, remains in the organisation) and inter-organisational (i.e., intent of leaving the organisation). Intra-organisational turnover intention studies were relatively less popular compared with inter-organisational turnover intention studies. The literature

search revealed minimal past studies on intra-organisational turnover intention. In the literature review, five past studies on intra-organisational turnover intention were elaborated and discussed.

Intra-organisational turnover intention. In general, four out of the five intra-organisational turnover intention studies were conducted in the European countries namely: The Netherland, Finland, Italy, and Belgium (Derycke et al., 2012; Hinno, Partanen, & Vehviläinen-Julkunen, 2012; Galletta et al., 2011; Galletta et al., 2013). Nevertheless, merely one intra-organisational turnover intention study had been surveyed in the Asian region (Lee, Dai, & McCreary, 2015).

The first study was investigated by Hinno et al., (2012) among 869 Finnish and Dutch nurses using a cross-sectional survey method. The study revealed that 57% of the entire sample had affirmed their intent to quit their unit. A comparison analysis between the nurses in the Netherland and Finland found that Finnish nurses (64%) had significantly higher intent of intra-organisational turnover intention compared to the Dutch nurses (44%). Thus, the study reported significant difference in terms of intra-organisational turnover intention between the nurses of the two countries through a chi-square analysis. Nonetheless, nurses from both countries tended to have relatively high intent to quit their unit. The rationale for the differences found in both of the countries was related to the types of employment (part-time versus full-time). Hinno et al. (2012) explained that majority of the Dutch nurses were employed as part-time while, most of the nurses in Finland were full-time employee. Thus, the lack of sense in belonging and commitment could be the contributing factors towards the high intra-organisational turnover intention among the nurses in the Netherland.

The second and third studies were by Galletta et al. (2011) and Galletta et al. (2013). Both the studies were conducted among the Italian nurses with sample size of

1240 and 832 respectively. The authors adopted two-item measurement scale in which the respondents had to rate their agreement towards intra-organisational turnover intention on a five-point scale. The lower the index reflected the less probable the respondent would quit the unit. In contrast with the study conducted in the Netherland and Finland by Hinno et al. (2012), the extent of intra-organisational turnover intention among the Italian nurses were relatively low with a mean value of 1.83 (*SD* = 1.22) and 1.96 (*SD* = 1.15) as reported by Galletta et al. (2011) and Galletta et al. (2013) respectively. Galletta et al. (2011) further explained that the Person-environment Fit theory was used to guide the study. The theory explained that the desire of an individual to remain or leave an environment was related to the degree of alignment and interaction between the individual and its work environment such as the characteristics and people of the organisation. Individuals would choose to remain when their values were matched with the characteristics of the organisation. However, desire of leaving may occur when the individual realised mismatch between the values and failed to change the mismatch.

Furthermore, both studies pointed out the importance of sustaining favourable unit-level working environment and physician-nurse relationship to improve nurses' commitment and desire to remain in the respective unit. Interestingly, Galletta et al. (2013) expanded the focus of the study through the inclusion of nurses' perception towards NPE (specifically on physician-nurse relationship) and organisational commitment (specifically on affective aspect of commitment). The findings related to the influence of NPE and affective commitments on turnover intention were discussed in the subsequent section which focused on the relationship among NPE, organisational commitment, and turnover intention.

In a separate study, Derycke et al. (2012) investigated intra-organisational turnover intention through secondary analysis method among 1531 nurses in Belgium. Nurses' intent to quit the unit was investigated over duration of one year. The preliminary results found relatively low proportion of intra-organisational turnover intention with merely six percent (95 out of 1531 respondents). Nevertheless, the study reported that changes in the degree of work ability and inter-colleagues' collegiality had significant influenced on intra-organisational turnover intention. The odd ratio analysis revealed that intra-organisational turnover intention was three times probable from the preliminary index when nurses experienced declination in work ability and collegiality among colleagues.

Nonetheless, in the Asian region, Lee et al. (2015) investigated intra-organisational turnover intention among 1283 Taiwan nurses through a survey method. The findings revealed that almost half (45%) of the respondents specified their intent to move out from the unit. The study used a single item measurement scale and the response format was five-point scale ranged between never and every day. The higher rating indicated greater extent of intra-organisational turnover intention. In average, the respondents rated moderate level of intra-organisational turnover intention with a mean value of 2.63 ($SD = 1.23$). Additionally, nurses who were younger (below 30 years old), had lower nursing educational attainment, types of unit (general versus specialty), nursing experience of two years or less; and between six and ten years were reported to had higher intra-organisational turnover intention. Time management in the aspect of balancing work and life was also pointed out as a contributor to the turnover intention at the unit level. Furthermore, regression analysis revealed that the quality of NPE particularly in the areas of staff cohesiveness,

interpersonal interaction, distribution of work, and staff adequacy significantly predicted intra-organisational turnover intention among the Taiwan nurses.

In summary, the literature review of intra-organisational turnover intention revealed combination findings. Former longitudinal studies had confirmed that intent to quit unit can change over time depending on the quality of work conditions, nurses' perception towards work ability, and staff collegiality. Nonetheless, nurses' age, nursing experience, educational status, working areas (general versus specialty units), and types of employment (full-time versus part-time/ contractual) were also contributed to the extent of intra-organisational turnover intention. Nonetheless, the phenomena of intra-organisational turnover intention should not be viewed lightly. The organisation equilibrium theory (March & Simon, 1958 cited in Tosi, 1984) and professional withdrawal process (Morrell, 2005) had clearly pointed out the direct link between intra-organisational and inter-organisational turnover intention. The subsequent section elaborated and appraised past studies which focused on nurses' inter-organisational turnover intention.

Inter-organisational turnover intention. In the literature search, inter-organisational turnover intention was the most popular research topic across the four different forms of turnover intention. The research variable was investigated extensively be it at the international and regional levels. Eight international, seven Asian, and one Malaysian inter-organisational turnover intention studies were identified for reviewed and discussion in the subsequent section.

The first study was by Heinen et al. (2013) who had analysed a secondary data from a large scale study among 23 159 European nurses called "Registered Nurse Forecasting" (RN4CAST). In the study, the respondents were asked to state their response on inter-organisational turnover intention. The response format was

dichotomous (yes/no). It was reported that as a whole, approximately 33% of the European nurses had affirmed on inter-organisational turnover intention. The nurses in the Finland (49%) had the highest proportion while, the nurses in the Netherlands (19%) revealed the lowest proportion. The proportion of inter-organisational turnover intention was ranged between 25% and 44% across ten countries in the Europe region. Similarly, to Heinen et al. (2013), Hinno et al. (2012) also investigated inter-organisational turnover intention among the European nurses which targeted on the nurses in the Netherlands and Finland. The study revealed that nurses in the Finland (61%) had greater turnover intention than nurses in the Netherlands (48%). The findings were congruent with the findings reported by Heinen et al. (2013). Nonetheless, the findings of the association between nurses' socio-demographic profile and inter-organisational turnover intention were not reported by both studies.

In another study, Gurková et al. (2013) investigated inter-organisational turnover intention among 1055 nurses in Czech and Slovak Republics. In the study, the respondents were requested to rate their frequency of considering leaving their workplace on a four-point scale with the lower the score reflected the least frequency and less likelihood of quitting the workplace. Subsequently, the researchers grouped the responses for analysis. In the aspect of inter-organisational turnover intention, approximately 46% of the entire sample denoted their intent of quitting the workplace. The proportion among the Slovak nurses (25%) was higher compared to the Czech nurses (22%). Furthermore, the analysis revealed that nurses' who were older ($r = -.07$, $p < .01$) and with longer nursing experience ($r = -.08$, $p < .01$) tended to have lower inter-organisational turnover intention. Interestingly, extrinsic motivators such as salary were found to have insignificant influenced on inter-organisational turnover intention.

In addition, similarly to Heinen et al. (2013), Leone et al. (2015) extended RN4CAST study and investigated inter-organisational turnover intention among 2235 Portuguese nurses. The study reported a relatively high proportion of inter-organisational turnover intention with approximate 42% of the respondents had specified their quitting intention in the following year. Furthermore, the study reported that nurses with additional specialisation qualification were less probable to quit their work place. Additionally, turnover intention was positively correlated with nurses' age. Nurses who were aged between 35 and 39 years old had indicated the highest intent of quitting organisation. Nonetheless, nurses' turnover intention was found to reduce gradually after reaching the age of 40 years and above. Additionally, the authors justified that the high proportion of turnover intention could be related to work dissatisfaction such as long working hours, frequent shift duties during weekends, and increased work requirement. Thus, satisfaction towards work was the chief influenced on nurses' inter-organisational turnover intention.

Furthermore, Biegger, De Geest, Schubert, and Ausserhofer (2016) conducted secondary data analysis via RN4CAST project. The investigation targeted on the data of 1647 Swiss nurses. Motivation-Hygiene Theory was adopted to guide the study. The theory explained that the characteristics of the job were critical predictors in determining job satisfaction and turnover intention. There were two sets of characteristics which would improve job satisfaction and vice versa: intrinsic and hygiene factors. The intrinsic factors were refering to sense of achievement, acknowledgement, recognition, and opportunity for progression. Intrinsic factors were important for nurses' retention. On the other hand, hygiene factors particularly in the aspect of working environment commonly led to dissatisfaction towards job and influenced turnover intention. Henceforth, the study revealed relatively low

proportion of turnover intention with approximately 27% specified intention of quitting organisation within one-year duration. Furthermore, the multiple logistic regression analysis revealed that duty roster, career progression opportunity, autonomy, profession recognition, extrinsic motivator, and medical leave were significantly associated with inter-organisational turnover intention. Additionally, the regression model revealed career progression opportunity contributed the most to the intention of quitting organisation.

On the other hand, inter-organisational turnover intention was also investigated among the South African nurses through the expansion of RN4CAST project (Coetzee, Klopper, Ellis, & Aiken, 2013). The analysis reported that exceeded half (54.4%) of the respondents had specified intent to quit organisation within one-year duration. The proportion of the turnover intention was slightly higher among the nurses in the government hospitals compared with the private hospitals with approximately 59% and 51.3% respectively. The rationale for the differences expressed by the authors was related to the NPE quality perceived by the nurses. It was reported that the NPE quality of the private hospitals was more positive than the government hospitals.

In the Israel, inter-organisational turnover intention was investigated by Ganz and Toren (2014) using 610 nurses through quantitative descriptive study design. A single-item measurement scale was used to gauge turnover intention. Respondents were asked to rate their intent on quitting their workplace in a duration of one year using five points response format. A greater rating signified higher intent of inter-organisational turnover intention. In contrast with former studies, inter-organisational turnover intention among the Israeli nurses were comparatively lower with a mean value of 1.79 ($SD = 1.11$) and proportion of merely 8%. The authors explained that

the reasonably low level of inter-organisational turnover intention was related to the favourable NPE of the Israeli hospitals in which the hospitals' working conditions were regulated between by the government. Furthermore, the economic constraints of the country also had led to the reduction in turnover intention.

Interestingly, Liou and Grobe (2008) also found comparatively low proportion of inter-organisational turnover intention among the Asian nurses who were working in the United States. The study adopted Anticipated Turnover Scale (Hinshaw & Atwood, 1985) to measure nurses' turnover intention. The response format of the scale was a five-point scale. In terms of degree of turnover intention, it was reported that the Asian nurses had slightly above moderate level of turnover intention with a mean value of 2.89 ($SD = .82$). Nonetheless, in terms of proportion, the analysis revealed 94% of the respondents confirmed disagreement towards quitting their work place. The rationale for the reasonably low proportion and extent of intention to quit work place was related to the appreciation towards job opportunity being offered in a foreign country.

On the other hand, the Asian inter-organisational turnover intention studies were commonly found to revealed relatively high proportion and extent of nurses' turnover intent. Eight past studies were identified and reviewed. These studies were investigated among the Hong Kong, Korean, Taiwanese, Japanese, and Malaysian nurses through cross-sectional studies (Choi et al., 2013; Han et al., 2015; Lee et al., 2015; Lee, Kim, Kang, Yoon, & Kim, 2014; Liu et al., 2012; Ramoo et al., 2013; Tei-Tominaga, 2013; Yamaguchi, Inoue, Harada, & Oike, 2016; Zhang et al., 2014).

Choi et al. (2013) adopted single item and dichotomous (yes or no) measure in gauging the Hong Kong nurses' inter-organisational turnover intention. The authors reported that exceeded half (60%) of the respondents had indicated their intent to quit

their workplace. In addition, it was reported that inter-organisational turnover intention was influenced by nurses' age, educational status, and nursing experience. Similarly, with the findings reported by Choi et al. (2013), Lee et al. (2015) revealed comparatively high proportion of Taiwanese nurses' turnover intention with approximately 52.5%. Furthermore, the study reported that single nurses in the general units and with lower level of education had greater intention of quitting organisation. Nonetheless, both of the studies explained the rationale for the high inter-organisational turnover intention among the nurses were related to the influence of depletion of work life quality particularly in the aspects of staff cohesiveness, intrinsic motivation, and sense of security towards job. Furthermore, pressured work climate especially in the area of nurse professionalism, and autonomy were also found to have significant influence on nurses' turnover intention.

Nevertheless, Han et al. (2015) employed a modified turnover intention tool to gauge the nurses' desire to quit work place. In the study, the respondents were required to respond on a five-point scale in which a greater score reflected high turnover intention. The findings were somewhat congruent with the findings reported by Choi et al. (2013) and Lee et al. (2015). The Korean nurses were found to have reasonably above moderate extent of turnover intention with a mean value of 3.0 (*SD* = .08). Furthermore, Han et al. (2015) explained that the relatively low level of commitment towards organisation and escalating degree of burnout among the nurses may have influenced the turnover intention. Nevertheless, the authors also added that the lack of clarity pertaining to the nursing role may indirectly influence the turnover intention as well.

In a separate study, Lee et al. (2014) also found comparatively high proportion of inter-organisational turnover intention among 3096 Korean nurses. In contrast with

Han et al. (2015), the study adopted single-item measurement scale to gauge inter-organisational turnover intention. The response format was dichotomous (yes or no). Hence, the authors reported that in general, nurses in the private hospitals had higher intent of quitting organisation than nurses in the government hospitals. The findings were not consistent with the report by Coetzee et al. (2013) who revealed otherwise among the South African nurses. In addition, nurses who aged above 45 years old were most probable to quit the organisation. Nonetheless, nurses who were between 25 and 34 years old were found to have the least turnover intention. Conversely, nurses with higher educational status had lower intent of leaving organisation. Furthermore, nurses with nursing experience of three to six years were reported to rate the highest intent of leaving organisation. In contrast, nurses with more than ten years of nursing experience were least likely to quit organisation.

Additionally, inter-organisational turnover intention was investigated among the newly qualified Japanese nurses (Tei-Tominaga, 2013). The study adopted a six-item scale which asked respondents on their thought of quitting their employment. The response format was four points scale with the higher scores reflected greater thought of quitting. In terms of thought of quitting within three-month duration, merely seven percent nurses responded as affirmation. Nevertheless, approximately 30% of the respondents were classified as high risk for turnover intention. Interestingly, the reasons pointed out by the author for the tendency of turnover intention was related to lack of nursing role model and poor working conditions. In addition, the study found that nurses who did not receive educational scholarship were three times (OR = 3.24) more likely to quit the work place. Furthermore, in terms of association between socio-demographic profiles and turnover intention, the study revealed significant association with types of hospitals, average working hours in a

week, and patient to nurse ratio ($p < .05$). Government hospital nurses who were working with a patient to nurse ratio of more than 7:1 and exceeded 55 hours in a week had higher tendency to quit organisation.

Furthermore, Yamaguchi et al. (2016) investigated inter-organisational turnover intention among 1461 Japanese nurses across three types of healthcare facilities: hospital, home healthcare, and nursing homes through a cross-sectional survey design. The study found that the hospital nurses had the highest turnover intention compared with the home healthcare, and nursing homes with mean values of 2.1 ($SD = 1.0$), 1.6 ($SD = .7$), and 1.8 ($SD = .9$) respectively. Nonetheless, the review focused on the findings pertaining to hospital nurses. Thus, the study reported that nurses' age, nursing experience, types of employment, and nursing specialisation were significant socio-demographic determinants of inter-organisational turnover intention.

Similarly, with the other parts of the world, inter-organisational turnover intention was also found to be higher amid the Malaysian nurses as reported by Ramoo et al. (2013). Ramoo et al. (2013) investigated the inter-organisational turnover intention among 141 nurses who were employed in a tertiary university hospital. In the study, the respondents were required to rate their desire in leaving their workplace within the coming three years. It was reported that, as a whole, almost half (40%) of the respondents denoted inter-organisational turnover intention. The proportion of nurses' inter-organisational turnover intention was reflected as relatively high proportion. Moreover, the study revealed that younger nurses aged between 20 and 29 years with nursing experience of six years or less had higher turnover intention. Furthermore, nurses with lower educational attainment were found to have higher turnover intention. Nonetheless, inter-organisational turnover intention was not

influence by types of working unit. The findings of the study were not consistent with the reports by Lee et al. (2014). Similarly, to the rationale from Gurková et al. (2013), the authors also justified that the rationale for relatively high proportion of inter-organisational turnover intention was related to satisfaction towards job.

On the other hand, Zhang et al. (2014) investigated the Chinese nurses' inter-organisational turnover intention through a fairly large scale survey study using a sample size of 9698 nurses. The study was conducted across 180 hospitals. Single-item scale of measurement was used in the study. The respondents were asked to respond on whether they had planned to quit their work place within one-year duration. Similar to most of the turnover intention studies, the response format was dichotomous (either yes or no). Contrariwise with former Asian studies, Zhang et al. (2014) revealed a merely five percent of the respondents indicated inter-organisational turnover intention. Furthermore, the findings revealed that "bianzhi" nurses (relatively equivalent with permanent employment) had a lower turnover intention compared with contractual nurses. In addition to the NPE factors, the rationale expressed by the authors in regard to the relatively low proportion findings could be related to the culture of not being comfortable in disclosing future plan among the Chinese population.

Furthermore, Liu et al. (2012) echoed the findings reported by Zhang et al. (2014). In a similar study conducted among the Chinese nurses, Liu et al. (2012) also found relatively low proportion of inter-organisational turnover intention with approximately seven percent. Nonetheless, approximately 9.9% of young nurses aged below 30 years old had indicated turnover intention. The analysis revealed that younger nurses (below 30 years old) with contractual employment had higher probable of quitting organisation. The rationale for the associations was related to

higher degree of job dissatisfaction and burnout among the nurses with contractual employment status. Similarly, with Zhang et al. (2014), NPE characteristics were found to have significant influence on nurses' turnover intention.

In summary, the literature review revealed combination findings of nurses' inter-organisational turnover intention. Nonetheless, majority of the studies agreed that inter-organisational turnover intention was reasonably high across countries except for few locations such as Switzerland, Israel, and China. Furthermore, the scale of measurement for inter-organisational turnover intention was found to be congruent with intra-organisational turnover intention in which single-item measurement scale with dichotomous response format was observed to be the most frequently used measure. In addition, nurses' age, nursing experience, marital status, working areas, types of hospitals, employment status, educational status, and educational scholarship were reported as the significant predictors for inter-organisational turnover intention. Moreover, characteristics of NPE were commonly found to be the significant influential factor for turnover intention. Next, past studies pertaining to nurses' country turnover intention were elaborated and reviewed in the subsequent section.

Country turnover intention. Global mobility was common among registered nurses all parts of the world. Nurses working in the less developed countries were seen moving to more developed countries. Furthermore, the competitiveness of global healthcare organisations and challenging economic status of the country has becoming the push factor for nurses to consider leaving the country for better career prospect. The literature search found minimum published studies pertaining to country turnover intention. In the literature review, four past studies on country turnover intention were identified and appraised.

The first study was by Lansiquot, Tullai-McGuinness, and Madigan (2012) who had investigated country turnover intention among 301 nurses in the Eastern Caribbean region. The study required the respondents to specify their intent to move out from the country within the duration of two and five years' time. The authors adopted visual analog scale to gauge nurses' country turnover intention. Visual analog scale was rarely used in survey method. Nonetheless, the authors justified the use of the scale was necessary to ensure clarity of the degree towards country turnover intention. A longer measurement on the scale reflected greater degree of country turnover intention. Thus, it was reported that the country turnover intention within the coming five years were greater than two years with measurement of 65.6 millimeters and 63.2 millimeters respectively on a maximum scale of 100 millimeters. Lansiquot et al. (2012) further explained that the reasons for the relatively high degree of country turnover leaving could be related to the demographic profiles of the sample who were somewhat younger in age, lower educational status (60% were at certificate level), and approximately 91.4% of the participant's family were living abroad. In addition, the authors justified that the relatively high country turnover intention was related to the less favourable of the NPE perceived by the participants of the study.

The second study was by El-Jardali et al. (2011) who investigated 1793 Lebanese nurses' intention in leaving the country. In the study, intent to move out from the country was measure using single item measurement scale. Dichotomous response (yes or no) was required from the respondents. It was reported that exceeded half (67%) of the respondents had denoted their intent to exit the country. El-Jardali et al. (2011) pointed out that poor working conditions particularly in the aspect of shared decision making and empowerment were associated with high degree of nurses' country turnover intention. Furthermore, the study highlighted that nurses who

were younger than 30 years old, single, and had working experience of less than six years were highly susceptible towards country turnover intention due to the influence from the poor working conditions.

In a separate study, Gurková et al. (2013) also investigated country turnover intention among 1055 nurses with approximately 556 Slovak nurses and 499 Czech nurses. Contrariwise with the former studies investigated by Lansiquot et al. (2012) and El-Jardali et al. (2011), the Slovak and Czech nurses were found to have slightly lower proportion (28%) of country turnover intention. The Slovak nurses were found to have higher proportion (20%) for country turnover intention than Czech nurses with merely seven percent. Chi-square analysis revealed significant difference in terms of country turnover intention between the Slovak and Czech nurses. Similarly to findings reported by El-Jardali et al. (2011), nurses' age, marital status, and nursing experience were reported to be the significant predictors for country turnover intention. The correlation analysis revealed that nurses who were younger and with shorter duration of nursing experience tended to have higher country turnover intention. Furthermore, married nurses were found to have lower probability of leaving the country.

The fourth study was by Rhéaume et al. (2011) who investigated 348 newly qualified Canadian nurses' country turnover intention using repeated cross-sectional survey method over a five-year (between the year 2004 and 2008) period. In the study, the respondents were asked to specify their intent of leaving the country on a five-point respond format with the higher score reflected greater desire to exit from the country. In the five years' duration, the authors observed minimal changes in terms of nurses' turnover intention. Nonetheless, relatively a low proportion of the respondents, approximately five percent had affirmed their intent to leave the country. Interestingly, it was reported that almost half (41%) of the respondents towards the

later year of the study revealed that they were somewhat not confident of their future direction. In addition, the findings revealed that participants who were employed as casual staff were found to have much higher turnover intention compared with part-time and permanent staff. Interestingly, the authors also highlighted that nurses' age itself was not significant enough to cause turnover variations but rather the indirect influence on other factors within the age group such as older nurses were associated with nursing experience while, younger nurses were linked with being single and having lesser dependent responsibilities. Furthermore, the author pointed out that participants who were aligned with the mission of the organisation and had strong professional emphasis on provision of care were less probable to quit their workplace for another country.

In summary, country turnover intention was highly influenced by geographical locations and the external nursing demand. In general, socio-demographic profiles such as age, marital status, nursing experience, and types of employment had been found to be significant predictors for country turnover intention. Furthermore, favourable NPE characteristics were found to be important indicators for retention strategies. Nonetheless, the literature search revealed no similar study had been investigated among the Malaysian nurses. Malaysian nurses exiting the country were not an uncommon phenomenon. Hence, it was justifiable and applicable for the current study to investigate country turnover intention among the Malaysian nurse population. In addition, professional turnover intention had emerged as a detrimental phenomenon towards the nursing profession. Subsequently, the review would focus on past studies of nurses' professional turnover intention.

Professional turnover intention. Studies pertaining to nurses' professional turnover intention have been gaining much popularity over the years since the early

year of 2000. The literature search revealed numerous past studies on professional turnover intention which ranged from international to local levels. In the literature review, fifteen past studies on professional turnover intention were identified and discussed.

The study conducted by Hasselhorn et al. (2003) was indeed one of the pioneer and largest longitudinal nursing professional turnover intention studies across the Europe region. The study sample consisted of 34925 nurses from ten European countries. The study was known as Nurses' Early Exit Study (NEXT-study). The countries which participated in the study were the Netherlands, Belgium, Germany, Finland, France, United Kingdom, Italy, Norway, Poland, and Slovakia. In the preliminary study phase, the respondents were asked to rate their frequency of thinking about quitting nursing profession in the previous year on a five-point scale which ranged from never to everyday. The scale of measurement was developed and psychometrically tested by the authors. The preliminary findings reported that exceeded half (53.9%) of the participants had never thought of exiting nursing profession. Furthermore, the preliminary findings reported that less than a quarter (15.6%) of the participants had responded for sometimes per week, sometimes per month, and every day. In addition, the British and Italian nurses were found to have the highest proportion of professional turnover intention with approximately 36% and 20% respectively. On the other hand, the Belgian and Dutch nurses had the lowest proportion for professional turnover intention with approximately nine and eight percent respectively.

In terms of associations between socio-demographic profiles and professional turnover intention, Hasselhorn et al. (2003) pointed out that male gendered nurses were more susceptible of quiting nursing profession except for the Italian men in

which the density of male gendered nurses in Italy was relatively higher. On the other hand, professional turnover intention was found to have significant positive correlation with nurses' age of up to 34 years. Subsequently, intention to quit profession was found to be reduced consistently starting from 34 years old and above. Additionally, nurses with higher qualification attainment were found to have higher intent to leave nursing. Furthermore, in comparison with other healthcare facilities (i.e., long-term and community care facilities), hospital nurses were found to have the highest professional turnover intention. Henceforth, the success of Next-study had influenced numerous scholars to expand, refine, and replicate studies on professional turnover intention.

Flinkman et al. (2008) had conducted a secondary data analysis following the Next-study. The study investigated professional turnover intention among 147 junior group of nurses (age below 30 years old) in the Finland. The analysis revealed approximately 26% of the participants had affirmed on professional turnover intention while, 24% reported otherwise. The authors highlighted that the reasons for the young nurses to have professional turnover intention were related to work overload which disrupt their quality of life, low affection towards profession, and dissatisfaction towards remunerative as well as work schedule. In addition, the analysis on the open-ended questionnaire revealed that extrinsic motivation factor particularly the wages was found to be the most important reason contributed to professional turnover intention. Similarly, to Flinkman et al. (2008), Simon et al. (2010) also extracted the NEXT-study data which focusing on the Germany nurses' population. The study analysed the data of 2119 nurses and found a relatively moderate proportion of (18%) professional turnover intention. Furthermore, the authors explained that individualistic characteristics such as age, gender, marital status, working hours, and

quality of work-life balance were significant predictors for professional turnover intention.

In addition, the Belgian nurses' data of the NEXT-study was also shared with Derycke et al. (2012). In the study, professional turnover intention was found to be relatively low with approximately eight percent. Similarly, to the findings reported for intra-organisational turnover intention, nurses' desire to quit profession was influenced through the change in their perception towards their work performance capacity. The analysis revealed that a declination on work performance capacity significantly increased respondents' professional turnover intention.

Furthermore, being part of the team members of the NEXT-study, Estryn-Behar et al. (2007) investigated professional turnover intention among 18 594 nurses across the ten countries in the Europe. It was reported that the findings were congruent with Hasselhorn et al. (2003) in which nurses in the United Kingdom and Italy had highest professional turnover intention with approximately 35% and 20% respectively. Nonetheless, slightly contradicting to the findings reported by Hasselhorn et al. (2003), participants in the Netherlands, Norway, and Poland reported the least proportion of professional turnover intention with approximately 10%, 11%, and 11% respectively. The authors further explained that the high proportions of professional turnover intention among the British and Italian nurses were related to the status of their working environment and physical fitness. Declination in the working conditions and health status contributed to the intent of quitting nursing profession which demands high level of emotional balance and physical stability/ stamina. Nevertheless, participants in the Netherlands, Norway, and Poland were found to be relatively satisfied with their working conditions. In addition, the study also reported that approximately 91.5% of the participants in Poland, and 82.1% of

the participants in Slovak indicated challenge in searching for another job if they they were unemployment. Furthermore, the analysis revealed that nurses with nursing specialisation and aged between 30 and 44 years old with six to 14 years of nursing experience were more likely to quit nursing profession. Additionally, male gendered nurses who live alone and without young children dependent responsibilities were reported to have higher professional turnover intention.

In a separate study, Heinen et al. (2013) kicked off a comparative large scale of professional turnover intention study in the Europe region through the RN4CAST involving ten countries. The overall proportion of professional turnover intention among the nurses in the Europe region was approximately nine percent. The findings revealed that the fraction of professional turnover intention was ranged between five and 17 percent (Heinen et al., 2013). Germany nurses were found to have the highest professional turnover intention with approximately 17%. On the other hand, nurses in the Netherlands (5%) and Spain (5%) were found to have the lowest professional turnover intention. The findings of the study were reasonable congruent with the results of NEXT-study. Nurses in the Germany remained as the highest group with professional turnover intention while, the lowest group remained as the Dutch nurses. Furthermore, the findings of the current study were consistent with NEXT-study by Hasselhorn et al. (2003) in which older nurses were found to have higher professional turnover intention. Conversely, female gendered and permanent nurses were less probable to quit nursing. Furthermore, the authors echoed the rationale justified by Estryn-Behar et al. (2007) in which the odd ratio analysis of the study revealed favourable practice environment significantly predicted nurses' intent to quit profession and vice versa.

Additionally, professional turnover intention was investigated by Gurková et al. (2013). The investigations were targeted among the nurses in the Slovak and Czech Republics. It was reported that approximately 28% of the respondents had specified professional turnover intention with 16% of Slovak nurses and 13% of Czech nurses. Furthermore, the study reported that nurses who were aged between 36 and 40 years old with shorter duration of nursing experience were found to have higher professional turnover intention. Similarly, with other forms of turnover intention, older nurses (above 50 years old) tended to have lower intention to quit profession. The rationale for the reduction could be related to the cultural influence among the older generation to remain loyal to their organisation. In addition, the regression analysis model postulated that professional turnover intention was predicted by work satisfaction particularly in the aspects of autonomy, interpersonal relationship, and duty roster.

Furthermore, de Oliveira, Griep, Portela, and Rotenberg (2017) investigated professional turnover intention among 3229 Brazillian nurses. In the study, respondents were asked about their frequency of thought towards letting go of nursing profession. The response format was adopted from the NEXT-study. Hence, the findings revealed approximately 22% of the respondents indicated intention to exit nursing. Single and male nurses who were younger demonstrated higher professional turnover intention. Interestingly, the analysis also found that nurses who had high commitment towards work had higher professional turnover intention. Nonetheless, characteristics of NPE play major role in retaining nurses in the profession. Organisational support particularly among the managers was revealed as significant predictor for intention to quit profession with odds ratio of 1.33 (95%CI: 1.09 - 1.64).

Interestingly, professional turnover intention was investigated through qualitative research approach. Alilu, Zamanzadeh, Fooladi, Valizadeh, and

Habibzadeh (2016) investigated professional turnover intention among 16 Iranian nurses who were working in university hospitals. The study targeted on degree holder nurses who had intention of exiting nursing or already left nursing at ward level. One-to-one interview was conducted and the data were analysed using content analysis method. The study revealed four themes of professional turnover intention. The first theme was related to the physician-nurse collegiality and relationship among patients and colleagues. Respondents expressed the frustration of being single out by superiors (doctors and managers), patients, and colleagues which led to low self-esteem and conflict among staff. The second theme highlighted was related to career progression. Respondents felt discouraged as the nursing career path was not charted clearly and lack of intrinsic motivation. The third theme emerged was on work related stress. The overwhelming of workload, lack of staffing, and frequent shift duties had triggered the respondents to leave and seriously thought of quitting nursing. The fourth theme was related to dilemma experienced by the respondents. Majority of the respondents had voiced out their concerns over work situations which may lead to compromise patient safety. The fear of violation code of conduct and involve in medico-legal issues had greatly influenced respondents to exit nursing profession.

In general, the European literature had testified that nurses' professional turnover intention was relatively lower compared with other forms of turnover intention. Nonetheless, the index of professional turnover intention was observed to be slightly intensified over the years. In contrast with the Europe region, nurses' professional turnover intention studies were not as extensively been investigated among the Asian countries. Nonetheless, few countries had realised the gaps and the needs to address the escalating of nurses' professional withdrawal situation. Thus, few scholars had initiated professional turnover intention studies in the Asian countries

such as investigations among the Chinese, Taiwanese, and Japanese nurses (Li et al., 2010; Lin, Chiang, & Chen, 2011; Lee et al., 2015; Ohue et al., 2011; Yamaguchi et al., 2016).

In China, one of the largest professional turnover intention studies was investigated by Li et al. (2010). The authors collaborated with the research team of NEXT-study and replicated the one-year longitudinal investigation among 3088 Chinese nurses. The study found an inclination of professional turnover intention among the respondents after one-year duration. The proportion of nurses which had developed the turnover intention was approximately 14%. In the preliminary phase, these respondents had specified that they did not have any intent to quit profession. Similarly, to the rationale pointed out in the European studies, working conditions, nurses' commitment and satisfaction towards workplace had been found to be predicting professional turnover intention.

In Taiwan, professional turnover intention was investigated through three separate studies (Lee et al. 2015; Lin et al., 2011; Lu et al., 2002). The earliest investigation was conducted by Lu et al. (2002) using 2250 Taiwanese nurses. In the study, the respondents were asked to rate their agreement towards professional turnover intention on a four-point scale with the higher score reflected greater intent to quit profession. Henceforth, the professional turnover intention was found to be at moderate with a mean value of 2.59 and personal characteristics were found to be predictive factors of intent to quit nursing. Furthermore, the analysis revealed that single nurses with higher educational status were more probable to quit nursing profession.

On the other hand, Lin et al. (2011) and Lee et al. (2015) investigated professional turnover intention among 535 and 1283 nurses respectively. Both studies

revealed escalating findings whereby Lin et al. (2011) and Lee et al. (2015) reported 49% and 59% of professional turnover intention. Furthermore, Lee et al. (2015) testified that nurses who were not married and practicing in specialty divisions were found to have lower professional turnover intention. Both studies agreed that the quality of nursing working conditions influenced significantly towards intent to quit nursing. On the other hand, Lee et al. (2015) rationalised the high proportion of professional turnover intention due to intrinsic motivators (such as employer's acknowledgement and appreciation) and work-life balance dimension.

In Japan, Ohue et al. (2011) investigated professional turnover intention among 336 newly qualified nurses through survey method. The analysis revealed approximately 21% of respondents had specified intent to quit profession. The findings of the investigation were congruent with a past study conducted by Flinkman et al. (2008) which also targeted on novice nurses. Both the studies raised serious concerns over the projected tendency or early career exit among the nurses. Timely and effective interventions were required to counter intervene the phenomenon. Furthermore, Yamaguchi et al. (2016) investigated professional turnover intention among the Japanese nurses using a cross-sectional survey method. The study found that hospital nurses' professional turnover intention ($M = 1.7$, $SD = .8$) was the highest among the other healthcare facilities such as home healthcare ($M = 1.4$, $SD = .6$), and nursing home ($M = 1.5$, $SD = .7$). Furthermore, work intereference with family was found to have significant influenced on professional turnover intention among the hospital nurses.

In addition, the findings of the Asian studies particularly among the Taiwan nurses revealed serious professional turnover intention. There were numerous reasons that could lead to the phenomenon. One of the significant reasons could be related to

the Chinese culture in which nursing profession was linked with female-gendered. Henceforth, women were the dominant workforce in the nursing discipline. Furthermore, in view of the huge responsibilities of Chinese women such as taking up the roles as daughters, wives, daughter-in-laws, and mothers, women nurses were tended to have the thought of leaving their profession.

In summary, the proportion of professional turnover intention was rather diverse. In addition, consistent socio-demographic profile findings were revealed particularly in the aspect of nurses' marital status. Single nurses were found to have higher intention to exit nursing. Moreover, past studies had attested that professional withdrawal tendency was related to professional working environment, cultural aspect, influence of work-family matters, and commitment (particularly professional commitment). Nonetheless, majority of the countries had revealed relatively lower proportion of professional turnover intention. However, Asian countries particularly among the Chinese population had reported high tendency of professional withdrawal. Nonetheless, a literature searches for professional turnover intention studies been investigated among the Malaysian nurses revealed none. Hence, it was sensible and appropriate for the current study to investigate professional turnover intention among the Malaysian nurse population. The subsequent section would concentrate on the past studies which had integrated the various forms of turnover intention in their investigations.

Comparison across the different forms of turnover intention. In general, there were two types of turnover intention studies: individualistic and holistic. Individualistic turnover intention studies were referring to studies which were focused on single type of turnover intention. For example, inter-organisational turnover intention was the one and only form of turnover intention variable being explored in

the studies conducted by Choi et al. (2013) and Ramoo et al. (2013). On the other hand, holistic turnover intention studies were referring to studies that examine turnover intention at various levels such as unit, organisation, country, and profession. The trend analysis of the literature revealed that the current turnover intention studies were relatively more holistic and comprehensive in which studies started to explored the numerous forms of turnover intention (intra-organisational, inter-organisational, country, and profession) through multi-level and comparative analyses (Heinen et al., 2013; Hinno et al., 2012; Simon et al., 2010). Furthermore, longitudinal investigations were included to observe the change of turnover intention over a stipulated duration and effects of relevant variables (Derycke et al., 2012; Li et al., 2010; Kutney-Lee et al., 2013).

In this section, holistic studies were elaborated and discussed. The literature search yielded numerous turnover intention studies which used the holistic approach of investigation. The studies consisted of two-combination (inter-organisational and professional turnover intention) and three-combination (intra-organisational, inter-organisational, and professional turnover intention).

Two-combination studies. Two-combination studies were found to be more popular than three-combination studies. Inter-organisational and professional turnover intention was the focus of two-combination study. In this section, six two-combination studies were identified and appraised.

The first study was by Hasselhorn et al. (2003) through the NEXT-study. In the NEXT-study, professional turnover intention was the main aim of the investigation. Nonetheless, inter-organisational turnover intention data was also collected during the course of the investigation. Thus, numerous scholars had extended the study and employed secondary data analysis to further investigate the

link between the two distinctive types of turnover intention. Simon et al. (2010) was one of the scholars utilised the NEXT-study for the investigation of specific determinants for inter-organisational and professional turnover intention. The study engaged hierarchical regression method for the analysis. The analysis revealed that age and level of burnout were significant predictors for both of the turnover intentions. Nonetheless, organisational related features such as leaders' capability were significant determinant for inter-organisational turnover intention. On the other hand, personal related features such as marital status and time balance between work-life were identified as the specific determinants for professional turnover intention. In general, the study found that the proportion for professional turnover intention (18%) was slightly higher than inter-organisational turnover intention (15%) among the nurses in Germany. Next, Flinkman et al. (2008) also investigated the two-combination through secondary analysis of the data from NEXT-study which targeted on young nurses in Finland. In contrast with Simon et al. (2010), the analysis revealed that inter-organisational turnover intention (37%) was more common than professional turnover intention (26%).

In addition, similarly to Hasselhorn et al. (2003), the main aim of Heinen et al. (2013) was to ascertain professional turnover intention among the nurses in the Europe region. Nonetheless, data pertaining to inter-organisational turnover intention was also collected. In general, inter-organisational turnover intention (33%) was found to be higher than professional turnover intention (9%). Furthermore, an association between the two types of turnover intentions revealed that the countries with higher proportion of inter-organisational turnover intention tended to displayed higher proportion of professional turnover intention. For example, nurses in the United Kingdom and Finland were found to have the highest proportion of

professional turnover intention. Nonetheless, both countries were also found to display comparatively high proportion of professional turnover intention.

In a separate study, Zurmehly, Martin, and Fitzpatrick (2009) also investigated on the two-combination of turnover intentions (inter-organisational and professional turnover intention). The investigation was targeted among the nurses in the United States. A four-point measurement scale was adopted by Zurmehly et al. (2009) in which the higher score reflected higher intent of quitting position and work place. The findings revealed no significant difference in terms of the intent for professional turnover ($M = 3.00$, $SD = 1.33$) and inter-organisational ($M = 2.97$, $SD = .75$). Both turnover intentions revealed more than moderate level of turnover intent.

In the Asia region, two-combination studies were not uncommon. The studies had been investigated among the Taiwan nurses (Lin et al., 2011; Lu et al., 2002). In the earlier studies conducted by Lu et al. (2002), both types of turnover intentions revealed insignificant difference in which the mean values for inter-organisational and professional turnover intention were 2.67 ($SD = .75$) and 2.59 ($SD = .80$) respectively on a four-point scale (the higher score meant greater turnover intent). In addition, the analysis revealed significant positive correlation between inter-organisational and professional turnover intention ($r = .60$, $p < .01$). In another words, nurses with higher intention to quit current work would also have higher intention to quit nursing. Furthermore, nurses who were younger in age, earned lower income and single tended to have higher turnover intention. Conversely, nurses with higher educational attainment tended to have lower turnover intention.

Nonetheless, distinctive change was observed in the recent study by Lin et al. (2011). It was reported that the Taiwan nurses had somewhat developed a higher degree of professional turnover intention. Similar with Simon et al. (2010), the study

reported that the proportion for professional turnover intention (49%) was comparatively higher than inter-organisational turnover intention (19%).

Three-combination studies. Three-combination studies were also gaining popularity and its significance was observed in providing more comprehensive practical implications. Intra-organisational, inter-organisational and professional turnover intentions were commonly the focus of three-combination study (Derycke et al., 2012; Hinno et al., 2011, Lee et al. 2015; Ohue et al., 2011). Nonetheless, some scholars also investigated the three-combination studies through inter-organisational, country, and professional turnover intentions (Gurková et al., 2013). In this section, five three-combination studies were identified and appraised.

The first study was by Derycke et al. (2012) who investigated the change of intra-organisational, inter-organisational and professional turnover intention among the nurses in Belgium through secondary data analysis of the NEXT-study. The analysis revealed inter-organisational turnover intention (10%) was the highest proportion while, intra-organisational turnover intention (6%) was the lowest proportion. Henceforth, the findings were consistent with studies by Galletta et al. (2011), and Galletta et al. (2013) which reported low extent and proportion of intra-organisational turnover intention. Nonetheless, findings related to inter-organisational turnover intention was congruent with majority of the study which affirmed that inter-organisational was somewhat the highest type of turnover intention across the distinctive types of turnover intention. Furthermore, the study testified that individual perception towards their work capability (in terms of physical fitness) was found to have significant influence on the three different types of turnover intentions over duration of one year.

Interestingly, Hinno et al. (2012) found diverse results from the Finnish and Dutch nurses. In regards to Finnish nurses, intra-organisational turnover intention (64%) was reported to be the highest while; professional turnover intention (56%) was reported the lowest. In contrast, intention for professional withdrawal (58%) was reported as the highest by the Netherlands nurses while, intra-organisational turnover intention (44%) was indicated the lowest. Moreover, insignificant difference was observed in terms of professional turnover intention between the Finnish and Dutch nurses. Both countries revealed relatively high proportion for professional turnover intention. Nonetheless, combination results were observed among the Dutch nurses in which studies by Estryn-Behar et al. (2007) and Heinen et al. (2013) indicated low level of professional withdrawal intention. Hinno et al. (2012) justified the rationale for the significant difference on the turnover intention was related to the practice environment and staffing issues in the hospitals and profession. Hospitals and nurses which were adequately supported were found to have lower turnover intention.

In Asian countries, three-combination studies were investigated by Lee et al. (2015) and Ohue et al. (2011) among the Taiwanese and Japanese nurses respectively. In Taiwan, Lee et al. (2015) investigated the three types of turnover intentions through cross-sectional survey method. In contrast with majority of the former studies, Lee et al. (2015) reported relatively interesting results. The study revealed that the respondents were in general displayed high proportion of turnover intention across the three types of turnover intentions: intra-organisational (45%), inter-organisational (52%), and professional turnover intention (59%). The extent of turnover intentions was gauge through a five-point scale with the higher score reflected high intent. Hence, the extent of turnover intentions was congruent with the proportions in which all the mean values were exceeded the midpoint of the scale which reflected above

moderate turnover intent: intra-organisational (M = 2.63, SD =1.23), inter-organisational (M = 2.83, SD = 1.17), and professional turnover intention (M = 2.94, SD = 1.14). In summary, professional turnover intention was found to be the highest among the other turnover intentions.

On the other hand, the study by Ohue et al. (2011) among the Japanese nurses revealed otherwise. It was found that less than a quarter (21%) of the respondents specified professional turnover intention Nonetheless, the sum proportion for both intra-organisational and inter-organisational turnover intention was at 28%. Additionally, majority of the respondents (46%) had denoted their intent to remain in the nursing profession. The relatively low proportion of professional turnover intention could be related to the sense of affection and loyalty towards profession which was inbuilt in the Japanese culture.

Next, Gurková et al. (2013) investigated the three-combination study in a slightly different manner. In the study, Gurková et al. (2013) replaced intra-organisational turnover intention with country turnover intention. In the Slovak and Czech Republic, nurse migration was a serious phenomenon. Thus, it was appropriate and necessary for the comparative investigation which includes country turnover intention. In the study, the proportion of inter-organisational, country, and professional turnover intention among the Slovak and Czech nurses was reported as 46%, 28%, and 29% respectively. It was evident that inter-organisational turnover intention predominating the turnover intention. Furthermore, correlation analyses among the different forms of turnover intention revealed significant associations. For instance, country turnover intention was positively correlated with professional turnover intention (r = .32, p < .01), and inter-organisational turnover intention (r = .34, p < .01). Nonetheless, a comparative analysis revealed that there was significant

difference in terms of turnover intention between the two Republics. The proportion of turnover intentions for nurses in the Slovak Republic was reported as inter-organisational (24%), country (20%), and professional turnover intention (16%) while, the Czech nurses was reported as inter-organisational (21%), country (7%), and professional turnover intention (13%).

It can be concluded that turnover intentions among the Slovak nurses were comparatively consistent across the three types of turnover intentions. Nonetheless, that was not the case for Czech nurses in which country turnover intention was significantly lower compared with other forms of turnover intentions. The rationale that could lead to the difference was related to the diversity of working conditions and job satisfaction among the nurses as reported by Gurková et al. (2013). Nonetheless, the findings were congruent with studies by Derycke et al. (2012) and Simon et al. (2010) in which inter-organisational turnover intention was reported to be higher than professional turnover intention.

In summary, majority of the combination studies revealed that inter-organisational turnover intention was the highest in terms of proportion as well as degree of intention. Conversely, few studies had proven otherwise with professional turnover intention emerged as higher than inter-organisational turnover intention. Furthermore, significant relationships were observed among the distinctive types of turnover intentions. Additionally, the literature affirmed that distinctive sets of determinants were found to be predicting the diversity of the turnover intentions. Nonetheless, a literature searches for similar studies investigated among the Malaysian studies revealed none. Thus, it was timely and appropriate for the current study to investigate the combination of turnover intention among the Malaysian nurse

population. In addition, the focus of the study was on four-combination: intra-organisational, inter-organisational, country, and professional turnover intention.

Nurses' exit choice. Nurses' exit choice was referring to the future workplace, destination, or occupation/ career a nurse would pursue after leaving the current employer and/or profession. The literature search revealed that published studies pertaining to nurses' exit choice or destination was rather uncommon. Nevertheless, few recent studies have explored exit choice in studies pertaining to nurses' turnover intention. Henceforth, four past studies on nurses' exit choice were identified for appraised in the subsequent section.

In the Netherland, Homburg et al. (2013) investigated nurses' exit choice among 318 nurses. The instrument of the study was developed by the authors and pre-tested accordingly. In the study, the respondents were asked to state their choices after leaving the current workplace. The choices were ranged between nursing related options and vice versa. The response format for the study was a four-point scale with the lowest score reflected less likelihood of selecting the option. Thus, the study revealed that working in another hospital (inter-organisational), and another department within the same organisation (intra-organisational) was the most preferred exit choice. Nonetheless, community nursing practice and entrepreneurship were found to be the least preferred exit choice. Furthermore, the analysis revealed extrinsic motivators such as salary and remuneration were the predictors for the choice of working in another department and career. In addition, nurses' selection to work in other jobs which include entrepreneurship and community work was related to nurse managers' support and leadership. Nonetheless, the choices of community work and entrepreneurship were greatly influenced by factors related to work-life management.

In a separate study, Gök and Kocaman (2011) investigated the nurses' exit choice after leaving nursing profession among 134 Turkish nurses. Snowball sampling was used in the study to gauge the exit choice among the nurses who had left the nursing profession. In the study, respondents were required to respond to a set of structured questionnaire. Furthermore, individual interview was employed to gain additional information. The study reported that exceeded half of the respondents had pursued additional academic programme which was non-nursing related education/qualifications (69%) and worked in non-nursing related occupation (51%). Furthermore, almost half of the participants chose to remain within the healthcare sector but engaged in other health-related disciplines such as physiotherapy, social worker, medical doctor, health manager, and psychology. The study also highlighted that the main reason for nurses to leave the nursing profession was related to working conditions and personal issues such as family commitments and choice of career.

On the other hand, working abroad or practicing as international nurses had also found to be the exit choice among nurses in some countries. For example: Lansiquot et al. (2012) reported that the nurses in the Caribbean countries tended to have relatively high preference in working abroad. On the other hand, similar study had been conducted by El-Jardali et al. (2011) among the nurses in the Lebanon. The findings were congruent with the findings reported by Lansiquot et al. (2012) in which practicing nursing in another country was found to be the preferred exit choice. In addition, former studies by Flinkman et al. (2008) and Gurková et al. (2013) investigated the exit choice of nurses' working internationally. Both of the studies revealed relatively slightly lower than moderate proportion of choosing working abroad as the exit choice such as Flinkman et al. (2008) and Gurková et al. (2013), reported approximately 37% and 28% of respondents had chosen their exit choice as

practicing nursing in another country. The proportion was comparatively lower than the findings reported by Lansiquot et al. (2012) and El-Jardali et al. (2011).

In summary, studies on nurses' exit choice were relatively contemporary. Nonetheless, majority of the past studies reported that nursing related exit choices such as working as nurses in another unit/ ward, hospital or country were the more preferred choice than non-nursing related choice such as entrepreneurship. However, as reported by Gök and Kocaman (2011), the chances for nurses to remain in the profession was rather limited if the nurses had decided to quit nursing profession. Henceforth, early identification nurses' exit choice was crucial to counter intervene nurses' from withdrawing from the profession entirely. Similarly, a literature search for similar studies investigated in Malaysia revealed none. Thus, exit choice was added into the investigation for better comprehension of the Malaysian nurses' future direction. Next, the subsequent section focused on the influence of nurses' socio-demographic variables on turnover intention.

Nurses' socio-demographic variables on turnover intention. A search in the existing literature revealed that nurses' turnover intention was predominantly influenced by socio-demographic and work/ organisational related variables. Furthermore, former studies reported that different forms of turnover intention were influenced by different sets of socio-demographic variables. For examples, a multi-level analysis by Simon et al. (2010) found that the predictors for organisational turnover intention differ from professional turnover intention. Professional turnover intention was linked with personal factors while, organisational turnover intention was linked with organisational factors (Simon et al., 2010). The following section discussed on the association of nurses' individual-related features (such as age, nursing experience, organisational tenure, educational level, nursing specialisation,

marital status, dependent responsibility, educational sponsorship, wage, and working area) on turnover intention.

Nurses' age. Nurses' age had been attested as the most consistent predictor for all the different forms of turnover intention. In regards to intra-organisational turnover intention, Lee et al. (2015) reported that intention to quit unit was higher among nurses who were younger (below 30 years old). Conversely, in terms of inter-organisational turnover intention, majority of the studies reported higher intention of quitting organisation among the nurses who were more mature particularly nurses aged between 31 and 40 years old (Gurková et al., 2013; Lee et al., 2014; Leone et al., 2015). Nonetheless, few studies had also reported contrasting results for examples: Liu et al. (2012) and Ramoo et al. (2013) revealed younger nurses who aged below 30 years old were more probable of leaving the organisation. Nevertheless, contrasting findings were reported for country turnover intention. El-Jardali et al. (2011) and Lansiquot et al. (2012) testified that nurses who were younger (below 30 years old) were more likely to exit country. However, the findings were not consistent with Gurková et al. (2013) in which the investigation conducted among the Slovak and Czech nurses revealed vice versa. In contrast, nurses aged between 31 and 40 years old were more probable to exit country.

Additionally, scholars also explored the association of nurses' age with professional turnover intention. Hasselhorn et al. (2003) and Gurková et al. (2013) reported that nurses aged between 30 and 40 had higher tendency to quit nursing. Heinen et al. (2013) echoed the findings in which the study reported that older nurses were more probable to exit nursing profession. Mertens (1997 cited in Simon et al., 2010) explained that the occurrence of this phenomenon could be related to the development and growth of employee in their careers leading to higher salaries and

lower career mobility – which also indirectly lower turnover intention and turnover. In summary, combination findings were revealed across the different forms of turnover intention. In general, younger nurses were keen to quit unit, organisation and country. Nonetheless, mature nurses who aged above 30 years old were more probable to quit organisation and profession.

Nursing experience. Nurses' nursing experience had been emerged as another significant predictor for all the different forms of turnover intention. In regards to intra-organisational turnover intention, Lee et al. (2015) reported that nurses with nursing experience of two years or less; and between six and ten years were reported to had higher intra-organisational turnover intention. On the other hand, relatively extreme findings were reported for inter-organisational turnover intention. Gurková et al. (2013) reported that nurses with nursing experience of less than five years and more than 26 years were found to have significant high intention to quit organisation. Nonetheless, contrasting findings on inter-organisational turnover intention were reported among the Asian nurses. Ramoo et al. (2013) and Lee et al. (2014) reported that nurses with nursing experience of six years or below were tended to quit organisation.

On the other hand, similarly to inter-organisational turnover intention, nurses with nursing experience of less than five years and more than 26 years were also found to have higher intention of exiting country (Gurková et al., 2013). The findings of the study somewhat supported the findings of El-Jardali et al. (2011) in which country turnover intention was significantly higher among the nurses with less than six years nursing experience. Additionally, in regards to professional turnover intention, Gurková et al. (2013) reported slightly contradictory findings in which high professional turnover intention was revealed among the cohort of nurses with less than

five years and more than 26 years. In summary, extreme findings were revealed across the different forms of turnover intention. In general, nurses with relatively short nursing experience (less than ten years) were tended to quit unit, organisation, country, and profession. Nonetheless, nurses with comparatively longer duration of nursing service were more probable to quit organisation, country, and profession.

Organisational tenure. Organisational tenure is referring to the duration of an employee service in an organisation. Past studies had revealed that organisational tenure was significant predictor for inter-organisational turnover intention (Choi et al., 2013; Ganz & Toren, 2014). Furthermore, Choi et al. (2013) reported that nurses who had longer organisational tenure tended to have less satisfaction towards work place which led to the higher intention of quitting organisation. Nonetheless, contrasting results were reported by Lansiquot et al. (2012) which revealed insignificant influenced of organisational tenure on country turnover intention.

Educational level and nursing specialisation. In terms of educational level (i.e., diploma, undergraduate, and postgraduate levels), the literature revealed inconsistencies in terms of association with turnover intention. Furthermore, recent studies had included the investigation of nursing specialization. In this context, nursing specialisation was referring to additional qualification on clinical specialisation such as midwifery, intensive care, coronary care, paediatric and oncology nursing.

In the aspect of intra-organisational turnover intention, lower educational attainment was associated with high degree of intention to quit unit (Lee et al., 2015). Nonetheless, combination results were observed for inter-organisational turnover intention. Leone et al. (2015) reported that nurses with additional qualification like nursing specialization were less probable to quit organisation. In addition, nurses with

lower educational attainment were found to have greater intention of quitting organisation (Coetzee et al., 2013; Lee et al., 2015; Ramoo et al., 2013). However, the findings reported by Lu et al. (2002) were not consistent with recent studies in which the study revealed greater inter-organisational turnover intention among the nurses with higher educational attainment (Lu et al., 2002). Nonetheless, educational status did not influence nurses' country turnover intention.

In regards to professional turnover intention, Nogueras (2006) reported that nurses with higher nursing education level were more probable to have higher professional commitment and therefore, decreased the likelihood of professional turnover. The findings were supported by Nooney, Unruh, and Yore (2010) in which nurses' with master's degree or higher qualifications were found to have a higher likelihood to remain in the profession. However, Lu et al. (2002) and Hasselhorn et al. (2013) reported otherwise whereby higher educational level was associated with greater professional turnover intention. In summary, educational status plays significant role in determining nurses' turnover intention. The literature clearly highlighted that nurses with lower educational tended to have high intention to quit unit, organisation, and profession. Nonetheless, contrasting results were also revealed in which nurses with higher qualification were more probable to quit organisation and profession. The rationale to the intention could be related to the existence of job options which were more attractive and promising.

Marital status and dependent responsibilities. In addition, marital status which includes dependent responsibilities had been found to be significant predictors across the different forms of turnover intention except for intra-organisational turnover intention. In general, Nooney et al. (2010) and Simon et al. (2010) pointed out that married nurses with dependent responsibilities such as caring for young

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children or adults at home were more likely to have intent of turnover. Hence, in regards to inter-organisational turnover intention, nurses who were not married had greater intent to quit organisation (Lee et al. 2015).

Furthermore, nurses who were not married also tended to have greater intention of exiting country (El-Jardali et al., 2011; Gurková et al., 2013) and profession (Gurková et al., 2013; Lu et al., 2002). Interestingly, Lee et al. (2015) reported otherwise whereby Taiwanese single nurses tended to have lower professional turnover intention. In summary, marital status was revealed as significant predictor for turnover intention. Majority of the studies supported the findings where single nurses were more probable to quit organisation, country, and profession. Nonetheless, few studies have proven vice versa.

Educational sponsorship, wage, working area and types of employment. Studies exploring the role of educational sponsorship were relatively scarce. The literature review yielded one study which had included the variable in the investigation. Tei-Tominaga (2013) reported that nurses without an educational sponsorship contract were more likely to have inter-organisational turnover intention. Similarly, wages were uncommonly being investigated due to the sensitivity of the variable. Nevertheless, few former studies had reported significant negative correlation between intent of professional turnover and wages (Flinkman et al., 2008; Lu et al., 2002). Interestingly, contrasting results were reported by Gurkova et al. (2013) whereby wages revealed insignificant influence on the different forms of turnover intention. The authors proposed that the rationale for the contrasting results could be related to differences of competency among the nurses.

Nonetheless, working areas (types of units or hospitals) and types of employment were somewhat emerged as the predictors of turnover intention in few of the more recent studies. In regards to types of units, Lee et al. (2015) reported that nurses who were working in the general wards tended to have high degree of intent to quit unit, organisation, and profession. On the other hand, in regards to types of hospitals, Coetzee et al. (2013) reported that nurses in the government hospitals had greater inter-organisational turnover intention. However, that was not the case for Lee et al. (2014) who investigated the variable among the Korean nurses. The authors reported that nurses in the private hospitals tended to have greater intention of quitting organisation.

In addition, in terms of types of employment, nurses with full-time employment status were tended to have lower intra-organisational, inter-organisational, and professional turnover intention (Galletta et al., 2013; Heinen et al., 2013; Liu et al., 2012). In summary, educational sponsorship, wages, working areas (types of unit and hospitals) and types of employment were significant predictors for all the different forms of turnover intention. The literature pointed out that educational sponsorship was important predictor in view of more students were obtaining some forms of financial support for their education. On the other hand, working areas and types of employment were found to contribute towards the different forms of turnover intention except country turnover intention. The subsequent section would discuss on the past studies pertaining to NPE and turnover intention.

Nursing practice environment. A favourable NPE was implied as nurses' involvement in hospital affairs and provision to deliver highest quality of care through adequate nurse staffing, efficient nursing leadership and management, as well as collegial relationship between nurses and physician (Lake, 2002). Numerous

measures had been constructed to gauge nurses' perception towards NPE. The literature review yielded NWI-R (Aiken & Patrician, 2000) and PES-NWI (Lake, 2002) were the two most broadly and commonly used measures. Both the measures had been adopted, modified and translated accordingly to enhance the suitability and applicability across nurses worldwide. NWI-R had been modified and translated into Italian, Frence, and Arabic versions (Galletta et al., 2011; El-Jardali et al., 2011). Similarly, PES-NWI were modified and translated into Chinese and Japanese versions (Anzai, Douglas, & Bonner, 2014; Chiang & Lin, 2009; Liu et al., 2012; Zhang et al., 2014). Both measures were testified as parsimonious scale of measurement to gauge nurses' perception towards NPE (Chiang & Lin, 2009; Warshawsky & Havens, 2011). In this literature review, past NPE studies which adopted NWI-R and PES-NWI as the study instrument were elaborated and discussed. In general, nurses' perception towards NPE was extensively been investigated worldwide. Thus, for the purpose of the literature review, thirteen past studies were identified and appraised in the subsequent section.

Firstly, the review discussed on a large international project initiated in many countries to investigate nursing working conditions and projection on the future nursing workforce. The project was known as "Registered Nurses Forecasting" (RN4CAST). Heinen et al. (2013), Leone et al. (2015), and Coetzee et al. (2013) had adopted and utilised the RN4CAST project to investigate the status of NPE among the hospitals of the respective countries. The three studies adopted PES-NWI as the measure to gauge nurses' perception towards NPE. Firstly, Heinen et al. (2013) reported that two NPE areas were of great concern among the ten Europe countries: nurses' autonomy/ organisational involvement ($M = 1.33$, $SD = .56$) and staffing ($M = 2.19$, $SD = .66$). The staffing issue was most significant among the nurses in Poland

who had rated a mean value of 1.86 (SD = .67) and followed by nurses in Germany and Ireland with mean value of 2.02 (SD = .61) and 2.04 (SD = .69) respectively. Conversely, nurses in Spain were most concerned over matters related to nurses' autonomy/ organisational involvement with the lowest index across the ten countries (M = 2.00, SD = .54). Hence, both of the areas were rated the least favourable among the European nurses. Nonetheless, areas related to nurse leadership and provision of quality care were rated as the most favourable among the respondents with mean values of 2.72 (SD = .66) and 2.78 (SD = .50) respectively.

On the other hand, slightly different results were reported by Leone et al. (2015) in which the Portuguese nurses indicated special concern over area of career advancement opportunity with a mean value of 2.00 (SD = .21). In addition, approximately 91% of the participants indicated absence of career progression opportunity. Furthermore, age and nursing specialty were found to have significant influence on nurses' satisfaction towards level of career profession opportunity. Nonetheless, staffing matters remain as the most concerned NPE areas with mean values of 1.85 (SD = .21). Otherwise, compared with the findings reported by Heinen et al. (2013) the study found relatively higher mean values for areas related to leadership capability (M = 2.85, SD = .20) and provision of quality care (M = 2.83, SD = .18).

Nonetheless, Coetzee et al. (2013) investigated the perception of NPE among the South African nurses who were working in the government and private hospitals. In general, exceeded half (52%) of the respondents rated their NPE as unfavourable NPE. A comparison between the nurses in the government and private hospitals revealed that the government nurses had a more negative NPE perception than the private nurses. It was reported that 70% of the government hospital's nurses had rated

their NPE as fair or unfavourable. Nonetheless, the proportion of unfavourable NPE rating was significant lower among the private nurses with proportion of 40%. In addition, the analysis on the PES-NWI subscales revealed that all the five subscales exceeded the mean value of 2.5 which reflected presence of support towards the respective NPE areas. However, areas related to staffing was rated the least and lowered than the acceptable cut-off point. The mean value for the staffing subscale was at 2.28. The findings were relatively consistent with the findings of other European studies.

On the other hand, the American nurses' perception towards NPE were extensively been investigated since the earlier decades until to-date. Three American NPE studies were identified and discussed. In general, all the identified studies had adopted PES-NWI as the scale of measurement. The identified studies had investigated the perception of NPE across nurses from various cohorts, types of hospitals (i.e., magnet versus non-magnet hospitals) and disciplines such as medical-surgical, critical care and oncology (Eaton-Spiva, Buitrago, & Trotter, 2010; Liou & Grobe, 2008; Shang, Friese, Wu, & Aiken, 2013).

Eaton-Spiva et al. (2010) investigated the perception of NPE among the nurses who were working in the magnet hospitals. Magnet hospitals were reputable as a good nursing work place. The study was conducted in six units of different specialties (combination of general and critical care units). In general, the nurses perceived positively towards their NPE ($M = 2.81$, $SD = .50$). Furthermore, all the subscales were reported to have exceeded mean values of 2.5 which reflected favourable NPE of each subscale. In addition, the subscale related to nurse managerial and leadership capability was found to be the most favourable across all the units with an average mean value of 3.21 ($SD = .56$). Surprisingly and contrasting with the findings reported

by the European studies, collegiality between physicians and nurses were rated the lowest among the subscales with a mean value of 2.54 ($SD = .66$). The authors pointed out that the relatively high mean values found in the study could be related to the increased degree of empowerment been practiced among the magnet hospitals in the United States. The managers of the units tended to empower nurses with some form of autonomy when dealing with professional practice. Hence, the opportunity of being involvement and professional recognition may have been boosted and thus, NPE was perceived as favourable.

Furthermore, Liou and Grobe (2008) investigated the perception of NPE among the Asian nurses who were working in the United States hospitals. The authors had revised the response format of the scale by standardising into five-point scale. Hence, approximately 80% of the respondents agreed that their NPE was favourable with a mean value of 3.45 ($SD = .86$). Moreover, provision of quality care and nurse manager support and leadership revealed as the most satisfied NPE across the subscales with mean values of 3.79 ($SD= .79$) and 3.53 ($SD = 1.20$) respectively. Nevertheless, area related to staffing was found to be the greatest concerned among the respondents with a mean value of 2.79 ($SD = 1.09$).

On the other hand, Shang et al. (2013) investigated the perception of NPE among the American nurses working in the medical-surgical and oncology units through secondary data analysis. The analysis revealed that oncology nurses had a more positive perception towards NPE than the nurses employed in the medical-surgical units. There was approximately 50% of the respondents from the oncology unit specified favourable NPE compared with 42% among the respondents from the medical-surgical units. In addition, the oncology nurses perceived all areas of NPE as favourable. However, the medical-surgical nurses had unfavourable perception

towards staffing aspect with a mean value of 2.37 (SD = .77). Nonetheless, nurses from both units agreed that they were satisfied with the area on provision of quality care with mean values of 3.07 (SD = .55) among the nurses in the oncology units and 3.02 (SD = .54) among the nurses in the medical-surgical units.

Conversely, Lansiquot et al. (2012) investigated the perception of NPE among the nurses in the Caribbean countries using the PES-NWI. In general, the investigation revealed unfavourable NPE (M = 2.30, SD = .40). The investigation revealed three NPE subscales were rated as unfavourable: nurse leadership capability (M = 2.30, SD = .59), staffing (M = 1.90, SD = .62), and autonomy/ organisational involvement (M = 2.10, SD = .53). The findings were somewhat congruent with findings reported by Heinen et al. (2013) and Leone et al. (2015). Nevertheless, similar with Heinen et al. (2013), collegiality between doctors and nurses were rated the most satisfied among the Caribbean nurses with a mean value of 2.60 (SD = .62).

Furthermore, Ganz and Toren (2014) investigated the perception of NPE among the Israeli nurses using PES-NWI. The study revealed favourable NPE across all the PES-NWI subscales. The respondents were highly satisfied with the manager support and leadership capability (M = 3.00, SD = .58) as well as provision of quality care (M = 2.91, SD = .52). Nonetheless, areas on autonomy/ organisational involvement and physician-nurse relationship were found to be the most concerned areas among the respondents with mean values of 2.61 (SD = .57) and 2.73 (SD = .43). In addition, the subscales analysis revealed that organisational tenure and nursing experience had significant influenced on nurses' perception towards subscale related to staffing and provision of patient care. Nurses who had longer duration of organisational tenure and nursing experience were found to have rated favourably towards staffing and provision of patient care. Furthermore, nurses from different

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hospital locations and sizes were found to have rated the subscale of staffing significantly different. For example: nurses from the central region and large hospitals rated the subscale of staffing the lowest.

On the other hand, perception of NPE was investigated among the Lebanese nurses by El-Jardali et al. (2011) using NWI-R. The study revealed that the respondents perceived their NPE as favourable. The respondents were exceptionally satisfied with the relationship between doctors and nurses ($M = 2.99$, $SD = .60$). Nonetheless, areas on control over nursing practice was rated the least satisfied with a mean value of 2.56 ($SD = .56$). Furthermore, the analysis revealed that as overall, nurses who were not married somewhat had lower ratings across all the subscales in NWI-R except for the subscale on organisational involvement. On the other hand, nurses with higher educational background and nursing experience between three and less than six years tended to rate lesser on subscale related to professional growth. Interestingly, younger nurses (below 30 years old) were found to rate lesser for all subscales except for collegiality between physicians and nurses. Moreover, size of hospitals also revealed as significant predictor towards nurses' perception towards NPE. The study found that nurses in large hospital tended to rate lower for the aspects of control over practice and professional growth compared with those in the smaller hospitals. Additionally, nurses who were working in hospitals with quality recognition were found to have higher rating for autonomy and organisational involvement.

In Asian, nurses' perception towards NPE was also investigated among the nurses in China, Taiwan, Japan, and Malaysia. In China, Liu et al. (2012) and Zhang et al. (2014) had investigated perception of NPE among the hospital nurses across different units such as medical, surgical, and critical care units. PES-NWI was translated into Chinese version for both of the studies. Liu et al., (2012) reported that

approximately 45% of the study units were classified as good NPE while 44% classified as poor NPE. The remaining units were classified as mixed NPE. In general, all the subscales exceeded the minimum cut-off point of 2.5 which reflected favourable NPE. Furthermore, physician-nurse relationship was found to be area that respondents highly satisfied with a mean value of 3.36 (SD = .41). Nonetheless, staffing and autonomy/ organisational involvement were found to be the least satisfied among the subscales with mean values of 2.89 (SD = .38) and 2.94 (SD = .37). In addition, further analysis revealed that perception of NPE differs in terms of nurses' age, years of working experience, educational status.

On the other hand, the study conducted by Zhang et al. (2014) revealed relatively congruent results of Liu et al. (2012). The study found that all of the PES-NWI subscales revealed as favourable in which the mean values ranged between 3.14 and 3.37. Furthermore, physician-nurse relationship was found to be area that respondents highly satisfied with a mean value of 3.50 (SD = .63). Conversely, areas related to staffing and autonomy/ organisational involvement were found to be the least satisfied among the respondents with mean values of 3.14 (SD = .82) and 3.18 (SD = .79) respectively. Nevertheless, in terms of hospital analysis based on NPE classifications, approximately 45% of the hospitals were rated as good NPE while, 43% were rated as poor NPE. The remaining was classified as mixed NPE. Furthermore, nurses' years of working experience, marital status, type of employment (full-time versus contract), working areas, size and location of hospitals were found to have significant influenced on nurses' perception towards NPE.

In addition, perception towards NPE was investigated among 223 Japanese nurses by Anzai et al. (2013) using the Japanese version of PES-NWI. In general, the classification of the Japanese hospitals' NPE was good with four out of five subscales

were rated as favourable. The study found that majority of the respondents were satisfied with the collegial relationship between the doctors and nurses with a mean value of 2.84 ($SD = .44$). However, one area of NPE was rated as unfavourable which was the area related to staffing ($M = 1.94$, $SD = .48$). Furthermore, the perception towards NPE was investigated among the Malaysian nurses. Marzuki et al. (2012) and Marzuki et al. (2013) investigated the perception towards NPE among the nurses in the government university hospitals. Marzuki et al. (2012) revealed that the overall NPE as perceived by the respondents were relatively unfavourable with an overall mean value of 2.44 ($SD = .36$). Furthermore, four out of the five subscales were classified as unfavourable NPE and the subscale related to staffing was the least rated with a mean value of 2.14 ($SD = .49$) as reported by Marzuki et al. (2012). Additionally, the findings were verified through Marzuki, Wichaikhum, and Nantsupawat (2013) report in which approximately 87% of the respondents agreed that staffing was unfavourable in the study hospitals. Nonetheless, Marzuki et al. (2012) stated that provision of quality care was the only subscale perceived as favourable ($M = 2.91$, $SD = .50$). The results were echoed by Marzuki et al. (2013) in which approximately 87% respondents agreed favourable classification for the subscale on provision of quality care. Despite the challenges posed in the working conditions, nurses still feel very self-sufficient towards their basis in delivery patient care.

In summary, the review on past studies found that the NPE areas on provision of patient care with optimum standards and physician-nurse collaborative practice were the two NPE areas that were frequently highly satisfied among the nurses. Majority of the past studies revealed favourable ratings for both the subscales. In contrast, sufficiency of nursing workforce and nurses' autonomy were commonly

reported the least satisfied among the nurses. Interestingly, differences were observed between nurses in the multidisciplinary wards (such as medical or surgical wards) and area of specialties. Past studies reported that nurses in specialty units tended to have positive perceptions towards their practice environment compared with those practising in general wards. On the other hand, nurses who were working in the area of specialty such as critical care frequently rated autonomy and organisational involvement as the least satisfied. The results reflected that the nurses were disappointed towards their organisation in terms of recognition and respecting nursing as an autonomous profession. Despite being qualified as nurses with nursing specialisation, they were still not able to gain the confidence and recognition in contributing towards decision making for hospital matters. In addition, perception towards NPE was also found to differ between public and private hospital nurses. The private hospital nurses were found to be more positive than public hospital nurses in terms of perceptions towards NPE. In addition, the findings pertaining to nurse staffing were comparatively consistent throughout the literature of NPE. Inadequate of staffing has becoming a regular issue of dissatisfaction among nurses which trigger nurses in considering quitting their organisation, country, and profession. The focus of the current study was on the relationship between nurses' perception towards NPE and turnover intention. Hence, the subsequent section would discuss the findings of past studies in relations to nurses' perception towards NPE and turnover intention.

   Relationship between NPE and turnover intention. In general, past studies had affirmed that the quality of NPE was the key determinant in predicting nurses' outcomes such as turnover intention. The literature review pointed out that nurses' perception towards NPE significantly influenced their decision and thought towards

quitting unit, organisation, country, and profession. The subsequent literature review would discuss on the effects of NPE on nurses' turnover intention.

In terms of intra-organisational turnover intention, three studies were identified for the review. Hinno et al. (2012) examined the relationship between nurses' perception towards NPE and intention to quit unit. The study found that organisational support was the significant predictor among the Dutch nurses. On the other hand, Galletta et al. (2013) also investigated the impact of collegiality between physicians and nurses on nurses' intention to quit unit. It was reported that maintaining collegial relationship between the doctors and nurses were crucial for unit-level nursing retention. Nonetheless, the study also included the aspect of commitment in the investigation. Hence, the analysis revealed that physician-nurse collegiality acted as the mediator in the relationship between nurses' commitment and intra-organisational turnover intention. Furthermore, a separate study investigated by Lee et al. (2015) revealed that respondents with high intention to quit unit were more likely to rate lower for the aspect of staff cohesiveness and interaction. The findings were relatively acceptable in view of unit-level cohesiveness which includes good inter-colleagues' relationship is the most crucial aspect for unit retention as reported by Galletta et al. (2013).

On the other hand, studies pertaining to the effects of NPE on inter-organisational turnover intention were relatively common. Five studies were identified for the review. Leone et al. (2015) investigated the effects of NPE on nurses' intention to quit. The study found that issues pertaining to staffing and organisational involvement were the key predictors towards intention to quit. It was reported that respondents with greater intention to quit tended to have least satisfaction towards areas related to staffing and organisational involvement. On the other hand, a

longitudinal investigation led by Kutney-Lee et al. (2013) affirmed the trend of changes between NPE and organisational turnover intention. The investigation was conducted between the year 1999 and 2006 among the 42 000 American nurses. The study reported that there was significant negative correlation between NPE and intent to leave. Furthermore, it was reported that the average turnover intent was reduced by approximately 4% following improvement in practice environment over a period of time. Conversely, nurses who were working in an unfavourable NPE also revealed approximately four percent increase in turnover intention. Thus, the results of the study were supported by Zhang et al. (2014) which reported that the odds of nurses' inter-organisational turnover intention were found to be lowered by 47% in hospitals with favourable NPE compared to those with unfavourable NPE.

Furthermore, Choi, Pang, Cheung, and Wong (2011) conducted a qualitative study among the Hong Kong nurses to examine the influence of NPE on inter-organisational turnover intention. The study found that unfavourable NPE particularly in the aspects of scarce staffing, unhelpful management, and discriminatory employment terms were the reasons for high turnover intention. Furthermore, the results were confirmed through a cross-sectional survey study investigated by Choi et al. (2013). The study found that NPE characteristics especially in the areas of staffing and organisational support were significant predictors of nurses' intention of quitting organisation. Thus, the results of the study provided significant implications to the hospitals particularly in the aspect of continue to strive for NPE excellence in order to retain staff.

In terms of country turnover intention, literature search revealed limited studies. Hence, two studies were identified for the review. A cross-sectional survey conducted by El-Jardali et al. (2011) revealed that country turnover intention was

predicted by opportunity in profession progression, and autonomy in participating hospital affairs. Nurses were more likely to remain in the country when profession progression was available. In addition, nurses who were empowered by the management of the organisation tended to have higher satisfaction and thus, remain in the country. Interestingly, Lansiquot et al. (2012) found contrasting results in which the overall nurses' perception towards NPE was insignificant towards country turnover intention. Nonetheless, PES-NWI items analysis revealed intention to exit country within two years were significantly influenced by the items related to physician-nurse relationship, parallel power of nurse leaders with organisational management, and use of nursing model in care provision. On the other hand, intention to exit country within five years was significantly influenced by the item on spending quality time with patients.

Similarly, with country turnover intention, past studies investigating on the effects of NPE on professional turnover intention were relatively scarce. Thus, three studies were identified for the review. Heinen et al. (2013) revealed that three out of five PES-NWI subscales were significant negatively correlated with professional turnover intention. The subscales were related to nurses' autonomy and organisational involvement; relationship between doctors and nurses; and leadership. Furthermore, the odds ratio analysis revealed that improvement on these NPE areas would significantly reduce professional turnover intention. Additionally, Hinno et al. (2012) reported that professional turnover intention among the nurses in the Netherlands and Finland were significantly influenced by organisational support and sufficiency of resources. Nurses were less probable to exit profession when the hospital provides appropriate support and resources/ staffing towards nursing practice.

On the other hand, the study conducted by Lee et al. (2015) found that intention to exit profession was influenced by certain specific NPE characteristics. The authors reported that respondents with high degree of professional turnover intention tended to rate relatively lower for aspects related to organisational support, professional recognition, provision of quality care, staffing, and work-life balance. It was found that respondents were less probable to leave profession when the organisation provide support towards the provision of quality care and respectful towards nursing profession. Furthermore, respondents valued the importance of having a balance work and life time. Hence, issues related to staffing were found to be significant because it may jeopardise the quality time spent for work and family/ social.

In summary, a favourable NPE is crucial for nurse retention. Past studies have proven that improvement on NPE would lead to change of turnover intention among nurses. Furthermore, different forms of turnover intention were found to be influenced by different sets of NPE characteristics. For example: inter-organisational turnover intention was predominantly influenced by staffing and resources issues. On the other hand, country turnover intention was predicted by career advancement opportunity and provision of quality care. Nevertheless, professional turnover intention was influenced by professionalism aspects such as autonomy/ empowerment, leadership and collegiality between physicians and nurses.

Thus, investigation on the relationship between the quality of NPE and turnover intention would shed lights for hospital management strategic plan. A literature searches for the association between the characteristics of NPE and turnover intention among the Malaysian hospitals and nurses revealed partial investigation. Marzuki et al. (2013) pioneered the NPE investigation across the government teaching

universities. Nonetheless, it was timely to explore the characteristics of NPE among the Malaysian private hospitals and its relationship with nurses' turnover intention. Next, the subsequent section focused on nurses' commitment and it's influenced on turnover intention. The dimension of professional commitment was discussed first and followed by organisational commitment.

Nurses' commitment. In general, there were two types of commitments: professional and organisational commitment. Organisational commitment was more popular among the management scholars. Nonetheless, in view of the uniqueness of nursing as a profession, more and more nursing scholars had been actively investigated on the aspects of professional commitment. Furthermore, the latest trend of nurses'commitment studies had been intergrated the two types of commitments in a single study. Henceforth, the literature review would firstly discuss on professional and organisational commitment studies (i.e., studies which only investigate only one type of commitment variable). Subsequently, the literature review would highlight on integrated commitment studies (i.e., studies which incorporate more than one commitment variable in the studies).

Professional commitment. Lu et al. (2002) was one of the earlier studies which had explored on nurses' professional commitment. The investigation was targeted on Taiwanese nurses and a total of 2197 respondents participated in the study. The analysis found that nurses who were single and earned higher income had significantly higher professional commitment. Interestingly, the findings of the study found that educational level was insignificant towards professional commitment. In addition, the analysis revealed that participants with youngest child aged above three years old tended to have higher professional commitment.

On the other hand, Nogueras (2006) investigated nurses' professional commitment based on the commitment framework proposed by Meyer and Allen (1991) which was known as the three-component commitment. The components of the commitment were affective, normative, and continuance). The investigation was initiated in the United States and the study sample was recruited through a nursing online website and the measure of the study was adopted from Blau (2003). The measure was a 24-item questionnaire called occupational commitment instrument. The analysis of the investigation revealed moderate occupation commitment among the participants. Furthermore, commitment in the aspects of affective and continuance were found to be stronger than normative. The results pointed out that the commitment towards the profession was related to the intrinsic affection of belonging and monetary/ cost factors. In addition, the study reported that older nurses with longer nursing experience tended to have higher professional commitment. Furthemore, nurses who had higher educational attainment were reported to have higher professional commitment. The findings were incompatible with the results found by Lu et al. (2002).

In addition, Teng et al. (2007) also investigated the commitment of 238 Taiwanese nurses towards their profession. In the investigation, the respondents were required to rate their commitment on a seven-point scale with the higher score reflected greater degree of commitment. The analysis revealed approximately 48% of the respondents rated high professional commitment while, 52% indicated otherwise. Furthermore, nurses who were older in age were found to be more committed towards their profession.

Additionally, Van der Heijden, van Dam, and Hasselhorn (2009) also investigated the nurses' professional commitment through the secondary data

obtained from the NEXT-study. Nurses in the Netherlands were the target study population and affective professional commitment was the focus of the study. The scale of measurement was adopted from Meyer et al. (2003). The findings revealed above moderate professional commitment with mean value of 3.98 (SD = .62). Furthermore, similarly with van der Heijden et al. (2009), Simon et al. (2010) analysed the NEXT-study data for the Belgian nurses' professional commitment. The findings revealed that the professional commitment among the participants were at above moderate level with mean value of 3.9 (SD = .85).

In a separate study, Wang, Tao, Ellenbecker, and Liu (2011) investigated professional commitment among 510 Chinese nurses through cross-sectional survey method. The measure of the study was modified from Blau (2003). The measure was translated into Chinese language. In the study, the respondents were asked to rate their responses on a five-point scale with the higher score reflected greater commitment towards profession. The overall results revealed that the participants were moderately committed towards their profession (M = 3.25, SD = .48) with affective commitment rated as the highest (M = 3.45, SD = .70). Furthermore, correlation analyses found that age (r = .09, p < .05) and position (r = .14, p < .001) were significant predictors although relatively weak association with professional commitment. In other word, older nurses with higher position tended to have higher professional commitment. Nonetheless, education status and organisational tenure were insignificant towards professional commitment.

In summary, majority of the past studies revealed a moderate level of professional commitment among the nurses. Affective commitment was frequently found to be the strongest domain. In another word, nurses tended to have higher emotionally attachment towards their profession. Conversely, normative commitment

was found to be the lowest. The findings reflected that professional obligation was not the main reason for nurses to be committed towards their profession. In addition, professional commitment was found to be higher among the older nurses who were unmarried with longer nursing experience, had higher monthly income, and higher position. Nonetheless, combination findings were found for educational level. Thus, the subsequent section focused on nurses' organisational commitment.

Organisational commitment. In China, organisational commitment was investigated by Yang, Liu, Huang, and Zhu (2013) among 608 nurses through cross-sectional descriptive design. In the study, commitment towards organisation was measured using the Organisational Commitment Questionnaire (Mowday et al., 1979) which was in the Chinese version. The respondents were required to respond on a five-point scale with the higher score reflected greater commitment towards organisation. The analysis revealed moderate organisational commitment with a mean value of 2.88 (*SD* = .48). Normative and economic aspects were found to be the highest commitment among the participants with mean values of 3.12 (SD = .57) and 2.92 (SD = .55) respectively. Nonetheless, ideal aspect of commitment revealed as the lowest forms of commitment with mean value of 2.72 (*SD* = .62).

In Malaysia, organisational commitment was also investigated. The study was investigated by Lee et al. (2011) among 416 Peninsular Malaysian public hospital nurses. Similarly, to former studies, Organisational Commitment Questionnaire by Mowday et al. (1979) was adopted. The response format was ranged between one and seven with higher rating reflected greater commitment towards organisation. In average, the respondents indicated slightly above moderate level of organisational commitment with a mean value of 4.97 (*SD* = 1.20). Furthermore, nearly half (48%)

of the respondents specified high degree of organisational commitment and merely seven percent had specified low degree of commitment towards organisation.

In addition, the Lee et al. (2011) pointed out that the high degree of organisational commitment among the respondents was related to the institution recognition and reputation. In this context, the study hospitals were hospitals been awarded with quality recognition. Thus, organisational commitment was found to be relatively high in view of the sense of belonging in the achievement of the relevant recognition. Furthermore, the study found that participants who were married had higher degree of organisational commitment. Family commitment and financial security were the rationale for high organisational commitment among the married nurses. Additionally, the study revealed that organisational commitment was influenced by the degree of appreciation towards the nursing profession, control in nursing practice, and inter-professional collaborative interaction. Moreover, nurses with greater nursing experience was reported to have higher commitment towards organisation.

Integrated studies – professional and organisational commitment. The literature search yielded one study which had investigated both types of commitment in a study. The study was conducted by Duarte (2015) among 420 Portuguese nurses. The commitment conceptualisation proposed by Meyer et al. (1993) was adopted in the study. In general, the study found that professional commitment was higher than organisational commitment with mean values of 3.62 (*SD* = .61) and 3.11 (*SD* = .51) respectively. In terms of professional commitment domains analysis, affective domain was found to be the highest with mean value of 4.24 (*SD* = .65) while, normative domain was the lowest with mean value of 2.92 (*SD* = .77). The findings of the study reflected that participants had high affection towards their profession and the affection

was the main trigger for them to be committed in their profession. Nonetheless, professional obligation as nurses was not the main reason for them to be committed in the profession.

On the other hand, the organisational commitment domains analysis revealed that affective domain was the highest with mean value of 3.46 ($SD = .80$) while, continuance domain (specifically in the aspect of limited of options) was found the lowest with mean value of 2.65 ($SD = .63$). Similarly, with professional commitment, affective domain (emotional attachment) was the main reason that pushes nurses to be committed in their work place. Nonetheless, limited available options were found to be the least influence towards organisational attachment. In another word, despite limited available options, nurses may still have the tendency not committing for the organisation. The subsequent section elaborated on the findings of past studies pertaining to nurses' commitment and turnover intention.

Nurses' commitment and turnover intention. Past studies had testified that different types of commitment influenced different forms of turnover intention. Majority of the studies had found the significant influence of organisational commitment and inter-organisational turnover intention. Furthermore, recent studies had affirmed that professional commitment played significant role in predicting professional turnover intention. The subsequent section discussed on the findings of past studies pertaining to nurses' commitment and turnover intention.

Professional commitment and turnover intention. Numerous nursing scholars had investigated the influence of professional commitment on turnover intention. For example: Lu et al. (2002) conducted a study among the Taiwanese nurses and found that professional commitment had significant influenced on nurses' turnover intention regardless of inter-organisational or professional turnover intention. In other word,

professional commitment was also found to influence nurses' intention to quit organisation instead of profession alone. In addition, the discriminant analysis testified that professional commitment was a more effective predictor for professional turnover intention.

On the other hand, Nogueras (2006) also investigated the influenced of professional commitment on professional turnover intention. The three components of commitment were found to have significant influenced on professional turnover intention with affective component the highest ($r = -.31$, $p < .001$) then followed by normative ($r = -.18$, $p < .001$), and continuance ($r = -.14$, $p < .001$) components. In other word, intent to quit profession was found to be lower when the degree of commitment was higher. In addition, affective commitment was the strongest predictor among the other components.

Furthermore, Teng et al. (2007) investigated the association of professional commitment and professional turnover intention among the Taiwanese nurses. The study found that nurses with higher commitment had lower intent to quit their profession. Nonetheless, although professional commitment is the predictor for professional turnover intention however, it did not moderate the relationship between work satisfaction and turnover intention.

Additionally, Van der Heijden et al. (2009) also investigated the association of professional commitment on nurses' professional turnover intention through the NEXT-study. The findings reported that professional commitment significantly influenced professional turnover intention. However, the authors highlighted that the on-going issues pertaining to interference of work with family commitment may influenced nurses' professional withdrawal regardless of their satisfaction towards work and professional commitment. Furthermore, through the data from the NEXT-

study, Simon et al. (2010) investigated the association of professional commitment on inter-organisational and professional turnover intention. The analysis found that professional commitment was significant predictors for both, inter-organisational and professional turnover intention. The findings of the study were also congruent with former studies (Lu et al. 2002).

Furthermore, professional commitment among the nurses in the United States were continued been investigated. Gambino (2010) investigated 150 nurses' professional commitment through a survey research design. Similarly, with Nogueras (2006), occupational commitment measure by Blau (2003) was also found to be applicable among the American nurses. Interestingly, the study adopted an antagonize variable in determining the balance of nursing workforce. In the study, the variable of intent to remain was used to gauge nurse turnover instead of intent to leave or quit. In general, the study found that normative commitment was the strongest predictor for nurses' intent to stay. Respondents with higher professional obligation tended to have higher intent to stay in the work place. In other words, inter-organisational turnover intention was found to be low when normative commitment increases. Nonetheless, the findings of the study were not consistent with a former study investigated by Nogueras (2006) in which affective commitment was found to be the strongest predictor in the study.

In addition, Chang et al. (2015) investigated 579 Taiwanese nurses' professional commitment through one-year duration (2011 to 2012) longitudinal study. Similarly, to Nogueras (2006), the investigated was guided by the three-component of commitment framework. The authors pointed out that the global economic factors had induced the change in nurses' commitment. In the study, continuance aspect of commitment was found to have superseded the significance of

being affectionate and obligated in serving their profession. Both domains of commitment: affective and normative were found to have insignificant association with professional retention. Alternatively, the rationale for the unsustainable of nurses' affective and normative commitment towards their profession / occupation could relate to the lack of intrinsic motivation and inadequate remuneration/ reward system. In addition, the authors investigated on the predictive values of the three components of commitment on professional turnover intention through structural equation modeling method. In contrast with the findings reported by Nogueras (2006), the analysis revealed that continuance commitment was the only significant predictor for professional turnover intention and retention.

In summary, majority of the past studies were cross–sectional survey studies. The three-component of commitment framework was commonly used to guide the study. Nonetheless, measures constructed by Blau (2003) were used relatively frequent. Hence, majority of the past studies found significant negative correlation between commitment towards profession and intent of turnover. Furthermore, Lu et al. (2002) attested that professional commitment was a better determinant in projecting nurses' professional turnover intention. Nogueras (2006) reported that affective commitment was frequently found to be the strongest form of commitment among nurses, and demonstrated stronger negative association with professional turnover intention. However, Chang et al. (2015) testified that affective commitment did not show significant link with nurse retention. Instead, continuance commitment was the most significant determinant for nurse retention. Additionally, age was found to be the significant predictors for professional commitment (Teng et al., 2007; Wang et al., 2012). Henceforth, early identification nurses' professional commitment was crucial for early initiation of strategies to prevent nurses from withdrawing from the

nursing profession. A literature searches for professional commitment investigated among Malaysian nurses revealed none. Thus, professional commitment was added into the current study. Next, the subsequent section focused on nurses' organisational commitment and it's influenced on turnover intention.

Organisational commitment and turnover intention. Organisational commitment has been testified as an important predictor for nurses' turnover intention. Few of the studies had even tested on the moderating and mediating effects of organisational commitment on the relationships of turnover intention. The literature search yielded numerous studies pertaining to nurses' commitment towards their organisations. Nonetheless, for the purpose of literature review, five past studies were identified and appraised.

Liou and Grobe (2008) investigated organisational commitment among 35 Asian nurses who were working in the United States through cross-sectional survey methods. Snowball sampling method was used for participants' recruitment in view of the uniqueness of the inclusion criteria of the study. In the study, organisational commitment was measured using the Organisational Commitment Questionnaire by Mowday et al. (1979). The respondents were required to respond their commitment on a five-point scale. Thus, the analysis revealed high level of organisational commitment ($M = 3.34$, $SD = .80$). Furthermore, nurses who were committed were less probable to quit the organisation ($r = .71$, $p < .001$). In addition, the mediation analysis revealed that organisational commitment mediated the relationship between NPE and inter-organisational turnover intention.

Furthermore, Galletta et al. (2013) investigated nurses' organisational commitment towards unit-level turnover intention (intra-organisational turnover intention). In the study, affective aspect of organisational commitment was

investigated. The variable was gauged through the affective components of the Organisational Commitment Questionnaire constructed by Allen and Meyer (1990). Minor modifications such as replacing the term organisation with unit had been done to the measure in order to ensure suitability of the items to the study purpose. Hence, the analysis revealed relative high affective commitment with a mean value of 3.27 (SD = .76) among the Italian nurses. Furthermore, the effect of organisational commitment on intra-organisational turnover intention was investigated. The authors reported that respondents who demonstrated high degree of organisational commitment tended to had lower intent of leaving unit. In addition, the extent of collegiality relationship between the doctors and nurses was revealed as a mediator in the relationship between organisational commitment and intra-organisational turnover intention.

In a separate study, Gellatly, Cowden, and Cummings (2014) investigated the association of organisational commitment on willingness to remain in the unit and organisation. The findings of the study revealed that all the three domains of commitment (AOC, COC, and NOC) were found to have significant positive associations with nurses' willingness to remain in the unit and organisation. Nonetheless, out of the three domains, continuance domain was found to have the least association. Furthermore, organisational and unit tenures were found to have positive correlations with the three commitment domains. In addition, further analysis revealed that nurses with high scores for the three commitment domains were the most probable to remain in the unit and organisation. On the other hand, nurses' who were overall dominant by continuance commitment were found to be the most probable to quit the unit and organisation. In another word, extrinsic motivators (such as monetary incentives, bonuses, and salary increment) were temporal boost for continuance

commitment in the presence of high affective and normative commitment. Henceforth, organisation needs to initate strategies which not only focusing on the external factors (continuance aspect) but the sustainment of long-term organisational commitment through improving the affective and normative commitment.

In addition, Han et al. (2015) investigated the mediating role of organisational commitment in the relationship related to inter-organisational turnover intention. The measure of organisational commitment was based on the conceptualisation proposed by Mowday et al. (1979). In the study, respondents were asked to rate their commitment on a five-point scale with higher score reflected greater commitment. The analysis revealed moderate organisational commitment among the Korean nurses with a mean value of 2.5 ($SD = .50$). Moreover, although the correlation index was relatively weak, the study found that respondents with greater commitment towards organisation were less probable to quit the organisation ($r = -.11$, $p < .001$). Additionally, organisational commitment was testified as the mediator in the turnover intention model constructed through the relationship between nursing role stress and inter-organisational turnover intention.

In summary, past studies revealed that nurses' commitment towards organisation were relatively high to moderate level. Organisational commitment was found to be negatively correlated with turnover intention. Furthermore, commitment towards organisation was found to act as a mediator in the relationship between NPE and intent of turnover (Liou & Grobe, 2008). The literature reviews clearly highlighted the importance of organisational commitment and its significant influenced on nurses' turnover intention. A literature searches for organisational commitment investigated among Malaysian nurses revealed one study investigated by Lee et al. (2011). However, the study did not relate organisational commitment with

turnover intention. Next, the subsequent section focused on past studies on the relationships among nurses' perception towards NPE, turnover intention, exit choice, professional and organisational commitment.

Relationships among NPE, PC, OC, EC, and TI. Past studies have investigated extensively on the key predictors that influenced nurses' turnover intention. The literature review highlighted that nurses' perception towards NPE, professional commitment, and organisational commitment were the significant predictors for nurses' turnover intention (Chang et al., 2015; Ganz & Toren, 2014; Han et al., 2015; Liou & Cheng, 2009; Kutney-Lee et al., 2013). However, limited studies had examined the relationships among NPE, PC, OC, EC, and turnover intention.

The first study was conducted by Liou and Grobe (2008). The purpose of the study was to examine the relationship between NPE, organisational commitment, and turnover intention. Furthermore, the authors sought to determine the mediating effect of organisational commitment in the relationship concerning NPE and turnover intention. A hierarchical regression analysis revealed that NPE had direct effect on organisational turnover intention, while organisational commitment was confirmed as the mediator in the relationship.

In a separate study, Lu et al. (2002) reported the results of discriminant analysis revealed that professional commitment was a more effective variable in influencing professional turnover intention compared with organisational turnover intention by approximately nine percent. Furthermore, Yang et al. (2013) found that NPE partially influenced the relationship concerning nurses' empowerment and organisational commitment. Nonetheless, studies examining the influence of exit choice on nurses' turnover intention were rather scarce.

Theoretical Framework

The literature reviews clearly highlighted the continuous and progressive development of turnover theoretical frameworks. There were numerous on-going studies that sought to explore the concept of turnover and turnover intention namely: its predictors, mediators as well as related outcomes. The earlier turnover theoretical frameworks were predominantly psychological and economical stances in nature. Nonetheless, as the turnover theories continue to evolve, the concept of turnover intention was introduced and turnover was viewed in multiple perspectives. Hence, turnover was explained through integrated disciplines consisting of psychological, economical, and sociological stances. The subsequent section would focus and elaborate on other relevant turnover theoretical frameworks which have been developed and guide nurses' turnover intention studies such as patient care system and nurse turnover model (Irvine & Evans, 1995), competence-turnover intention model (Takase, Teraoka, & Kousuke, 2014), and nursing worklife – extended model (Roche, Laschinger, & Duffield, 2015). Intermediate linkages model (Mobley, 1982), organisation equilibrium theory (March & Simon, 1958 cited in Tosi, 1984), and causal model of turnover (Price & Mueller, 1981) were not discussed in the subsequent section because the models have been elaborated in Chapter One.

Patient care system and nurse turnover model. The original patient care system and nurse turnover model was developed by Irvine and Evans (1995) through a meta-analytic study. The model postulated turnover intent was the immediate antecedent of turnover. On the other hand, job satisfaction was proposed to be the mediator between turnover intent and actual turnover (Irvine & Evans, 1995). Subsequently, the validity of the model had been testified through a study conducted

in Canada by O'Brien-Pallas et al. (2010). The model was further expanded based on the perspectives of economist (i.e., turnover rate and the outcomes of nurse, patient, and system), and sociologist (i.e., characteristics of patient, nurse, and healthcare setting environment). The conceptual framework of the model was displayed in Figure 2.1.
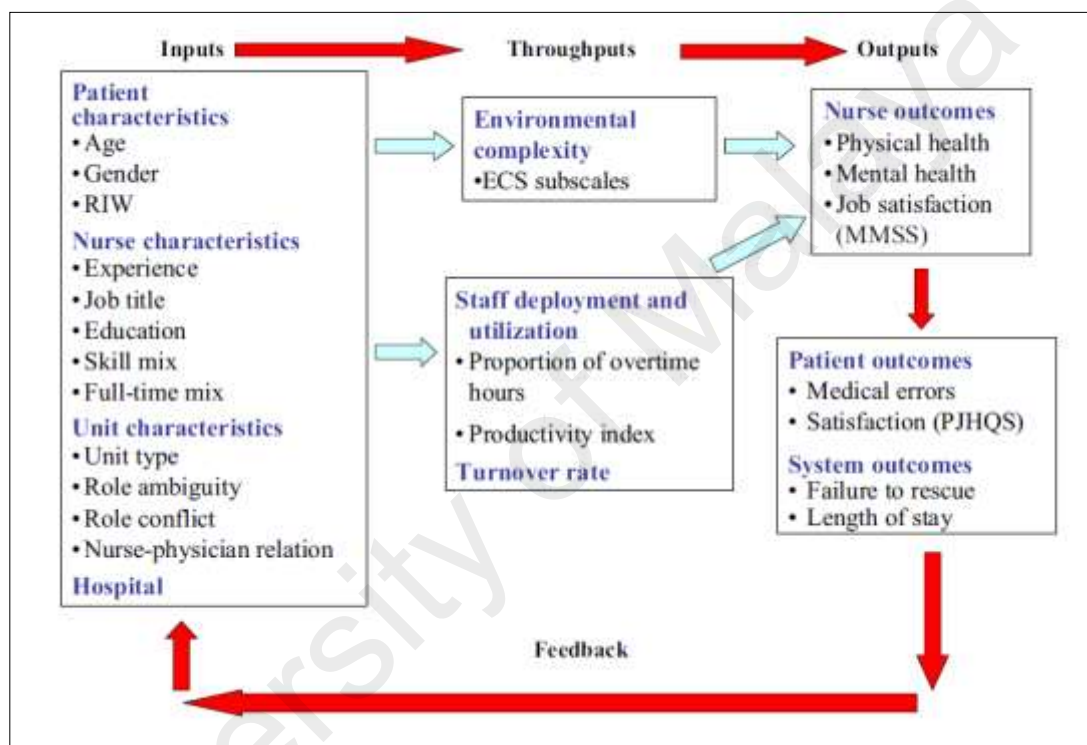
Figure 2.1. Patient care system and nurse turnover model (Irvine & Evans, 1995; O'Brien-Pallas et al., 2010, p.1075)

The model consisted of three structures: inputs, throughputs, and outputs. The inputs contained the characteristics of the patients' nurse, unit/ ward, and hospital while, the throughputs contained the characteristics of work and turnover. The outputs were related to the outcomes of the nurse, patient, and system/ organisation. In the expanded model, turnover was postulated as the throughput (mediator) between components stated in the inputs and outcomes of the nurses such as nurses' physical-

mental well-being and satisfaction towards work (O'Brien-Pallas et al., 2010). Negative nurses' outcomes would result in compromising patient safety which affects the outcomes of the patient and system/ organisation as a whole. The model testified that nurses' contentment (satisfaction) towards work was directly influenced by the characteristics of practice environment (such as leadership and role conflict) and turnover (O'Brien-Pallas et al., 2010).

Competence-turnover intention model. Competence-turnover intention model (Takase et al., 2014) was a relatively new model. The model focused on the effect of nurses' competence leading to organisational commitment (i.e., affective domain) and turnover intention. In this context, nursing competence was defined as the nurses' effectiveness in the area of nursing education, management, professionalism, and provision in care (Takase et al., 2014). Turnover intention was influenced by nurses' level of competence through the effect of nurses' exhaustion, organisational rewards and organisational commitment. The model was built based on the theory of job demands-resources and leader-member exchange (Takase et al., 2014). The job demands-resources theory postulated that high job demand may cause exhaustion (i.e., burnout) which can lead to reduction of organisational commitment. In contrast, nurses who are resourceful and competent were less likely to experience exhaustion (Takase et al., 2014). Thus, managing issues pertaining to job demand is crucial in order to boost nurses' organisational commitment and reduce likelihood of turnover intention. The conceptual model of competence-turnover intention model was displayed in Figure 2.2.
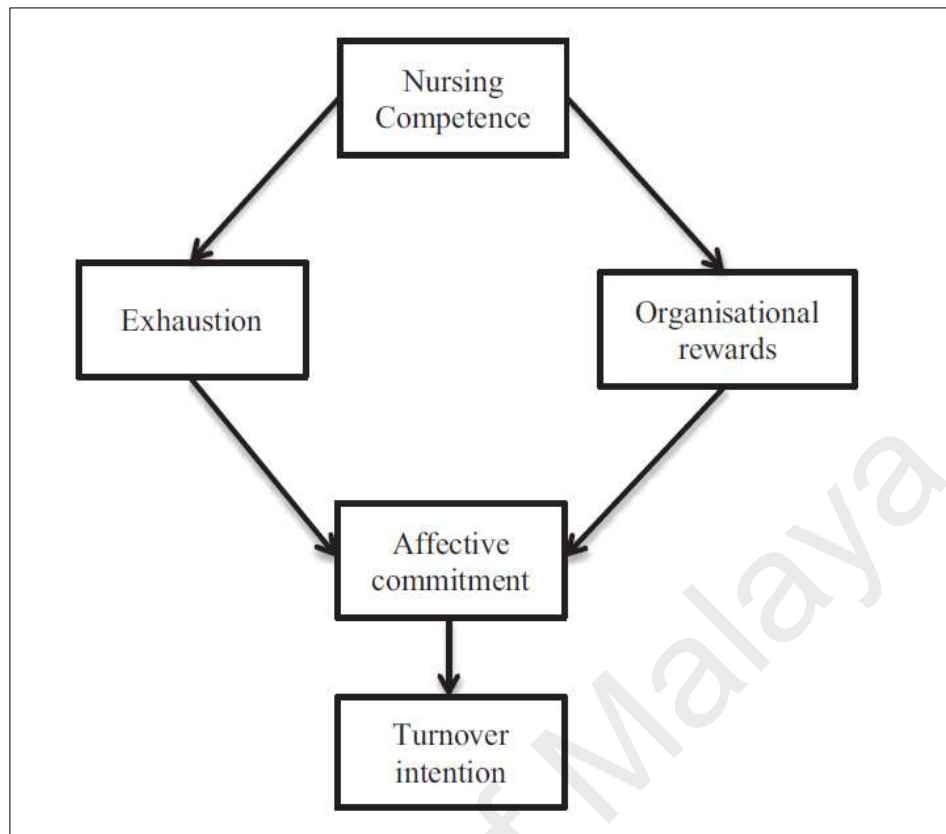
Figure 2.2. Competence-turnover intention model (Takase et al., 2014, p. 806)

Contrariwise, the leader-member exchange theory postulated that leader-member relationship can be sustained through mutual relationship between the leader and member (Takase et al., 2014). In this context, turnover intention is less likely in a strengthen leader-member relationship which can be attained through the enhancement of the affective commitment using organisational rewards. Thus, organisations (leaders) were obligated to fulfil the needs of organisational rewards which were can be in the forms of extrinsic (i.e., financial rewards) and intrinsic (i.e., recognition and career progression) among the nurses (members) who had demonstrated nursing competence.

Nursing worklife – extended model. Nursing worklife – extended model (Roche et al., 2015) was an extended model from the original nursing worklife model which was constructed by Leiter and Laschinger (2006). The nursing worklife model highlighted the importance of improving nurses' work life through strengthening the nursing practice environment which was characterised by effective leadership, participation, collegial relationships, resources, and foundation for quality. Nonetheless, the development of the nursing worklife – extended model (Roche et al., 2015) was to testify that nurses' turnover intention was influenced by the characteristics of nursing practice environments. The conceptual model of the nursing worklife – extended model was displayed in Figure 2.3.
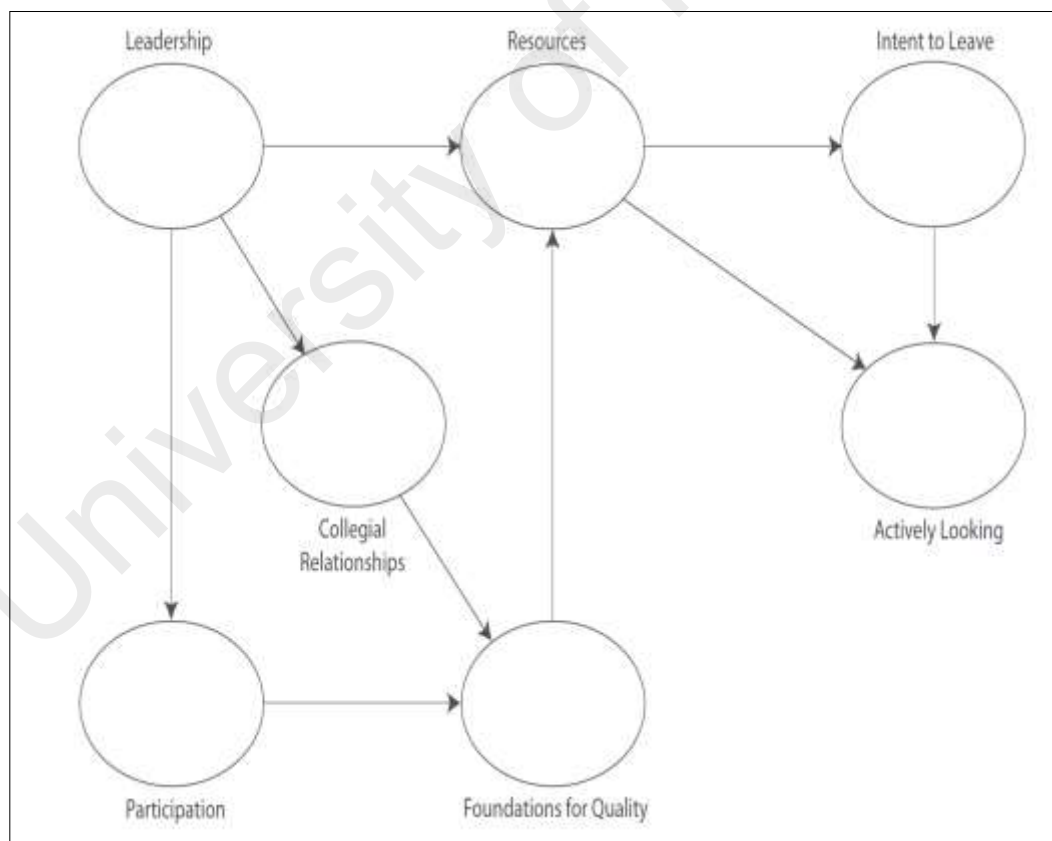
Figure 2.3. Nursing worklife – extended model (Roche et al., 2015, p. 526)

The conceptual model depicted that nurse turnover intention (i.e., intent to leave) was less likely if the nursing practice environment was supportive. A supportive nursing practice environment was characterised through the presence of nursing leadership, nurses' autonomy in hospital affairs involvement (participation), collegial relationships among healthcare providers, adequate resources, and basis in quality care (Roche et al., 2015).

Summary

The literature review chapter described the conceptual definitions, reviewed the significant findings of the previous studies, and appraised other related nurses' turnover theoretical frameworks which have been used in guiding former studies. Thus, it can be concluded that majority of the former turnover intention studies were quantitative in nature (combination of cross-sectional and longitudinal studies). Nonetheless, inconsistencies of measurement were observed in which, dichotomous response and Likert and frequency point scale were the most common measures and demonstrated acceptable validity and reliability.

In conclusion, the past findings revealed combination results of turnover intention. Turnover intention was higher among the nurses working in the Asia countries. Longitudinal studies confirmed that turnover intention may change according to the nursing practice environment and individual-related factors. In terms of nursing practice environment, majority of the nurses revealed great concern over the staffing situation and lack of nurses' autonomy in clinical decision making. In regard to the relationship of NPE, professional commitment, organisational commitment, and turnover intention, majority of the former studies found significant negative relationships between the variables with few studies revealed commitment

as a mediating variable. Nonetheless, the literature clearly pointed out on the scarcity of information pertaining to nurses' exit choice and also analysis of relationships among the influence of NPE, professional commitment, organisational commitment, exit choice, on turnover intention. Thus, it was timely for the current study to investigate on these mentioned research variables. In the subsequent chapter, research methodology consisted of research epistemology, design, sampling plan, instrument, data collection procedure, and analyses would be elaborated.

CHAPTER 3

RESEARCH METHODOLOGY

Introduction

The current chapter discussed the research methods that had been used in the investigation of relationship among the nurses' turnover intention, exit choice, perception towards NPE, professional commitment, and organisational commitment. The first section of the current chapter focused on the ontology, epistemology, methodology, and design of the research. The second section of the chapter described the population and sampling plan of the study. Sample size estimation, procedure, and technique of sampling were also elaborated in the section. The third section of the chapter elaborated on the study instruments. The findings of the pilot studies particularly in the aspects of validity and reliability were justified in the section. The last section of the chapter explained on the ethical considerations, procedures for data collection, and data analysis methods used in providing answers to the research questions of the study.

In accord to the rationale of the study, the study strives to provide answers to the following research questions:

1. What are the characteristics of nursing practice environment (NPE) as perceived by the Malaysian registered nurses (RNs)?

2. What is the estimated degree of professional commitment (PC) and organisational commitment (OC) among the Malaysian registered nurses?

3. What is the estimated degree and proportion of turnover intention (TI) among the Malaysian RNs?

4. What is the proportion of exit choice (EC) in terms of organisational, education, country and entrepreneurship among the Malaysian RNs?

5. Do NPE, PC, and OC predict TI when controlling the socio-demographic variables?

6. How do PC and OC influence the relationship between NPE and TI among the Malaysian RNs?

7. Do EC contribute to TI among the Malaysian RNs?

8. How does EC influence the relationship between NPE and TI among the Malaysian RNs?

Research Ontology, Epistemology, Methodology, and Design

Research is defined as "systematic inquiry that uses disciplined methods to answers questions and solves problems" (Polit & Beck, 2014, p.2). The utmost purpose of research is to acquire, improve and extend the body of knowledge (Polit & Beck, 2014). The researchers' paradigm influences the way they ask and answer their research questions. The term "paradigm" is referring to the view or belief of how the complexity of the world worked (Guba & Lincoln, 1994; Polit & Beck, 2014). Guba and Lincoln (1994) explained that paradigm represented the "worldview" in which it consisted of the disposition of the world, and the array of probable connections in the world.

In this context, it is crucial for researchers to consider the three components of inquiry paradigm when deciding on the most appropriate research design for their studies, namely the: ontology, epistemology, and methodology (Guba & Lincoln, 1994). The ontology is referring to the "nature of reality and the nature of human being in the world" (Denzin & Lincoln, 2005, p. 183). The naive realism ontological

perspective believes that the reality exists and is directed by existent natural causes (Guba & Lincoln, 1994). On the other hand, the relativism ontological perspective believes that reality is multiple and consisted of predetermined subjective experience and individuals' thoughts (Levers, 2013).

The epistemology is defined as the "study of knowledge" (Levers, 2013, p. 2). The epistemological inquirer explores the world through seeking answers for the relationship between the knower and knowledge (Denzin & Lincoln, 2005). There are two contrasting epistemological stances namely: objectivism and subjectivism. Objectivist believes that the truth exists independent entities in the reality (Guba & Lincoln, 1994). Furthermore, human subjectivity such as values and biases can be controlled or prevented in objectivism epistemological perspective (Levers, 2013). Henceforth, the objectivism epistemological perspective is commonly adopted with the purpose to address research question pertaining to explanation, prediction, and control (Polit & Beck, 2014). Conversely, subjectivist believes that "knowledge is always filtered through the lenses of language, gender, social class, race, and ethnicity" (Denzin & Lincoln, 2005, p. 21). In the subjectivism epistemological perspective, the researchers are assumed to be interactive with those being researched, and the research findings are the output from the interactive process (Guba & Lincoln, 1994). Thus, the subjectivism epistemological perspective is commonly used to deal with research question pertaining to identification, description, exploration, and explanation (Polit & Beck, 2014).

The methodology is referring to "how can the inquirer (would-be-knower) go about finding out whatever he or she believes can be known" (Guba & Lincoln, 1994, p.108). In general, there are two complementary methodological namely: quantitative and qualitative. Quantitative researchers design their research methodology in a

manner of systematic, objective and deductive with hypotheses testing as the main emphasis of the methodology (Polit & Beck, 2014). The study data is quantifiable in nature to be analysed statistically and the methodology seeks to generalise its research findings (Polit & Beck, 2014). Contrariwise, qualitative researchers design their research methodology in a manner of interactive, subjective and inductive in which the main aim of the methodology is to generate hypotheses (Polit & Beck, 2014). The study data is commonly unquantifiable to be analysed qualitatively and the methodology seeks to gain in-depth understanding towards the study matter (Polit & Beck, 2014).

The three components of the inquiry paradigms namely: ontology, epistemology, and methodology serve as the major considerations when deciding for the most appropriate research design for the current study. The first consideration was on the ontological perspective. The study adopted naive realism ontological perspective in which the researcher believed that the reality of turnover intention among nurses exist and driven by numerous existence factors. On the other hand, the second consideration was on the epistemological perspective. In the current study, the researcher adopted the objectivism epistemological stance in which the researcher believed that the researcher was independent and had no subjectivity against the study population. Furthermore, the objectivism epistemological stance was aligned with the purpose of the current study in explaining and predicting the nurses' turnover intention phenomenon.

The third consideration was on the methodological perspective. Based on the ontology and epistemology of the study, the researcher adopted the quantitative methodology in which the researcher would use the deductive processes (i.e., hypotheses testing) to explain and predict the answers for the research questions.

Quantifiable data were collected using structured questionnaire and data were analysed statistically. In this context, the most appropriate research design that aligned with the ontology, epistemology, and methodology of the study was cross-sectional inferential survey study.

Cross-sectional inferential survey permitted multiple variables to be gauged at one same time and ascertained the underlying potential relationships, regardless the existence of prior assumptions or hypotheses pertaining to the nature of the relationships (Easterby-Smith, Thorpe, & Jackson, 2010). The dependent variable of the study was known as "main criterion" while, independent variables were known as "predictors". Predictors were assumed to be the underlying relationships causing main criterion (Easterby-Smith et al., 2010). In the current study, nurses' turnover intention (TI) was regarded as the main criterion. The predictors of the study were nurses' exit choice (EC), perceptions towards their nursing practice environment (NPE), professional commitment (PC), and organisational commitment (OC).

Sampling Plan

Study population. The study population was registered nurses who were employed full-time in the private hospitals which were situated in the Peninsular Malaysia. In general, the characteristics of the hospitals can be categorised according to its size. Kutney-Lee et al. (2013) stated that hospital size can be stratified based on its volume in terms of bed numbers. Hospitals with bed volume of lower than 100 beds were categorised as small hospitals while, hospitals with bed volume between 100 and 250 were categorised as medium hospitals (Kutney-Lee et al., 2013). Large hospitals were referring to hospitals with bed volume of 250 and above (Kutney-Lee

et al., 2013). In the study, all categories of hospitals regardless of small, medium, and large were taken account of so that generalization was possible in the study.

The APHM (2014) reported that there were approximately 104 private hospitals in the entire Peninsular Malaysia. The proportions of the number of private hospitals according to the distribution of regions namely north region (the states of *Kedah, Perlis, Perak*, and *Pulau Pinang*), central region (the states of *Wilayah Persekutuan Kuala Lumpur* and *Selangor*), and south-east region (the states of *Johor, Melaka, Negeri Sembilan, Kelantan*, *Terengganu,* and *Pahang*) were 24, 54, and 26 respectively. The central region consisted the highest number of private hospitals while, the south-east region consisted the lowest number of private hospitals.

The Department of Statistics Malaysia (2011) reported that both the *Wilayah Persekutuan Kuala Lumpur*, and *Selangor* were ranked as the states that had experienced the highest degree of urbanization in the entire Peninsular Malaysia. Henceforth, the central region particularly the states of Wilayah Persekutuan Kuala Lumpur, and Selangor has becoming the target for the establishment of private healthcare facilities such as private hospitals, rehabilitation centers, dialysis centers and others. Nonetheless, the statistics of the Ministry of Health Malaysia (2014) revealed that the estimated population size for registered nurses who were working in the private healthcare sector was 26 653.

Sample size estimation and procedure. There were numerous methods that can be used to estimate the minimum required sample size of a study. Firstly, the most essential reason in performing the sample size estimation and procedure was to ensure the sample size met the adequacy of the population (Polit & Beck, 2014). Secondly, sample size estimation and procedure was crucial to ensure that the minimum sample

size met the requirement for statistical analysis such as exploratory factor analysis (EFA) and multiple regression analysis (Chua, 2009; Palaniappan 2009).

Henceforth, the sample size estimation and procedure of the study were based on the finite population and the requirement to fulfil the assumptions of the statistical analysis. The finite population sample size was estimated through the use of Raosoft® sample size software. Based on the estimated population size of 26 653 (Ministry of Health Malaysia, 2014), the Raosoft® sample size software recommended a sample size of 379 with 95% level of confidence, 5% margin of error and, 50% response distribution. The output of the Raosoft® sample size software was verified further through the formula below (Cochran, 1977 cited in Bartlett, Kotrlik, & Higgins, 2001):

$$n = \frac{Nt^2pq}{d^2(N\text{-}1) + t^2pq}$$

Based on the formula, t refers to normal deviation corresponded to the confidence interval. The confidence level was set as 95%, thus, the $t = 1.96$. On the other hand, p refers to the outcome of prevalence rate in the study population, which was 50%, and q was 50 based on equation of $(100 - 50)$. The requisite total precision of the estimate (d) was set as 5%, and the estimated population (N) was 26 653. The calculation yielded similar output as the Raosoft® sample size software which was 379. Henceforth, a minimum of 379 responses were required in order to achieve sample size adequacy in reflecting the population size of the study.

In addition, sample size assumptions for EFA and hierarchical multiple regression analysis were assessed in view that the analysis methods were used for data analysis. In terms of EFA, Chua (2009) recommended a minimum of five cases for

each item. The PES-NWI (Lake, 2002) consisted of 31 items was found to be the longest scale used in the study. Thus, based on the recommendation by Chua (2009), the minimum required sample size to perform EFA was (31 X 5) = 155 responses. EFA was used to analyse the construct validity of the study instruments. Henceforth, a minimum sample size of 155 was recommended for the pilot study in order to meet the requirement of EFA.

Furthermore, in terms of hierarchical multiple regression analysis, Palaniappan (2009) stated that the ratio of respondent number to variable was at least twenty times more than the number of predictors. There were five predictors in the study namely: nurses' perception towards NPE, professional commitment, organisational commitment, *nursing*-EC, and *non-nursing*-EC. Henceforth, the minimum required respondents was at least (20 X 5) = 100. Hierarchical multiple regression analysis was used to analyse the relationship among the nurses' perception towards NPE, professional commitment, organisational commitment, turnover intention, and exit choice. Thus, a minimum sample size of 100 was recommended for the main study in order to meet the requirement of hierarchical multiple regression analysis.

Sampling technique. The sampling technique of the study consisted of two stages: hospital and nurse sampling. Simple random sampling was used for hospital sampling so that the results from the study were able to be generalized to the population and enhance the external validity of the study (Wood & Ross-Kerr, 2011). However, simple random sampling was not possible for nurse sampling because majority of the study sites (three out of four hospitals) did not permit the revelation of registered nurses' identity to third party such as researcher. Henceforth, convenience sampling was employed for nurse sampling.

Hospital sampling. Hospital sampling was the first stage of the sampling in order to select the hospitals within the Peninsular Malaysia. Firstly, the Peninsular Malaysia was separated into three regions: north, central and south-east. Simple random sampling was employed for hospital sampling. A list of the private hospital names based on the regions was acquired from the website of the APHM (2014). The ratio of hospitals according to the regions was approximately 1:2:1 for north, central and south-east respectively. Thus, two hospitals were selected from the list of private hospitals located at the central region while, one hospital was selected from the list of private hospitals located at the north and south-east regions respectively. Nonetheless, two private hospitals which had been used for pilot studies were excluded from the central region list of hospitals prior to simple random sampling process.

Henceforth, a total of four private hospitals were sampled for the study. Formal letters seeking for permission to conduct study were addressed to the chief executive officers of the respective hospitals. Nonetheless, three hospitals (one from the north, central, and south-east region, respectively) out of the four sampled private hospitals declined the permission. Subsequently, the researcher re-sampled for another three private hospitals using the similar method. One hospital was selected from the list of private hospitals located at the north, central, and south-east regions respectively. Similarly, formal letters seeking for permission to conduct study were addressed to the chief executive officers of the respective hospitals. All the three private hospitals granted permission to conduct study with conditions that the research proposal needed to obtain research ethics committee approval prior to conduct of the study. The details of the ethical considerations were elaborated in the later section.

Nurse sampling. Simple random sampling was not possible for nurse sampling due to the policy requirement of the private hospitals. The policy

requirement did not allow the researcher to have direct contact and access to the nurses working in the hospitals. Consequently, the researcher did not manage to obtain the complete nurses data and name list from the hospitals. Henceforth, all registered nurses working in the selected study sites and fulfilled the inclusion criteria of the study were requested to respond the questionnaire. The inclusion criteria of the study were Malaysian registered nurses who were employed full-time.

Non-Malaysian registered nurses, who were employed part-time and hold managerial and supervisory positions such as director / assistant director of nursing, nursing supervisor, ward sister/ manager, nurse educators and clinical instructors were excluded from the study. Furthermore, registered nurses who were working in the specialist clinics were excluded from the study. The exclusion was necessary in view of the differing tasks performed among the nurse managers, supervisors, and specialist clinic nurses. Furthermore, registered nurses who were on long and special leaves such as medical and study leaves were excluded from the study. Henceforth, there were a total of 1290 registered nurses from the four private hospitals were deemed to have fulfilled the inclusion criteria and were requested to respond the questionnaire. The details of the steps in data collection for the main study were elaborated in the section under the sub-heading data collection procedure.

Research Instruments

The instruments of the study consisted of self-report questionnaire. The questionnaire was divided into six sections namely: socio-demographic characteristics; Turnover Intention Questionnaire (TIQ), Exit Choice Questionnaire (ECQ), Practice Environment Scale of the Nursing Work Index (PES-NWI; Lake, 2000), Professional Commitment Scale (PCS, Meyer et al., 1993), and Organisational

Commitment Scale (OCS, Meyer et al., 1993). TIQ and ECQ were developed by the researcher based on the existing literature (Flinkman et al., 2008; Hasselhorn et al., 2003; Homburg et al., 2013; Simon et al., 2010). Conversely, PES-NWI, PCS, and OCS were developed by content experts. Permission to use the instruments had been obtained from the respective instrument developers.

Socio-demographic characteristics. There were thirteen items in this section. The items were constructed based on the existing literature (Flinkman et al., 2008; Hasselhorn et al., 2003; Simon et al., 2010). The items in the socio-demographic characteristics section were divided into continuous as well as categorical data. Nurses' age, nursing experience, and organisational tenure were the continuous data. On the other hand, nurses' region, types of hospital, average monthly income, dependent responsibilities, educational sponsorship bond, nursing specialty qualification, the highest educational attainment, and working area was the categorical data. The inclusion of the socio-demographic characteristics was deemed to be necessary and appropriate in view that past studies have shown significant association between the nurses' socio-demographic characteristics and turnover intention. The findings of the former studies had been elaborated in chapter two.

Turnover intention questionnaire (TIQ). The items in the TIQ were extracted and modified from the existing measures found in the existing literature (Hasselhorn et al., 2003). The items in the TIQ inquired participants on their intent to leave unit or ward, organisation, country, and profession. There were four items in TIQ.

In TIQ, participants were asked to respond the question: "How often during the period of the last six months have you thought about leaving your ward, hospital,

country and nursing profession?" The response format was Likert scale: "1 = never", "2 = sometimes in a year", "3 = sometimes in a month", "4 = sometimes in a week", and "5 = almost every day". The total scores ranged between four and 20. The higher scores indicated higher turnover intention. Furthermore, each and individual of the item can be used to estimate the different forms of turnover intention such as intra-organisational, inter-organisational, country, and profession. Hasselhorn et al. (2003) explained that the intent to leave numerous times per month and more frequent was deemed to be suggestive phenomenon while, intent to leave numerous times per year was natural occurrence among professionals. In other words, it is a norm and acceptable thought for professionals such as nurses to have the cognitive trigger in leaving numerous times per year. However, numerous thoughts of leaving in a month are deemed serious and warrant attention.

Exit choice questionnaire (ECQ). ECQ was constructed based on existing literature (Hasselhorn et al., 2003; Homburg et al., 2013). The items were verified by one chief nursing officer, and one human resource officer who were working in a private hospital. ECQ consisted of seven items which asked nurses on their exit choices such as pursuing nursing qualification, entrepreneurship, working in another country and organisation. Three items were related to nursing discipline exit choice (*nursing*-EC), and remaining four items were related to non-nursing discipline exit choice (*non-nursing*-EC). The response format of the measure was similar with TIQ.

In ECQ, participants were asked to respond the question: "How often during the period of the last six months have you thought about pursuing further qualification in nursing profession?" The response format was Likert scale: "1 = never", "2 = sometimes in a year", "3 = sometimes in a month", "4 = sometimes in a week", and "5 = almost every day". The total scores for *nursing*-EC was ranged between three

and 15, while the total scores for *non-nursing*-EC was from four to 20. The higher the score reflected higher tendency to choose the exit choice classifications.

Practice environment scale of the nursing work index (PES-NWI). PES-NWI (Lake, 2002) consisted of 31 items to estimate participants' perceptions towards NPE. In PES-NWI, participants were requested to specify their extent of agreement or disagreement towards the stated items such as: "adequate support services allow me to spend time with my patients". The response format was Likert scale: "1 = strongly disagree", "2 = disagree", "3 = agree", and "4 = strongly agree". The scale consisted of five subscales: "nurse participation in hospital affairs" (NPHA); "nursing foundations for quality of care" (NFQC); "nurse manager ability, leadership and support of nurses" (NMLS); "staffing and resource adequacy" (SRA); and "collegial nurse-physician relations" (CNPR). The total scores ranged between 31 and 124. A higher score indicated a more favourable NPE (Liou & Cheng, 2009).

The NPE was classified as "favourable" when at least four subscales attained minimum mean scores of 2.5, "mixed" when at least two subscales attained mean scores of 2.5, and "unfavourable" when at least one subscale attained mean score of 2.5 (Lake & Friese, 2006). PES-NWI was widely used by numerous scholars across many countries in the world including Asian countries such as China, Taiwan, and Malaysia (Lin et al., 2011; Marzuki et al., 2013; Warshawsky & Havens, 2011; Zhang et al., 2014). Additionally, psychometric analyses had been conducted among the scholars and its application among hospital-based nurses had been proven to be of high validity and reliability (Warshawsky & Havens, 2011). Furthermore, the scale had been tested in numerous clinical and healthcare related settings such as critical care, dialysis, and oncology (Warshawsky & Havens, 2011).

Professional commitment scale (PCS). PCS was constructed by Meyer et al. (1993). The scale was used to estimate the degree of attachment or affection towards ones' profession and contained 18 items. There were three domains: affective (APC), continuance (CPC), and normative (NPC). In PCS, participants were requested to specify their extent of agreement or disagreement towards the stated items such as: "I believe people who have been trained in a profession have a responsibility to stay in that profession for a reasonable of time". The original response format of the scale was Likert scale: "1 = strongly disagree", "2 = moderately disagree", "3 = slightly disagree", "4 = neither agree nor disagree", "5 = slightly agree", "6 = moderately agree", and "7 = strongly agree".

Nonetheless, in view of some participants tended to have extreme responses towards "neither agree nor disagree", when they responded the questionnaire during the pilot study, the researcher decided to standardised the response format to six-point scale: "1 = strongly disagree", "2 = disagree", "3 = slightly disagree", "4 = slightly agree", "5 = agree", and "6 = strongly agree". The modifications were considered as acceptable and commonly been practiced among researchers as stated by Meyer and Allen (2004). Thus, the total scores ranged between 18 and 108. A higher score indicated higher professional commitment.

Organisational commitment scale (OCS). OCS was developed by Meyer et al. (1993) and contained 18 items. OCS was used to estimate the degree of attachment or affection towards one's organisation. OCS also consisted of three domains: affective (AOC), continuance (COC), and normative (NOC). In OCS, participants were requested to specify their extent of agreement or disagreement towards the stated items such as: "One of the few consequences of leaving this organisation would be the scarcity of available alternatives". The original response format of the scale was

Likert scale: "1 = strongly disagree", "2 = moderately disagree", "3 = slightly disagree", "4 = neither agree nor disagree", "5 = slightly agree", "6 = moderately agree", and "7 = strongly agree".

Nonetheless, similarly to PCS, some participants tended to have extreme responses towards "neither agree nor disagree", when they responded the questionnaire during the pilot study, henceforth, the researcher decided to standardised the response format to six-point scale: "1 = strongly disagree", "2 = disagree", "3 = slightly disagree", "4 = slightly agree", "5 = agree", and "6 = strongly agree". Thus, the total scores ranged between 18 and 108. A higher score indicated higher organisational commitment.

Pilot Studies, Validity and Reliability of Instruments

The study instruments were piloted prior the implementation of actual study. The pilot study aimed to evaluate the instruments' reliability and validity. Internal consistency and stability were examined to ascertain instruments' reliability. The validity examinations included content, criterion-related, and construct validity. Thus, the main aim of the pilot studies were to established the validity and reliability of the following measures:

1. Turnover Intention Questionnaire (TIQ)

2. Exit Choice Questionnaire (ECQ)

3. Practice Environment Scale – Nursing Work Index (PES-NWI)

4. Professional Commitment Scale (PCS)

5. Organisational Commitment Scale (OCS)

The pilot studies were conducted between December 2013 and May 2014. There were two phases of pilot studies: the first phase was conducted between

December 2013 and February 2014 while, the second phase was conducted between March and May 2014. Convenience sampling was used for the pilot studies. The rationale for using the convenience sampling was that the researcher encounter difficulty in obtaining access to the nurse's name list from the respective hospitals. The inaccessibility to the name list resulted the researcher facing constraints in generating simple random sample. There were two levels of sampling: hospital and nurse sampling. The pilot study hospitals were drawn from the state of the *Wilayah Persekutuan Kuala Lumpur* and *Selangor* which were located in the central region. A list of private hospital names located at both of the states was acquired from the website of the Association of Private Hospitals of Malaysia (APHM, 2014). Four private hospitals (two private hospitals from the state of *Wilayah Persekutuan Kuala Lumpur* and two private hospitals from the state of Selangor) were selected and invited to participate in the pilot studies. However, only the two private hospitals from the state of *Wilayah Persekutuan Kuala Lumpur* had permitted for the conduct of the pilot studies. The pilot studies commenced upon the permission given by the chief executive officers of the respective private hospitals.

Content validity of the instruments. Content validity was the first level of verifying the suitability of the instrument items for the study population. Three panels of experts: one hospital administrator, one chief nursing officer, and one ward manager of the two selected private hospitals were invited to review the study instruments. The rationale in selecting the hospital administrator, chief nursing officer, and ward managers as the panel of experts was because the selected panels would be able to justify the appropriateness of the instrument for the study population in terms of language and suitability of the items in aligning to the hospitals management standards of practice and policy.

The first instrument of the study was Turnover Intention Questionnaire (TIQ). All the three panel of experts agreed that the items in questionnaire were appropriate in determining nurses' turnover intention and therefore, no modification was required for the questionnaire.

The second instrument of the study was the Exit Choice Questionnaire (ECQ). In general, the panel of experts agreed that the items were appropriate and current to the Malaysian nurses' exit choices. However, the panel of experts had suggested some minor modification for few items. It was suggested that the phrase "outside nursing" to be replaced with "not in nursing". Furthermore, the phrase "non-nursing" was suggested to be bolded and underlined in order to alert the participants when answering the questionnaire. Pilot study was conducted after the amendment on the ECQ.

The third instrument of the study was PES-NWI. The panel of experts agreed that the measure was appropriate to gauge nurses' perception towards NPE. Furthermore, the items listed in the index were aligned with international nursing standards as well as quality indicators for magnet recognition hospitals in the United States. Nonetheless, the panel of experts had recommended few items to be modified in order to suit the items to the nurses in the local context. Thus, it was recommended that the word "supervisor" which appeared in Item 3 and 7 to be replaced with "ward sister/ ward manager". The change was necessary because the term "ward sister/ ward manager" were more commonly used in the Malaysian private hospitals. Furthermore, the term "ward sister" was suggested to be added to "ward manager" for item 10 and 20 because in some hospitals, "ward sister" was synonymous with "ward manager" which reflected the managerial role of the ward. In item 11 and 15, "director of nursing" was suggested to be added to "chief nursing officer" because in some

hospitals, the "chief nursing officer" position was addressed as "director of nursing" which reflected the leadership role of the hospital. Pilot study was conducted after the amendment on the PES-NWI.

The fourth and fifth instruments of the study were Professional Commitment Scale (PCS) and Organisational Commitment Scale (OCS). The panel of experts agreed that the items in scale were appropriate and suitable in determining Malaysian nurses' professional and organisational commitment. Therefore, no modification was required for the scales. The subsequent section of the chapter focused on the conduct of the pilot studies.

Pilot study - first phase. The first phase pilot study was intended to assess the internal consistency and construct validity. In the aspect of reliability, Cronbach's alpha value between .65 and .95 was considered as an acceptable internal consistency of an instrument (Chua, 2013). In addition, a correlation value of more than .30 was considered as acceptable for corrected item-total correlation (DeVellis, 2003). Item with correlation value of less than .30 can be considered for deletion (Nunnally & Berstein, 1994 cited in Liou & Cheng, 2009).

Furthermore, EFA was used to ascertain for construct validity. Adequacy of sample and appropriateness of factor model were determined based on Kaiser-Meyer-Olkin (KMO) and Bartlett's test of sphericity (Pett et al., 2003 cited in Chiang & Lin, 2009). The value of KMO should be .60 and above. Bartlett's test of sphericity was aimed at significant value which was less than .05 (Hopper, 2012). Kaiser's eigenvalue higher than 1.00, level of cumulative variance, scree plot, and priori theory were factors to consider for decision on quantity of factors (Hooper, 2012). The significant factor loading was .30 (Liou & Cheng, 2009). A minimum of three items were required for interpreting a factor (Liou & Cheng, 2009).

The first step of the data collection in the pilot study was that the researcher conducted a briefing on the study to the respective hospital administrator/ chief nursing officer. Hospital *A* had appointed the hospital administrator's secretary as the liaison person of the study while, Hospital *B* had appointed the deputy chief nursing officer as the liaison person of the study. The role of the liaison person is to introduce the researcher to the respective ward or unit managers and facilitate the distribution of questionnaire to the registered nurses. Henceforth, all registered nurses working in the selected private hospitals and fulfilled the inclusion criteria of the study were requested to respond for the study. Participants were assured that their responses for the questionnaire were of strict confidence and anonymous. The registered nurses were instructed to place their responses in a sealed envelope as attached and drop into the folder place at the nurses' counter. The researcher emptied the response folder every week. A reminder was conveyed to all of the registered nurses during the weekly visitation to the units/ wards. Alternatively, the participants can opt to post or return the responses directly to the researcher.

Convenience sampling was used for nurse sampling. Written consent was obtained from the participants prior to questionnaire administration. Once the participants agreed to participate in the pilot study, the survey packages were administered to the participants. The survey packages consisted of the cover letter from the researcher, consent form, envelope with seal, and the five sets of study instruments which include TIQ, ECQ, PES-NWI, PCS, and OCS. The estimated duration to complete the questionnaire was between 30 and 40 minute. A total of 270 questionnaires were administered (Hospital A administered 130 questionnaires while, Hospital B administered 140 questionnaire). Nevertheless, three wards of Hospital *A* (estimated 72 registered nurses) were excluded from the first phase pilot study. The

registered nurses who were working in these three wards were reserved for the second phase pilot study. Thus, in total, approximately 240 out of 270 participants responded the pilot study survey (response rate 89%).

In terms of hospital response rate, Hospital *A* achieved 107 (response rate 82%) while, Hospital *B* achieved 133 (response rate 95%). The high response rate from both of the hospitals could be related to the weekly reminder from the researcher and also the encouragement from the hospital administrator as well as deputy chief nursing officer of the hospitals. Nonetheless, 80 responses were found to be incomplete with missing values and extreme biases. Henceforth, these responses were excluded. The actual response rate was approximately 160 responses (response rate 59%). Nevertheless, the sample size managed to achieve the minimum requirement to run exploratory factor analysis.

Pilot study – second phase. The second phase pilot study aimed to evaluate the stability of TIQ, ECQ, PES-NWI, PCS, and OCS. TIQ and ECQ were developed by the researcher. Therefore, stability evaluation was deemed to be crucial to ensure that the items were applicable and relevant over time. Instruments' stability was estimated through test-retest reliability (Polit & Beck, 2014). A correlation value of .65 and above was required to have stability (Chua, 2013). The other instruments (PES-NWI, PCS, and OCS) were existing instruments which had been extensively used across many countries. Nonetheless, stability evaluation on these instruments was deemed to be relevant and appropriate.

On the other hand, the pilot study aimed to confirm the criterion-related validity of TIQ, PES-NWI, and OCS. Criterion-related validity can be confirmed through correlation analysis. The correlation between the instruments' value and another instrument which measure similar concepts (external criterion) was examined

(Polit & Beck, 2014). A higher value of the correlation coefficient indicated greater criterion-related validity (Polit & Beck, 2014). In the study, the criterion-related validity was examined using the "Anticipated Turnover Scale" (ATS, Hinshaw & Atwood, 1985), "Organisational Commitment Questionnaire" (OCQ, Mowday et al., 1979), and "Nursing Work Index – Revised" (NWI-R, Aiken & Patrician, 2000). ATS was used to establish the criterion validity for nurses' turnover intention in TIQ. OCQ and NWI-R were used to establish the criterion validity for OCS and PES-NWI respectively. Furthermore, convergence validity of PCS was examined in the study. Past studies have confirmed that commitment towards profession was significantly negative correlated with turnover intention (Chang et al., 2015; Nogueras, 2006). Thus, turnover intention was used to confirm the convergence validity of PCS.

Similarly, to the first phase pilot study, the liaison person introduced the researcher to the respective ward managers and registered nurses to facilitate the administration of the pilot study questionnaire to the registered nurses. In addition, second phase pilot study consisted of two stages: first stage was conducted between 10th and 23rd March 2014 while; second stage was conducted between 1st and 20th April 2014. Written consent was required and in addition, the participants who have consented were required to state their name, working unit/ ward, and contact particulars such as email address or mobile telephone number on the questionnaire so that the researcher can contact them for the second distribution (second stage) of the questionnaire.

Henceforth, study participants were briefed by the researcher or liaison person that the study consisted of two stages where the participants were required to repeat the questionnaire at a later date this was unknown to the participants. Participants were assured that their responses for the questionnaire were of strict confidence. The

participant's personal particulars such as email address and telephone number were kept as strict confidence for research purpose and were deleted from the computer database after the completion of the pilot study. The participants were instructed to place their responses together with their contact particulars (such as email address or telephone number) in a sealed envelope as attached and drop into the folder place at the nurses' counter. The researcher emptied the response folder every week. A reminder was conveyed to all the registered nurses during the weekly visitation to the units/ wards. Alternatively, the participants can opt to post or return the responses directly to the researcher.

Second phase pilot study – first stage. The first stage of the second phase pilot study was conducted between the 10th and 23rd March 2014. Once the participants agreed to participate in the study, the survey packages were administered to the participants. The survey packages consisted of the cover letter from the researcher, consent form, envelope with seal, and study instruments which include TIQ, ECQ, PES-NWI, PCS, OCS, ATS, OCQ and NWI-R. The inclusion of ATS, OCQ and NWI-R in the survey packages were for the purpose of criterion-related validity analysis. The estimated duration to complete all the study instruments was between 40 and 60 minutes. A longer duration was estimated in view of the addition of three instruments.

A total of 72 questionnaires administered and approximately 45 (response rate 63%) responded to the questionnaire and were usable for analysis. There other responses were found to have missing values, extreme biases, and incomplete contact particulars such as name, working ward, email address, and telephone number. Hence, these responses were excluded. Henceforth, the collected data was used for test-retest

of TIQ, ECQ, PES-NWI, PCS, and OCS. The first stage data was computed as "test" in the data analysis computer software.

Second phase pilot study – second stage. The second stage of the study was conducted after an interval of one to two weeks, between the 1st and 20th April 2014. Participants who had participated in the first stage of the second phase pilot study were contacted based on their name, working ward, telephone number and email address stated in the consent forms attached with the questionnaire. The researcher was able to contact the 45 participants with the assistance of the liaison person and ward managers. All the participants agreed to participate in the study.

Henceforth, a sum of 45 questionnaires was administered. Written consent was obtained prior to questionnaire distribution. The participants were instructed to state their name on the questionnaire in order to facilitate the data entry for test-retest analysis subsequently. Once the participants agreed to participate in the study, the survey packages were administered to the participants. The survey packages consisted of the cover letter from the researcher, consent form, envelope with seal, and study instruments which include TIQ, ECQ, PES-NWI, PCS, and OCS. The estimated duration to complete the questionnaire was from 30 to 40 minutes.

The participants were instructed to place their responses in the seal envelope. They can also return their responses directly to the researcher or liaison person. Alternatively, the participants may drop their responses in the folder which was located at nurses' counter of their respective wards. The researcher emptied the folder every week. There were 43 participants responded to the questionnaire (response rate 96%). However, missing values and extreme bias were found in two responses while, one response did not state name on the questionnaire. Thus, the actual response rate was 40 participants (response rate 89%). The high response rate of the study was due

to the high cooperation demonstrated among the participants and encouragement from their hospital management. Furthermore, the researcher reminded the participants to return their responses every week. Data collected in stage two of the second phase pilot study was used for test-retest analysis. The collected data for TIQ, ECQ, PES-NWI, PCS, and OCS were computed as "re-test" in the data analysis computer software.

Results of the Pilot Studies, Validity and Reliability of the Instruments

      Description of pilot study sample. The socio-demographic profile of the first phase pilot study sample was analysed using descriptive statistics. The results were presented in Table 3.1. Majority of the participants were female single nurses who were diploma holders and earned an average monthly income between RM 2001 and RM 3000. The average age of the participants were 26.52 (SD = 4.44), and have an average nursing experience of approximately 6.22 years (SD = 3.46). Furthermore, more than half of the sample worked in the general adult medical-surgical wards, and still serving their educational sponsorship contract bond. Thus, the results revealed rather similar to the demographic found among the registered nurses working in a Peninsular Malaysian hospital (Atefi, Abdullah, Wong, & Mazlom, 2014; Ramoo et al., 2013).

Table 3.1

Socio-demographic Profile of Pilot Study Sample (n = 160)

Socio-demographic profile	*n*	%	Mean	*SD*
Age (years)			26.52	4.44
Nursing experience (years)			6.22	3.46
Organisational tenure (years)			4.08	4.29
Gender				
- Male	3	1.90		
- Female	157	98.10		
Marital status				
- Single	105	65.60		
- Married	54	33.80		
- Others	1	.60		
Dependent responsibility				
- Yes	36	22.50		
- No	124	77.50		
Average monthly income				
- Below RM 2000	Nil	Nil		
- RM 2001 – RM 3000	118	73.75		
- RM 3001 – RM 4000	42	26.25		
Area of work				
- Medical Surgical Ward/ Adult General Ward	102	63.80		
- Specialty units	58	36.20		
Educational sponsorship bond				
- Yes	104	65.00		
- No	56	35.00		
Nursing specialization qualification				
- Yes	25	15.60		
- No	135	84.40		
Highest education				
- Diploma in Nursing	151	94.40		
- Bachelor of Nursing and higher	9	5.60		

Data Distribution. The normality of the pilot study data was examined using skewness, kurtosis, and Shapiro-Wilk (S-W) test. The analysis revealed all the variables were within the skewness and kurtosis limit of -1.96 to +1.96 which indicated normal distribution (Chua, 2013). The results were presented in Table 3.2.

Table 3.2

Skewness, Kurtosis and S-W Test Results for Pilot Study (n=160)

Variables	Skewness	Kurtosis	Shapiro-Wilk test
Nursing practice environment (NPE)	.17	-.18	.99
Professional commitment (PC)	-1.15	2.30	.93**
Organisational commitment (OC)	-.04	-.33	.99
Exit choice (EC)	.65	-.06	.96**
Turnover intention (TI)	.38	-.68	.95**
- Intra-organisational TI	.59	-.53	.87**
- Inter-organisational TI	.21	-.98	.90**
- Country TI	1.22	.79	.78**
- Professional TI	1.19	.73	.78**

*Significant at $p < .05$

In terms of Shapiro-Wilk test, NPE ($p = .38$) and OC ($p = .21$) variables revealed insignificant results ($p > .05$) which supported normality distribution. Nonetheless, the remaining variables were found to have significant results ($p < .05$). The analysis revealed slightly negative skewed distribution for PC variables in which higher proportion of participants had indicated relatively high commitment towards their profession. On the other hand, the analysis revealed slightly positive skewed distribution for EC, TI, intra-organisational TI, inter-organisational TI, country TI, and professional TI variables. The results indicated that relatively lower proportion of participants had indicated for the overall turnover intention, exit choice, and the different forms of turnover intention (i.e., intra-organisational TI, inter-organisational TI, country TI, and professional TI). Nonetheless, in view that all the variables revealed skewness and kurtosis values within the limit between -1.96 to +1.96, the variables were considered as fulfilling the normality distribution. The subsequent section highlighted the results for validity and reliability of TIQ, ECQ, PES-NWI, PCS, and OCS.

Validity and reliability of TIQ. The construct validity of TIQ was confirmed through EFA using principal component analysis (PCA). Varimax rotation was used

in PCA. KMO value was .68. Bartlett's test of sphericity revealed significance of less than .05 ($p < .05$). The EFA for TIQ yielded one factor, which explained 54.94% turnover intention. The analysis results were displayed in Table 3.3.

Table 3.3

EFA Results and Internal Consistency of TIQ (n=160)

Item No	Item	Factor 1
2	Inter-organisational turnover intention	.86
1	Intra-organisational turnover intention	.74
4	Professional turnover intention	.72
3	Country turnover intention	.63
	Eigenvalue	2.20
	Percent of explained variance	54.94
	Cronbach's alpha	.72

In terms of criterion-related validity, correlation analysis was performed between ATS and TIQ. The results revealed that ATS had moderate positive correlation with TIQ ($r = .57, p < .01$). Thus, the results supported the criterion-related validity of TIQ.

In terms of reliability, the internal consistency coefficient for the overall TIQ was .72. The internal consistency coefficient for the four different forms of turnover intention: inter-organisational, intra-organisational, professional, and country turnover intention were .86, .74, .72, and .63 respectively. Furthermore, all the items had correlation value of more than .30 for corrected item-total correlation. The corrected item-total correlation for TIQ ranged between .40 and .67.

In addition, in terms of stability, correlation analysis was used for "test" and "retest" data of TIQ. The test-retest analysis found strong positive correlation ($r = .81$, $p < .01$) between the "test" and "retest" data of TIQ. In conclusion, the validity and

reliability evaluations confirmed TIQ was a reliable and valid instrument to be applied among the study population.

Validity and reliability of ECQ. The construct validity of the ECQ was confirmed through EFA using PCA and varimax rotation. KMO value was .73. Bartlett's test of sphericity attained significance less than .05 ($p < .05$). The EFA revealed two factors: nursing related exit choice (*nursing*-EC), and non-nursing related exit choice (*non-nursing*-EC), which explained 58.42% nurses' exit choice. The results were displayed in Table 3.4.

Table 3.4

EFA Results and Internal Consistency of ECQ (n=160)

Item No.	Items	Factor 1	Factor 2
	Factor 1: *Non-nursing*-EC		
12	Working in another organisation with a different kind of job (non-nursing job)?	.82	
10	Working in another country but not as a nurse?	.77	
8	Pursuing further qualification not in nursing profession?	.75	
13	Starting your own business?	.62	
	Factor 2: *Nursing*-EC		
7	Pursuing further qualification in nursing profession?		.79
11	Working in another hospital as a nurse?		.73
9	Working in another country as a nurse?		.71
	Eigenvalue	2.86	1.23
	Percent of explained variance	40.91	17.51
	Cronbach's alpha	.75	.63

In terms of reliability, the internal consistency coefficient for the overall ECQ was .75. The internal consistency coefficient for *non-nursing*-EC and *nursing*-EC subscales were .75 and .63 respectively. In terms of individual items, the internal consistency coefficient was ranged between .62 and .82. Furthermore, all the items

had correlation value of more than .30 for corrected item-total correlation. The corrected item-total correlation for ECQ ranged between .30 and .57.

On the other hand, in terms of stability, correlation analysis was used for "test" and "retest" data of ECQ. The test-retest analysis found strong positive correlation ($r = .79$, $p < .01$) between the "test" and "retest" data of ECQ. In conclusion, the validity and reliability evaluations confirmed ECQ was a reliable and valid instrument to be applied among the study population.

Validity and reliability of PES-NWI. Construct validity was established by EFA using principal axis factoring (PAF) with promax rotation. PAF was used to ascertain whether the factors exist in the data were interpretable in the theoretical sense (Hooper, 2012). In other words, PAF was used to identify the latent constructs underlying the measured variables (Liou & Cheng, 2009). The analysis revealed the KMO value was .89. Bartlett's test of sphericity attained significance level less than .05 ($p < .05$). The analysis produced eight factors which explained 62.81% nurses' perception on NPE. Item 28 has factor loading of less than .30. Factor 1, 2, 3 and 5 were found to contain more than three items in each of the factors. Nonetheless, no cross-loading was noted in the pattern matrix. The analysis results were shown in Table 3.5.

Table 3.5

EFA Results and Internal Consistency of PES-NWI (n=160)

Item No.	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8
31.	.99							
29.	.73							
30.	.61							
26.	.56							
25.	.42							
27.	.39							
3.		.86						
10.		.77						
1.		.48						
8.		.42						
5.		.42						
4.		.34						
2.		.30						
16.			.80					
24.			.60					
17.			.57					
13.			.46					
18.			.45					
7.			.45					
9.				.93				
12.				.76				
22.					.69			
21.					.62			
20.					.60			
23.					.37			
19.						.57		
14.						.54		
15.							.63	
11.							.58	
6.								.84
Explanation (%)	32.46	6.10	5.01	4.63	4.62	3.74	3.43	3.23
Eigenvalue	10.06	1.89	1.55	1.44	1.31	1.16	1.06	1.00

Note. Only factor loadings higher than .30 are presented.

Furthermore, the findings of the analysis were compared with the PES-NWI original subscales. The comparison revealed that all items loaded in Factor 1 were corresponded with NFQC subscale which was related to provision of quality care, except for one item (item 27) which was corresponded with NPHA subscale which was related to organisational involvement and autonomy. In Factor 2, there were two

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items (item 3 and 10) corresponded with NMLS subscale which was related to nurse manager support and leadership; and two items (item 1 and 8) corresponded with SRA subscale which was aligned with staffing and resources. Item 4 and 5 were related to professional development, both items were found to be loaded in Factor 2. The factor analysis results were similar to a study conducted among the Taiwan nurses by Chiang and Lin (2009). Nonetheless, item 2 which was related to nurse-physician relationship was loaded in Factor 2.

In Factor 3, there were two items (item 16 and 24) which corresponded with CNPR subscale which was related to relationship between doctors and nurses; and two items (item 13 and 7) corresponded with NMLS subscale. The explanation to this phenomenon was related to the perception of collegiality (scholastic relationship) among the Malaysian nurses. In the local context, healthcare providers were referring to physicians, nurse managers, and peers as a whole. Henceforth, collegial relationships among members encompass all healthcare providers. Item 18 which were related to philosophy of care, and item 17 on opportunity advancement were also loaded in Factor 3. In Factor 5, there were two items (item 21 and 23) corresponded with NPHA. Item 22 which were related to active quality programme and item 20 which was related to nurse manager stands by nurses' decision making were loaded in Factor 5. Both items were reflecting the extent of nurses' involvement in hospital affair.

Furthermore, the criterion-related validity was established through the Nursing Work Index - Revised. PES-NWI revealed significant strong association with Nursing Work Index - Revised ($r = .97$, $p < .01$). Thus, the findings supported the validity of PES-NWI. Henceforth, in view of prior theoretical framework by Lake (2002) and the constructs had been psychometrically proven as well as replicated

among the Malaysian studies (Marzuki et al., 2012), all the items and subscales in the PES-NWI were retained according to the original measure in order to facilitate result comparison purposes.

In terms of reliability, the internal consistency coefficient for the overall scale was .93. The corrected item-total correlations for the scale were ranged positively between .34 and .68 which fall within the recommended range .30 to .70 as proposed by DeVellis (2003). The internal consistency coefficients of the five subscales were ranged between .63 and .84. In addition, the test-retest reliability indicated PES-NWI was a stable measure to determine NPE ($r = .93$, $p < .01$). In conclusion, the validity and reliability evaluations confirmed PES-NWI was reliable and valid.

Validity and reliability of PCS. In terms of construct validity, EFA using PAF with promax rotation was conducted. KMO value was .90. Bartlett's test of sphericity also attained significance level of less than .05 ($p < .05$). The results produced four factors which explained 64.94% professional commitment. The results were displayed in Table 3.6.

Table 3.6

EFA Results of PCS (n=160)

Item No.	Items	Factor 1	Factor 2	Factor 3	Factor 4
4.	I like being a nurse.	.98			
16.	I am proud to be in the nursing profession.	.73			
10	I identify with the nursing profession.	.67			
1	Nursing profession is important to my self-image.	.56		.47	
8	Changing nursing profession now would be difficult for me to do.	.48	.38		
12	I feel a responsibility to the nursing profession to continue in it.	.41			.35
5	Too much of my life would be disrupted if I were to change nursing profession.	.31			

Item No.	Items	Factor 1	Factor 2	Factor 3	Factor 4
11	There are pressures to keep me from changing nursing profession.		.83		
14	Changing nursing profession now would require considerable personal sacrifice.		.62		.36
17	It would be costly for me to change nursing profession.		.49		
9	I would feel guilty if I left nursing profession.	.33	.33		
3	I believe people who have been trained in a profession have a responsibility to stay in that profession for a reasonable of time.			.82	
7	I am contented having entered the nursing profession.			.54	
2	I have put too much into the nursing profession to consider changing now.		.43	.52	
6	I feel obligated to remain in the nursing profession.			.40	.32
15	Even if it were to my advantage, I do not feel that it would be right to leave nursing profession now.				.53
18	I am in nursing profession because of a sense of loyalty to it.	.40			.47
13	I am enthusiastic about nursing profession.			.35	.44
	Eigenvalue	7.81	1.67	1.13	1.08
	Percent of explained variance (%)	43.38	9.29	6.25	6.02

Note. Only factor loadings higher than .30 are presented.

All the items have factor loadings of greater than .30. Cross-loadings were identified: item 1 in Factors 1 and 3; item 2 in Factors 2 and 3; and item 18 in Factors 1 and 4. The factors were compared with the original PCS subscales. The comparison found that items loaded in Factor 1 were majority related to the affective domain. As for Factor 2 and 3, items were mainly related to continuance, and normative domains respectively. Factor 4 contained less than three items.

Furthermore, professional turnover intention was used as the convergence validity of the study. Past studies have confirmed that commitment towards profession was significantly negative correlated with professional turnover intention (Chang et al., 2015; Nogueras, 2006). The correlation analysis revealed a significant association between turnover intention and professional commitment ($r = -.39, p < .01$). Thus, the

findings supported the validity of PCS. Henceforth, in view of prior theoretical framework by Meyer et al. (1993) and the constructs had been psychometrically proven, all the items and subscales in the PCS were retained according to the original measure in order to facilitate result comparison purposes.

The internal consistency coefficient of PCS was .92. All the items in the scale had correlation value of more than .30 for corrected item-total correlation. The corrected item-total correlation for PCS ranged between .34 and .72. The internal consistency coefficients for the three domains: APC, CPC, and NPC were .89, .79, and .77 respectively. Furthermore, the test-retest reliability indicated PCS was a stable measure to determine professional commitment ($r = .95, p < .01$). Henceforth, the findings supported the validity of PCS. In conclusion, the validity and reliability evaluations confirmed PCS was a reliable and valid instrument to be applied among the study population.

Validity and reliability of OCS. In terms of construct validity, EFA using PAF with promax rotation was conducted. KMO value was .91. Bartlett's test of sphericity attained significance level of less than .05 ($p < .05$). The results of the analysis produced four factors which explained 64.48% organisational commitment. The EFA results were displayed in Table 3.7.

Table 3.7

EFA Results of OCS (n = 160)

Item No	Items	Factor 1	Factor 2
13	This hospital has a great deal of personal meaning for me	.96	
16	I feel like "part of the family" at my hospital	.76	
12	This hospital deserves my loyalty	.75	
10	I feel a strong sense of "belonging" to my hospital	.52	

Item No	Items	Factor 1	Factor 2
15	I would not leave my hospital right now because I have a sense of obligation to the people in it	.51	
18	I owe a great deal to my hospital	.46	
17	One of the few consequences of leaving this organisation would be the scarcity of available alternatives	.44	
1	I would be very happy to spend the rest of my career with this hospital	.42	
6	Even if it were to my advantage, I do not feel it would be right to leave my hospital now		.93
7	I really feel as if this hospital's problems are my own		.66
8	Too much of my life would be disrupted if I decided I wanted to leave my hospital now		.59
5	It would be very hard for me to leave my hospital right now even if I wanted to		.54
9	I would feel guilty if I left my hospital now		.44
4	I feel "emotionally attached" to this hospital		.37
	Eigenvalue	7.88	1.44
	Percent of explained variance	43.78	8.01

All the items have factor loadings of higher than .30. Item 9 was found to be crossed loaded in Factors 1 and 2. Item 9 was retained in the questionnaire because it did not load higher than .50 in the second factor. Furthermore, items loaded in Factor 1 were found to belong in the affective and normative domains. Factor 2 consisted of items related to continuance domain. Factor 3 and 4 contained less than three items.

In terms criterion-related validity, correlation analysis was performed between the data collected for OCQ and OCS. OCQ was found to have significant positive correlation with OCS ($r = .68$, $p < .01$). Henceforth, in view of prior theoretical framework by Meyer et al. (1993) and the constructs had been psychometrically proven, all the items and subscales in the OCS were retained according to the original measure in order to facilitate result comparison purposes.

The internal consistency coefficient for OCS was .92. All the items in the scale had correlation value of more than .30 for corrected item-total correlation. The corrected item-total correlation for OCS ranged between .38 and .73. The internal

consistency coefficients for AOC, COC, and NOC domains were .84, .73, and .83 respectively. Moreover, the test-retest reliability indicated that OCS was stable in measuring organisational commitment ($r = .96$, $p < .01$). Henceforth, the findings supported the validity of OCS. In conclusion, the validity and reliability evaluations confirmed OCS was a reliable and valid instrument to be applied among the study population.

Main Study Instrumentation

Prior to the implementation of the main study, all of the study instruments were reviewed and modified meticulously based on the findings of the pilot studies. TIQ, ECQ and PES-NWI did not require further amendments. Nevertheless, minor modifications were required for PCS and OCS. In view of relatively high proportion of pilot study participants responded on "neither agree nor disagree" in the seven-point scale, the response format for PCS and OCS were standardized to six points scale: "1 = strongly disagree", "2 = disagree", "3 = slightly disagree", "4 = slightly agree", "5 = agree", and "6 = strongly agree". The modifications were acceptable and commonly been practiced among researchers as stated by Meyer and Allen (2004). Thus, the instrument package for the main study includes a cover letter from the researcher, consent form, and five sets of research instruments: TIQ, ECQ, PES-NWI, PCS, and OCS.

All the instruments of the study were in English version, which were the original language of the instruments. Malaysian registered nurses were proficient in English language in view of proficiency in English is one of the entry requirement when enrolling for a basic nursing programme. Furthermore, English language is the official language used in the Malaysian private hospital. Henceforth, the use of

English language instruments was deemed appropriate and questionnaire translation to other languages was not required in the study. The constructs of the instrument were displayed in Table 3.8.

Table 3.8

Constructs of the Research Instruments for the Main Study

Construct	Instrument Name and Developer(s)	Measures		Number of Items
Socio-demographic characteristics	Socio-demographic characteristics developed by the researcher	-	Age, nursing experience, organisational tenure (continuous data)	13 items
		-	Region, types of hospital, gender, marital status, average monthly income, dependent responsibilities, educational sponsorship bond, nursing specialization, level of education, and work area (categorical data)	
Turnover intention	TIQ (researcher)		5-point Likert Scale (1-5 scale)	4 items
Exit choice	ECQ (researcher)		5-point Likert Scale (1-5 scale)	7 items
Perception of nursing practice environment	PES-NWI (Lake , 2002)		4-point Likert Scale (1-4 scale)	31 items
Professional commitment	PCS (Meyer et al., 1993)		6-point Likert Scale (1-6 scale)	18 items
Organisational commitment	OCS (Meyer et al., 1993)		6-point Likert Scale (1-6 scale)	18 items
			Total Items	91 items

Ethical Considerations

Firstly, the researcher had presented the research proposal at the university faculty level on 17th July 2014 and the university institutional review board had approved the conduct of the study on 7th October 2014. Subsequently, in view of the

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main study was conducted in the clinical/ hospital settings, good clinical practice certification and research ethics committee approval was necessary prior to seeking permission to conduct study from the respective private hospitals. Henceforth, the researcher had completed an online good clinical practice module and sought three independent research ethics committee approvals. The three independent research ethics committee approvals were granted on 11th February 2015 (reference no. RD5/02/15), 16th April 2015 (reference no. AC2015-037), and 29th April 2015 (reference no. 003/2015/ER).

The researcher was able to seek the permission to conduct study from the chief executive officers of the respective private hospitals following the independent research ethics committee approvals. The study began after obtaining the institutional permission from the chief executive officers of the respective private hospitals. Participation in the study was based on voluntarily basis, and participants were assured that their responses were of strict confidence and anonymous. Informed consent was obtained before data collection.

Procedures for Data Collection

The study was conducted in four private hospitals in the Peninsular Malaysia. The researcher implemented the same data collection procedure across the four hospitals. Prior to the data collection, the researcher met up with the hospital administrators such as chief nursing officer or director of nursing to explain on the study purpose and elaborated in length on the data collection procedure. Subsequently, with the consensus of the chief nursing officer or director of nursing, a liaison person (non-nursing personnel) was appointed by the hospital administrators

to assist with the administration of the study instruments. No monetary incentives were given to the research administrator.

Hospital *C* and *D* had appointed the chief nursing officer's secretary as the liaison person of the study. Hospital *E* had appointed the research officer while, Hospital *F* had appointed the quality control executive of the hospital as the liaison person of the study. Similar to the pilot study, the role of the liaison person was to introduce the researcher to the respective ward or unit managers and registered nurses to facilitate the distribution of the study questionnaire to the registered nurses. The researcher had also explained the data collection procedure to the research administrator. Registered nurses were assured that their responses for the questionnaire were of strict confidence and anonymous. Additionally, the registered nurses were instructed to place their responses in a sealed envelope as attached and drop into the folder place at the nurses' counter. The researcher emptied the response folder every fortnight. A reminder was conveyed to all the registered nurses during the fortnightly visitation to the units/ wards. Furthermore, the research administrators also performed gentle reminder through the hospital's email to the participants to return responded questionnaire every week. Alternatively, the participants can opt to post or return the responses directly to the researcher. All the nurses who fulfilled the study criteria of the study were asked to participate in the study.

Once the participants agreed to participate in the study, the survey packages were administered to the participants. The survey packages consisted of the cover letter from the researcher, consent form, envelope with seal, and five sets of study instruments which include TIQ, ECQ, PES-NWI, PCS, and OCS. The participants were instructed to complete all the questionnaires in the survey package. Participants were advised to contact the researcher through the stated email address if they have

any inquiries about the instruments. The estimated time to answer all the questionnaires was approximately 30 to 40 minutes. The participants were instructed to respond the questionnaires anonymously and placed the responses in sealed envelopes. Participants may return the sealed response directly to the researcher, liaison person or a folder which was located at the nurses' counter.

The duration for the data collection from the four private hospitals was approximately eight months between February and October 2015. Averagely, the duration of data collection of each private hospital were ranged between three and four months. All the collected data was kept confidential in a locked cabinet. Only researcher had contact to the collected data. The researcher will destroy the data after dissemination of research findings.

Data Analysis Procedures

Data was entered into the Statistical Package for the Social Sciences (SPSS) version 18 for analysis. Statistical methods were used for analyses. The following section explained on the statistical methods used to address the research questions.

Research question 1: What are the characteristics of nursing practice environment (NPE) as perceived by the Malaysian registered nurses (RNs)?. The characteristics of NPE were determined through the data gathered using PES-NWI. The composite mean score of the entire PES-NWI and subscales were calculated. A minimum cut-off point of more than 2.5 composite mean values was required in order to be accepted as favourable NPE (Lake, 2002). A higher composite mean score of PES-NWI indicated a more favourable NPE (Lake, 2002). Subsequently, the NPE categorisation proposed by Lake and Friese (2006) was adopted to categorize the NPE. NPE was classified as "favourable" when at least four subscales attained

composite mean scores exceeded 2.5, "mixed" when at least two subscales composite mean scores exceeded 2.5 and "unfavourable" when at least one subscale composite mean scores exceeded 2.5.

In addition, in view of hierarchical multiple regressions was required in subsequent section, the associations between the socio-demographic profiles and NPE were investigated. The continuous variables such as age, nursing experience, organisational tenure, and NPE were analysed using the Pearson correlations. The categorical variables such as region, types of hospitals, dependent responsibilities, educational sponsorship bond, nursing specialisation qualification, marital status, monthly income, the highest education level, and working area were analysed using t-test and Cohen, d, effect size. Effect sizes ranged $.2 \leq d < .5$ was considered as small; $.5 \leq d < .8$ as moderate; and $\geq .8$ as large (Cohen, 1988 cited in Ramoo et al., 2013). Furthermore, the associations of socio-demographic profiles on the subscales of PES-NWI were investigated using correlations and t-tests.

Research question 2: What is the estimated degree of professional commitment (PC) and organisational commitment (OC) among the Malaysian RNs?. The degree of professional commitment and organisational commitment were determined through the data gathered using PCS and OCS respectively. Composite mean value of PCS and OCS were calculated. A higher composite mean value indicated higher degree of professional commitment and organisational commitment. The commitment was categorised as 1 to 2.5; > 2.5 to 4.5; and > 4.5 to 6 were deemed as low, moderate, and high commitment respectively. The composite mean value of each commitment domain including affective, continuance, and normative were calculated to determine the strongest domain and vice versa.

Furthermore, the associations of socio-demographic profiles on professional and organisational commitment were investigated through correlation and t-test. The continuous variables such as age, nursing experience, organisational tenure, PC, and OC were analysed using the Pearson correlations. The categorical variables such as region, types of hospitals, dependent responsibilities, educational sponsorship bond, nursing specialisation qualification, marital status, monthly income, the highest education level, and working area were analysed using t-test and Cohen, d, effect size. Furthermore, the associations of socio-demographic profiles on the domains of PCS and OCS were investigated using correlations and t-tests.

Research question 3: What is the estimated degree and proportion of turnover intention (TI) among the Malaysian RNs?. The degree and proportion of turnover intention were determined through the data gathered using TIQ. Composite mean value of TIQ was calculated. A higher composite mean value of TIQ indicated higher turnover intention. The degree of turnover intention was categorised as 1 to 2; > 2 to 4; and > 4 to 5 were deemed as low, moderate, and high turnover intention respectively. As for proportion of turnover intention, the different forms of turnover intention such as intra-organisational, inter-organisational, country, and professional were dichotomised. Responses of "never" and "sometimes per year" were re-coded as "do not have turnover intention" (no), while responses of "sometimes per month", "sometimes per week", and "almost every day" were re-coded as "have turnover intention" (yes) (Hasselhorn et al., 2003). Frequency and percentage were calculated to determine the proportion of turnover intention.

Additionally, in view of regression analyses were required for subsequent research questions, the association of socio-demographic profiles on turnover intention and the different forms of turnover intention were investigated through

correlation and t-test. The continuous variables were analysed using the Pearson correlations. The categorical variables such as region, types of hospital, dependent responsibilities, educational sponsorship bond, nursing specialisation qualification, marital status, monthly income, the highest education level, and working area were analysed using t-test and Cohen, d, effect size.

Research question 4: What is the proportion of exit choice (EC) in terms of organisational, education, country and entrepreneurship among the Malaysian RNs?. The proportion of exit choice were determined through the data gathered using ECQ. The various exit choices such as pursuing nursing qualification/ qualification outside nursing discipline, working in another healthcare organisation/ country, engaging job outside nursing discipline in another organisation/ country, and starting own business were dichotomised. Responses of "never" and "sometimes per year" were re-coded as "not exit choice", while responses of "sometimes per month", "sometimes per week", and "almost every day" were re-coded as "exit choice" (Hasselhorn et al., 2003). Frequency and percentage were calculated to determine the proportion of exit choice in terms of organisation, education, country, and entrepreneurship.

Research question 5: Do NPE, PC and OC predict TI when controlling the socio-demographic variables?. Hierarchical multiple regression was used to address the answer for the research question. The associations of socio-demographic variables, NPE, PC, OC, and on TI were determined. In the earlier analyses, the associations of socio-demographic variables on NPE, PC, OC, and TI had been determined. Thus, in the section, the associations of NPE, PC, and OC on TI and different forms of TI were determined through correlation, t-test, Cohen, d, effect size, chi-square, and odds ratio analysis. Subsequently, variables which demonstrated

significant coefficients were included in the hierarchical multiple regressions using stepwise method. Socio-demographic variables were entered in the first step (Model 1). Subsequently, NPE, PC, and OC were entered into the analysis accordingly. The percentage explained in the variance on TI reflected on the predictive value towards turnover intention. The similar data analysis method was also used to analyse the predictive values of the NPE, PC, and OC on the different forms of turnover intention.

Research question 6: How do PC and OC influence the relationship between NPE and TI among the Malaysian RNs?. Partial correlation was used to address the answer for the research question. Firstly, regression analysis was performed to ascertain the association of NPE, PC, OC, and TI. PC and OC can only be confirmed as a mediator when NPE (predictor) had significant relationships with TI (dependent variable, DV) and PC/ OC (mediator). Furthermore, PC and OC (mediators) had to predict TI (DV) when NPE (predictor) was controlled. A reduction of the relationship between NPE (predictor) and TI (DV) was observed when PC/ OC (mediator) was in the equation. The mediation was described as "perfect" if the relationship relating NPE (predictor) and TI (DV) went to zero once PC/ OC (mediator) was in the equation (Tabachnick & Fidell, 2013).

Research question 7: Do EC contribute to TI among the Malaysian RNs?. T-tests and effect sizes were used to address the answer for the research question. All items in ECQ were dichotomised. Responses of "never" and "sometimes per year" were re-coded as "not exit choice", while responses of "sometimes per month", "sometimes per week", and "almost every day" were re-coded as "exit choice" (Hasselhorn et al., 2003). T-tests and effect sizes were used to determine whether there were any significant associations on turnover intention between those who chose the

exit choice and vice versa. Significant difference results would mean exit choice (EC) contributed to turnover intention (TI).

Research question 8: How does EC influence the relationship between NPE and TI among the Malaysian RNs?. Partial correlation analysis was used to address the answer for the research question. Prior to partial correlation analysis, hierarchical multiple regression analysis was performed to ascertain the association of NPE, *nursing*-EC, and *non-nursing*-EC on TI and the different forms of TI. Subsequently, *nursing*-EC/ *non-nursing*-EC can only be confirmed as a mediator when NPE (predictor) had significant relationships with TI (DV) and *nursing-EC/ non-nursing*-EC (mediator). Furthermore, *nursing*-EC/ *non-nursing*-EC (mediator) had to predict TI (DV) when NPE (predictor) was controlled. A reduction of the relationship between NPE (predictor) and TI (DV) was observed when *nursing-EC/ non-nursing*-EC (mediator) was in the equation. The mediation was described as "perfect" if the relationship relating NPE (predictor) and TI (DV) went to zero once *nursing*-EC/ *non-nursing*-EC (mediator) was in the equation (Tabachnick & Fidell, 2013).

As a summary, the data analysis methods of the study comprised of both: descriptive (mean, standard deviation, frequency, and percentage), and inferential statistics (t-test, correlation, chi-square, odd ratio, hierarchical multiple regression, and partial correlation). Table 3.9 displayed the data analysis methods for each research question.

Table 3.9

Data Analysis Methods for the Research Questions

No.	Research Questions	Data Analysis Methods
1	What are the characteristics of nursing practice environment (NPE) as perceived by the Malaysian RNs?	Descriptive statistics – mean and standard deviation
2	What is the estimated degree of professional commitment (PC) and organisational commitment (OC) among the Malaysian RNs?	Descriptive statistics – mean and standard deviation
3	What is the estimated degree and proportion of turnover intention (TI) among the Malaysian RNs?	Descriptive statistics – mean, standard deviation, frequency and percentage
4	What is the proportion of exit choice (EC) in terms of organisational, education, country and entrepreneurship among the Malaysian RNs?	Descriptive statistics –frequency and percentage
5	Do NPE, PC and OC predict TI when controlling the socio-demographic variables?	Inferential statistics – Hierarchical multiple regression
6	How do PC and OC influence the relationship between NPE and TI among the Malaysian RNs?	Inferential statistics – Partial correlations
7	Do EC contribute to TI among the Malaysian RNs?	Inferential statistics – T-test
8	How does EC influence the relationship between NPE and TI among the Malaysian RNs?	Inferential statistics – Partial correlations

Summary

The current chapter elaborated on the research methodology and rationale for the selected research design. Subsequently, the sampling plan, instrument, findings of the pilot studies (validity and reliability), procedures of data collection and analysis were explained in length in the chapter. The next chapter would elaborate on data analysis and research findings.

CHAPTER 4

DATA ANALYSIS AND FINDINGS

Introduction

Data analysis procedures and research findings were presented in this chapter. SPSS version 18.0 was used and statistical significance level of .05 was determined for statistical analyses. The description of sample was presented first and followed by the findings for the research questions as below:

1. What are the characteristics of nursing practice environment (NPE) as perceived by the Malaysian RNs?

2. What is the estimated degree of professional commitment (PC) and organisational commitment (OC) among the Malaysian RNs?

3. What is the estimated degree and proportion of turnover intention (TI) among the Malaysian RNs?

4. What is the proportion of exit choice (EC) in terms of organisational, education, country and entrepreneurship among the Malaysian RNs?

5. Do NPE, PC and OC predict TI when controlling the socio-demographic variables?

6. How do PC and OC influence the relationship between NPE and TI among the Malaysian RNs?

7. Do EC contribute to TI among the Malaysian RNs?

8. How does EC influence the relationship between NPE and TI among the Malaysian RNs?

Description of the Sample

The study sample was registered nurses from the four private hospitals (Hospital *C*, *D*, *E*, and *F*) located in the Peninsular Malaysia. Hospital *C* was located in the south-east region with approximately 238 beds capacity (medium-sized hospital). Hospital *D* and *F* were located in the central region with approximately 424 beds capacity (large-sized hospital) and 185 beds capacity (medium-sized hospital). Hospital *E* was located in the north region with approximately 276 beds capacity (large-sized hospital).

A total of 1290 questionnaire (Hospital *C*, *D*, *E*, and *F* administered 430, 300, 270, and 290 questionnaires respectively) were administered and 944 of the participants returned the questionnaire. The response rate was 73%. In terms of hospital response rate, Hospital *C*, *D*, *E*, and *F* achieved 306 (response rate 71%), 286 (response rate 95%), 223 (response rate 83%), and 129 (response rate 45%) respectively. The high response rate in Hospital *D* could be related to the encouragement given to the participants by the ward managers and hospital management to participate in the study. On the other hand, the low response rate of Hospital *F* could be related to the festive season during the data collection period.

Nonetheless, 34 out of the 944 responses were found to have missing values and incomplete responses. In addition, 56 responses were found to be extreme bias responses. Henceforth, a total of 90 responses were excluded and thus, the remaining 854 responses were used for further analysis. Thus, the actual response rate was 66%.

Data Screening. The accuracy of the data was determined by having two people to proofread approximately half of the original data against the computerized data entered in the SPSS. Subsequently, SPSS "EXPLORE" was used to screen and clean the data. The descriptive statistical analysis detected some outliers in the dataset

and these outliers were removed because the extreme value may distort the results particularly on the value of the regression coefficient (Tabachnick & Fidell, 2013). Henceforth, the overall valid response rate for analysis was approximately 64% ($n = 820$).

Data Distribution. In general, there were three methods that can be used to determine data normality: visual or graphical methods, normality tests, and numerical methods (Ghasemi & Zahediasl, 2012; Kim, 2013; Razali & Wah, 2011). The visual methods consisted of histogram, boxplot, and probability plots such as probability-probability (P-P) and quantile-quantile (Q-Q) plots (Ghasemi & Zahediasl, 2012). In terms of normality tests, Kolmogorov-Smirnov and Shapiro-Wilk tests were the most common normality tests used while, the most common numerical methods used were skewness and kurtosis (Ghasemi & Zahediasl, 2012; Kim, 2013).

In the current study, the normality of NPE, PC, OC, *nursing*-EC, *non-nursing*-EC, TI, and the different forms of TI (i.e., intra-organisational, inter-organisational, country, and professional) variables were examined using Q-Q plot, Shapiro-Wilk test, skewness, and kurtosis. In terms of graphical methods, the Q-Q plot was used because it was recommended as an effective diagnostic tool for verifying data normality (Razali & Wah, 2011) and the preferred method for large sample size (Ghasemi & Zahediasl, 2012). Furthermore, a straight oblique line would be shown in the Q-Q plot if the data were distributed normally (Ghasemi & Zahediasl, 2012).

In terms of normality test, Shapiro-Wilk test was used in the study because majority of the scholars have proposed that Shapiro-Wilk test as the most appropriate normality test (Ghasemi & Zahediasl, 2012). A significant value more than .05 ($p > .05$) was required in order to support normality (Chua, 2013). Nevertheless, the normality results for graphical methods and normality tests were easily influenced by

sample size, henceforth, skewness, and kurtosis (numerical methods) were postulated to be the most effective methods for assessing normality in both small as well as large samples (Kim, 2013). Henceforth, assessing normality using skewness, and kurtosis were included in the study. Skewness was referring to the measure of the asymmetry while, kurtosis referred to the measure of peakedness of a distribution (Kim, 2013). The range between -1.96 and +1.96 was necessary to reflect normal distribution (Chua, 2013).

Furthermore, scholars anticipated that data distribution can be disregarded when the sample size was of hundreds (Altman & Bland, 1995; Ghasemi & Zahediasl, 2012). Nevertheless, in this study, the researcher decided to assess the data distribution using the three methods: graphical method (Q-Q plot), numerical methods (skewness and kurtosis), and normality test (Shapiro-Wilk test).

The Shapiro-Wilk test results were displayed in Table 4.1. However, the Shapiro-Wilk test showed significant values less than .05 ($p < .05$) which did not support normality (Chua, 2013). Nevertheless, Shapiro-Wilk test had been found to be less reliable when apply onto large sample ($n > 300$) (Kim, 2013). Henceforth, the numerical method through skewness and kurtosis; and graphical method through Q-Q plot were used to verify the problem (Kim, 2013). The skewness and kurtosis results were presented in Table 4.1. The analysis revealed the skewness and kurtosis were within the limit of -1.96 to +1.96 which indicated normal distribution (Chua, 2013). Thus, the results supported normality.

Table 4.1

Skewness, Kurtosis and S-W Test for Variables

Variables	Skewness	Kurtosis	Shapiro-Wilk test
Nursing practice environment (NPE)	-.16	-.43	.99[*]
- NPHA subscale	-.57	.33	.96[*]
- NFQC subscale	-.15	.48	.97[*]
- NMLS subscale	-.64	1.07	.94[*]
- SRA subscale	-.42	.01	.96[*]
- CNRP subscale	-.60	1.14	.91[*]
Professional commitment (PC)	-.27	-.24	.99[*]
- APC domain	-.54	.63	.97[*]
- CPC domain	-.40	.06	.98[*]
- NPC domain	-.47	.26	.98[*]
Organisational commitment (OC)	-.20	-.36	.99[*]
- AOC domain	-.25	-.48	.98[*]
- COC domain	-.33	.09	.99[*]
- NOC domain	-.29	-.41	.98[*]
Nursing related exit choice (*nursing*-EC)	.34	-.42	.97[*]
Non-nursing related exit choice (*non-nursing*-EC)	.83	-.22	.90[*]
Turnover intention (TI)	.44	-.49	.96[*]
- Intra-organisational TI	.50	-.72	.88[*]
- Inter-organisational TI	.31	-.89	.90[*]
- Country TI	.95	.15	.82[*]
- Professional TI	1.10	.55	.80[*]

*Significant at $p < .05$

In addition, Q-Q plot was used to determine the data distribution for NPE, PC, OC, *nursing*-EC, *non-nursing*-EC, TI, intraorganisational TI, inter-organisational TI, country TI, and professional TI. The Q-Q plot for NPE, PC, OC, *nursing*-EC, *non-nursing*-EC, TI, intra-organisational TI, and inter-organisational TI variables revealed that the points were almost all lined quite close to the line which indicated normal distribution (Kellar & Kelvin, 2013) as shown from Figure 4.1 to Figure 4.8.
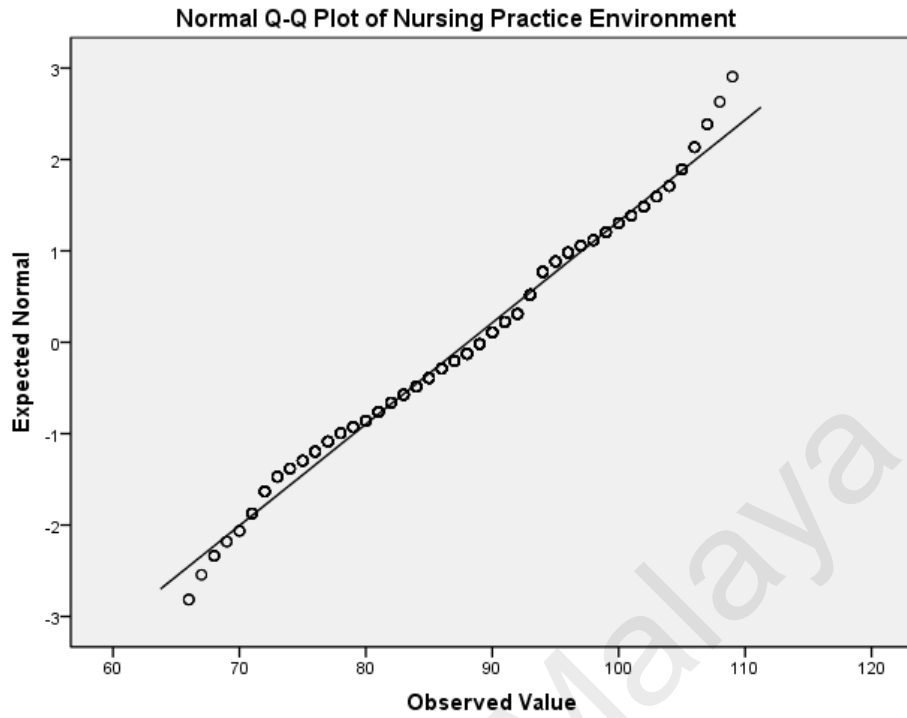
Figure 4.1. Q-Q plot for NPE variable
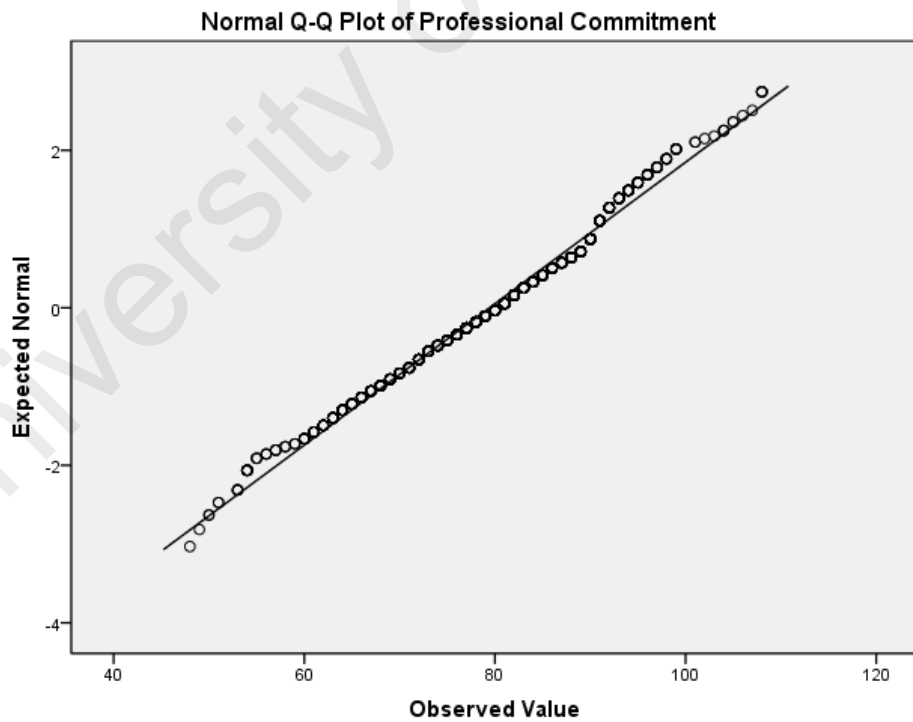
Figure 4.2. Q-Q plot for PC variable
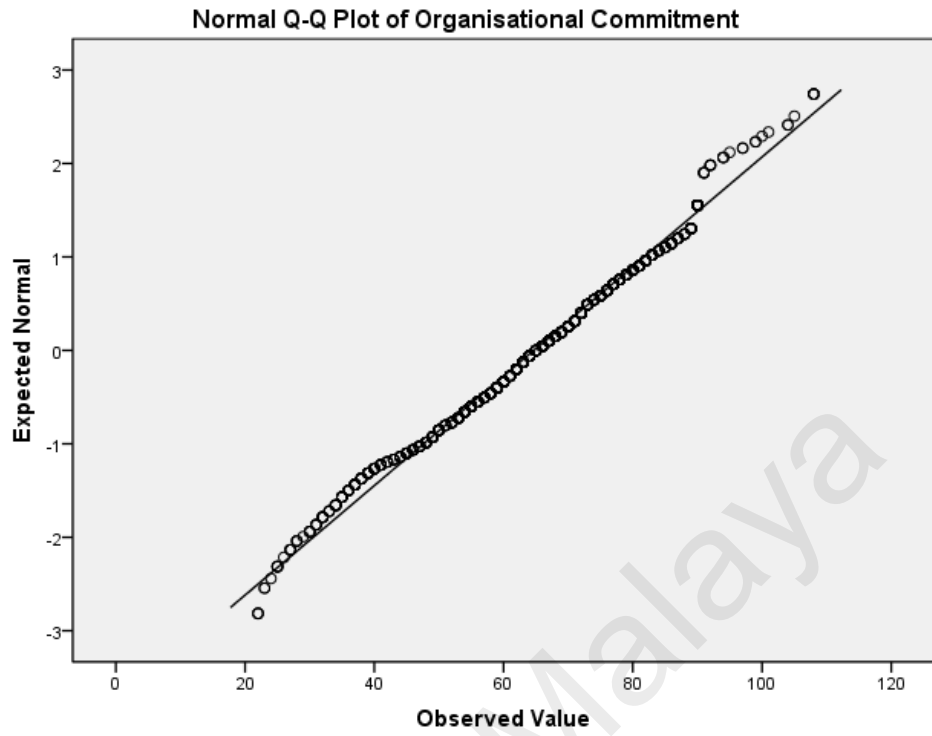
Figure 4.3. Q-Q plot for OC variable
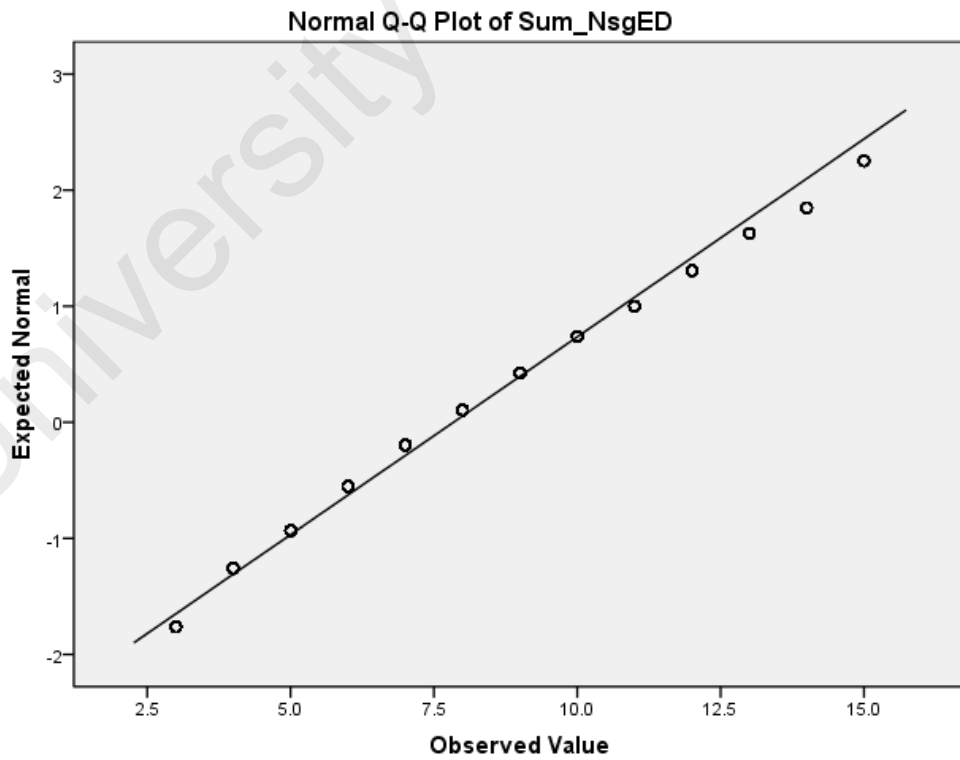
Figure 4.4. Q-Q plot for *nursing*-EC variable
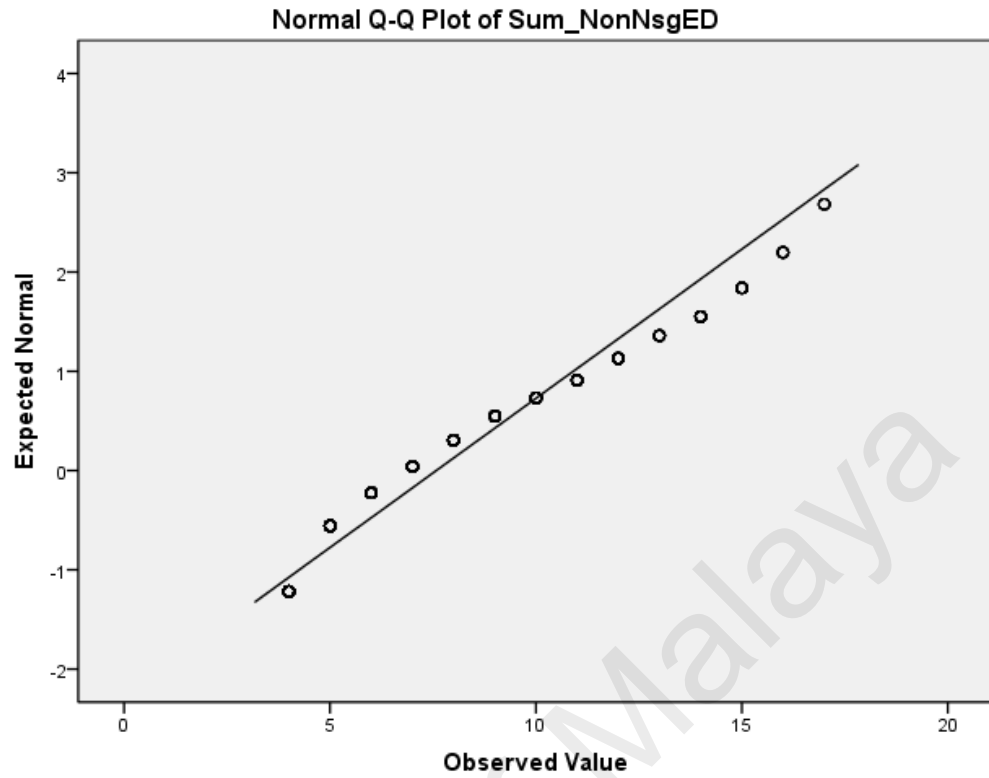
Figure 4.5. Q-Q plot for *non-nursing*-EC variable
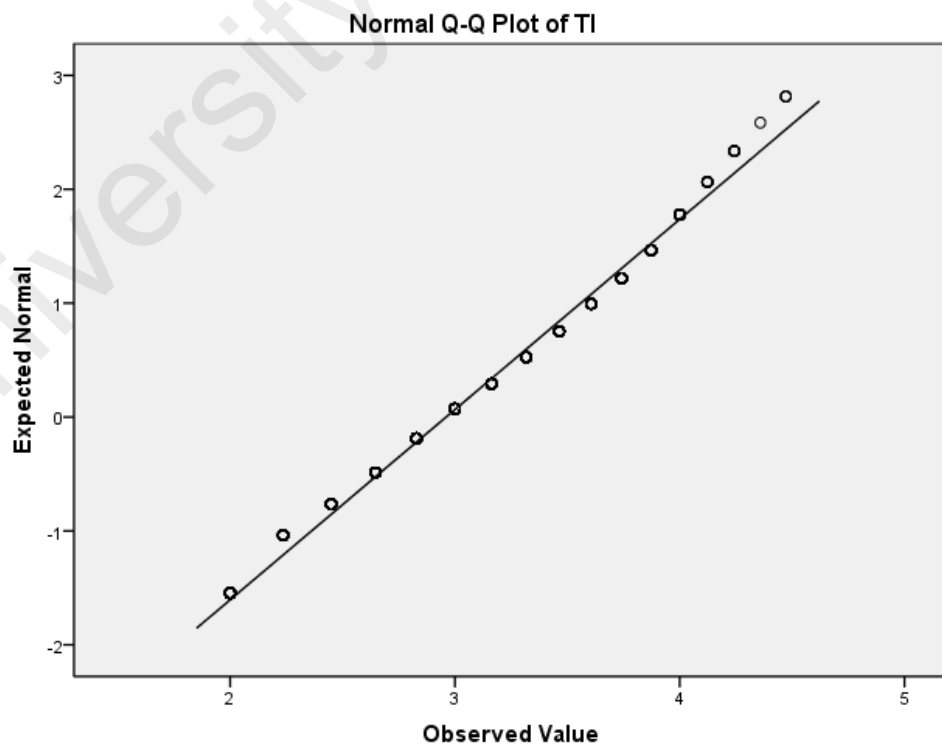
Figure 4.6. Q-Q plot for TI variable
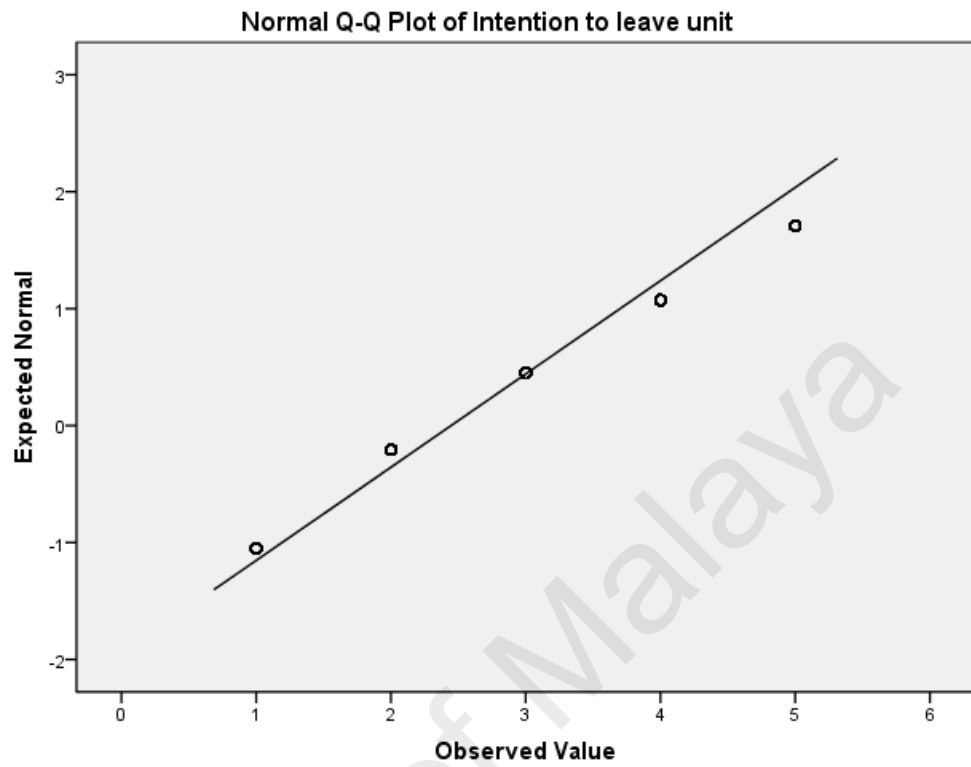
Figure 4.7 Q-Q plot for intra-organisational TI variable
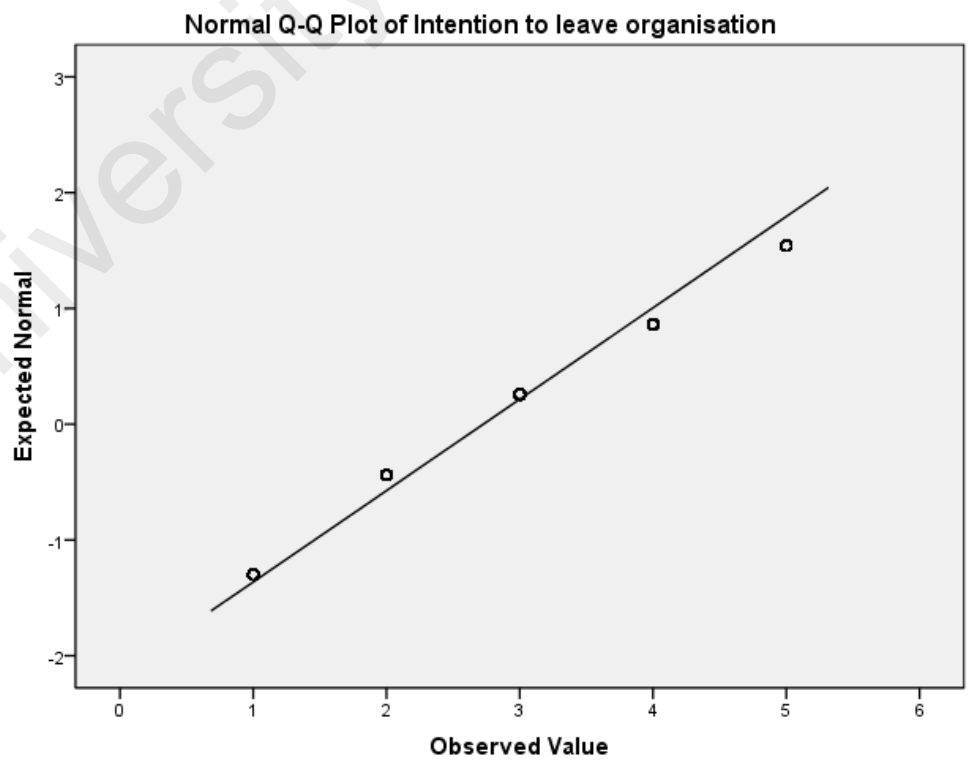
Figure 4.8 Q-Q plot for inter-organisational TI variable

Nonetheless, the Q-Q plot for country TI and professional TI variables showed slightly skewness as displayed in Figure 4.9 and Figure 4.10 respectively.
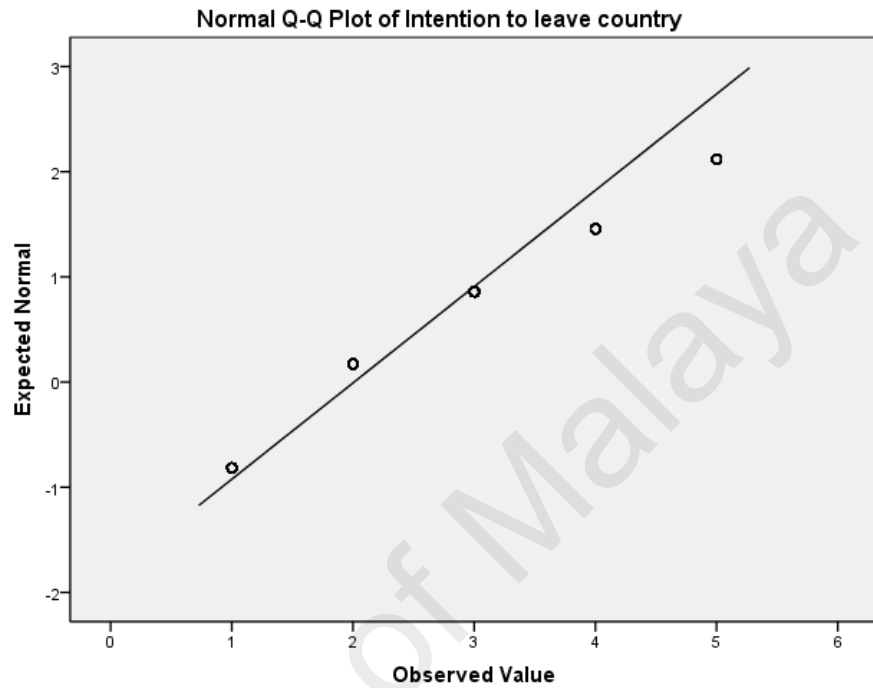
Figure 4.9. Q-Q plot for country TI variable
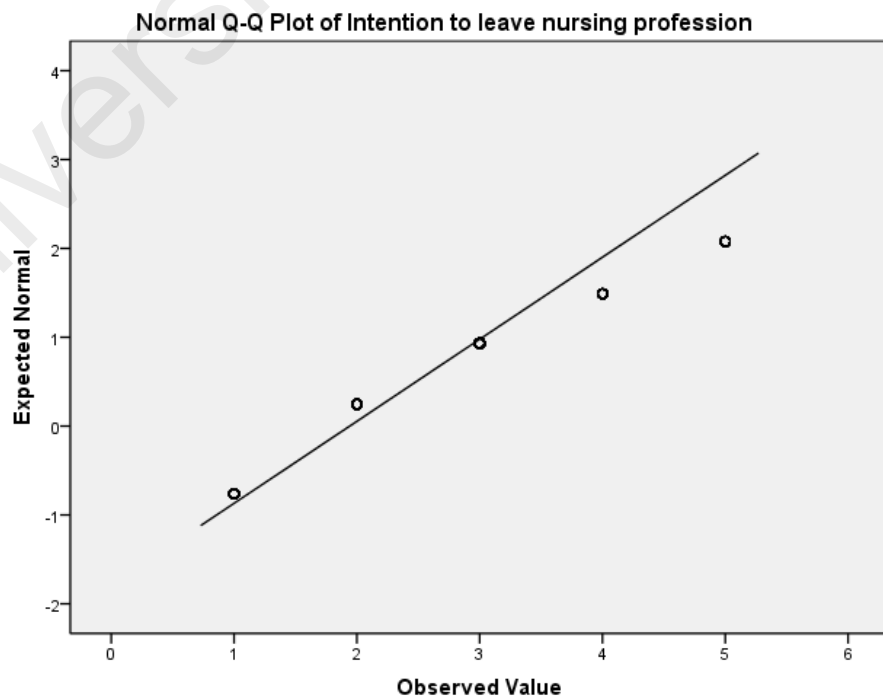
Figure 4.10. Q-Q plot for professional TI variable

Socio-demographic Profile

The socio-demographic profile of the sample was described in Table 4.2. The distribution of participants across the north, central, and south-east regions were 23.54%, 44.63%, and 31.83% respectively. The ratio of the study participants among the regions was relatively comparable with the population which was 1:2:1. Furthermore, the participants were generally from the medium and large hospitals with proportions of 45.24% and 54.76% respectively. Majority of the participants were female ($n = 782$, 95.37%) aged between 20 and 30 years old ($n = 657$, 80.12%) and had Diploma in Nursing ($n = 571$, 69.63%) as their highest educational attainment. More than three-quarter of the participants did not have any nursing specialization qualification ($n = 623$, 75.98%), and approximately half were still serving their educational sponsorship bond ($n = 415$, 50.61%). Furthermore, majority of the participants had merely six years or less of nursing experience ($n = 606$, 73.90%), and six years or less of organisational tenure ($n = 639$, 77.93%).

Table 4.2

Socio-demographic Profile (n=820)

Socio-demographic profile	*n*	%	Mean	*SD*
Region				
- North	193	23.54		
- Central	366	44.63		
- South-east	261	31.83		
Types of hospitals				
- Medium	371	45.24		
- Large	449	54.76		
Age			27.93	5.71
- 20 – 30 years	657	80.12		
- Above 30 years	163	19.88		
Gender				
- Male	38	4.63		
- Female	782	95.37		

Socio-demographic profile	n	%	Mean	SD
Marital status				
- Single	485	59.15		
- Married	335	40.85		
Average monthly income				
- RM 2000 and below	297	36.22		
- Above RM 2000	523	63.78		
Nursing experience			5.35	4.84
- 6 years and below	606	73.90		
- Above 6 years	211	26.10		
Organisational tenure			4.54	3.99
- 6 years and below	639	77.93		
- Above 6 years	181	22.07		
Dependent responsibilities				
- Yes	508	61.95		
- No	312	38.05		
Educational sponsorship bond				
- Yes	415	50.61		
- No	405	49.39		
Nursing specialization qualification				
- Yes	197	24.02		
- No	623	75.98		
Highest educational level				
- Diploma in nursing	571	69.63		
- Higher than diploma in nursing	249	30.37		
Working areas				
- General adult medical surgical wards	394	48.05		
	426	51.95		
- Units of specialty				

The socio-demographic attributes of the current study sample was reflecting the typical population of Malaysian hospital nurses such as majority of the nurses were female between 20 and 30 years old, diploma holders without nursing specialty qualification, and working as qualified nurses for six years or less (Atefi et al., 2014; Ramoo et al., 2013). Furthermore, some of the individual characteristics of the current study sample were found to be comparable with the nurses' sample of other countries in terms of gender whereby similar with Malaysia, female is still dominating the nursing profession in most of the other countries such as in Europe, Hong Kong, and China (Choi et al., 2013; Heinen et al., 2013; Zhang et al., 2014).

Nonetheless, the current study sample was found to be distinctive with nurses' sample of other countries in terms of age and highest nursing educational attainment. Majority of the nurses' sample in other countries were found to have a higher age range which extended from 20 to 40 years old, and attained higher nursing educational attainment such as advanced diploma qualifications and bachelor's degree (Choi et al., 2013; Heinen et al., 2013; Zhang et al., 2014). For example: in a study conducted among the Portuguese and Chinese nurses revealed approximately 98% and 80% of the participants were found to have the highest educational level at bachelor's degree (Choi et al., 2013; Leone et al., 2015). On the other hand, studies conducted in Israel and China found that approximately 51% and 64% of the participants had advanced diploma / nursing specialization qualifications (Ganz & Toren, 2014; Liu et al., 2012).

Dissimilarities in the highest nursing educational attainment were due to the divergences found in the nursing education system of different countries (Ganz & Toren, 2014; Lansiquot et al., 2012; Lee et al., 2015; Leone et al., 2015). In some countries, bachelor's degree was the basic nursing education leading to nursing registration/ licensing (Lee et al., 2015; Leone et al., 2015). Nonetheless, nursing workforce was still predominating by certificate levels of nurses in some countries such as among the Caribbean countries as reported by Lansiquot et al. (2012). In Malaysia, there were two distinctive basic nursing education pathways: diploma in nursing and pre-registration bachelor's nursing degree. Majority of the Malaysian students opted for the diploma in nursing qualification due to lower entry requirement, availability of educational sponsorship programme, and guaranteed job opportunity upon completion of programme.

Research Findings

Research question 1 - What are the characteristics of nursing practice environment (NPE) as perceived by the Malaysian RNs?. The purpose of this section was to answer research question 1, "What are the characteristics of nursing practice environment (NPE) as perceived by the Malaysian RNs?" Data for this research question was gathered using the PES-NWI. The characteristics of NPE as perceived by the registered nurses were analysed using descriptive statistics. The results were displayed in Table 4.3.

Table 4.3

Mean and Standard Deviation of Perceptions towards NPE (n=820)

Item No.	Items	Mean	*SD*	Categorisation
	NPHA Subscale:	2.78	.38	Favourable
23.	Staff nurses are involved in the internal governance of the hospital (e.g., practice and policy committees)	2.83	.64	
6.	Opportunity for staff nurses to participate in policy decisions	2.66	.60	
17.	Opportunities for advancement	2.81	.54	
21.	Administration that listens and responds to employee concerns	2.62	.76	
11.	A chief nursing officer/ director of nursing who is highly visible and accessible to staff	2.65	.69	
5.	Career development/clinical ladder opportunity	2.85	.53	
28.	Nursing administrators consult with staff on daily problems and procedures	2.79	.70	
27.	Staff nurses have the opportunity to serve on hospital and nursing committees	3.04	.56	
15.	A chief nursing officer/ director of nursing equal in power and authority to other top-level hospital executives	2.77	.58	
	NFQC Subscale:	3.01	.31	Favourable
31.	Use of nursing diagnoses	3.12	.59	
22.	An active quality assurance program	2.93	.58	
25.	A preceptor program for newly hired Registered Nurses	3.12	.59	

Item No.	Items	Mean	SD	Categorisation
26.	Nursing care is based on a nursing, rather than a medical model	3.06	.56	
30.	Patient care assignments that foster continuity of care, i.e., the same nurse cares for the patient from one day to the next	2.92	.68	
18.	A clear philosophy of nursing that pervades the patient care environment	2.89	.44	
29.	Written, up-to-date nursing care plans for all patients	3.09	.58	
14.	High standards of nursing care are expected by the administration	3.02	.55	
4.	Active staff development or continuing education programs for nurses	3.02	.47	
19.	Working with nurses who are clinically competent	2.90	.49	
	NMLS Subscale:	2.86	.43	Favourable
10.	A nurse sister/ manager who is a good manager and leader	2.89	.61	
20.	A ward sister/ manager who backs up the nursing staff in decision making, even if the conflict is with a physician	2.89	.72	
7.	Ward sisters/ managers use mistakes as learning opportunities, not criticism	2.86	.61	
3.	A ward sister/ manager that is supportive of the nurses	2.92	.58	
13.	Praise and recognition for a job well done	2.73	.63	
	SRA Subscale:	2.57	.50	Favourable
12.	Enough staff to get the work done	2.40	.79	
9.	Enough registered nurses to provide quality patient care	2.43	.80	
1.	Adequate support services allow me to spend time with my patients	2.73	.59	
8.	Enough time and opportunity to discuss patient care problems with other nurses	2.73	.60	
	CNPR Subscale:	2.81	.45	Favourable
16.	A lot of team work between nurses and physicians	2.75	.62	
2.	Physicians and nurses have good working relationships	2.84	.53	
24.	Collaboration (joint practice) between nurses and physicians	2.83	.64	
	Overall PES-NWI	2.84	.29	Favourable

The overall PES-NWI composite mean score was 2.84 (*SD* = .29). All the five subscales' composite mean score were found to be greater than 2.5 which indicated favourable NPE. In this context, the participants agreed that the organisations possessed characteristics that facilitate professional nursing practice. The results revealed that the participants agreed that their organisations recognized nurses' autonomy and acknowledged nurses' involvement in decision-making of hospital matters. Furthermore, the participants agreed that their organisation had acceptable nursing staffing and resources which enable them to present quality nursing care. In addition, participants agreed that they were supported, and led by capable and charismatic nurse managers and leaders.

In terms of PES-NWI scales analysis, NFQC subscale was rated the highest among the participants with mean value of 3.01 (*SD* = .31). The participants highly agreed that their work place supported them in providing optimum standards of care to their patients. The results also reflected that the participants were highly agreeable that their organisations had quality assurance programmes in placed (i.e., internal/ external audits, preceptor programme, and in-service continuing nursing education), and standards of practices such as the use of nursing process, a nursing model (i.e., nursing diagnoses, and nursing care plan) which guided that that practices ensuring the delivery of quality patient care.

The second and third highest rating were NMLS and CNPR subscales with mean values of 2.86 (*SD* = .43) and 2.81 (*SD* = .45) respectively. The participants also agreed that their unit managers were capable and have leadership skills in supporting the nurses with their professional practice. The nurse managers were found to be supportive; stand-by nurses when conflict occurred between nurses and physicians encourage constructive learning, and commend nurses for their efforts and

achievements. Furthermore, the participants valued highly the collegial relationship with the doctors. Participants agreed that they were able to engage collaborative practice with the physicians in the management of patients care.

In addition, NPHA subscale which was related to autonomy and organisational involvement was found to be favourable among the participants with mean value of 2.78 (*SD* = .38). Participants agreed that they were given the opportunity to be involved in hospital working committee, and progress in their career. Nevertheless, the participants were less agreeable that the organisations empowered them in decision-making. Their voices were frequently not very well being heard or accepted by the higher management. Furthermore, the participants were less agreeable that their chief nursing officers/ directors of nursing were easily accessible and approachable. The results revealed a gap between the top management and its subordinates (i.e., nurses). The organisational structure was very much bureaucratic and hierarchical in nature.

Conversely, although the rating for SRA subscale achieved the minimum cut-off point of 2.5 to be considered as favourable NPE, the subscale was rated the lowest among the participants with mean value of 2.57 (*SD* = .50). Nonetheless, participants perceived their organisations as unfavourable in terms of "enough registered nurses to provide quality patient care", and "enough staff to get the work done" with mean values of 2.43 (*SD* = .80) and 2.40 (*SD* = .79) respectively. Both mean values were rated below the cut-off point of 2.5. The results revealed that the participants were least agreeable that their organisations had adequate registered nurses to render quality patient care, and complete nursing tasks. The results revealed serious implications for nursing practice and management because insufficiency of nursing staffing may jeopardise the patients' quality of care and safety.

In summary, the results explained that the participants agreed that their organisations were considered as favourable working environment which meant that the organisations possessed the characteristics that support nursing practice through sustaining high standards of nursing care, supportive / capable managers and leaders, as well as collegial relationship between physicians and nurses. Nonetheless, area pertaining to nurse staffing, workload, and resource sufficiency was the major concern among the nurses.

Associations of socio-demographic profiles and NPE. In view hierarchical regression was required in subsequent section, the associations between the socio-demographic profiles and NPE were investigated. The associations were ascertained through Pearson's correlations and t-tests. The continuous variables were analysed using the Pearson correlations. Correlation was the appropriate statistical analysis in view of the variables (i.e., age, nursing experience, organisational tenure, NPE, and PES-NWI subscales) were continuous data (Chua, 2013). Then, the categorical variables such as region, types of hospitals, dependent responsibilities, educational sponsorship bond, nursing specialization qualification, marital status, monthly income, the highest education level, and working area were analysed using t-test and Cohen, *d*, effect size. T-test was the appropriate statistical analyses in view of the dependent variables (i.e., NPE and PES-NWI subscales) were continuous data and fulfilled the normality distribution (Chua, 2013). Furthermore, t-test was applicable for comparison between two groups (Chua, 2013).

Associations of socio-demographic profiles on NPE. The correlation analyses revealed that age, nursing experience, and organisational tenure were not statistically correlated with NPE ($p > .05$). In other word, the perception towards NPE was not influenced through nurses' age, nursing experience, and organisational tenure.

In addition, the t-test and Cohen, *d*, effect size analyses revealed that NPE were significantly associated with educational sponsorship bond (*t* [818] = -3.59, *p* = .000, *d* = .25), nursing specialisation (*t* [818] = -3.33, *p* = .001, *d* = .28), and highest educational level (*t* [818] = 3.02, *p* = .003, *d* = .23). The significant associations revealed small effect sizes. In another word, the results showed that participants without educational sponsorship bond and nursing specialisation have rated their NPE as more favourable than those with educational sponsorship bond and nursing specialisation. In other words, participants without educational sponsorship bond and nursing post basic specialty certification/ qualification have a better perception towards their working environment. Furthermore, participants with higher educational level (nursing academic qualification higher than diploma level such as advanced diploma, undergraduate and postgraduate levels) tended to rate their NPE least favourable. The results were displayed in Table 4.4.

Table 4.4

T-test Results of Socio-demographics on NPE

Socio-demographics	Nursing Practice Environment (NPE)					
	n	Mean	*SD*	*t*	*p*	Effect Size, *d*
Region				1.18	.238	.08
- Central	366	88.50	8.17			
- North-east-south	454	87.75	9.63			
Types of hospital				-1.05	.294	.07
- Medium	371	87.72	9.84			
- Large	449	88.38	8.26			
Marital status				-1.92	.055	.14
- Single	485	87.58	9.05			
- Married	335	88.81	8.91			
Average monthly income				.10	.917	.008
- Above RM2000	523	88.11	8.83			
- RM 2000 and below	297	88.04	9.34			
Dependent responsibilities				.38	.707	.027
- Yes	508	88.17	9.08			
- No	312	87.93	8.92			
Educational sponsorship bond				-3.59	.000**	.25
- Yes	415	86.97	8.91			
- No	405	89.21	8.99			
Nursing specialisation				-3.33	.001*	.28
- Yes	197	86.23	8.66			
- No	623	88.67	9.05			
Highest educational level				3.02	.003*	.23
- Diploma in nursing	571	88.70	9.15			
- Higher than diploma in nursing	249	86.65	8.54			
Area of working				-.92	.357	.07
- General medical-surgical units	394	87.78	8.56			
- Units of specialty	426	88.36	9.41			

*Significant at $p < .05$. **Significant at $p < .001$.

Henceforth, the remaining socio-demographic variables such as marital status, monthly income, dependent responsibilities, and working areas were found to have insignificant associations with NPE ($p > .05$). In conclusion, the results explained that the overall perception of NPE was influenced by whether the participants had any educational sponsorship bond, nursing specialisation, and highest educational level.

Participants who did not have any had educational sponsorship bond or completed serving their bond were found to have better perception towards their NPE. Additionally, diploma holder participants and without nursing specialisation were found to perceived positively towards their NPE. The subsequent section elaborated the analysis results of the associations of socio-demographic profiles and PES-NWI subscales.

Associations of socio-demographic profiles on PES-NWI subscales. The correlation analyses revealed that organisational tenure was not statistically correlated with the five PES-NWI subscales ($p > .05$). Nonetheless, age and nursing experience were found to have significant weak negative association with CNPR subscales ($p < .05$). The results reflected that nurses who were more mature and with longer years of nursing experience tended to rate lower for the aspect of collegiality between physicians and nurses. Nevertheless, age and nursing experience were found have insignificant association with the remaining subscales (NPHA, NFQC, NMLS, and SRA subscales).

On the other hand, the t-test and Cohen, *d*, effect size analyses revealed that married nurses (t [818] = -3.80, $p = .000$, $d = .10$) working in the central region (t [818] = 3.33, $p = .001$, $d = .24$), and with dependent responsibilities (t [818] = 2.20, $p = .028$, $d = .16$) tended to have higher satisfaction towards the NPHA subscale. Furthermore, participants with educational sponsorship bond (t [818] = -5.02, $p = .000$, $d = .32$), higher educational level (t [818] = 2.74, $p = .006$, $d = .21$), and with nursing specialization (t [818] = -3.00, $p = .003$, $d = .25$) tended to rate the aspect of autonomy and organisational involvement as less favourable. The significant associations revealed small effect sizes. In summary, nurses' perception towards degree of autonomy and organisational involvement was influenced by location of the

hospital, marital status, dependent responsibilities, educational sponsorship bond, educational level, and nursing specialisation. The results for NPHA subscale were displayed in Table 4.5.

Table 4.5

Associations of the Socio-demographic Profiles on the NPHA Subscale

Socio-demographics	NPHA Subscale					
	n	Mean	*SD*	t	p	Effect Size, d
Region				3.33	.001[*]	.24
- Central	366	25.45	2.84			
- North-east-south	454	24.66	3.81			
Types of hospital				1.20	.232	.08
- Medium	371	25.17	3.46			
- Large	449	24.88	3.40			
Marital status				-3.80	.000[**]	.10
- Single	485	24.64	3.54			
- Married	335	25.56	3.19			
Average monthly income				-.03	.977	.00
- Above RM2000	523	25.01	3.36			
- RM 2000 and below	297	25.02	3.55			
Dependent responsibilities				2.20	.028[*]	.16
- Yes	508	25.22	3.33			
- No	312	24.68	3.56			
Educational sponsorship bond				-5.02	.000[**]	.32
- Yes	415	24.53	3.48			
- No	405	25.61	3.27			
Nursing specialisation				-3.00	.003[*]	.25
- Yes	197	24.38	3.31			
- No	623	25.21	3.45			
Highest educational level				2.74	.006[*]	.21
- Diploma in nursing	571	25.23	3.54			
- Higher than diploma in nursing	249	24.52	3.34			
Area of working				-.59	.558	.04
- General medical-surgical units	394	24.94	3.26			
- Units of specialty	426	25.08	3.58			

*Significant at $p < .05$. **Significant at $p < .001$.

Subsequently, the associations between the categorical socio-demographic variables and NFQC subscale were analysed. The t-test and Cohen, *d*, effect size analyses results were displayed in Table 4.6.

Table 4.6

Associations of the Socio-demographic Profiles on the NFQC Subscale

Socio-demographics	NFQC Subscale					
	n	Mean	*SD*	*t*	*p*	Effect Size, *d*
Region				-5.14	.000**	.37
- Central	366	29.45	2.56			
- North-east-south	454	30.55	3.36			
Types of hospital				-1.87	.062	.13
- Medium	371	29.84	3.47			
- Large	449	30.24	2.69			
Marital status				.68	.494	.05
- Single	485	30.12	3.02			
- Married	335	29.97	3.15			
Average monthly income				-.30	.766	.02
- Above RM2000	523	30.03	2.99			
- RM 2000 and below	297	30.10	3.22			
Dependent responsibilities				-1.12	.264	.08
- Yes	508	29.96	3.06			
- No	312	30.21	3.09			
Educational sponsorship bond				-.69	.492	.05
- Yes	415	29.99	2.98			
- No	405	30.13	3.17			
Nursing specialisation				-3.36	.001*	.28
- Yes	197	29.42	3.04			
- No	623	30.26	3.06			
Highest educational level				3.12	.002*	.24
- Diploma in nursing	571	30.28	3.05			
- Higher than diploma in nursing	249	29.55	3.08			
Area of working				-1.78	.076	.12
- General medical-surgical units	394	29.86	2.90			
- Units of specialty	426	30.24	3.22			

*Significant at *p* < .05. **Significant at *p* < .001.

The analysis revealed that nurses who were working in the central region (t [818] = -5.14, p = .000, d = .37) tended to rate lower for the aspect of provision of quality care. Furthermore, nurses with specialisation (t [818] = -3.36, p = .001, d = .28) and higher educational level (t [818] = 3.12, p = .002, d = .24) tended to have lower satisfaction towards the NFQC subscale. The significant associations revealed small effect sizes. The results reflected that location of the hospital, nursing education and specialisation qualification influenced nurses' perception towards the provision of quality care. Nurses with specialisation and higher educational level tended to pose higher expectation on the quality of their nursing work. Thus, it was relatively acceptable for the findings of the analyses. However, nurses working in the central region were least satisfied towards their provision of care. The rationale of the findings could be related to the higher patient population among the hospitals in the central region compared to the other regions. Nonetheless, the remaining socio-demographic variables revealed insignificant influenced on NFQC subscale. Subsequently, the associations between categorical socio-demographic variables and NMLS subscale were analysed. The t-test and Cohen, d, effect size analyses results were displayed in Table 4.7.

Table 4.7

Associations of the Socio-demographic Profiles on the NMLS Subscale

Socio-demographics	NMLS Subscale					
	n	Mean	*SD*	*t*	*p*	Effect Size, *d*
Region				2.26	.024*	.16
- Central	366	14.49	2.03			
- North-east-south	454	14.14	2.26			
Types of hospital				2.63	.009*	.18
- Medium	371	14.51	2.18			
- Large	449	14.12	2.14			
Marital status				-2.42	.016*	.18
- Single	485	14.14	2.20			
- Married	335	14.52	2.10			
Average monthly income				-.80	.422	.06
- Above RM2000	523	14.25	2.20			
- RM 2000 and below	297	14.38	2.11			
Dependent responsibilities				.18	.856	.01
- Yes	508	14.31	2.23			
- No	312	14.28	2.06			
Educational sponsorship bond				-4.73	.000**	.32
- Yes	415	13.95	2.16			
- No	405	14.64	2.12			
Nursing specialisation				-2.59	.010*	.21
- Yes	197	13.95	2.15			
- No	623	14.41	2.16			
Highest educational level				1.99	.047*	.15
- Diploma in nursing	571	14.40	2.20			
- Higher than diploma in nursing	249	14.07	2.09			
Area of working				1.36	.173	.09
- General medical-surgical units	394	14.40	1.94			
- Units of specialty	426	14.20	2.36			

*Significant at *p* < .05. **Significant at *p* < .001.

The analysis revealed that nurses who were working in the central region (*t* [818] = 2.26, *p* = .024, *d* = .16) and medium-sized hospitals (*t* [818] = 2.63, *p* = .009, *d* = .18) tended to have a more favourable perception towards leadership and support they received from their managers. Additionally, participants who were married (*t* [818] = -2.42, *p* = .016, *d* = .18) and without educational sponsorship bond (*t* [818] =

-4.73, p = .000, d = .32) tended to rate their managers as supportive and have leadership capabilities. Nonetheless, participants with nursing specialisation (t [818] = -2.59, p = .010, d = .21) and higher educational level (t [818] = 1.99, p = .047, d = .15) rated otherwise. The significant associations revealed small effect sizes. In summary, nurses' perception towards the role and leadership capability of the nurse managers was influenced by location of the hospital, types of hospital, marital status, educational sponsorship bond, nursing specialisation, and educational level. Subsequently, the associations between categorical socio-demographic variables and SRA subscale were analysed. The t-test and Cohen, d, effect size analyses results were displayed in Table 4.8.

Table 4.8

Associations of the Socio-demographic Profiles on the SRA Subscale

Socio-demographics	SRA Subscale					
	n	Mean	*SD*	t	p	Effect Size, d
Region				3.58	.000**	.26
- Central	366	10.57	1.93			
- North-east-south	454	10.06	2.06			
Types of hospital				-4.98	.000**	.35
- Medium	371	9.91	2.21			
- Large	449	10.60	1.79			
Marital status				-1.55	.122	.11
- Single	485	10.20	2.04			
- Married	335	10.42	1.98			
Average monthly income				1.88	.061	.14
- Above RM2000	523	10.39	1.92			
- RM 2000 and below	297	10.11	2.18			
Dependent responsibilities				.30	.77	.02
- Yes	508	10.30	2.08			
- No	312	10.26	1.92			
Educational sponsorship bond				-1.94	.053	.13
- Yes	415	10.15	2.03			
- No	405	10.42	2.00			

Socio-demographics	SRA Subscale					
	n	Mean	*SD*	*t*	*p*	Effect Size, *d*
Nursing specialisation				-1.07	.284	.14
- Yes	197	10.15	1.87			
- No	623	10.33	2.06			
Highest educational level				.88	.380	.07
- Diploma in nursing	571	10.33	2.08			
- Higher than diploma in nursing	249	10.19	1.86			
Area of working				-.83	.408	.05
- General medical-surgical units	394	10.23	2.08			
- Units of specialty	426	10.34	1.96			

*Significant at $p < .05$. **Significant at $p < .001$.

The analysis revealed that nurses who were working in the central region (*t* [818] = 3.58, *p* = .000, *d* = .26) and large-sized hospitals (*t* [818] = -4.98, *p* = .000, *d* = .35) tended to have a more favourable perception towards staffing and resources aspect of the organisation. Nonetheless, staffing and resources aspects were found to be least satisfied among nurses who were practicing in medium-sized hospitals located outside the central region. Subsequently, the associations between the categorical socio-demographic variables and CNPR subscale were analysed. The t-test and Cohen, *d*, effect size analyses results were displayed in Table 4.9.

Table 4.9

Associations of the Socio-demographic Profiles on the CNPR Subscale

Socio-demographics	CNPR Subscale					
	n	Mean	*SD*	*t*	*p*	Effect Size, *d*
Region				2.07	.039*	.15
- Central	366	8.54	1.20			
- North-east-south	454	8.34	1.46			
Types of hospital				-2.67	.008*	.18
- Medium	371	8.29	1.52			
- Large	449	8.54	1.19			
Marital status				1.42	.157	.10
- Single	485	8.48	1.35			
- Married	335	8.35	1.36			
Average monthly income				-.07	.947	.00
- Above RM2000	523	8.43	1.36			
- RM 2000 and below	297	8.43	1.34			
Dependent responsibilities				-1.27	.206	.09
- Yes	508	8.38	1.40			
- No	312	8.50	1.29			
Educational sponsorship bond				.77	.444	.05
- Yes	415	8.46	1.32			
- No	405	8.39	1.40			
Nursing specialisation				-1.15	.250	.10
- Yes	197	8.33	1.29			
- No	623	8.46	1.38			
Highest educational level				1.53	.126	.11
- Diploma in nursing	571	8.47	1.40			
- Higher than diploma in nursing	249	8.32	1.26			
Area of working				-1.56	.120	.11
- General medical-surgical units	394	8.35	1.28			
- Units of specialty	426	8.50	1.42			

*Significant at $p < .05$. **Significant at $p < .001$.

The analysis revealed that nurses who were working in the central region (*t* [818] = 2.07, *p* = .039, *d* = .15) and large-sized hospitals (*t* [818] = -2.67, *p* = .008, *d* = .18) tended to have a more favourable perception towards their relationship with the doctors. Conversely, slightly lower perception was found among the nurses who were practicing in medium-sized hospitals located outside the central region.

In summary, the analysis revealed that monthly income and working areas did not have significant influenced on all the PES-NWI subscales. Interestingly, the location of the hospital (region) was found to have significant influence across the five subscales. In general, nurses who were working in the central region were found to have higher satisfaction towards all the NPE aspects except for area related to provision of quality care. The rationale for the least satisfaction could be related to the expectation of care between nurses and patient in which the patients who visited the private hospitals in the central region were most of the time highly urbanised and were relatively educated. On the other hand, nurses who were working in the large-sized hospitals have higher satisfaction towards all the NPE aspects except for areas related to autonomy, organisational involvement, managerial support and leadership. The rationale for the lower satisfaction in these areas could be related to the steeper hierarchical management system in the large hospitals. Medium to smaller size of hospitals tended to be less bureaucratic.

Nonetheless, married nurses tended to perceived positively towards the aspect of autonomy, organisational involvement, and nurse manager's support/ leadership. On the other hand, nurses with higher educational level and nursing specialisation were less satisfied with their degree of autonomy, organisational involvement, and provision of quality care. Furthermore, nurses with higher educational level and nursing specialisation also tended to perceive their nurse managers as less supportive and lacking in leadership capability. Additionally, nurses with educational sponsorship bond were found to perceived lower for the aspects of control, hospital participation, and organisational support. Moreover, nurses' age and nursing experience were found to only have significant influence on the area related to

physician-nurse relationship. Subsequently, the results for research question two were elaborated.

Research question 2 - What is the estimated degree of professional commitment (PC) and organisational commitment (OC) among the Malaysian RNs?. The results of this section were to answer research question 2, "What is the estimated degree of professional commitment (PC) and organisational commitment (OC) among the Malaysian RNs?" There were two sub-sections in this section: professional commitment and organisational commitment. The findings for professional commitment would present first and followed by the findings of organisational commitment.

Professional commitment (PC). The degree of professional commitment was analysed using descriptive statistics (i.e., mean and standard deviation). Data for this research question was gathered using PCS. The overall composite mean score for professional commitment was 4.41 (SD = .62). The results implied that the participants had moderate level of commitment towards their professional. In other words, participants were still very much attached and devoted towards their profession. The results of the PCS domains and items were displayed in Table 4.10.

Table 4.10

Mean and Standard Deviation of PC (n = 820)

Item No.	Items	Mean	*SD*	Categorisation
	APC Domain	4.69	.66	High
1.	Nursing profession is important to my self-image.	5.00	.87	
7.	I am contented having entered the nursing profession.	4.40	.97	
16.	I am proud to be in the nursing profession.	4.94	.91	
4.	I like being a nurse.	4.89	.93	
10.	I identify with the nursing profession.	4.53	.93	
13.	I am enthusiastic about nursing profession.	4.39	.94	
	CPC Domain	4.21	.74	Moderate
2.	I have put too much into the nursing profession to consider changing now.	4.46	1.04	
8.	Changing nursing profession now would be difficult for me to do.	4.25	1.15	
5.	Too much of my life would be disrupted if I were to change nursing profession.	4.11	1.15	
17.	It would be costly for me to change nursing profession.	4.16	1.22	
11.	There are pressures to keep me from changing nursing profession.	3.93	1.28	
14.	Changing nursing profession now would require considerable personal sacrifice.	4.36	1.04	
	NPC Domain	4.33	.75	Moderate
3.	I believe people who have been trained in a profession have a responsibility to stay in that profession for a reasonable of time.	4.71	1.00	
6.	I feel obligated to remain in the nursing profession.	4.06	1.11	
12.	I feel a responsibility to the nursing profession to continue in it.	4.48	.97	
15.	Even if it were to my advantage, I do not feel that it would be right to leave nursing profession now.	4.27	1.15	
9.	I would feel guilty if I left nursing profession.	4.01	1.31	
18.	I am in nursing profession because of a sense of loyalty to it.	4.47	1.11	

In terms of domain analyses, the study found that APC domain was the strongest domain with mean value of 4.69 (*SD* = .66) and categorised as high. The results explained that the participants were emotionally obligated towards their profession. They have a deep-seated intrinsic aspiration to stay put in the profession in view that the profession was perceived as satisfying and was embedded with their identity. The results were echoed through the highly agreeable ratings for items on "nursing profession is important to my self-image"; "I am proud to be in the nursing profession"; and "I like being a nurse" with mean values of 5.00 (*SD* = .87), 4.94 (*SD* = .91), and 4.89 (*SD* = .93) respectively.

On the other hand, NPC domain was categorised as moderate with mean value of 4.33 (*SD* = .75). The participants indicated moderate professional obligation through the NPC domain. The participants believed that nurses were obligated to be remained in the profession due to their social responsibilities as nurses. In another word, nurses were perceived as valuable employee who required gifted people to take up the caring profession. Therefore, qualified registered nurses were obligated to remain in the profession for certain duration to fulfil the challenging healthcare demand.

Nevertheless, participants rated moderately for CPC domain with mean value of 4.21 (*SD* = .74). The study results reflected that cost was not the main commitment towards nursing profession despite large amount of time and effort been invested in acquiring nursing profession knowledge and skills. It was evident through the slightly lower ratings for the items on "there are pressures to keep me from changing nursing profession" (*M* = 3.93, *SD* = 1.28) which means that participants did not agree that the presence of pressure which prevent them from leaving their profession. In another

word, participants may not be hesitated to leave the profession if it was related to monetary or cost related matters.

Associations of socio-demographic profiles on PC. The associations of socio-demographic variables on the PC (i.e., overall PC and domains) were ascertained in view of the requirement of subsequent analysis. The continuous variables were analysed using the Pearson correlations. Correlation was the appropriate statistical analysis in view of the variables (i.e., age, nursing experience, organisational tenure, PC, and domains) were continuous data (Chua, 2013). Then, the categorical variables such as region, types of hospitals, dependent responsibilities, educational sponsorship bond, nursing specialization qualification, marital status, monthly income, the highest education level, and working area were analysed using t-test and Cohen, *d*, effect size. T-test was the appropriate statistical analyses in view of the dependent variables (i.e., PC and domains) were continuous data and fulfilled the normality distribution (Chua, 2013). Furthermore, t-test was applicable for comparison between two groups (Chua, 2013).

There were two levels of analysis. The first level was focused on the associations between the socio-demographic profiles and the overall PCS score (professional commitment variable). The second level of analysis was focused on the associations between the socio-demographic profiles and the domains in the PCS (i.e., APC, CPC, and NPC domains).

The correlation analyses revealed significant weak positive correlation between age ($r = .12$, $p = .001$), nursing experience ($r = .10$, $p = .003$), and organisational tenure ($r = .11$, $p = .001$). The analyses revealed that older participants with longer years of nursing experience and organisational tenure were found to have higher commitment towards their profession.

In addition, the t-test and Cohen, *d*, effect size analyses found that the overall professional commitment had significant associations and small effects with marital status (*t* [818] = -3.23, *p* = .001, *d* = .23), dependent responsibilities (*t* [818] = 4.05, *p* = .000, *d* = .29), and educational sponsorship bond (*t* [818] = -2.58, *p* = .000, *d* = .18). Married participants with dependent responsibilities and those who did not have educational sponsorship bond were found to have higher commitment towards the profession. Nonetheless, the remaining socio-demographic variables (i.e., monthly income, nursing specialisation, the highest educational level, and area of working) were found to have insignificant association with PC (*p* > .05). The analyses results were displayed in Table 4.11.

Table 4.11

T-test Results of Socio-demographics on PC

Socio-demographics	Professional Commitment (PC)					
	n	Mean	*SD*	*t*	*p*	Effect Size, *d*
Region				3.51	.000**	.25
- Central	366	80.93	10.43			
- North-east-south	454	78.20	11.54			
Types of hospital				2.32	.02*	.16
- Medium	371	80.41	11.68			
- Large	449	78.60	10.61			
Marital status				-3.23	.001*	.23
- Single	485	78.38	11.61			
- Married	335	80.92	10.24			
Average monthly income				1.51	.131	.11
- Above RM2000	523	79.86	10.94			
- RM 2000 and below	297	78.64	11.45			
Dependent responsibilities				4.05	.000**	.29
- Yes	508	80.64	10.76			
- No	312	77.43	11.46			

Socio-demographics	Professional Commitment (PC)					
	n	Mean	*SD*	*t*	*p*	Effect Size, *d*
Educational sponsorship bond				-2.58	.000**	18
- Yes	415	78.43	10.68			
- No	405	80.43	11.51			
Nursing specialisation				.78	.434	.06
- Yes	197	79.96	12.01			
- No	623	79.25	10.85			
Highest educational level				-.50	.615	.04
- Diploma in nursing	571	79.29	10.82			
- Higher than diploma in nursing	249	79.71	11.85			
Area of working				.50	.619	.03
- General medical-surgical units	394	79.62	11.21			
- Units of specialty	426	79.23	11.08			

*Significant at *p* < .05. **Significant at *p* < .001

In summary, the results explained that the nurses' overall professional commitment was influenced by age, nursing experience, organisational tenure, location of the hospital, types of hospitals, marital status, dependent responsibilities, and educational sponsorship bond. Nurses who were working in the central region and medium-sized hospital were found to have significantly higher of professional commitment. Moreover, mature married participants with dependent responsibilities were found to have higher professional commitment. The results also revealed that the longer the participants worked in the nursing profession and organisation, their commitment towards the profession were found to be higher. In addition, the professional commitment was found to be higher among the participants without educational sponsorship bond. In other words, young single nurses with educational sponsorship bond were tended to have lower commitment towards the profession.

Subsequently, the associations of socio-demographic profiles on the domains of professional commitment: APC, CPC, and NPC domains were analysed.

Associations of socio-demographic profiles on the PC domains. The correlation analyses revealed that APC and NPC domains were statistically significant with age, nursing experience, and organisational tenure ($p < .001$). Nonetheless, nurses' age, nursing experience, and organisational tenure were found to have insignificant associations with CPC domain ($p > .05$). In other word, the findings reflected that nurses who were older with longer duration of nursing experience and service in an organisation tended to have higher degree of emotional and professional obligation attachments. Extrinsic factor was not influential in determining nurses' willingness to commit in the profession.

Furthermore, the t-test and Cohen, *d*, effect size were used to analyse the associations between the categorical data of the socio-demographic variables and the domains of professional commitment. The results analysis for APC domain was displayed in Table 4.12.

Table 4.12

T-test Results of Socio-demographics on APC Domain

Socio-demographics	Affective Professional Commitment (APC)					
	n	Mean	*SD*	*t*	*p*	Effect Size, *d*
Region				1.18	.237	.08
- Central	366	28.33	3.74			
- North-east-south	454	28.00	4.12			
Types of hospital				2.13	.033[*]	.15
- Medium	371	28.47	4.20			
- Large	449	27.88	3.72			
Marital status				-2.68	.008[*]	.19
- Single	485	27.85	4.02			
- Married	335	28.59	3.83			

Socio-demographics	Affective Professional Commitment (APC)					
	n	Mean	*SD*	*t*	*p*	Effect Size, *d*
Average monthly income				2.10	.036*	.15
- Above RM2000	523	28.37	3.92			
- RM 2000 and below	297	27.77	3.98			
Dependent responsibilities				2.49	.013*	.18
- Yes	508	28.42	3.96			
- No	312	27.71	3.92			
Educational sponsorship bond				-2.46	.014*	.17
- Yes	415	27.82	3.86			
- No	405	28.49	4.03			
Nursing specialisation				2.24	.025*	.17
- Yes	197	28.70	4.26			
- No	623	27.98	3.84			
Highest educational level				-1.85	.064	.14
- Diploma in nursing	571	27.98	3.88			
- Higher than diploma in nursing	249	28.54	4.11			
Area of working				-1.21	.226	.08
- General medical-surgical units	394	27.98	4.00			
- Units of specialty	426	28.31	3.91			

*Significant at *p* < .05. **Significant at *p* < .001.

The t-test and Cohen, *d*, effect size analyses found that the APC domain had significant associations and small effects with types of hospital (*t* [818] = 2.13, *p* = .033, *d* = .15), marital status (*t* [818] = -2.68, *p* = .008, *d* = .19), average monthly income (*t* [818] = 2.10, *p* = .036, *d* = .15), dependent responsibilities (*t* [818] = 2.49, *p* = .013, *d* = .18), educational sponsorship bond (*t* [818] = -2.46, *p* = .014, *d* = .17), and nursing specialization (*t* [818] = 2.24, *p* = .025, *d* = .17). The findings reflected that participants who were married, with dependent responsibilities, earned higher

monthly income, and working in the medium-sized hospitals tended to have higher emotional attachment towards their profession. On the other hand, nurses with educational sponsorship bond and without nursing specialization tended to have lower emotional attachment towards their profession. Subsequently, the results analysis for CPC domain was displayed in Table 4.13.

Table 4.13

T-test Results of Socio-demographics on CPC Domain

Socio-demographics	Continuance Professional Commitment (CPC)					
	n	Mean	*SD*	*t*	*p*	Effect Size, *d*
Region				3.84	.000**	.27
- Central	366	25.93	4.28			
- North-east-south	454	24.74	4.52			
Types of hospital				1.28	.202	.09
- Medium	371	25.49	4.38			
- Large	449	25.09	4.50			
Marital status				-2.44	.015*	.18
- Single	485	24.95	4.66			
- Married	335	25.72	4.09			
Average monthly income				.53	.598	.04
- Above RM2000	523	25.33	4.51			
- RM 2000 and below	297	25.16	4.34			
Dependent responsibilities				4.15	.000**	.28
- Yes	508	25.77	4.23			
- No	312	24.51	4.68			
Educational sponsorship bond				-1.35	.178	.09
- Yes	415	25.06	4.27			
- No	405	25.48	4.62			
Nursing specialisation				-.38	.705	.03
- Yes	197	25.16	4.89			
- No	623	25.30	4.30			

Socio-demographics	Continuance Professional Commitment (CPC)					
	n	Mean	SD	t	p	Effect Size, d
Highest educational level				1.58	.115	.17
- Diploma in nursing	571	25.35	4.40			
- Higher than diploma in nursing	249	24.58	4.84			
Area of working				2.09	.037	.14
- General medical-surgical units	394	25.60	4.46			
- Units of specialty	426	24.96	4.42			

*Significant at $p < .05$. **Significant at $p < .001$.

The t-test and Cohen, d, effect size analyses found that the CPC domain had significant associations and small effects with location of the hospitals (t [818] = 3.84, $p = .000$, $d = .27$), marital status (t [818] = -2.44, $p = .015$, $d = .18$), and dependent responsibilities (t [818] = 4.15, $p = .000$, $d = .28$). The findings reflected that married nurses with dependent responsibilities and working in the central region tended to have higher commitment towards their profession in view of monetary and extrinsic factors. The remaining socio-demographic variables revealed insignificant associations with CPC domain. Subsequently, the results analysis for NPC domain was displayed in Table 4.14.

Table 4.14

T-test Results of Socio-demographics on NPC Domain

Socio-demographics	Normative Professional Commitment (NPC)					
	n	Mean	SD	t	p	Effect Size, d
Region				3.82	.000**	.27
- Central	366	26.67	4.10			
- North-east-south	454	25.46	4.78			
Types of hospital				2.58	.010*	.18
- Medium	371	26.45	4.60			
- Large	449	25.63	4.43			
Marital status				-3.19	.001*	.23
- Single	485	25.58	4.79			
- Married	335	26.60	4.04			
Average monthly income				1.37	.173	.10
- Above RM2000	523	26.16	4.44			
- RM 2000 and below	297	25.71	4.67			
Dependent responsibilities				3.70	.000**	.26
- Yes	508	26.45	4.36			
- No	312	25.26	4.70			
Educational sponsorship bond				-2.85	.004*	.20
- Yes	415	25.56	4.42			
- No	405	26.45	4.59			
Nursing specialisation				.34	.732	.02
- Yes	197	26.10	4.71			
- No	623	25.97	4.47			
Highest educational level				.29	.774	.03
- Diploma in nursing	571	26.01	4.53			
Higher than diploma in nursing	249	25.87	4.57			
Area of working				.23	.817	.02
- General medical-surgical units	394	26.04	4.61			
- Units of specialty	426	25.96	4.45			

*Significant at $p < .05$. **Significant at $p < .001$.

The t-test and Cohen, *d*, effect size analyses found that the NPC had significant associations and small effects with location of hospital (*t* [818] = 3.82, *p* = .000, *d* = .27), types of hospitals (*t* [818] = 2.58, *p* = .010, *d* = .18), marital status (*t* [818] = -3.19, *p* = .001, *d* = .23), dependent responsibilities (*t* [818] = 3.70, *p* = .000, *d* = .26), and educational sponsorship bond (*t* [818] = -2.85, *p* = .004, *d* = .20). The findings reflected that nurses who were working in the central region and medium-sized hospitals tended to have higher NPC compared with those in the outside of central region and large-sized hospitals. Furthermore, married nurses with dependent responsibilities and without educational sponsorship bond were more willing to commit to the profession in view of professional obligation. The remaining socio-demographic variables revealed insignificant associations with NPC.

In summary, the socio-demographic variables influencing APC and NPC domains were found to be relatively similar except for the variables related to hospital location, average monthly income, and nursing specialisation. Both, APC and NPC domains were influenced by types of hospitals, age, nursing experience, organisational tenure, marital status, dependent responsibilities, and educational sponsorship bond. Nonetheless, CPC domain was merely influenced by hospital location, marital status, and dependent responsibilities. Next, the results analysis for organisational commitment was elaborated in the subsequent section.

Organisational commitment (OC). The degree of organisational commitment was analysed using descriptive statistics (i.e., mean and standard deviation). Data for this research question was gathered using OCS. The results were displayed in Table 4.15.

Table 4.15

Mean and Standard Deviation of OC (n = 820)

Item No.	Items	Mean	*SD*	Categorisation
	AOC Domain	3.45	1.11	Moderate
1.	I would be very happy to spend the rest of my career with this hospital.	3.25	1.52	
7.	I really feel as if this hospital's problems are my own.	3.29	1.38	
10.	I feel a strong sense of "belonging" to my hospital.	3.39	1.39	
4.	I feel "emotionally attached" to this hospital.	3.56	1.33	
16.	I feel like "part of the family" at my hospital.	3.60	1.36	
13.	This hospital has a great deal of personal meaning for me.	3.64	1.26	
	COC Domain	3.75	.89	Moderate
2.	Right now, staying with my hospital is a matter of necessity as much as desire.	3.96	1.20	
5.	It would be very hard for me to leave my hospital right now even if I wanted to.	3.79	1.42	
8.	Too much of my life would be disrupted if I decided I wanted to leave my hospital now.	3.51	1.37	
14.	I feel that I have too few options to consider leaving this hospital.	3.70	1.29	
11.	If I had not already put so much of myself into this hospital, I might consider working elsewhere.	3.82	1.25	
17.	One of the few consequences of leaving this organisation would be the scarcity of available alternatives.	3.69	1.17	
	NOC Domain	3.58	1.03	Moderate
3.	I feel obligated to remain with my current employer.	3.77	1.19	
6.	Even if it were to my advantage, I do not feel it would be right to leave my hospital now.	3.65	1.36	
9.	I would feel guilty if I left my hospital now.	3.26	1.44	
12.	This hospital deserves my loyalty.	3.63	1.28	
15.	I would not leave my hospital right now because I have a sense of obligation to the people in it.	3.58	1.31	
18.	I owe a great deal to my hospital.	3.58	1.33	

The overall composite mean score for organisational commitment was 3.59 (SD = .95) and the results suggested that the participants had moderate level of commitment towards organisation. In addition, COC domain was found to be the strongest domain with mean value of 3.75 (SD = .89). The results indicated that cost was the main reason that influenced participants' willingness to stay put in the organisations. The findings were supported by the high agreeable ratings on the items on "right now, staying with my hospital is a matter of necessity as much as desire" (M = 3.96, SD = 1.20), and "if I had not already put so much of myself into this hospital, I might consider working elsewhere" (M = 3.82, SD = 1.25). The study results indicated that the participants may become less obligated to stay in the organisations if their burden on cost was lifted.

On the other hand, AOC domain was rated the lowest with mean value of 3.45 (SD = 1.11). The results indicated that the participants were generally had lesser emotional attachment towards their organisations. The results were echoed through the less agreement on items "I would be very happy to spend the rest of my career with this hospital" and "I would feel guilty if I left my hospital now" with mean values of 3.25 (SD = 1.52) and 3.26 (SD = 1.44) respectively. These results simply reflected that the participants were not satisfied to be remained in the organisations for as long as they could, and on top of that, guilt feeling was less likely to be experienced if they were to leave the organisations.

In conclusion, commitment towards profession was found to be higher than commitment towards organisation. Emotional attachment and professional obligation (AOC and NOC domains) were revealed in professional commitment. Participants had indicated strong sense of belonging towards their profession and therefore had a strong desire to uphold the standards of the profession. However, participants did not

reveal similar obligation towards their organisation. AOC domain was the least commitment when it comes to organisational commitment. Nevertheless, cost (COC domain) was the main justification that influenced their willingness to be remained with their organisations.

Associations of socio-demographic variables on OC. The associations of socio-demographic variables on the OC (i.e., overall OC and domains) were ascertained in view of the requirement of subsequent analysis. The continuous variables were analysed using the Pearson correlations. Correlation was the appropriate statistical analysis in view of the variables (i.e., age, nursing experience, organisational tenure, OC, and domains) were continuous data (Chua, 2013). Then, the categorical variables such as region, types of hospitals, dependent responsibilities, educational sponsorship bond, nursing specialization qualification, marital status, monthly income, the highest education level, and working area were analysed using t-test and Cohen, *d*, effect size. T-test was the appropriate statistical analyses in view of the dependent variables (i.e., OC and domains) were continuous data and fulfilled the normality distribution (Chua, 2013). Furthermore, t-test was applicable for comparison between two groups (Chua, 2013).

There were two levels of analysis. The first level was focused on the associations between the socio-demographic profiles and the overall OCS score (organisational commitment variable). The second level of analysis was focused on the associations between the socio-demographic profiles and the domains in the OCS (i.e., AOC, COC, and NOC domains).

The correlation tests revealed significant correlation but the strength of associations were extremely weak or no correlation between age ($r = .07$, $p = .035$), nursing experience ($r = .07$, $p = .046$), and organisational tenure ($r = .08$, $p = .020$).

Henceforth, it can be concluded that organisational commitment was not significantly associated with age, nursing experience, and organisational tenure.

On the other hand, the categorical variables such as region, types of hospitals, dependent responsibilities, educational sponsorship bond, nursing specialization qualification, marital status, monthly income, the highest education level, and working area were analysed using t-test and Cohen, *d*, effect size. The results were displayed in Table 4.16.

Table 4.16

T-test Results of Socio-demographics on OC

Socio-demographics	Organisational Commitment (OC)					
	n	Mean	*SD*	*t*	*p*	Effect Size, *d*
Region				6.92	.000**	.49
- Central	366	69.15	16.72			
- North-east-south	454	61.08	16.50			
Types of hospital				-.94	.347	.06
- Medium	371	64.06	16.88			
- Large	449	65.19	17.22			
Marital status				-3.12	.002*	.22
- Single	485	63.15	17.52			
- Married	335	66.91	16.16			
Average monthly income				2.32	.021*	.17
- Above RM2000	523	65.72	17.54			
- RM 2000 and below	297	62.85	16.07			
Dependent responsibilities				4.20	.000**	.30
- Yes	508	66.62	17.09			
- No	312	61.52	16.57			
Educational sponsorship bond				-3.47	.001*	.24
- Yes	415	62.65	17.15			
- No	405	66.76	16.74			
Nursing specialisation				-.27	.791	.02
- Yes	197	64.40	17.28			
- No	623	64.77	17.01			
Highest educational level				.31	.760	.02
- Diploma in nursing	571	64.80	16.93			
- Higher than diploma in nursing	249	64.41	17.41			

Socio-demographics	Organisational Commitment (OC)					
	n	Mean	*SD*	*t*	*p*	Effect Size, *d*
Area of working				.43	.666	.03
- General medical-surgical units	394	64.94	17.39			
- Units of specialty	426	64.43	16.78			

*Significant at *p* < .05. **Significant at *p* < .001.

The t-test and Cohen, *d*, effect size calculation showed organisational commitment had significant associations and small effects with location of the hospital (*t* [818] = 6.92, *p* = .000, *d* = .49), marital status (*t* [818] = -3.12, *p* = .002, *d* = .22), average monthly income (*t* [818] = 2.32, *p* < .05, *d* = .17), dependent responsibilities (*t* [818] = 4.20, *p* = .021, *d* = .30), and educational sponsorship bond (*t* [818] = -3.47, *p* = .001, *d* = .24). Similarly, with professional commitment, married participants with dependent responsibilities, and those who did not have educational sponsorship bond were found to have higher commitment towards the organisation. Contrariwise, participants with higher earnings were found to have higher organisational commitment in this study. The remaining socio-demographic variables such as highest educational level and working area were found to have insignificant association with organisational commitment (*p* > .05).

In conclusion, the results explained that organisational commitment was influenced by age, nursing experience, organisational tenure, hospital location, marital status, monthly income, dependent responsibilities, and educational sponsorship bond. Married participants with dependent responsibilities, higher earnings, and without educational sponsorship bond were found to have higher organisational commitment. In contrast, single participants without dependent responsibilities, earned lesser, and with educational sponsorship bond were tended to have lower

organisational commitment. Subsequently, the associations of socio-demographic profiles on the domains of organisational commitment: AOC, COC, and NOC domains were analysed.

Associations of socio-demographic profiles on the OC domains. The associations of socio-demographic variables on the domains were analysed through Pearson's correlations and t-tests. The continuous variables such as age, nursing experience, and organisational tenure were analysed using the Pearson correlations. The results revealed AOC domain had significant weak positive correlation with nurses' age (r = .11, p = .000), nursing experience (r = .10, p = .000), and organisational tenure (r = .11, p = .000). The analysis revealed that older participants with longer years of nursing experience and organisational tenure were found to have higher emotional attachment towards their organisation. Nonetheless, nurses' age, nursing experience, and organisational tenure had no significant influenced on COC and NOC domains. In other words, organisational commitment in terms of cost and professional obligation were not influenced by nurses' age, years in nursing profession, and servicing the organisation.

Furthermore, the t-test and Cohen, *d*, effect size were used to analyse the associations between socio-demographic variables (i.e., marital status, average income, dependent responsibilities, educational sponsorship bond, nursing specialisation, the highest educational level and area of working) and the domains of professional commitment. The results analyses for AOC domain were displayed in Table 4.17.

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Table 4.17

T-test Results of Socio-demographics on AOC Domain

Socio-demographics	Affective Organisational Commitment (AOC)					
	n	Mean	*SD*	*t*	*p*	Effect Size, *d*
Region				5.74	.000**	.40
- Central	366	22.17	6.62			
- North-east-south	454	19.55	6.45			
Types of hospital				-.52	.606	.04
- Medium	371	20.59	6.52			
- Large	449	20.83	6.75			
Marital status				-3.78	.000**	.27
- Single	485	19.99	6.79			
- Married	335	21.76	6.29			
Average monthly income				2.13	.033*	.16
- Above RM2000	523	21.09	6.85			
- RM 2000 and below	297	20.06	6.24			
Dependent responsibilities				3.97	.000**	.29
- Yes	508	21.44	6.67			
- No	312	19.55	6.45			
Educational sponsorship bond				-4.22	.000**	.30
- Yes	415	19.76	6.70			
- No	405	21.70	6.45			
Nursing specialisation				-.12	.905	.01
- Yes	197	20.67	6.87			
- No	623	20.74	6.58			
Highest educational level				.04	.971	.00
- Diploma in nursing	571	20.73	6.58			
- Higher than diploma in nursing	249	20.71	6.80			
Area of working				.93	.352	.06
- General medical-surgical units	394	20.94	6.64			
- Units of specialty	426	20.51	6.65			

*Significant at *p* < .05. **Significant at *p* < .001.

The t-test analysis found the AOC domain had significant associations and small effects with location of the hospital (*t* [818] = 5.74, *p* = .000, *d* = .40), marital status (*t* [818] = -3.78, *p* = .000, *d* = .27), average monthly income (*t* [818] = 2.13, *p* = .033, *d* = .16), dependent responsibilities (*t* [818] = 3.97, *p* = .000, *d* = .29), and educational sponsorship bond (*t* [818] = -4.22, *p* = .000, *d* = .30). The findings of the study were not consistent with APC domain in which location of hospitals were found to have significant influence on nurses' AOC. Nurses who were working in the central region were reported to have higher affective commitment towards their organisation. In addition, married nurses with dependent responsibilities and earned higher monthly income tended to have higher affection towards their organisations. Conversely, nurses with educational sponsorship bond tended to have lesser affection towards their organisations. Subsequently, the results analysis for COC domain was displayed in Table 4.18.

Table 4.18

T-test Results of Socio-demographics on COC Domain

Socio-demographics	Continuance Organisational Commitment (COC)					
	n	Mean	*SD*	*t*	*p*	Effect Size, *d*
Region				7.05	.000**	.50
- Central	366	23.90	5.16			
- North-east-south	454	21.33	5.23			
Types of hospital				-1.50	.134	.10
- Medium	371	22.17	5.21			
- Large	449	22.73	5.46			
Marital status				-2.26	.024*	.16
- Single	485	22.13	5.51			
- Married	335	22.99	5.09			

Socio-demographics	Continuance Organisational Commitment (COC)					
	n	Mean	*SD*	*t*	*p*	Effect Size, *d*
Average monthly income				2.64	.008*	.19
- Above RM2000	523	22.85	5.44			
- RM 2000 and below	297	21.83	5.15			
Dependent responsibilities				4.33	.000**	.31
- Yes	508	23.10	5.30			
- No	312	21.46	5.28			
Educational sponsorship bond				-1.95	.051	.14
- Yes	415	22.11	5.36			
- No	405	22.85	5.33			
Nursing specialisation				.10	.917	.00
- Yes	197	22.51	5.25			
- No	623	22.47	5.39			
Highest educational level				.43	.670	.03
- Diploma in nursing	571	22.53	5.30			
- Higher than diploma in nursing	249	22.36	5.47			
Area of working				-.12	.903	.00
- General medical-surgical units	394	22.45	5.58			
- Units of specialty	426	22.50	5.14			

*Significant at *p* < .05. **Significant at *p* < .001.

The t-test analysis found that the location of the hospital (*t* [818] = 7.05, *p* = .000, *d* = .50) had significant and moderate effect on COC domain. On the other hand, COC domain was found to have significant associations and small effects with marital status (*t* [818] = -2.26, *p* = .024, *d* = .16), average monthly income (*t* [818] = 2.64, *p* = .008, *d* = .19), and dependent responsibilities (*t* [818] = 4.33, *p* = .000, *d* = .31). The findings of the study reflected that nurses who were working in the central region had

exceptionally higher continuance commitment towards their organisation. The commitment towards their work place was relatively mainly driven by cost and extrinsic motivation factors. Furthermore, married nurses with dependent responsibilities and earned higher monthly income tended to have higher COC. The rationale for the higher COC was due to the higher family commitment and constraints of the current economic situation which impacted on to the domestic finances. The remaining socio-demographic variables were found to have insignificant associations with COC domain. Subsequently, the results analysis for NOC domain was displayed in Table 4.19.

Table 4.19

T-test Results of Socio-demographics on NOC Domain

Socio-demographics	Normative Organisational Commitment (NOC)					
	n	Mean	*SD*	*t*	*p*	Effect Size, *d*
Region				6.81	.000**	.48
- Central	366	23.07	5.98			
- North-east-south	454	20.20	6.00			
Types of hospital				-.75	.455	.05
- Medium	371	21.31	6.11			
- Large	449	21.63	6.20			
Marital status				-2.60	.009*	.19
- Single	485	21.02	6.32			
- Married	335	22.16	5.86			
Average monthly income				1.83	.068	.13
- Above RM2000	523	21.78	6.28			
- RM 2000 and below	297	20.96	5.91			
Dependent responsibilities				3.57	.000**	.26
- Yes	508	22.08	6.14			
- No	312	20.51	6.08			

Socio-demographics	Normative Organisational Commitment (NOC)					
	n	Mean	*SD*	*t*	*p*	Effect Size, *d*
Educational sponsorship bond				-3.38	.001*	.24
- Yes	415	20.77	6.24			
- No	405	22.21	5.99			
Nursing specialisation				-.70	.487	.06
- Yes	197	21.22	6.30			
- No	623	21.57	6.12			
Highest educational level				.44	.661	.03
- Diploma in nursing	571	21.55	6.12			
- Higher than diploma in nursing	249	21.34	6.25			
Area of working				.30	.766	.02
- General medical-surgical units	394	21.55	6.16			
- Units of specialty	426	21.42	6.16			

*Significant at *p* < .05. **Significant at *p* < .001.

The t-test analysis found the NOC domain had significant associations and small effects with location of hospital (*t* [818] = 6.81, *p* = .000, *d* = .48), marital status (*t* [818] = -2.60, *p* = .009, *d* = .19), dependent responsibilities (*t* [818] = 3.57, *p* = .000, *d* = .26), and educational sponsorship bond (*t* [818] = -3.38, *p* = .001, *d* = .24). Similarly, with COC domain, the findings of the study reflected that location of hospital, married nurses with dependent responsibilities were more willing to remain with their organisations due to professional obligation factors. Interestingly, nurses without educational sponsorship bond have higher professional obligation to remain in the organisation than those with sponsorship bond.

In summary, location of the hospital, marital status and dependent responsibilities were found to have significant associations across the three organisational commitment domains. On the other hand, average monthly income was significant influence towards AOC and COC domains. Furthermore, educational sponsorship bond was found to have significant associations with AOC and NOC domains. Nonetheless, age, nursing experience, and organisational tenure were found to have significant influence on AOC domain only. The remaining socio-demographic variables revealed insignificant associations with the three organisational commitment domains.

In conclusion, marital status and dependent responsibilities were found to have significant influenced across all the domains in both professional and organisational commitment. In other word, married nurses with dependent responsibilities were found to be committed to the organisations in view of emotional attachment, cost, and professional obligation factors. The subsequent section discussed on the results for research questions three.

Research Question 3 - What is the estimated degree and proportion of turnover intention (TI) among the Malaysian RNS?. In this section, answers for research question 3, "What is the estimated degree and proportion of turnover intention (TI) among the Malaysian RNs?" Data for this research question was gathered using TIQ. The degree and proportion of turnover intention were analysed using descriptive statistics. The research findings for degree of turnover intention would be presented first and followed by the proportion of turnover intention. The results were displayed in Table 4.20.

Table 4.20

Descriptive Statistics Results for Turnover Intention (n = 820)

Items	Mean	SD	Categorisation	Yes		No	
				n	%	n	%
Inter-organisational TI	2.73	1.27	Moderate	436	53.2	384	46.8
Intra-organisational TI	2.45	1.25	Moderate	374	45.6	446	54.4
Country TI	2.01	1.09	Moderate	229	27.9	591	72.1
Professional TI	1.94	1.08	Low	206	25.1	614	74.9
Overall TI	2.28	.90	Moderate				

The overall turnover intention (TI) composite mean value was 2.28 (SD = .90). The result reflected moderate turnover intention. Additionally, inter-organisational (M = 2.73, SD = 1.27), intra-organisational (M = 2.45, SD = 1.25), and country turnover intent (M = 2.01, SD = 1.09) were found to be at moderate level. Interestingly, professional turnover intent (M = 1.94, SD = 1.08) was found to be at low level. Nonetheless, inter-organisational turnover intention was found to be the highest, and followed by intra-organisational turnover intention. Conversely, intent to leave profession was found to be the lowest.

In terms of turnover intention proportion, the results echoed the findings of degree of turnover intention. The findings revealed that the proportion of inter-organisational turnover intention (n = 436, 53.2%) was the highest, and followed by intra-organisational turnover intention (n = 374, 45.6%), country turnover intention (n = 229, 27.9%), and professional turnover intention (n = 206, 25.1%). In this context, the results reflected that the participants had higher tendency to leave their units/ wards and organisations. In conclusion, the overall turnover intention was moderate. Nevertheless, intra-organisational and inter-organisational turnover intent was found to be higher than intent to leave country and profession.

Associations of socio-demographic profiles on turnover intention. The associations of socio-demographic variables on the turnover intention (i.e., overall turnover intention and different types of turnover intention) were ascertained in view of the requirement of subsequent analysis. The continuous variables were analysed using the Pearson correlations. Correlation was the appropriate statistical analysis in view of the variables (i.e., age, nursing experience, organisational tenure, turnover intention, and different forms of turnover intention) were continuous data (Chua, 2013). Then, the categorical variables such as region, types of hospitals, dependent responsibilities, educational sponsorship bond, nursing specialization qualification, marital status, monthly income, the highest education level, and working area were analysed using t-test and Cohen, *d*, effect size. T-test was the appropriate statistical analyses in view of the dependent variable (i.e., turnover intention and the different types of turnover intention) were continuous data and fulfilled the normality distribution (Chua, 2013).

There were two levels of analysis. The first level was focused on the associations between the socio-demographic profiles and the overall TIQ score (turnover intention variable). The second level of analysis was focused on the associations between the socio-demographic profiles and the types of turnover intention (i.e., intra-organisational, inter-organisational, country, and professional turnover intention). The associations of socio-demographic variables (i.e., age, nursing experience, and organisation tenure) on overall turnover intention were analysed using Pearson correlation.

The correlation analysis revealed turnover intention had no significant associations with age, nursing experience, and organisational tenure ($p > .05$). In other word, nurses' turnover intention was not influenced by age, nursing experience, and

organisational tenure. On the other hand, the t-test and Cohen, *d*, effect size were used to ascertain the association between the categorical socio-demographic variables and turnover intention. The analysis showed turnover intention had significant associations and small effects with average monthly income (*t* [818] = 2.56, *p* = .011, *d* = .19) and educational sponsorship bond (*t* [818] = 5.10, *p* = .000, *d* = .37) as displayed in Table 4.21.

Table 4.21

T-test Results of Socio-demographics on TI

Socio-demographics	Nurses' Turnover Intention (TI)					
	n	Mean	*SD*	*t*	*p*	Effect Size, *d*
Region				-.51	.608	.05
- Central	366	2.12	.43			
- North-east-south	454	2.14	.41			
Types of hospital				.56	.577	.05
- Medium	371	2.12	.43			
- Large	449	2.14	.41			
Marital status				1.64	.101	.12
- Single	485	2.15	.43			
- Married	335	2.10	.40			
Average monthly income				2.56	.011*	.19
- Above RM2000	523	2.16	.40			
- RM 2000 and below	297	2.08	.44			
Dependent responsibilities				1.52	.130	.12
- Yes	508	2.15	.41			
- No	312	2.10	.42			
Educational sponsorship bond				5.10	.000**	.37
- Yes	415	2.20	.38			
- No	405	2.05	.44			
Nursing specialisation				1.03	.301	.10
- Yes	197	2.16	.40			
- No	623	2.12	.42			

Socio-demographics	Nurses' Turnover Intention (TI)					
	n	Mean	*SD*	*t*	*p*	Effect Size, *d*
Highest educational level				-.99	.320	.07
- Diploma in nursing	571	2.12	.42			
- Higher than diploma in nursing	249	2.15	.40			
Area of working				1.64	.102	.10
- General medical-surgical units	394	2.15	.42			
- Units of specialty	426	2.11	.41			

*Significant at *p* < .05. **Significant at *p* < .001.

Participants with educational sponsorship bond and earned higher monthly income were tended to have higher turnover intention. Nevertheless, the t-test results showed that turnover intention did not differ in terms of marital status, dependent responsibilities, nursing specialisation, educational status, and working area (*p* > .05). In conclusion, participants who were still serving their educational sponsorship bond and earned higher monthly income were found to have higher intent to leave. In contrast, participants without educational sponsorship bond and had lower monthly income were less probable in considering turnover intention. Subsequently, chi-square and odd ratio were performed to ascertain the associations of socio-demographic variables on the different forms of turnover intention (i.e., intra-organisational, inter-organisational, country, and professional).

Associations of socio-demographic profiles on the different forms of TI. The associations of socio-demographic variables on the different forms of TI were analysed through Pearson's correlations and t-tests. The continuous variables were analysed using the Pearson correlations. The results revealed intra-organisational, inter-organisational, and professional turnover intention were not influenced by nurses' age, nursing experience, and organisational tenure (*p* > .05). On the other

hand, the findings revealed that only country turnover intention revealed significant weak negative correlation with nurses' age and nursing experience ($p < .001$). The findings reflected that younger nurses with lesser years of nursing experience had a higher intention to leave country. Furthermore, the t-test and Cohen, d, effect size were used to analyse the associations between socio-demographic variables and the the different forms of TI. The analysis results for intra-organisational TI were displayed in Table 4.22.

Table 4.22

Associations of Socio-demographics on Intra-organisational TI

Socio-demographics		Intra-organisational TI				
	n	Mean	*SD*	*t*	*p*	Effect Size, *d*
Region				.99	.32	.06
- Central	366	2.49	1.24			
- North-east-south	454	2.41	1.27			
Types of hospital				1.03	.303	.07
- Medium	371	2.50	1.32			
- Large	449	2.41	1.20			
Marital status				-.25	.800	.02
- Single	485	2.44	1.26			
- Married	335	2.46	1.25			
Average monthly income				2.24	.025[*]	.16
- Above RM2000	523	2.52	1.22			
- RM 2000 and below	297	2.32	1.31			
Dependent responsibilities				3.07	.002[*]	.16
- Yes	508	2.55	1.28			
- No	312	2.28	1.19			
Educational sponsorship bond				2.22	.027[*]	.15
- Yes	415	2.54	1.21			
- No	405	2.35	1.30			
Nursing specialisation				.98	.326	.15
- Yes	197	2.52	1.20			
- No	623	2.42	1.27			

| Socio-demographics | Intra-organisational TI | | | | | |
	n	Mean	*SD*	*t*	*p*	Effect Size, *d*
Highest educational level				-1.26	.207	.10
- Diploma in nursing	571	2.41	1.27			
- Higher than diploma in nursing	249	2.53	1.21			
Area of working				.84	.399	.06
- General medical-surgical units	394	2.48	1.26			
- Units of specialty	426	2.41	1.25			

*Significant at $p < .05$. **Significant at $p < .001$.

The analysis revealed intra-organisational turnover intention was significantly associated with average monthly income (t [818] = 2.24, $p = .025$, $d = .16$), dependent responsibilities (t [818] = 3.07, $p = .002$, $d = .16$), and educational sponsorship bond (t [818] = 2.22, $p = .027$, $d = .15$). In other words, nurses with dependent responsibilities, earned higher income, and had educational sponsorship bond were found to have higher intra-organisational turnover intention. The remaining socio-demographic variables were found to have insignificant association on intra-organisational turnover intention ($p > .05$). Subsequently, the analysis results for inter-organisational TI were displayed in Table 4.23.

Table 4.23

Associations of Socio-demographics on Inter-organisational TI

| Socio-demographics | Inter-organisational TI | | | | | |
	n	Mean	*SD*	*t*	*p*	Effect Size, *d*
Region				-1.44	.149	.09
- Central	366	2.66	1.24			
- North-east-south	454	2.78	1.29			
Types of hospital				.68	.495	.09
- Medium	371	2.76	1.34			
- Large	449	2.70	1.21			

Socio-demographics	Inter-organisational TI					
	n	Mean	*SD*	*t*	*p*	Effect Size, *d*
Marital status				1.26	.208	.09
- Single	485	2.77	1.29			
- Married	335	2.66	1.23			
Average monthly income				1.60	.110	.07
- Above RM2000	523	2.78	1.21			
- RM 2000 and below	297	2.63	1.35			
Dependent responsibilities				1.12	.262	.09
- Yes	508	2.77	1.26			
- No	312	2.66	1.28			
Educational sponsorship bond				5.11	.000**	.36
- Yes	415	2.95	1.23			
- No	405	2.50	1.27			
Nursing specialisation				1.28	.201	.36
- Yes	197	2.83	1.25			
- No	623	2.70	1.27			
Highest educational level				-1.14	.255	.09
- Diploma in nursing	571	2.69	1.27			
- Higher than diploma in nursing	249	2.80	1.25			
Area of working				1.42	1.58	.09
- General medical-surgical units	394	2.79	1.29			
- Units of specialty	426	2.67	1.25			

*Significant at $p < .05$. **Significant at $p < .001$.

The analysis revealed inter-organisational turnover intention was significantly associated with educational sponsorship bond (*t* [818] = 5.11, *p* = .000, *d* = .36). Nurses who were still serving their educational sponsorship bond (*M* = 2.95, *SD* = 1.23) were found to have higher intent to quit their organisations than those who did not have sponsorship bond (*M* = 2.50, *SD* = 1.27). The remaining socio-demographic variables were found to have insignificant association on inter-organisational turnover

intention ($p > .05$). Subsequently, the analysis results for country TI were displayed in Table 4.24.

Table 4.24

Associations of Socio-demographics on Country TI

| Socio-demographics | Country TI | | | | | |
	n	Mean	*SD*	*t*	*p*	Effect Size, *d*
Region				-1.62	.106	.11
- Central	366	1.94	1.07			
- North-east-south	454	2.06	1.11			
Types of hospital				-.59	.556	.05
- Medium	371	1.98	1.11			
- Large	449	2.03	1.08			
Marital status				4.74	.000**	.35
- Single	485	2.16	1.12			
- Married	335	1.79	1.02			
Average monthly income				.24	.814	.02
- Above RM2000	523	2.02	1.07			
- RM 2000 and below	297	2.00	1.13			
Dependent responsibilities				-.94	.345	.06
- Yes	508	1.98	1.09			
- No	312	2.05	1.10			
Educational sponsorship bond				3.51	.000**	.25
- Yes	415	2.14	1.15			
- No	405	1.87	1.02			
Nursing specialisation				-.20	.841	.02
- Yes	197	1.99	1.11			
- No	623	2.01	1.09			
Highest educational level				-1.14	.255	.09
- Diploma in nursing	571	2.69	1.27			
- Higher than diploma in nursing	249	2.80	1.25			
Area of working				1.39	.166	.09
- General medical-surgical units	394	2.06	1.15			
- Units of specialty	426	1.96	1.04			

*Significant at $p < .05$. **Significant at $p < .001$.

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The analysis revealed country turnover intention was significantly associated with marital status (t [818] = 4.74, p = .000, d = .35) and educational sponsorship bond bond (t [818] = 3.51, p = .000, d = .25). The results implied that nurses who were single (M = 2.16, SD = 1.12) and with educational sponsorship bond (M = 2.14, SD = 1.15) were more probable to leave country than those who were married (M = 1.79, SD = 1.02) and without sponsorship bond (M = 1.87, SD = 1.02). The remaining socio-demographic variables were found to have insignificant association on country turnover intention (p > .05). Subsequently, the analysis results for professional TI were displayed in Table 4.25.

Table 4.25

Associations of Socio-demographics on Professional TI

Socio-demographics	Professional TI					
	n	Mean	SD	t	p	Effect Size, d
Region				1.39	.165	.10
- Central	366	2.00	1.11			
- North-east-south	454	1.89	1.06			
Types of hospital				-2.16	.031	.16
- Medium	371	1.85	1.03			
- Large	449	2.02	1.12			
Marital status				.75	.455	.05
- Single	485	1.96	1.09			
- Married	335	1.91	1.07			
Average monthly income				2.13	.034	.15
- Above RM2000	523	2.00	1.11			
- RM 2000 and below	297	1.84	1.03			
Dependent responsibilities				.91	.362	.07
- Yes	508	1.97	1.09			
- No	312	1.90	1.08			
Educational sponsorship bond				2.61	.009[*]	.07
- Yes	415	2.04	1.05			
- No	405	1.84	1.11			

| Socio-demographics | Professional TI | | | | | |
	n	Mean	SD	t	p	Effect Size, d
Nursing specialisation				.42	.677	.19
- Yes	197	1.97	1.15			
- No	623	1.93	1.06			
Highest educational level				-.25	.802	.02
- Diploma in nursing	571	1.94	1.07			
- Higher than diploma in nursing	249	1.96	1.13			
Area of working				2.20	.028*	.16
- General medical-surgical units	394	2.03	1.10			
- Units of specialty	426	1.86	1.06			

*Significant at $p < .05$. **Significant at $p < .001$.

The analysis revealed professional turnover intention was significantly associated with educational sponsorship bond bond (t [818] = 2.61, p = .009, d = .07) and working areas (t [818] = 2.20, p = .028, d = .16). The results implied that nurses with educational sponsorshorship bond (M = 2.08, SD = 1.05) were more probable to leave the profession than those who were without sponsorship bond (M = 1.84, SD = 1.11). Furthermore, nurses who were working in the general multidisciplinary units (M = 2.03, SD = 1.10) were found to have higher of professional turnover intention compared with those who were working in the specialty units (M = 1.86, SD = 1.06). The remaining socio-demographic variables were found to have insignificant association on professional turnover intention (p > .05).

In summary, the findings of the study revealed that socio-demographic determinants were distinctive among the various forms of turnover intention. In terms of intra-organisational turnover intention, nurses who earned higher monthly income, had educational sponsorship bond, and dependent responsibilities were tended to have higher consideration to leave their current units/ wards. On the other hand, inter-

organisational turnover intention was more probable among the nurses with educational sponsorship bond. Furthermore, country turnover intention was more probable among the nurses who were single, younger, with less than six years nursing experience, and educational sponsorship bond. Moreover, professional turnover intention was found to be higher among the nurses who were working in the adult general wards and still having their educational sponsorship bond. In conclusion, educational sponsorship bond was found to have significant influenced on the four forms of turnover intention, namely: intra-organisational, inter-organisational, country, and professional turnover intention. Furthermore, the associations among the NPE, PC, and OC on nurses' turnover intention were analysed. The subsequent section would elaborate on the associations between NPE and TI.

Associations between NPE and TI. The Pearson correlation analysis revealed significant weak correlation between NPE and turnover intention ($r = -.25$, $p = .000$). The result explained that participants who perceived better NPE were tended to have lower turnover intention. In addition, chi-square and odds ratio were used to determine the association of nurses' perceptions towards PES-NWI subscales on the different forms of turnover intention. The PES-NWI subscales were dichotomised into "favourable" (mean value of 2.5 and above), and "unfavourable" (mean value of less than 2.5) based on the mean value cut-off point proposed by Lake (2002). The analysis results for the association between the PES-NWI subscales: NPHA, NFQC, NMLS, SRA, and CNPR subscales and the different forms of turnover intention were elaborated in the subsequent section.

Associations of NPHA subscale on the different forms of TI. Chi-square and odds ratio were used to determine the association between NPHA subscale and the different forms of turnover intention. The analysis method was employed in earlier

studies to find out the magnitude and proportion of association between variables (El-Jardali et al., 2011; Heinen et al., 2013; Hinno et al., 2012). The results were displayed in Table 4.26.

Table 4.26

Associations of NPHA Subscale and the Different Forms of TI

Turnover Intention	NPHA Subscale		$\chi2$	p	OR [95% CI]
	Unfavourable	Favourable			
Intra-organisational TI			11.39	.001[*]	1.76 [1.27, 2.45]
- Yes	104	270			
- No	80	366			
Inter-organisational TI			34.80	.000[**]	2.87 [2.00, 4.10]
- Yes	133	303			
- No	51	333			
Country TI			17.80	.000[**]	2.09 [1.48, 2.95]
- Yes	74	155			
- No	110	481			
Professional TI			2.87	.090	1.37 [.95, 1.97]
- Yes	55	151			
- No	129	485			

Note. OR = odds ratio, CI = confidence interval. [*]Significant at $p < .05$. [**]Significant at $p < .001$.

The analysis revealed NPHA subscale was significantly associated with intra-organisational TI ($\chi2$ [1, $N = 820$] = 11.39, $p = .001$), inter-organisational TI ($\chi2$ [1, $N = 820$] = 34.80, $p = .000$), and country TI ($\chi2$ [1, $N = 820$] = 17.80, $p = .000$). The association between NPHA subscale and professional TI was found to be insignificant ($p > .05$). Moreover, inter-organisational TI (OR 2.87; 95%CI 2.00 – 4.10) and country TI (OR 2.09; 95%CI 1.48 – 2.95) were tended to be twice higher when the

characteristics pertaining to nurses' involvement in matters related to their workplace were unfavourable.

Associations of NFQC subscale on the different forms of TI. Chi-square and odds ratio were used to determine the association between NFQC subscales on the different forms of turnover intention. The results were displayed in Table 4.27.

Table 4.27

Associations of the NFQC Subscale on the Different Forms of TI

Turnover Intention	NFQC Subscale		$\chi2$	p	OR [95% CI]
	Unfavourable	Favourable			
Intra-organisational TI			5.21	.022*	2.26 [1.10, 4.63]
- Yes	22	352			
- No	12	434			
Inter-organisational TI			5.90	.015*	2.53 [1.17, 5.50]
- Yes	25	411			
- No	9	375			
Country TI			1.87	.171	1.63 [.80, 3.32]
- Yes	13	216			
- No	21	570			
Professional TI			3.24	.072	1.90 [.94, 3.87]
- Yes	13	193			
- No	21	593			

Note. OR = odds ratio, CI = confidence interval. *Significant at p < .05. **Significant at p <.001.

The analysis revealed NFQC subscale was significantly associated with intra-organisational TI ($\chi2$ [1, N = 820] = 5.21, p = .022) and inter-organisational TI ($\chi2$ [1, N = 820] = 5.90, p = .015). NFQC subscale was found to have insignificant association with country TI and professional TI (p > .05). Additionally, intra-organisational TI (OR 2.26; 95%CI 1.10 – 4.63) and inter-organisational TI (OR 2.53; 95%CI 1.17 –

5.50) were tended to be twice higher when the characteristics pertaining to nurses'

provision in providing quality of care were unfavourable.

Associations of NMLS subscale on the different forms of TI. Chi-square and

odds ratio were used to determine the association between of NMLS subscale on the

different forms of turnover intention. The results were displayed in Table 4.28.

Table 4.28

Associations of NMLS Subscale on the Different Forms of TI

Turnover Intention	NMLS Subscale		χ^2	p	OR [95% CI]
	Unfavourable	Favourable			
Intra-organisational TI			15.92	.000**	2.04 [1.43, 2.91]
- Yes	94	280			
- No	63	383			
Inter-organisational TI			27.57	.000**	2.70 [1.85, 3.95]
- Yes	113	323			
- No	44	340			
Country TI			14.36	.000**	2.01 [1.39, 2.89]
- Yes	63	166			
- No	94	497			
Professional TI			5.60	.018*	1.58 [1.08, 2.30]
- Yes	51	155			
- No	106	508			

Note. OR = odds ratio, CI = confidence interval. *Significant at $p < .05$. **Significant

at $p < .001$.

The analysis revealed NMLS subscale was significantly associated with all the

different forms of turnover intention: intra-organisational TI (χ^2 [1, $N = 820$] = 15.92,

$p = .000$), inter-organisational TI (χ^2 [1, $N = 820$] = 27.57, $p = .000$), country TI (χ^2

[1, $N = 820$] = 14.36, $p = .000$), and professional TI (χ^2 [1, $N = 820$] = 5.60, $p = .018$).

Furthermore, intra-organisational TI (OR 2.04; 95%CI 1.43 – 2.91), inter-

organisational TI (OR 2.70; 95%CI 1.85 – 3.95), and country TI (OR 2.01; 95%CI

1.39 – 2.89) were tended to be twice higher when the characteristics pertaining to

nurse managers' ability and leadership were unfavourable.

Associations of SRA subscale on the different forms of TI. Chi-square and

odds ratio were used to determine the association between SRA subscale and the

different forms of turnover intention. The results were displayed in Table 4.29.

Table 4.29

Associations of SRA Subscale on the Different Forms of TI

Turnover Intention	SRA Subscale		χ2	*p*	OR [95% CI]
	Unfavourable	Favourable			
Intra-organisational TI			6.86	.009*	1.47 [1.10, 1.97]
- Yes	144	230			
- No	133	313			
Inter-organisational TI			22.03	.000**	2.03 [1.51, 2.74]
- Yes	179	257			
- No	98	286			
Country TI			6.63	.010*	1.51 [1.10, 2.08]
- Yes	93	136			
- No	184	407			
Professional TI			1.19	.275	1.20 [.86, 1.67]
- Yes	76	130			
- No	201	413			

Note. OR = odds ratio, CI = confidence interval. *Significant at *p* < .05. **Significant

at *p* <.001.

The analysis revealed SRA subscale was significantly associated with intra-

organisational TI (χ2 [1, *N* = 820] = 6.86, *p* = .009), inter-organisational TI (χ2 [1, *N*

= 820] = 22.03, *p* = .000), and country TI (χ2 [1, *N* = 820] = 6.63, *p* = .010). The

association between SRA subscale and professional TI was found to be insignificant

($p > .05$). Moreover, inter-organisational TI (OR 2.03; 95%CI 1.51 – 2.08) was tended

to be twice higher when the characteristics pertaining to adequacy of staffing and

resource were unfavourable.

Associations of CNPR subscale on the different forms of TI. Chi-square and

odds ratio were used to determine the association between CNPR subscale and the

different forms of turnover intention. The results were displayed in Table 4.30.

Table 4.30

Associations of CNPR subscale on the Different Forms of TI

Turnover Intention	CNPR Subscale		χ2	*p*	OR [95% CI]
	Unfavourable	Favourable			
Intra-organisational TI			5.92	.015*	1.51 [1.08, 2.11]
- Yes	95	279			
- No	82	364			
Inter-organisational TI			10.32	.001*	1.75 [1.24, 2.47]
- Yes	113	323			
- No	64	320			
Country TI			1.11	.292	1.22 [.85, 1.75]
- Yes	55	174			
- No	122	469			
Professional TI			1.17	.279	1.23 [.85, 1.79]
- Yes	50	156			
- No	127	487			

Note. OR = odds ratio, CI = confidence interval. *Significant at $p < .05$. **Significant

at $p < .001$.

The analysis revealed CNRP subscale was significantly associated with intra-

organisational TI (χ2 [1, $N = 820$] = 6.86, $p = .009$) and inter-organisational TI (χ2 [1,

$N = 820$] = 22.03, $p = .000$). CNRP subscale was found to have no significant

association with country TI and professional TI ($p > .05$).

In conclusion, all the five subscales were significantly associated with intra-organisational TI and inter-organisational TI ($p < .05$). Thus, the findings reflected that the overall characteristics of the NPE were crucial in retaining nurses within unit and organisation. Nonetheless, country TI was significantly associated with NPHA, NMLS, and SRA subscales ($p < .05$). In other word, areas related to autonomy, organisational involvement, manager support, leadership, and staffing were crucial characteristics to prevent nurses from leaving country. Interestingly, professional TI was found to be significantly associated with only one subscale which was NMLS subscale ($p < .05$). Thus, the findings reflected the significance of organisational supportiveness at the unit-level. Competent nurse managers were crucial in sustaining the entire nursing workforce. The subsequent section elaborated on the associations between professional commitment and turnover intention.

Associations between PC and TI. The Pearson correlation analysis revealed significant weak correlation between PC and turnover intention ($r = -.22$, $p = .000$). The result explained that participants who perceived better professional commitment were tended to have lower turnover intention. In addition, t-test and Cohen, *d*, effect size were used to determine the association of nurses' professional commitment domains (APC, CPC, and NPC domains) on the different forms of turnover intention. The analysis results for the association between the different forms of turnover intention and each of the professional commitment domains: APC, CPC, and NPC domains were elaborated in the subsequent section.

Associations of APC domain on the different forms of TI. T-test and effect size were used to determine the association between APC domain and the different forms of turnover intention. The analysis showed that APC domain had significant

associations and small to moderate effects with intra-organisational TI (t [818] = -3.29, p = .001, d = .23), inter-organisational TI (t [818] = -2.99, p = .003, d = .20), country TI (t [818] = -3.22, p = .001, d = .24), and professional TI (t [818] = -7.29, p = .000, d = .58). The results were displayed in Table 4.31.

Table 4.31

Associations of APC Domain on the Different Forms of TI (n = 820)

Turnover Intention	APC Domain					
	n	Mean	*SD*	t	p	Effect Size, *d*
Intra-organisational TI				-3.29	.001**	.23
- Yes	374	4.61	.68			
- No	446	4.76	.64			
Inter-organisational TI				-2.99	.003*	.20
- Yes	436	4.63	.67			
- No	384	4.76	.63			
Country TI				-3.22	.001*	.24
- Yes	229	4.58	.69			
- No	591	4.74	.64			
Professional TI				-7.29	.000**	.58
- Yes	206	4.41	.70			
- No	614	4.79	.62			

*Significant at p < .05. **Significant at p <.001.

In general, the results reflected that APC domain played significant role in all the different forms of turnover intention. Participants with higher APC were found to have lower turnover intention. Furthermore, the findings pointed out that emotional attachment towards profession was the main contributor towards professional turnover intention with moderate effect size of .58.

Associations of CPC domain on the different forms of TI. The analysis showed CPC domain had significant associations and small effects with intra-organisational TI (t [818] = -2.53, p = .012, d = .22), inter-organisational TI (t [818] = -2.74, p = .006, d = .20), and country TI (t [818] = -2.00, p = .046, d = .15). CPC domain had no

significant association with professional turnover intention ($p > .05$). The results were displayed in Table 4.32.

Table 4.32

Associations of CPC Domain on the Different Forms of TI (n = 820)

Turnover Intention	CPC Domain					
	n	Mean	*SD*	*t*	*p*	Effect Size, *d*
Intra-organisational TI				-2.53	.012*	.22
- Yes	374	4.12	.77			
- No	446	4.28	.71			
Inter-organisational TI				-2.74	.006*	.20
- Yes	436	4.14	.76			
- No	384	4.29	.71			
Country TI				-2.00	.046*	.15
- Yes	229	4.13	.75			
- No	591	4.24	.73			
Professional TI				-1.89	.060	.13
- Yes	206	4.13	.79			
- No	614	4.23	.72			

*Significant at $p < .05$. **Significant at $p < .001$.

In general, the results reflected that professional commitment in the aspect of cost was significantly related to intra-organisational, inter-organisational, and country turnover intention. Participants with higher CPC were found to have lower turnover intention. For examples: participants may think that it would be a waste to leave the unit, organisation, and country when they have invested so much money in the profession. Nonetheless, CPC was not the influence for professional turnover intention.

Associations of NPC domain on the different forms of TI. The analysis showed NPC domain had significant associations and small to moderate effects with intra-organisational TI (t [818] = -3.67, p = .000, d = .25), inter-organisational TI (t [818] = -5.43, p = .000, d = .38), country TI (t [818] = -5.13, p = .000, d = .39), and

professional TI (t [818] = -6.74, p = .000, d = .52). The results were displayed in Table 4.33.

Table 4.33

Associations of NPC Domain on the Different Forms of TI (n = 820)

Turnover Intention	NPC Domain					
	n	Mean	SD	t	p	Effect Size, d
Intra-organisational TI				-3.67	.000**	.25
- Yes	374	4.23	.77			
- No	446	4.42	.73			
Inter-organisational TI				-5.43	.000**	.38
- Yes	436	4.20	.78			
- No	384	4.48	.70			
Country TI				-5.13	.000**	.39
- Yes	229	4.12	.83			
- No	591	4.42	.71			
Professional TI				-6.74	.000**	.52
- Yes	206	4.03	.83			
- No	614	4.43	.70			

*Significant at p < .05. **Significant at p <.001.

In general, the results reflected that NPC domain were significantly associated with all the different forms of turnover intention (p = .000). Participants with higher NPC were found to have lower turnover intention. Furthermore, the findings pointed out that professional obligation attachment towards profession was the main contributor towards professional turnover intention with moderate effect size of .52.

In summary, APC, CPC, and NPC domains were found to have significant associations with intra-organisational, inter-organisational, and country turnover intention (p <. 05). Nonetheless, professional turnover intention was found to have associations with APC and NPC only (p < .05). Professional commitment related to cost (CPC) was found to have insignificant association with professional turnover (p > .05). Furthermore, APC and NPC revealed moderate effect sizes for professional

turnover intention, .58 and .52 respectively. The subsequent section elaborated on the associations between organisational commitment and turnover intention.

Associations between OC and TI. The Pearson correlation analysis revealed significant weak correlation between OC and turnover intention ($r = -.31$, $p = .000$). The result explained that participants who have higher commitment towards organisation tended to have lower turnover intention. In addition, t-test and Cohen, *d*, effect size were used to determine the association of nurses' organisational commitment domains (AOC, COC, and NOC domains) on the different forms of turnover intention. The analysis results for the association between the different forms of turnover intention and each of the organisational commitment domains: AOC, COC, and NOC domains were elaborated in the subsequent section.

Associations of AOC domain on the different forms of TI. The analysis showed AOC domain had significant associations and small to moderate effects with intra-organisational TI (t [818] = -6.52, $p = .000$, $d = .46$), inter-organisational TI (t [818] = -9.17, $p = .000$, $d = .64$), country TI (t [818] = -5.31, $p = .000$, $d = .40$), and professional TI (t [818] = -2.09, $p = .037$, $d = .17$). The results were displayed in Table 4.34.

Table 4.34

Associations of AOC Domain on the Different Forms of TI (n = 820)

Turnover Intention	AOC Domain					
	n	Mean	*SD*	*t*	*p*	Effect Size, *d*
Intra-organisational TI				-6.52	.000**	.46
- Yes	374	3.18	1.12			
- No	446	3.68	1.04			
Inter-organisational TI				-9.17	.000**	.64
- Yes	436	3.14	1.12			
- No	384	3.81	.98			
Country TI				-5.31	.000**	.40
- Yes	229	3.13	1.19			
- No	591	3.58	1.05			
Professional TI				-2.09	.037*	.17
- Yes	206	3.31	1.13			
- No	614	3.50	1.10			

*Significant at $p < .05$. **Significant at $p < .001$.

In general, the results reflected that AOC domain were significantly associated with all the different forms of turnover intention ($p < .001$). Participants with higher AOC were found to have lower turnover intention. Furthermore, the findings pointed out that emotional attachment towards organisational were the main contributor towards inter-organisational turnover intention with moderate effect size of .64.

Associations of COC domain on the different forms of TI. The analysis showed COC domain had significant associations and small effects with intra-organisational TI (t [818] = -4.62, $p = .000$, $d = .33$), inter-organisational TI (t [818] = -5.61, $p = .000$, $d = .38$), and country TI (t [818] = -3.98, $p = .000$, $d = .29$). Nonetheless, COC domain was found to have insignificant association with professional turnover intention (p > .05). The results were displayed in Table 4.35.

Table 4.35

Associations of COC Domain on the Different Forms of TI (n = 820)

Turnover Intention	COC Domain					
	n	Mean	*SD*	*t*	*p*	Effect Size, *d*
Intra-organisational TI				-4.62	.000**	.33
- Yes	374	3.59	.93			
- No	446	3.88	.84			
Inter-organisational TI				-5.61	.000**	.38
- Yes	436	3.59	.94			
- No	384	3.92	.79			
Country TI				-3.98	.000**	.29
- Yes	229	3.55	1.00			
- No	591	3.28	.84			
Professional TI				-.59	.553	
- Yes	206	3.71	.94			.05
- No	614	3.76	.88			

*Significant at *p* < .05. **Significant at *p* <.001.

In general, the results reflected that COC domain were significantly associated with intra-organisational, inter-organisational, and country turnover intention (*p* = .000). Participants with higher COC were found to have lower turnover intention. Nevertheless, cost related organisational attachment was found to have no influenced on intention to exit profession.

Associations of NOC domain on the different forms of TI. The analysis showed NOC domain had significant associations and small to moderate effects with intra-organisational TI (*t* [818] = -6.12, *p* = .000, *d* = .33), inter-organisational TI (*t* [818] = -8.88, *p* = .000, *d* = .62), country TI (*t* [818] = -5.97, *p* = .000, *d* = .46), and professional TI (*t* [818] = -2.04, *p* = .042, *d* = .17). The results were displayed in Table 4.36.

Table 4.36

Associations of NOC Domain on the Different Forms of TI (n = 820)

Turnover Intention	NOC Domain					
	n	Mean	*SD*	*t*	*p*	Effect Size, *d*
Intra-organisational TI				-6.12	.000**	.33
- Yes	374	3.45	1.03			
- No	446	3.78	.98			
Inter-organisational TI				-8.88	.000**	.62
- Yes	436	3.30	1.05			
- No	384	3.90	.90			
Country TI				-5.97	.000**	.46
- Yes	229	3.24	1.10			
- No	591	3.71	.96			
Professional TI				-2.04	.042*	.17
- Yes	206	3.45	1.05			
- No	614	3.62	1.01			

*Significant at *p* < .05. **Significant at *p* <.001.

In general, the results reflected that NOC domain were significantly associated with all the different forms of turnover intention (*p* < .05). Participants with higher NOC were found to have lower turnover intention. Furthermore, the findings pointed out that professional obligation attachment towards organisational were the main contributor towards inter-organisational turnover intention with moderate effect size of .62.

In summary, AOC, COC, and NOC domains were found to have significant associations with intra-organisational, inter-organisational, and country turnover intention (*p* <. 05). Nonetheless, professional turnover intention was found to have associations with AOC and NOC only (*p* < .05). Organisational commitment related to cost (COC) was found to have insignificant association with professional turnover (*p* > .05). Furthermore, AOC and NOC revealed moderate effect sizes for inter-organisational turnover intention, .64 and .62 respectively.

In conclusion, the findings found that all the different forms of turnover intention were influenced by the affective and normative domains of commitment (professional and organisational commitments). Professional turnover intention was not influenced by continuance domain (professional and organisational commitments). Nonetheless, affective and normative domains in professional commitment were found to have high influenced on professional turnover intention. On the other hand, affective and normative domains in organisational commitment were found to have high influenced on inter-organisational turnover intention. Henceforth, the results reflected that different forms of turnover intention (particularly between inter-organisational and professional turnover intention) were influenced by distinctive domains of commitment. The subsequent section elaborated on the nurses' exit choices.

Research Question 4 - What is the proportion of exit choice (EC) in terms of organisational, education, country and entrepreneurship among the Malaysian RNs?. In this section, answers for research question 4, "What is the proportion of exit choice (EC) in terms of organisational, education, country and entrepreneurship among the Malaysian RNs?" were presented. Data for this research question was gathered using ECQ. The proportion of exit choice was analysed using descriptive statistics.

Prior to data analysis, exit choices were categorized into nursing related choice (*nursing*-EC) and non-nursing related choice (*non-nursing*-EC). *Nursing*-EC was referring to the choices which belong to the nursing discipline such as pursuing nursing qualification and practicing nursing in another organisation or country. On the other hand, *non-nursing*-EC was referring to choices which were not related to the nursing discipline such as entrepreneurship, advancing non-nursing qualification, and

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venturing into non-nursing job whether it is in another organisation or country. In general, the analysis revealed nursing discipline ($M = 2.61$, $SD = .98$) was a more preferred exit choice compared with non-nursing discipline with mean values of 2.61 ($SD = .98$) and 1.90 ($SD = .83$) respectively. The analysis results were shown in Table 4.37.

Table 4.37

Descriptive Statistics Results for Exit Choice (n = 820)

Items	Mean	*SD*	Categorisation	Yes		No	
				n	%	*n*	%
Nursing-EC	2.61	.98	Moderate				
- Pursuing further nursing qualification	2.93	1.30	Moderate	478	58.3	342	41.7
- Working in another country as a nurse	2.50	1.29	Moderate	353	43.0	467	57.0
- Working in another organisation as a nurse	2.41	1.16	Moderate	345	42.1	475	57.9
Non-nursing-EC	1.90	.83	Low				
- Starting own business	2.23	1.31	Moderate	276	33.7	544	66.3
- Pursuing further qualification but not in nursing	2.00	1.16	Low	231	28.2	589	71.8
- Working in another organisation but not as a nurse	1.86	1.07	Low	193	23.5	627	76.5
- Working in another country but not as a nurse	1.49	.90	Low	108	13.2	712	86.8

In terms of *nursing*-EC, participants rated moderately preferred for pursuing nursing qualification and practicing nursing in another organisation or country. On the other hand, for *non-nursing*-EC, participants rated moderately preferred for entrepreneurship while, the remaining choices such as advancing non-nursing qualification, and venturing into non-nursing job whether it is in another organisation or country were rated least preferred.

In terms of exit choice proportion, more than half of the participants indicated their preferred exit choice in advancing their nursing qualifications ($n = 478$, 58.3%). Furthermore, almost half of the participants expressed intention to practice nursing in another country ($n = 353$, 43.0%), and organisation ($n = 345$, 42.1%). Nonetheless, pursuing non nursing related job either in another organisation ($n = 193$, 23.5%) or country ($n = 108$, 13.2%) were found to be the least preferred exit choices. These results further confirmed on the results found in turnover intention where professional turnover intention was rated the lowest among the participants. In conclusion, the results explained that participants were still very much devoted to their profession, and have high intent to progress in the profession through advancing in higher nursing qualification, and practicing nursing in another country or organisation.

Research Question 5 - Do NPE, PC and OC Predict TI when Controlling the Socio-demographic Variables?. In this section, results for research question 5, "Do NPE, PC and OC predict TI when controlling the socio-demographic variables?" were presented. The research hypothesis to address the research question was:

H0$_1$: NPE, PC and OC are not significant predictors for TI when socio-demographic variables are controlled.

H1: NPE, PC and OC are significant predictors for TI when socio-demographic variables are controlled.

Hierarchical multiple regressions (stepwise) were used for analysis. The regression method of analysis was deemed to be appropriate for the study because the objective of the research was to ascertain the predictive value of the IVs (i.e., NPE, PC, and OC) on TI (Tabachnick & Fidell, 2013). The advantage of the analysis method was the ability to develop a subset of predictors for the DV and simultaneously remove the IVs which do not contribute additional prediction to the set of IVs in the prediction equation (Tabachnick & Fidell, 2013). Henceforth, prior to the analysis, the following analysis was performed:

1. Associations among the research variables: NPE, PC, OC, and TI

2. Assumptions for regressions

3. Results of hierarchical multiple regressions

Associations among NPE, PC, OC, and TI. Subsequently, the associations among NPE, PC, OC, and TI were ascertained using the Pearson correlation analysis. The correlation tests revealed turnover intention was significantly negative correlated with NPE ($r = -.25$, $p = .000$), PC ($r = -.22$, $p = .000$), and OC ($r = -.31$, $p = .000$). Participants who perceived a more favourable NPE had higher PC and OC. Additionally, the participants who had better perception towards their NPE, PC and OC were found to have lower turnover intention. Furthermore, NPE was found to have significant weak to moderate positive correlation with professional commitment ($r = .26$, $p = .000$), and organisational commitment ($r = .42$, $p = .000$) respectively. Participants with higher PC and OC were tended to perceive their NPE as more

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favourable. In terms of associations of between PC and OC, the analysis revealed significant moderate positive correlation ($r = .42$, $p = .000$). Participants with higher PC were tended to have higher OC.

In conclusion, the results revealed turnover intention was found to be lower when the NPE was perceived as more favourable. In addition, participants with higher PC and OC were tended to perceive their working environment as more favourable and have lesser probable of turnover intention. Furthermore, favourable working environment was found to have positive influence on PC and OC. Moreover, participants who have higher commitment towards their organisation were tended to have higher commitment towards their profession as well. As a summary, the results verified that NPE, PC, and OC were associated with turnover intention. Simultaneously, NPE, PC and OC were found to have inter-connections. Furthermore, PC and OC were found to have influenced on NPE.

Henceforth, the current study sought to investigate whether NPE, PC, and OC predict turnover intention when socio-demographic variables were controlled. Hierarchical multiple regression analysis was used for the analysis. In the earlier analysis, average monthly income and educational sponsorship bond were found to have significant associations with turnover intention ($p < .001$). Thus, both variables were included in the hierarchical multiple regression analysis. The variables were coded into dummy variables prior to the regression analysis. Socio-demographic variables which did not showed significant associations with turnover intention were excluded in the regression analysis.

Testing assumptions for regression. Testing regression assumptions were important when multiple regression models were being used and the assumptions were the ratio of subjects to independent variables (IVs), normal distribution, linearity,

homoscedasticity, multicollinearity and multivariate outliers (Palaniappan, 2009; Tabachnick & Fidell, 2013).

Ratio of subjects to independent variables (IVs). In terms of the ratio of subjects to IVs, the sample size must fulfil at least 20 times bigger than the number of predictors in the study (Palanappian, 2009). In the current research question, the study consisted of five IVs (NPE, PC, OC, monthly income, and educational sponsorship bond). Thus, the least required size of a study sample (*n*) was (20 X 5) which yielded 100. The assumption for ratio of subjects to IVs was met because the total valid responses of the study were 820 which exceeded the minimum sample size requirement.

Normal distribution. The assumption on normal distribution was assessed through normal probability (P-P) plot of the standardised residuals (Kellar & Kelvin, 2013). The residuals will be distributed normally when linear relationships were present, and the dependent variable (DV) has normal distribution for each of the independent variable (IV) (Kellar & Kelvin, 2013). The P-P plot of regression standardised residuals were shown in Figure 4.11. The plots were found to be closed to the line in the normal P-P plot which indicated normal distribution (Kellar & Kelvin, 2013). Henceforth, the assumption of normality of the data was fulfilled.
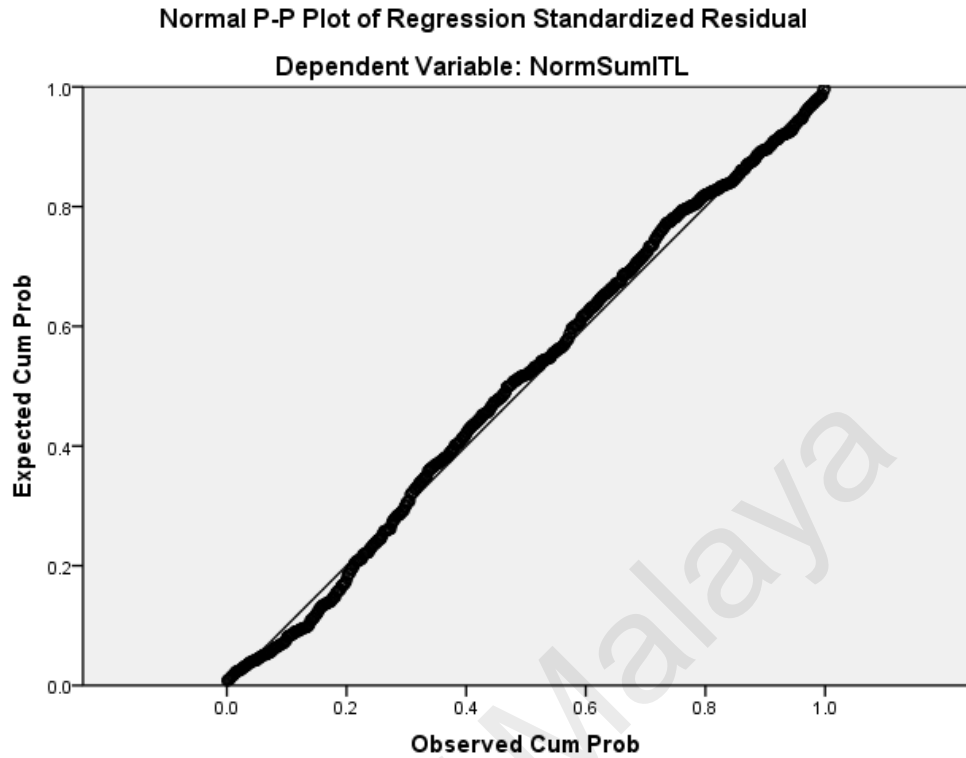
Figure 4.11. Normal P-P plot for NPE, PC, OC, and TI

Linearity and homoscedasticity. Linearity was assumed when a "straight-line" relationship was present amid two variables (Tabachnick & Fidell, 2013). On the other hand, homoscedasticity was referring to the variance of the residuals about predicted dependent variables were similar across all predicted values (Tabachnick & Fidell, 2013). Palanniappan (2009) stated that linearity was confirmed when the points in scatter plot were evenly distributed on both sides of zero "0" value of the standardised predicted value, x-axis. Thus, as shown in Figure 4.12, the scatter plot between standard residual and standard predicted values of DV revealed fulfilment of homoscedasticity and linearity assumptions.

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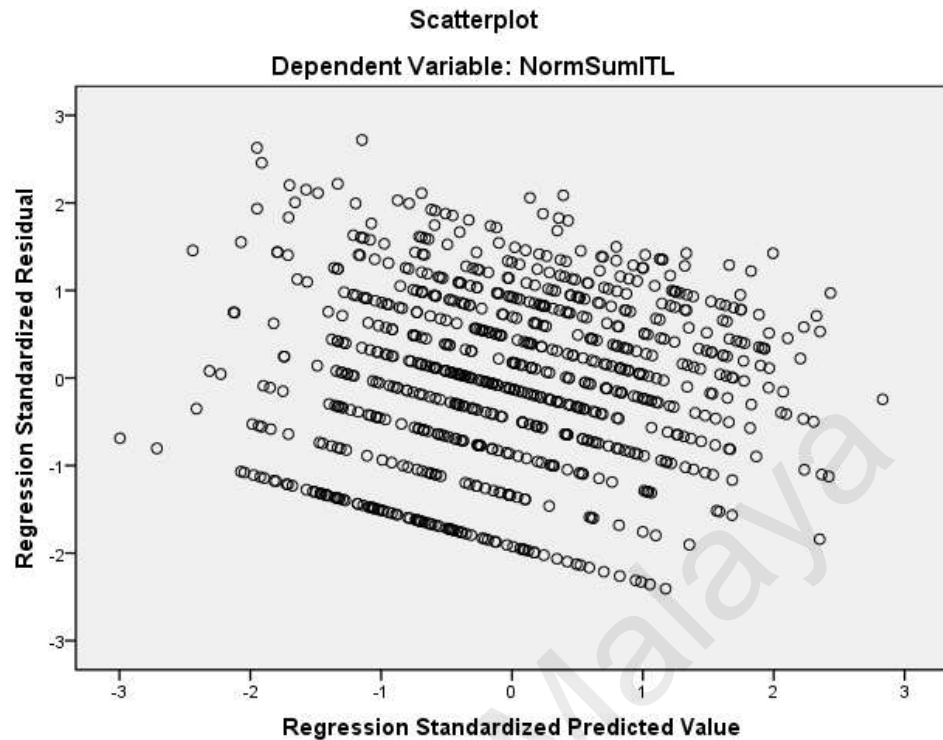
Figure 4.12 Scatter plot for NPE, PC, OC, and TI

Multicollinearity. The tolerance of variables was used to measure multicollinearity. Tolerance of variables was referring to the "proportion of the variance in a variable that is not accounted for by the other independent variables" (Kellar & Kelvin, 2013, p.365). The tolerance value was calculated by treating each independent variable as dependent variables and subsequently regressed on other independent variables (Kellar & Kelvin, 2013). Kellar and Kelvin (2013) further explained that a high multitude of correlation (R2) indicated strong associations and therefore, tolerance was calculated through (1 – R2). A tolerance value of zero "0" indicated perfect collinearity and thus, in order to avoid multicollinearity, the value of tolerance must be more than .1 (Palaniappan, 2009). Thus, the values of tolerance in this study were larger than .1 ranging from .82 to .99 which indicated that the assumption of multicollinearity has been fulfilled.

Furthermore, Hutcheson and Sofroniou (1999) stated that the variables would be deemed as independence when the value of Durbin-Watson was in the range of 1.5 and 2.5. The Durbin-Watson value of the study was 1.87. The result indicated that the variables were deemed to be as independence.

Multivariate outliers. The multivariate outliers were detected through the use of mahalanobis distance. Tabachnick and Fidell (2013) explained that Mahalanobis distance ($p < .001$) was used as the measure for multivariate outliers. Mahalanobis distance was   assessed as chi square with degree of freedom equate to the number of IVs (Tabachnick & Fidell, 2013).

In the current study, there were five IVs: monthly income, educational sponsorship bond, NPE, PC and OC. Cases with a Mahalanobis distance greater than chi-square value of 20.515 based on table of critical values of chi square in Tabachnick and Fidell (2013, p. 952) were considered as multivariate outliers. The range of Mahalanobis distance was between 1.559 and 18.253. Thus, no multivariate outliers were detected.

Results of the hierarchical multiple regression. The ability of NPE, PC and OC to predict turnover intention was estimated using hierarchical multiple regression. Socio-demographic variables (i.e., monthly income, and educational sponsorship bond dummy variables) were controlled. The results were displayed in Table 4.38.

Table 4.38

Hierarchical Regression Model of NPE, PC and OC on TI

	R	R^2	R^2 change	B	SE	β	p	t
Model 1	.19	.038**	.035**					
- Income				.07	.03	.08*	.016	2.41
- EducS.				.14	.03	.17**	.000	5.02
Model 2	.35	.125**	.122**					
- Income				.09	.03	.11*	.001	3.29
- EducS.				.11	.03	.14**	.000	4.10
- OC				-.01	.001	-.30**	.000	-9.01
Model 3	.37	.139**	.135**					
- Income				.09	.03	.10*	.001	3.20
- EducS.				.11	.03	.10**	.000	3.82
- OC				-.01	.00	-.24**	.000	-6.74
- NPE				-.01	.00	-.13**	.000	-3.70
Model 4	.38	.146*	.141*					
- Income				.09	.03	.11*	.001	3.28
- EducS.				.10	.03	.11**	.000	3.74
- OC				-.01	.00	-.21**	.000	-5.47
- NPE				-.01	.00	-.12*	.001	-3.44
- PC				-.00	.00	-.09*	.011	-2.56

Note. EducS. = Educational sponsorship, SE = standard error. Statistical significance

at $p < .05^*$; $p < .001^{**}$

Firstly, socio-demographic variables: monthly income, and educational

sponsorship bond dummy variables were entered in Model 1. The analysis revealed

that monthly income and educational sponsorship bond explained for 3.8% (R2) of

the variance in turnover intention (F [2, 817] = 15.95, p = .000). Educational

sponsorship bond (t = 5.02, p = .000), and monthly income (t = 2.41, p = .016) had

significant regression coefficients in predicting turnover intention.

In Model 2 (step 2), OC was added and the model explained 12.5% (R2) of

variance in turnover intention (F [1, 816] = 81.25, p = .000) which indicated that OC

explained additional 8.7% of the variance in turnover intention. Furthermore, OC

revealed significant coefficient (t = -9.01, p = .000). Subsequently, in Model 3 (step

3) and Model 4 (step 4), the variance in turnover intention were 13.9% ($R2$) after the inclusion of NPE, and 14.6% ($R2$) after the inclusion of PC respectively. NPE and PC explained additional 1.4%, and .7% of the variance in turnover intention respectively. In Model 4 (step 4), both NPE (t = -3.44, p = .001), and PC (t = -2.56, p = .011) revealed significant regression coefficients. Thus, the hierarchical multiple regression analysis revealed that NPE, PC and OC significantly contributed to turnover intention, in which rejecting null hypothesis ($p < .001$).

In conclusion, the results explained that NPE, PC, and OC have the ability to predict turnover intention. OC was found to be contributed the most in the turnover intention relationships, and then followed by NPE, and PC. In another words, turnover intention was influenced by working environment, professional and organisational commitment. In the relationships, commitment towards organisation was found to have the most contribution on turnover intention. Nevertheless, working environment and commitment towards profession also play significant role on turnover intention. Thus, the results supported the proposed conceptual framework which envisaged that NPE, PC, OC, and turnover intention were associated and NPE, PC, and OC were predictors of turnover intention.

Associations among NPE, PC, OC, and the different forms of TI. In view of the literature review pointed out the distinctive predictors for the different forms of turnover intention, further analysis was conducted to examine whether there was any difference in the predictive values of NPE, PC, and OC on the different forms of turnover intention (i.e., intra-organisation, inter-organisational, country, and professional). Firstly, the associations among NPE, PC, OC, and the different forms of turnover intention were ascertained using the Pearson correlation analysis.

The correlation tests revealed intra-organisational, inter-organisational, country, and professional turnover intention were significantly negative correlated with NPE, PC, and OC ($p < .001$). The results reflected that participants who perceived a more favourable NPE and had higher PC and OC were tended to have lower intention to quit unit, organisational, country, and profession.

Furthermore, intra-organisational TI was found to have significant weak to moderate positive correlation with inter-organisational TI ($r = .69$, $p = .000$), country TI ($r = .34$, $p = .000$), and professional TI ($r = .38$, $p = .000$). Participants with higher intention to quit unit were found to have higher intention to quit organisational, country, and profession. In terms of inter-organisational TI, the analysis revealed significant moderate positive correlation with country TI ($r = .48$, $p = .000$) and professional TI ($r = .43$, $p = .000$). Participants with higher inter-organisational turnover intention were tended to have higher intention to exit country and profession. In addition, the analysis for country TI found weak positive correlation with professional TI ($r = .30$, $p = .000$). In other word, participants with high country turnover intention were more probable to also have high professional turnover intention. As summary, the different forms of turnover intention were found to have association with nurses' perception towards NPE, PC, and OC. Nonetheless, the different forms of turnover intention were also found to have significant positive association among one another.

Henceforth, the current study sought to investigate whether NPE, PC, and OC predict the different forms of turnover intention when socio-demographic variables were controlled. Hierarchical multiple regression analysis was used for the analysis. The analysis results for intra-organisational turnover intention were presented in the subsequent section.

Associations of NPE, PC, and OC on intra-organisational TI. In the earlier analysis, monthly income, dependent responsibilities, and educational sponsorship bond were found to have significant associations with intra-organisational turnover intention ($p < .05$). Thus, these variables were included in the hierarchical multiple regression analysis. The variables were coded into dummy variables prior to the regression analysis. Socio-demographic variables which did not showed significant associations with intra-organisational turnover intention were excluded in the regression analysis.

Testing regression assumptions were conducted prior to the analysis. In terms of the ratio of subjects to IVs, the sample size must fulfil at least 20 times bigger than the number of predictors in the study. In the current analysis, the study consisted of six IVs (NPE, PC, OC, monthly income, dependent responsibilities, and educational sponsorship bond). Thus, the least required size of a study sample (*n*) was (20 X 6) which yielded 120. The assumption for ratio of subjects to IVs was met because the total valid responses of the study were 820 which exceeded the minimum sample size requirement. Furthermore, the assumption on normal distribution was assessed through normal P-P plot of the standardised residuals. The normal P-P plot of regression standardised residuals were shown in Figure 4.13. The points were found to be closed to the line in the normal P-P plot which indicated normal distribution. Henceforth, the assumption of normality of the data was fulfilled. Hence, as shown in Figure 4.14, the scatter plot between standard residual and standard predicted values of DV revealed fulfilment of homoscedasticity and linearity assumptions.

Normal P-P Plot of Regression Standardized Residual

Dependent Variable: Intention to leave unit
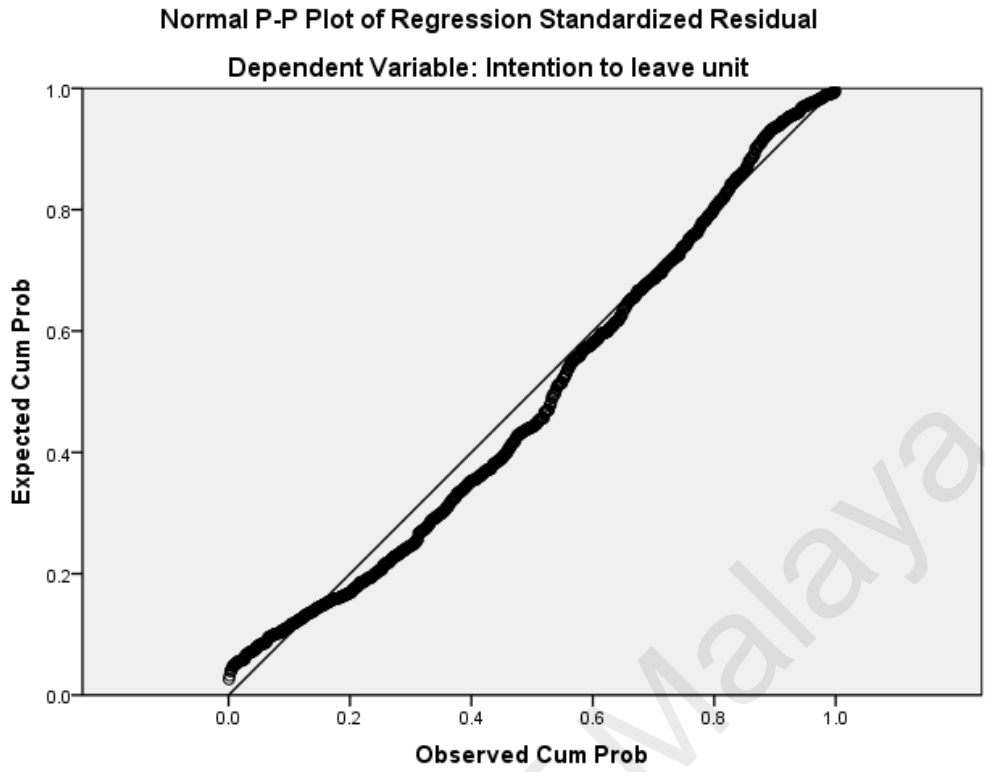
Figure 4.13. Normal P-P plot for NPE, PC, OC, and intra-organisational TI

Scatterplot
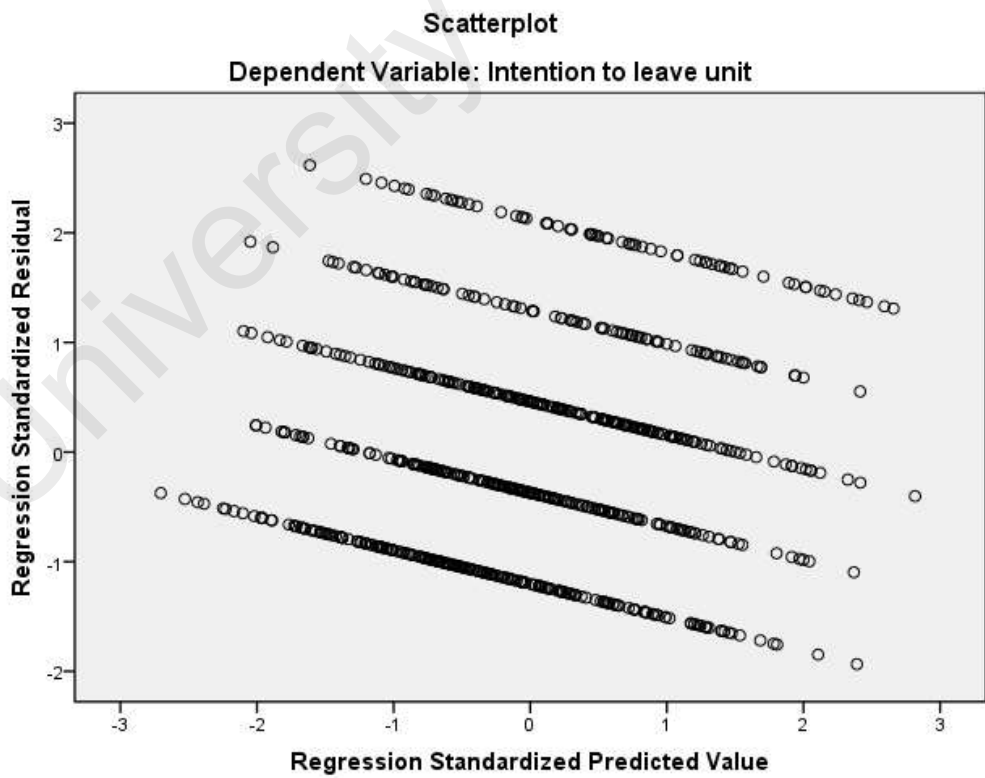
Dependent Variable: Intention to leave unit

Figure 4.14. Scatter plot for NPE, PC, OC, and intra-organisational TI

In the analysis, the tolerance of variables was used to measure multicollinearity. The values of tolerance in this study were larger than .1 ranging from .71 to 1.00 which indicated that the assumption of multicollinearity has been fulfilled. Additionally, the Durbin-Watson value of the study was 1.72 which range between 1.5 and 2.5 and was deemed to be as independence. The multivariate outliers were detected through the use of mahalanobis distance. In the current analysis, there were six IVs. Thus, cases with a Mahalanobis distance greater than chi-square value of 22.458 based on table of critical values of chi square in Tabachnick and Fidell (2013, p. 952) were considered as multivariate outliers. The range of Mahalanobis distance was between 1.609 and 18.324. Thus, no multivariate outliers were detected.

The ability of NPE, PC and OC to predict intra-organisational turnover intention was estimated using hierarchical multiple regression. Socio-demographic variables (i.e., monthly income, dependent responsibilities, and educational sponsorship bond dummy variables) were controlled. Firstly, socio-demographic dummy variables were entered in Model 1. The analysis revealed that dependent responsibilities explained for 1.1% (R^2) of the variance in intra-organisational turnover intention (F [1, 818] = 9.42, p = .002). Dependent responsibilities (t = 3.07, p = .002) had significant regression coefficients in predicting intra-organisational turnover intention. In Model 2 (step 2), educational sponsorship bond was added and the model explained 1.8% (R^2) of variance in intra-organisational turnover intention (F [2, 817] = 7.45, p = .001) which indicated that educational sponsorship bond explained additional .7% of the variance in intra-organisational turnover intention. Furthermore, educational sponsorship bond revealed significant coefficient (t = 2.33, p = .020). The results were displayed in Table 4.39.

Table 4.39

Hierarchical Regression Model of NPE, PC and OC on Intra-organisational TI

	R	R^2	R^2 change	B	SE	β	p	t
Model 1	.11	.011*	.011*					
- Dependent responsibilities				.28	.09	.11*	.002	3.07
Model 2	.13	.018*	.007*					
- Dependent responsibilities				.28	.09	.11*	.002	3.15
- EducS.				.20	.09	.08*	.020	2.33
Model 3	.29	.086**	.068**					
- Dependent responsibilities				.37	.09	.14**	.000	4.15
- EducS.				.11	.09	.04	.207	1.26
- NPE				-.02	.06	-.11*	.004	-2.89
- PC				-.01	.00	-.04	.277	-1.09
- OC				-.01	.00	-.18**	.000	-4.55

Note. EducS. = Educational sponsorship, SE = standard error. Statistical significance at $p < .05$*; $p < .001$**

Subsequently, in Model 3 (step 3), the variance in intra-organisational turnover intention were 8.6% (R2) after the inclusion of NPE, PC, and OC. NPE, PC, and OC explained additional 6.8% of the variance in intra-organisational turnover intention. In Model 3, dependent responsibilities ($t = 4.15$, $p = .000$), NPE ($t = -2.80$, $p = .004$), and OC ($t = -4.55$, $p = .002$) revealed significant regression coefficients. Nonetheless, educational sponsorship bond and PC revealed insignificant regression coefficients ($p > .05$). Thus, the hierarchical multiple regression analysis revealed that NPE and OC significantly contributed to intra-organisational turnover intention. However, PC was not significantly contributed to intra-organisational turnover intention. In conclusion, the results explained that NPE and OC have the ability to predict intra-organisational turnover intention.

Furthermore, an additional hierarchical multiple regression analysis was conducted by excluding the insignificant variables (i.e., monthly income and PC) revealed OC was the main contributor in the relationship of NPE and OC on intra-organisational turnover intention. In Model 2, the variance in intra-organisational turnover intention was 7.2% (R2) after the inclusion of OC which explained additional 7.0% of the variance in intra-organisational turnover intention. Nonetheless, in Model 3, the variance in intra-organisational turnover intention was 8.3% (R2) after the inclusion of NPE. The variance of change between Model 2 and 3 was approximately one percent. Thus, the results revealed that OC had the higher variance in the relationship of NPE and OC on intra-organisational turnover intention. The analysis results were presented in Table 4.40.

Table 4.40

Hierarchical Regression Model of NPE and OC on Intra-organisational TI

	R	R^2	R^2 change	B	SE	β	p	t
Model 1	.11	.011*	.010*					
- Dependent responsibilities				.28	.09	.11*	.002	3.07
Model 2	.27	.072*	.070**					
- Dependent responsibilities				.37	.09	.14**	.000	4.19
- OC				-.02	.00	-.25**	.000	-7.30
Model 3	.29	.083**	.080**					
- Dependent responsibilities				.35	.09	.14**	.000	4.04
- OC				-.02	.00	-.20**	.000	-5.31
- NPE				-.02	.01	-.12**	.000	-3.14

Note. SE = standard error. Statistical significance at $p < .05^*$; $p < .001^{**}$

In conclusion, the results failed to support the proposed conceptual framework which envisaged that NPE, PC, OC, and intra-organisational turnover intention were

associated. The predictors for intra-organisational turnover intention were NPE and OC. Nonetheless, PC was not the predictor for intra-organisational turnover intention. Henceforth, the analysis results for inter-organisational turnover intention were presented in the subsequent section.

Associations of NPE, PC, and OC on inter-organisational TI. In the earlier analysis, educational sponsorship bond was the only socio-demographic variable found to have significant associations with inter-organisational turnover intention ($p < .05$). Thus, the variable was included in the hierarchical multiple regression analysis. Socio-demographic variables which did not showed significant associations with inter-organisational turnover intention were excluded in the regression analysis.

Testing regression assumptions were conducted prior to the analysis. In terms of the ratio of subjects to IVs, the sample size must fulfil at least 20 times bigger than the number of predictors in the study. In the current analysis, the study consisted of four IVs (NPE, PC, OC, and educational sponsorship bond). Thus, the least required size of a study sample (n) was (20 X 4) which yielded 80. The assumption for ratio of subjects to IVs was met because the total valid responses of the study were 820 which exceeded the minimum sample size requirement. Furthermore, the assumption on normal distribution was assessed through normal P-P plot of the standardised residuals. The normal P-P plot of regression standardised residuals were shown in Figure 4.15. The plots were found to be closed to the line in the normal probability plot which indicated normal distribution. Henceforth, the assumption of normality of the data was fulfilled. Hence, as shown in Figure 4.16, the scatter plot between standard residual and standard predicted values of DV revealed fulfilment of homoscedasticity and linearity assumptions.
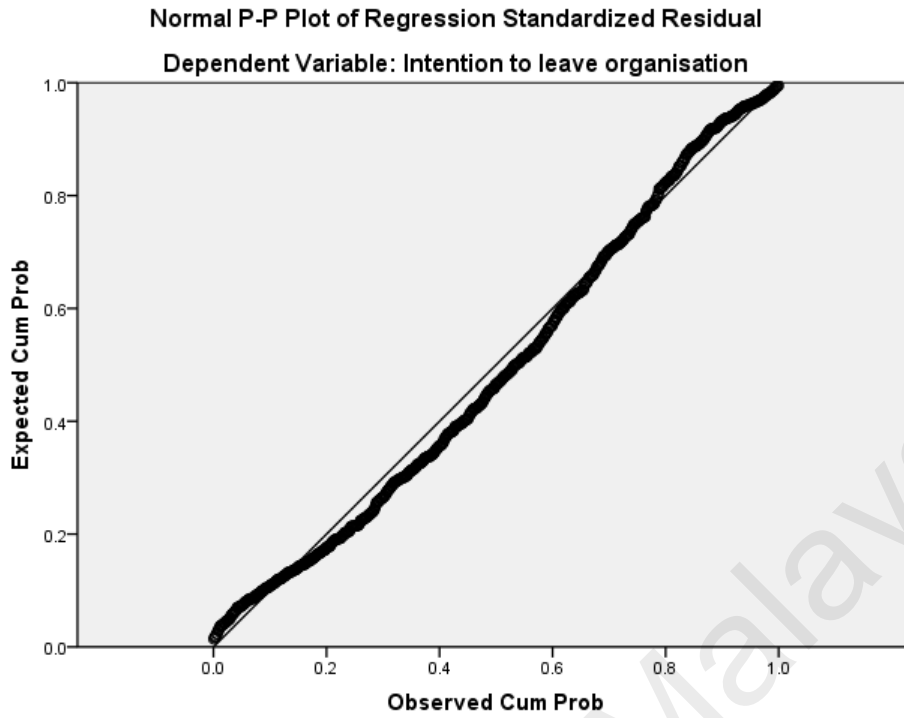
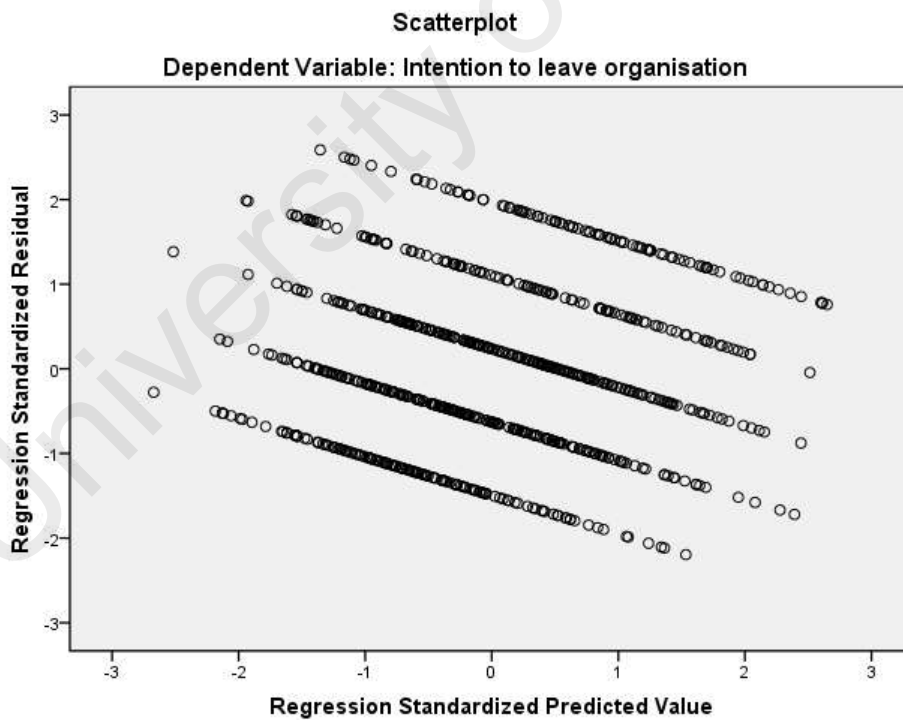*Figure 4.15.* Normal P-P plot for NPE, PC, OC, and inter-organisational TI

Figure 4.16. Scatter plot for NPE, PC, OC, and inter-organisational TI

In the analysis, the tolerance of variables was used to measure multicollinearity. The values of tolerance in this study were larger than .1 ranging from .82 to 1.00 which indicated that the assumption of multicollinearity has been fulfilled. Additionally, the Durbin-Watson value of the study was 1.93 which range between 1.5 and 2.5 and was deemed to be as independence. The multivariate outliers were detected through the use of mahalanobis distance. In the current analysis, there were four IVs. Thus, cases with a Mahalanobis distance greater than chi-square value of 18.467 based on table of critical values of chi square in Tabachnick and Fidell (2013, p. 952) were considered as multivariate outliers. The range of Mahalanobis distance was between .975 and 15.050. Thus, no multivariate outliers were detected.

The ability of NPE, PC and OC to predict inter-organisational turnover intention was estimated using hierarchical multiple regression. Socio-demographic variable (i.e., educational sponsorship bond dummy variable) was controlled. The results were displayed in Table 4.41.

Table 4.41

Hierarchical Regression Model of NPE, PC and OC on Inter-organisational TI

	R	R^2	R^2 change	B	SE	β	p	t
Model 1	.18	.031**	.030**					
- EducS.				.45	.09	.18**	.000	5.11
Model 2	.39	.155*	.153*					
- EducS.				.34	.08	.13**	.000	4.11
- OC				-.03	.00	-.36**	.000	-10.95
Model 3	.42	.173**	.170**					
- EducS.				.31	.08	.12**	.000	3.80
- OC				-.02	.00	-.29**	.000	-8.34
- NPE				-.02	.00	-.15**	.000	-4.19

Note. EducS. = Educational sponsorship, SE = standard error. Statistical significance at $p < .05^*$; $p < .001^{**}$

Firstly, socio-demographic variable, educational sponsorship bond dummy variable was entered in Model 1. The analysis revealed that educational sponsorship bond explained for 3.1% (R2) of the variance in inter-organisational turnover intention (F [1, 818] = 26.15, p = .000). Educational sponsorship bond (t = 5.11, p = .000) had significant regression coefficients in predicting inter-organisational turnover intention.

In Model 2 (step 2), OC was added and the model explained 15.5% (R2) of variance in inter-organisational turnover intention (F [2, 817] = 74.91, p = .000) which indicated that OC explained additional 12.4% of the variance in inter-organisational turnover intention. Furthermore, OC revealed significant coefficient (t = -10.95, p = .000). Subsequently, in Model 3 (step 3), the variance in intra-organisational turnover intention were 17.3% (R2) after the inclusion of NPE and explained additional 1.8% of the variance in inter-organisational turnover intention. In Model 3, educational sponsorship bond (t = 3.80, p = .000), OC (t = -8.34, p = .000), and NPE (t = -4.19, p = .000) revealed significant regression coefficients. Nonetheless, PC revealed insignificant regression coefficients (p > .05). Thus, the hierarchical multiple regression analysis revealed that NPE and OC significantly contributed to inter-organisational turnover intention. However, PC was not significantly contributed to inter-organisational turnover intention. Thus, the results explained that NPE and OC have the ability to predict inter-organisational turnover intention. The results revealed that OC had the higher variance in the relationship of NPE and OC on inter-organisational turnover intention.

In conclusion, the results failed to support the proposed conceptual framework which envisaged that NPE, PC, OC, and inter-organisational turnover intention were associated. The predictors for inter-organisational turnover intention were NPE and

OC. Nonetheless, similarly with intra-organisational turnover intention, PC was not the predictor for inter-organisational turnover intention. Henceforth, the analysis results for country turnover intention were presented in the subsequent section.

Associations of NPE, PC, and OC on country organisational TI. In the earlier analysis, age, nursing experience, marital status, and educational sponsorship bond were the socio-demographic variables found to have significant associations with country turnover intention ($p < .05$). Nonetheless, in view of multicollinearity between age and nursing experience, both variables were excluded from analysis. Furthermore, Rhéaume et al. (2011) stated that nurses' age by itself did not cause variation in turnover but instead the influence from other factors such as nursing experience and dependent responsibilities. Thus, for the analysis, only marital status, and educational sponsorship bond variables were included in the hierarchical multiple regression analysis. Socio-demographic variables which did not showed significant associations with country turnover intention were excluded in the regression analysis.

Testing regression assumptions were conducted prior to the analysis. In terms of the ratio of subjects to IVs, the sample size must fulfil at least 20 times bigger than the number of predictors in the study. In the current analysis, the study consisted of five IVs (NPE, PC, OC, marital status, and educational sponsorship bond). Thus, the least required size of a study sample (*n*) was (20 X 5) which yielded 100. The assumption for ratio of subjects to IVs was met because the total valid responses of the study were 820 which exceeded the minimum sample size requirement. Furthermore, the assumption on normal distribution, homoscedasticity, and linearity were assessed through normal P-P plot of the standardised residuals, and scatter plot between standard residual and standard predicted values of DV. The normal P-P plot of regression standardised residuals, and scatter plot between standard residual and

standard predicted values of DV were shown in Figure 4.17 and Figure 4.18. The data

was found to be slightly skewed in nature.
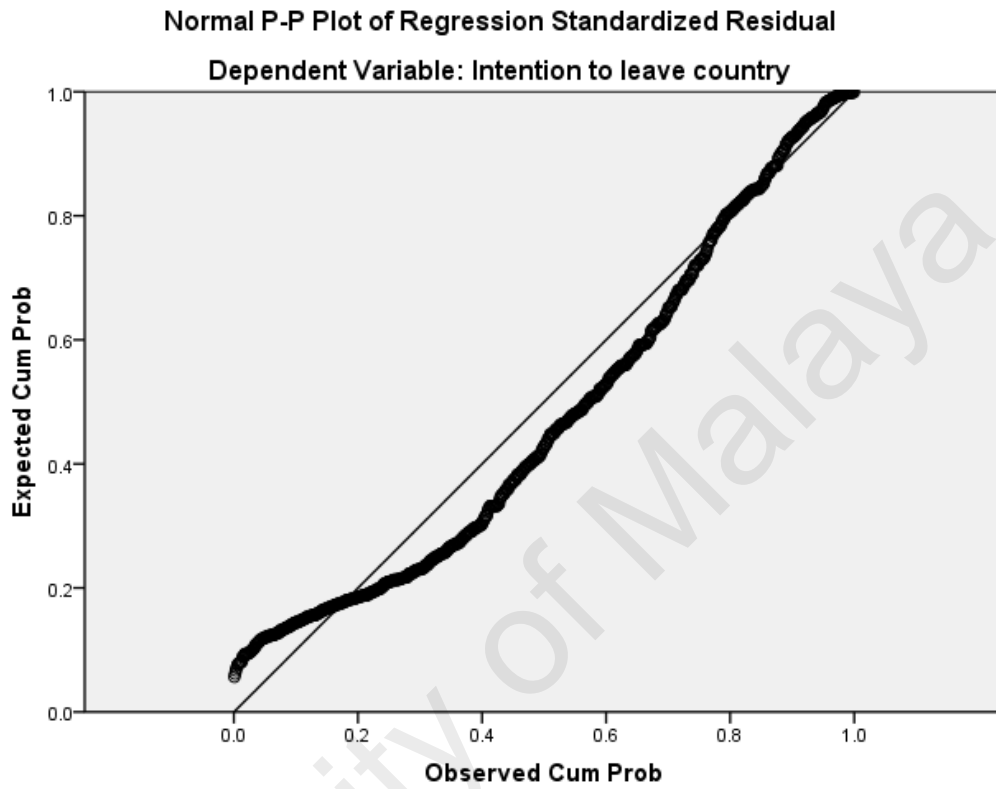
Figure 4.17. Normal P-P plot for NPE, PC, OC, and country TI
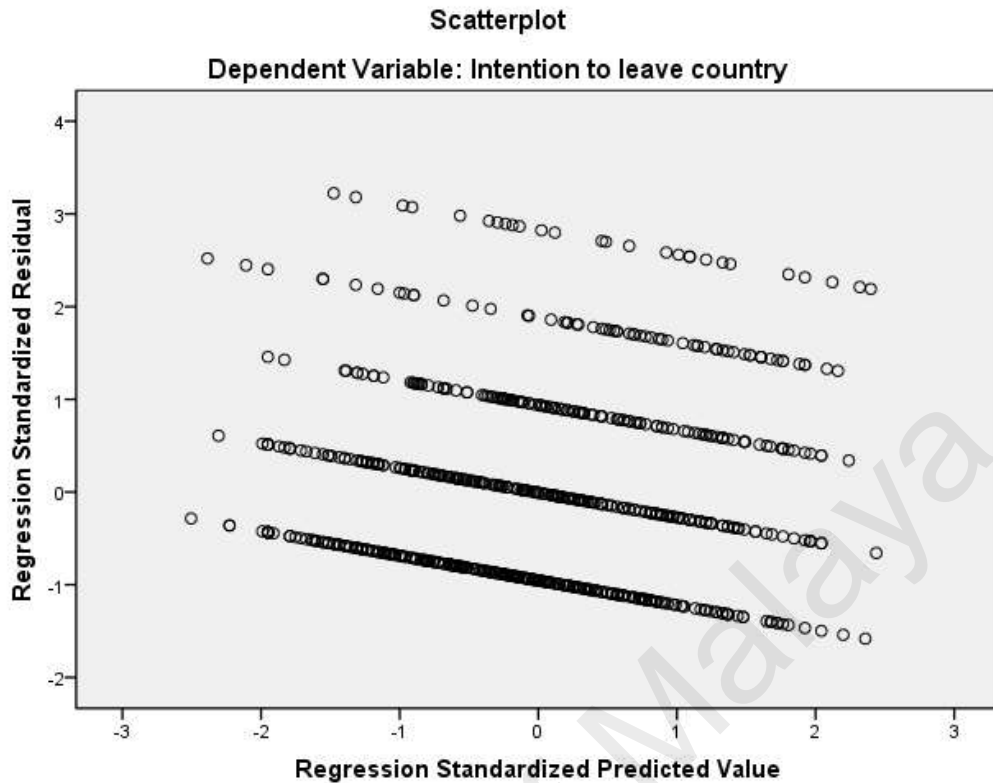
Figure 4.18. Scatter plot for NPE, PC, OC, and country TI

In the analysis, the tolerance of variables was used to measure multicollinearity. The values of tolerance in this study were larger than .1 ranging from .82 to .98 which indicated that the assumption of multicollinearity has been fulfilled. Additionally, the Durbin-Watson value of the study was 1.92 which range between 1.5 and 2.5 and was deemed to be as independence. The multivariate outliers were detected through the use of mahalanobis distance. Mahalanobis distance was assessed as chi square with degree of freedom equate to the number of IVs (Tabachnick & Fidell, 2013). In the current analysis, there were five IVs. Thus, cases with a Mahalanobis distance greater than chi-square value of 20.515 based on table of critical values of chi square in Tabachnick and Fidell (2013, p. 952) were considered as multivariate outliers. The range of Mahalanobis distance was between 1.475 and 9.780. Thus, no multivariate outliers were detected.

The ability of NPE, PC and OC to predict country organisational turnover intention was estimated using hierarchical multiple regression. Socio-demographic variables (i.e., marital status and educational sponsorship bond dummy variables) were controlled. The results were displayed in Table 4.42.

Table 4.42

Hierarchical Regression Model of NPE, PC and OC on Country TI

	R	R^2	R^2 change	B	SE	β	p	t
Model 1	.19	.037**	.035**					
- Marital status				.33	.08	.15**	.000	4.33
- EducS.				.22	.08	.10**	.000	2.94
Model 2	.26	.067*	.063**					
- Marital status				.30	.08	.13**	.000	3.90
- EducS.				.18	.08	.08**	.000	2.42
- OC				-.01	.00	-.17**	.000	-5.10

Note. EducS. = Educational sponsorship, SE = standard error. Statistical significance at $p < .05^*$; $p < .001^{**}$

Firstly, socio-demographic variables, marital status and educational sponsorship bond dummy variables were entered in Model 1. The analysis revealed that marital status and educational sponsorship bond explained for 3.7% (R2) of the variance in country turnover intention (F [2, 817] = 15.65, p = .000). Marital status (t = 4.33, p = .000) and educational sponsorship bond (t = 2.94, p = .000) had significant regression coefficients in predicting country turnover intention.

In Model 2 (step 2), OC was added and the model explained 6.7% (R2) of variance in country turnover intention (F [3, 816] = 19.41, p = .000) which indicated that OC explained additional 2.8% of the variance in country turnover intention. In Model 2, marital status (t = 3.90, p = .000), educational sponsorship bond (t = 2.42, p = .000), and OC (t = -5.10, p = .000) revealed significant regression coefficients.

Nonetheless, PC and NPE revealed insignificant regression coefficients ($p > .05$). Thus, the hierarchical multiple regression analysis revealed that only OC significantly contributed to country turnover intention. However, PC and NPE did not significantly contribute to country turnover intention. Thus, the results explained that OC have the ability to predict country turnover intention.

In conclusion, the results failed to support the proposed conceptual framework which envisaged that NPE, PC, OC, and country turnover intention were associated. The predictor for country turnover intention was OC. In contrast with organisational turnover intention, country turnover intention was not influenced by NPE. Henceforth, the analysis results for professional turnover intention were presented in the subsequent section.

Associations of NPE, PC, and OC on professional TI. In the earlier analysis, educational sponsorship bond and working areas (general medical-surgical unit versus specialty units) were the socio-demographic variables found to have significant associations with professional turnover intention ($p < .05$). Thus, the variables were included in the hierarchical multiple regression analysis. Socio-demographic variables which did not showed significant associations with professional turnover intention were excluded in the regression analysis.

Testing regression assumptions were conducted prior to the analysis. In terms of the ratio of subjects to IVs, the sample size must fulfil at least 20 times bigger than the number of predictors in the study. In the current analysis, the study consisted of five IVs (NPE, PC, OC, educational sponsorship bond, and working areas). Thus, the least required size of a study sample (*n*) was (20 X 5) which yielded 100. The assumption for ratio of subjects to IVs was met because the total valid responses of the study were 820 which exceeded the minimum sample size requirement.

Furthermore, the assumption on normal distribution, homoscedasticity, and linearity were assessed through normal P-P plot of the standardised residuals, and scatter plot between standard residual and standard predicted values of DV. The normal P-P plot of regression standardised residuals, and scatter plot between standard residual and standard predicted values of DV were shown in Figure 4.19 and Figure 4.20. The data was found to be slightly skewed in nature.
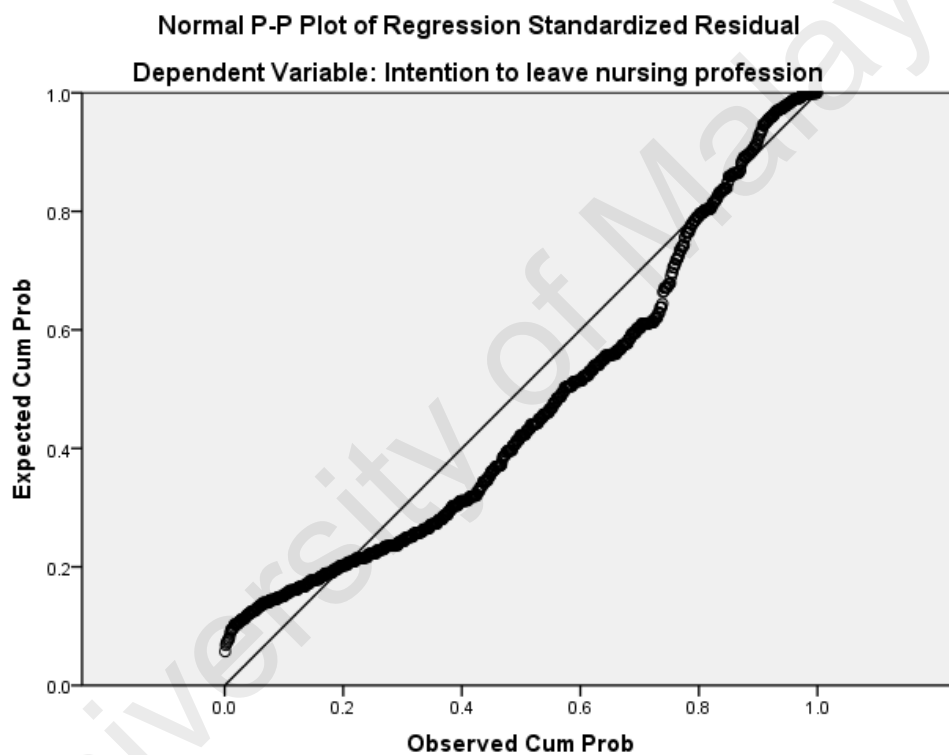
Figure 4.19. Normal P-P plot for NPE, PC, OC, and profession TI

Scatterplot

Dependent Variable: Intention to leave nursing profession
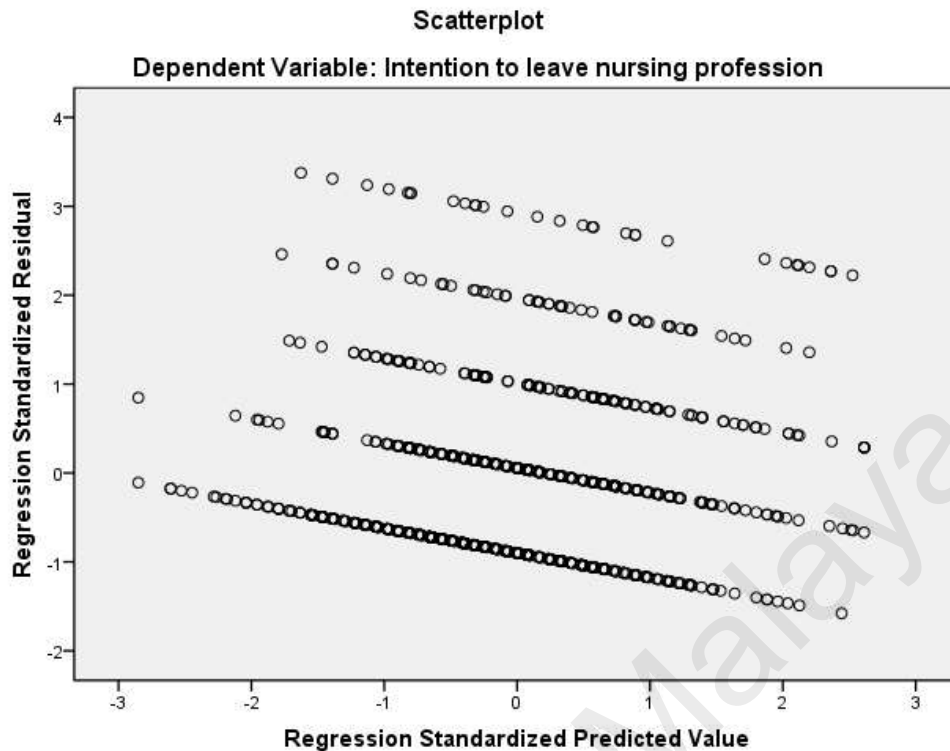
Figure 4.20. Scatter plot for NPE, PC, OC, and professional TI

In the analysis, the tolerance of variables was used to measure multicollinearity. The values of tolerance in this study were larger than .1 ranging from .82 to .99 which indicated that the assumption of multicollinearity has been fulfilled. Additionally, the Durbin-Watson value of the study was 1.89 which range between 1.5 and 2.5 and was deemed to be as independence. The multivariate outliers were detected through the use of mahalanobis distance. In the current analysis, there were five IVs. Thus, cases with a Mahalanobis distance greater than chi-square value of 20.515 based on table of critical values of chi square in Tabachnick and Fidell (2013, p. 952) were considered as multivariate outliers. The range of Mahalanobis distance was between 1.878 and 10.344. Thus, no multivariate outliers were detected.

The ability of NPE, PC and OC to predict professional turnover intention was estimated using hierarchical multiple regression. Socio-demographic variables (i.e.,

working areas and educational sponsorship bond dummy variables) were controlled. The results were displayed in Table 4.43.

Table 4.43

Hierarchical Regression Model of NPE, PC and OC on Professional TI

	R	R^2	R^2 change	B	SE	β	p	t
Model 1	.12	.014*	.011*					
- Working areas				.16	.08	.07*	.035	2.12
- EducS.				.19	.08	.09*	.012	2.53
Model 2	.27	.072*	.068**					
- Working areas				.17	.07	.08*	.020	2.33
- EducS.				.14	.07	.07	.051	1.95
- PC				-.02	.00	-.24**	.000	-7.15

Note. EducS. = Educational sponsorship, SE = standard error. Statistical significance at $p < .05^*$; $p < .001^{**}$

Firstly, socio-demographic variables: working areas and educational sponsorship bond dummy variables were entered in Model 1. The analysis revealed that working areas and educational sponsorship bond explained for 1.4% (R2) of the variance in professional turnover intention (F [2, 817] = 5.65, p = .004). Working areas (t = 2.12, p = .035) and educational sponsorship bond (t = 2.53, p = .012) had significant regression coefficients in predicting professional turnover intention.

In Model 2 (step 2), PC was added and the model explained 7.2% (R2) of variance in professional turnover intention (F [3, 816] = 21.05, p = .000) which indicated that PC explained additional 5.8% of the variance in professional turnover intention. In Model 2, working areas (t = 2.33, p = .020) and PC (t = -7.15, p = .000) revealed significant regression coefficients. Nonetheless, working areas, NPE, and OC revealed insignificant regression coefficients (p > .05). Thus, the hierarchical multiple regression analysis revealed that PC was the only significant predictor

contributed to professional turnover intention. Nonetheless, NPE and OC were not significantly contributed to professional turnover intention. Thus, the results explained that PC had the ability to predict professional turnover intention. In conclusion, the results failed to support the proposed conceptual framework which envisaged that NPE, PC, OC, and professional turnover intention were associated. The predictor for professional turnover intention was PC. The findings were not consistent with findings of organisational and country turnover intention. Nonetheless, similarly with country turnover intention, NPE was not the predictor for professional turnover intention.

As summary, the findings clearly highlighted the distinctive predictors for the different forms of turnover intention. Organisational commitment and characteristics of NPE were found to be significant predictors for organisational turnover intention (i.e., intra-organisational and inter-organisational). Furthermore, organisational turnover intention was not influenced by professional commitment. On the other hand, country and professional turnover intention was not influenced by the characteristics of NPE. Conversely, country turnover intention was only influenced by organisational commitment while, professional turnover intention was only influenced by professional commitment.

Research Question 6 - How do PC and OC influence the relationship between NPE and TI among the Malaysian RNs?. Partial correlations were used to perform the analysis. In this section, answers for research question 6, "How do PC and OC influence the relationship between NPE and TI among the Malaysian RNs?" were presented. The hypothesis of to address the research questions were:

H0$_2$:　There is no significant change in the relationship between NPE and TI when mediated by PC and OC.

H2:　There is significant change in the relationship between NPE and TI when mediated by PC and OC.

The middle variable which accounted for at least part of the changes in the DV was known as the mediator (Tabachnick & Fidell, 2013). Baron and Kenny (1986 cited in Tabachnick & Fidell, 2013) explained that a variable can only be confirmed as a mediator when the predictor had significant relationships with the DV and mediator. Furthermore, the mediator had to predict the DV when the predictor was controlled. A reduction of the relationship between the predictor and DV was observed when the mediator was in the equation. The mediation was described as "perfect" if the relationship relating the predictor and DV went to zero once the mediator was in the equation (Tabachnick & Fidell, 2013).

In the current study, the DV was TI while, NPE was the predictor. The mediators were PC and OC. In order to confirm PC and/ or OC as mediator(s), firstly, the analysis needed to testify that NPE (predictor) had significant relationships with TI (DV) and PC (mediator) as well as OC (mediator). The regression analysis was run to examine these assumptions. The analysis revealed that NPE explained for 7% of the variation of TI (F [1, 796] = 55.28, p = .000), 6% of the variation of PC (F [1, 796] = 55.36, p = .000), and 18% of the variation of OC (F [1, 796] = 175.86, p = .000). Furthermore, PC explained for 5% of the variation of TI (F [1, 796] = 41.87, p = .000), and OC explained for 9% of the variation of TI (F [1, 796] = 83.73, p = .000). Both, PC and OC were significant predictors for TI. The results were displayed in Table 4.44.

Table 4.44

Regression Coefficients among Variables

Paths	R	R^2	F	p	B	β	t	p
A: NPE → TI	.26	.07	55.28	.000**	-.02	-.26	-7.44	.000**
B: NPE → PC	.22	.06	52.36	.000**	.31	.25	7.24	.000**
C: NPE → OC	.30	.18	175.86	.000**	.81	.43	13.26	.000**
D: PC → TI	.22	.05	41.87	.000**	-.01	-.23	-6.47	.000**
E: OC → TI	.30	.09	80.39	.000**	-.01	-.30	-8.97	.000**

Statistical significance: $p < .05^*$; $p < .001^{**}$

Thus, the results indicated that NPE had significant relationships with TI, PC, and OC. In addition, PC and OC were predictors for TI. Henceforth, the first criterion for testing mediating effect was fulfilled. Secondly, PC (mediator) and OC (mediator) had to predict TI (DV) when NPE (predictor) was controlled. Thirdly, there was a reduction of the relationship between the NPE (predictor) and TI (DV) when the PC/ OC (mediator) was in the equation. Subsequently, the mediating effects were analysed using partial correlation.

The analysis revealed the correlation between PC and TI ($r = -.17$, $p = .000$) was significant when NPE was controlled. Similarly, the correlation between OC and TI ($r = -.22$, $p = .000$) was significant when NPE was controlled. Subsequently, when PC and OC were controlled in the relationship between NPE and TI, the correlation index was found to have reduced. However, the correlation between NPE and TI was still remained as significant despite controlling for PC ($r = -.21$, $p = .000$). Similarly, when OC was controlled, the correlations between NPE and TI was still remained as significant ($r = -.15$, $p = .000$). The relationship relating the NPE (predictor) and TI

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(DV) did not show zero when the mediator was in the equation. Henceforth, the results indicated that the relationship between NPE and TI was not influenced by PC and OC. Both, PC and OC were not significant mediators in the relationship of NPE and TI.

In conclusion, commitment towards profession and organisation has direct influence on the relationship between NPE and TI. In another word, the reinforcement of either PC or OC does not change the relationship between NPE and TI. Henceforth, the results failed to reject the null hypothesis and failed to support the proposed conceptual framework which envisaged that PC and OC mediated the relationship between NPE and TI.

Research Question 7 - Do EC contribute to TI among the Malaysian RNs?. In this section, answers for research question 7, "Do EC contribute to TI among the Malaysian RNs?" were presented. The hypothesis to address the research question was:

$H0_3$:   There is no significant relationship between EC and TI.

$H3$:   There is significant relationship between EC and TI.

Prior to analysis, EC were dichotomised. Responses for "never" and "sometimes per year" were re-coded to "0" as "No"; while the remaining responses "sometimes per month", "sometimes per week", and "almost every day" was re-coded to "1" as "Yes" (Hasselhorn et al., 2003). T-test was used to determine whether EC has any associations on TI and the results were presented in Table 4.45.

Table 4.45

Associations of Exit Choice on Turnover Intention (n = 820)

Exit Choice	Turnover Intention					
	n	Mean	*SD*	*t*	*p*	Effect size, *d*
Nursing qualification				-8.39	.000**	.59
- Yes	478	2.23	.39			
- No	342	1.99	.42			
Non-nursing qualification				-11.83	.000**	.96
- Yes	231	2.38	.32			
- No	589	2.03	.41			
Another country as nurses				-13.09	.000**	.93
- Yes	353	2.33	.35			
- No	467	1.98	.40			
Another country but not as nurses				-9.41	.000**	1.13
- Yes	108	2.46	.26			
- No	712	2.08	.41			
Another hospital as nurses				-14.49	.000**	1.04
- Yes	345	2.35	.33			
- No	475	1.97	.40			
Another organisation with non-nursing job				-11.06	.000**	.99
- Yes	193	2.40	.30			
- No	627	2.05	.41			
Business				-9.00	.000**	.67
- Yes	276	2.30	.37			
- No	544	2.04	.41			

*Significant at *p* < .05. **Significant at *p* < .001

The t-test analyses found that EC had significant and moderate to large effects on turnover intention. Participants who chose to pursue higher qualification be it nursing qualification (*t* [818] = -8.39, *p* = .000, *d* = .59) or non-nursing qualification (*t* [818] = -11.83, *p* = .000, *d* = .96), were found to have significant higher turnover intention. Furthermore, participants who chose to work in another country be it as nurses (*t* [818] = -13.09, *p* = .000, *d* = .93) or not as nurses (*t* [818] = -9.41, *p* = .000, *d* = 1.13) were found to significant higher turnover intention. Also, participants who

chose to work in another organisations be it as nurses (t [818] = -14.49, p = .000, d = 1.04) or not as nurses (t [818] = -11.06, p = .000, d = .99) were found to have significant higher turnover intention. Last but not least, participants who chose entrepreneurship (t [818] = -9.00, p = .000, d = .67) was also found to have significant higher turnover intention. Henceforth, the analysis results confirmed significant association between exit choice and turnover intention and thus, rejecting null hypothesis (p < .001). In conclusion, exit choice play significant role in influencing turnover intention. Participants' alternative job seeking behaviour such as advancing in higher qualification, working in another organisation or country, and starting own business have demonstrated significant contribution towards their turnover intention.

Research Question 8 - How does EC influence the relationship between NPE and TI among the Malaysian RNs?. In this section, answers for research question 8, "How does EC influence the relationship between NPE and TI among the Malaysian RNs?" were presented. The hypothesis to address the research question was:

H0$_4$: There is no significant change in the relationship between NPE and TI when mediated by EC.

H4: There is significant change in the relationship between NPE and TI when mediated by EC.

Partial correlations were used to perform the analysis. The DV of the analysis was TI while, NPE was the predictor. The mediators were *nursing*-EC and *non-nursing*-EC. Nonetheless, prior to the analysis, the assumptions for regression were estimated. Furthermore, hierarchical multiple regression analysis was conducted to determine the relationship of NPE, *nursing*-EC, and *non-nursing*-EC on TI.

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Associations of NPE, nursing-EC, and non-nursing-EC on TI. Firstly, the relationship of NPE, nursing-EC, and non-nursing-EC on TI was estimated using the hierarchical multiple regression. In the earlier analysis, monthly income and educational sponsorship bond were found to have significant associations with TI. Thus, both socio-demograhic variables were controlled in the analysis. In the analysis, monthly income and educational sponsorship bond were controlled in the analysis. Monthly income and educational sponsorship bond dummy variables were entered at Step 1 (Model 1) and subsequently, the three predictor variables (NPE, nursing-EC, and non-nursing-EC) were entered into the hierarchical multiple regression model using stepwise method at p value of less than .05.

Testing regression assumptions were conducted prior to the analysis. In terms of the ratio of subjects to IVs, the current analysis consisted of five IVs (NPE, *nursing-*EC, *non-nursing-*EC, monthly income, and educational sponsorship bond). Thus, the least required size for the study sample size (*n*) was (20 X 5) which yielded 100. The assumption for ratio of subjects to IVs was met because the total valid responses of the study were 820 which exceeded the minimum sample size requirement.

The normality of the data was shown in the normal P-P plot of regression standardised residuals (Figure 4.21). Furthermore, the scatter plot between standard residual and standard predicted values of DV revealed that the homoscedasticity and linearity assumptions were fulfilled as presented in Figure 4.22.

Normal P-P Plot of Regression Standardized Residual

Dependent Variable: NormSumITL
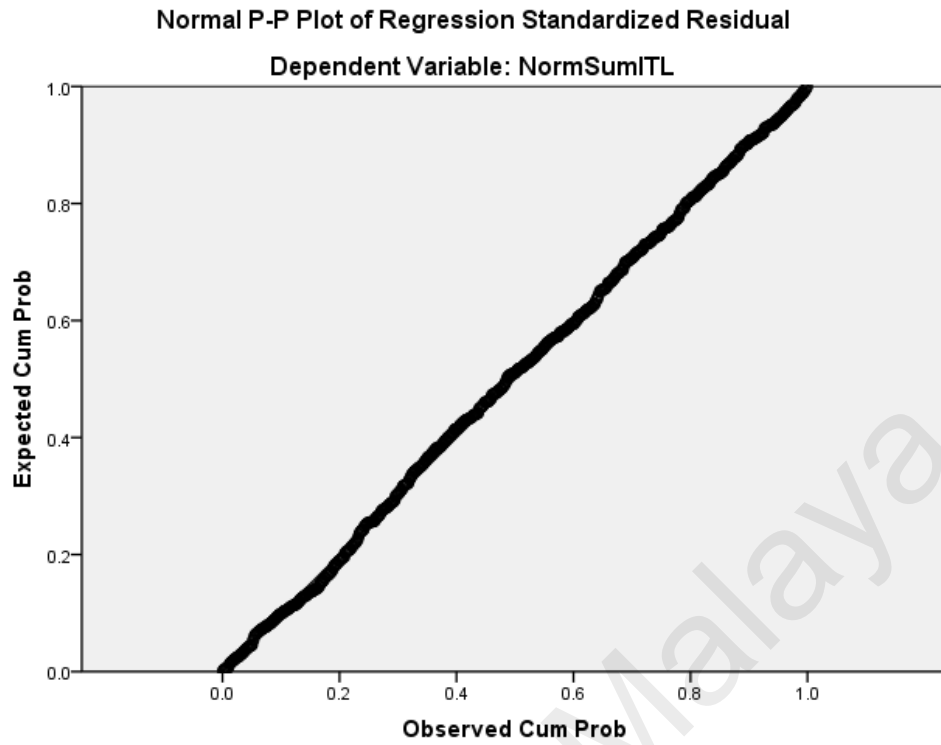
Figure 4.0.21. Normal P-P plot of for NPE, *nursing*-EC, *non-nursing*-EC, and TI
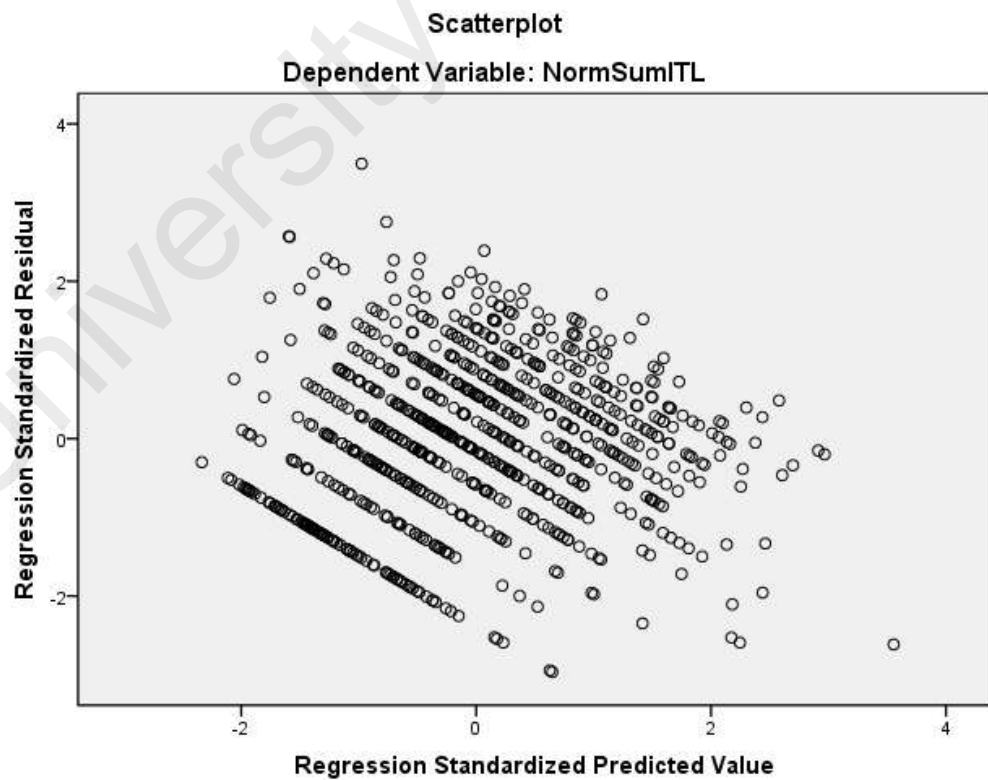

Scatterplot

Dependent Variable: NormSumITL

Figure 4.22. Scatter plot for NPE, *nursing*-EC, *non-nursing*-EC, and TI

In addition, the values of tolerance were larger than .1 ranged between .89 and .99 which indicated that the assumption of multicollinearity were met. The Durbin-Watson value was 2.02 which was within the ranged from 1.5 to 2.5 indicating independence of the variables. In terms of multivariate outliers, mahalanobis distance was used. There were five independent variables and thus, cases with a Mahalanobis distance greater than chi-square value of 20.515 based on table of critical values of chi square in Tabachnick and Fidell (2013, p. 952) were considered as multivariate outliers. The Mahalanobis distance range between 1.505 and 16.201. Thus, no multivariate outlier was detected in the dataset.

The relationship of NPE, *nursing*-EC, and *non-nursing*-EC on turnover intention was analysed using hierarchical multiple regression analysis. The analysis revealed that these variables explained for 3.8% (R2) of the variance in TI (F [2, 817] = 15.95, *p* = .000). Educational sponsorship bond and monthly income had significant regression coefficients in predicting turnover intention (*p* < .05). In step 2 (Model 2), *nursing*-EC was added and the model explained 28.9% (R2) of variance in turnover intention (F [1, 816] = 288.87, *p* = .000) which indicated that *nursing*-EC explained additional 25.1% of the variance in turnover intention. Furthermore, *nursing*-EC revealed significant coefficient (*t* = 16.99, *p* = .000). Subsequently, the variance of turnover intention in Model 3 (step 3) was 42.1% (R2) after the inclusion of *non-nursing*-EC. In Model 4 (step 4) the variance of turnover intention was 44.5% (R2) after the inclusion of NPE. Thus, *non-nursing*-EC and NPE explained additional 13.2%, and 2.4% of the variance in turnover intention respectively. In Model 4, both *non-nursing*-EC (*t* = 13.38, *p* = .000), and NPE (*t* = --6.03, *p* = .000) revealed significant regression coefficients. Thus, the hierarchical multiple regression analysis

revealed that NPE, *nursing*-EC, and *non-nursing*-EC significantly contributed to turnover intention. The analysis results were presented in Table 4.46.

Table 4.46

Hierarchical Regression Model of NPE and EC on TI

	R	R^2	R^2 change	B	SE	β	*p*	*t*
Model 1	.19	.038**	.035**					
- Income				.07	.03	.08*	.016	2.41
- EducS.				.14	.03	.17*	.000	5.02
Model 2	.54	.289**	.287**					
- Income				.08	.03	.09*	.002	3.08
- EducS.				.10	.03	.11**	.000	3.83
- *Nursing*-EC				.07	.00	.51**	.000	16.99
Model 3	.65	.421**	.418**					
- Income				.08	.02	.09*	.001	3.29
- EducS.				.06	.02	.07**	.000	2.74
- *Nursing*-EC				.06	.00	.40**	.000	14.06
- *Non-nursing*-EC				.05	.00	.38**	.000	13.59
Model 4	.67	.445*	.442**					
- Income				.08	.02	.09*	.001	3.41
- EducS.				.05	.02	.06**	.000	2.15
- *Nursing*-EC				.05	.00	.38**	.000	13.91
- *Non-nursing*-EC				.05	.00	.37**	.000	13.38
- NPE				-.01	.00	-.16**	.000	-6.03

Note. EducS. = Educational sponsorship, SE = standard error. Statistical significance at $p < .05$*; $p < .001$**

In conclusion, the results explained that NPE, *nursing*-EC, and *non-nursing*-EC have the ability to predict turnover intention. *Nursing*-EC was found to be contributed the most in the turnover intention relationships, and then followed by *non-nursing*-EC, and NPE. In other words, TI was influenced by working environment and EC be it nursing-related or vice versa. In the relationships, nursing related ECs such as pursuing nursing qualification, practising nursing in another organisation or

country was found to have the most contribution on turnover intention. Furthermore, non-nursing related ECs such as pursuing other discipline qualification, working other jobs in another organisation or country, and starting own business were found to have influenced on turnover intention. Nevertheless, working environment remained important contributor towards turnover intention. Thus, the results supported the proposed conceptual framework which envisaged that NPE, *nursing*-EC, *non-nursing*-EC, and turnover intention were associated and NPE, *nursing*-EC, *non-nursing*-EC were predictors of turnover intention.

Associations among NPE, nursing-EC, non-nursing-EC, and the different forms of TI. In view of the literature review pointed out the distinctive predictors for the different forms of turnover intention, additional analysis was conducted to examine whether there was any difference in the predictive values of NPE, *nursing*-EC, and *non-nursing*-EC on the different forms of turnover intention (i.e., intra-organisational, inter-organisational, country, and professional).

Associations of NPE, nursing-EC, and non-nursing-EC on intra-organisational TI. In the earlier analysis, monthly income, dependent responsibilities, and educational sponsorship bond were found to have significant associations with intra-organisational turnover intention ($p < .05$). Thus, these variables were included in the hierarchical multiple regression analysis. The variables were coded into dummy variables prior to the regression analysis. Socio-demographic variables which did not showed significant associations with intra-organisational turnover intention were excluded in the regression analysis.

Testing regression assumptions were conducted prior to the analysis. In terms of the ratio of subjects to IVs, the sample size must fulfil at least 20 times bigger than the number of predictors in the study. In the current analysis, the study consisted of

six IVs (NPE, *nursing*-EC, *non-nursing*-EC, monthly income, dependent responsibilities, and educational sponsorship bond). Thus, the least required size of a study sample (*n*) was (20 X 6) which yielded 120. The assumption for ratio of subjects to IVs was met because the total valid responses of the study were 820 which exceeded the minimum sample size requirement. Furthermore, the assumption on normal distribution was assessed through histogram and normal probability plot of the standardised residuals. The normal P-P plot of regression standardised residuals were shown in Figure 4.23. The plots were found to be closed to the line in the normal P-P plot which indicated normal distribution. Henceforth, the assumption of normality of the data was fulfilled. Hence, as shown in Figure 4.24, the scatter plot between standard residual and standard predicted values of DV revealed fulfilment of homoscedasticity and linearity assumptions.
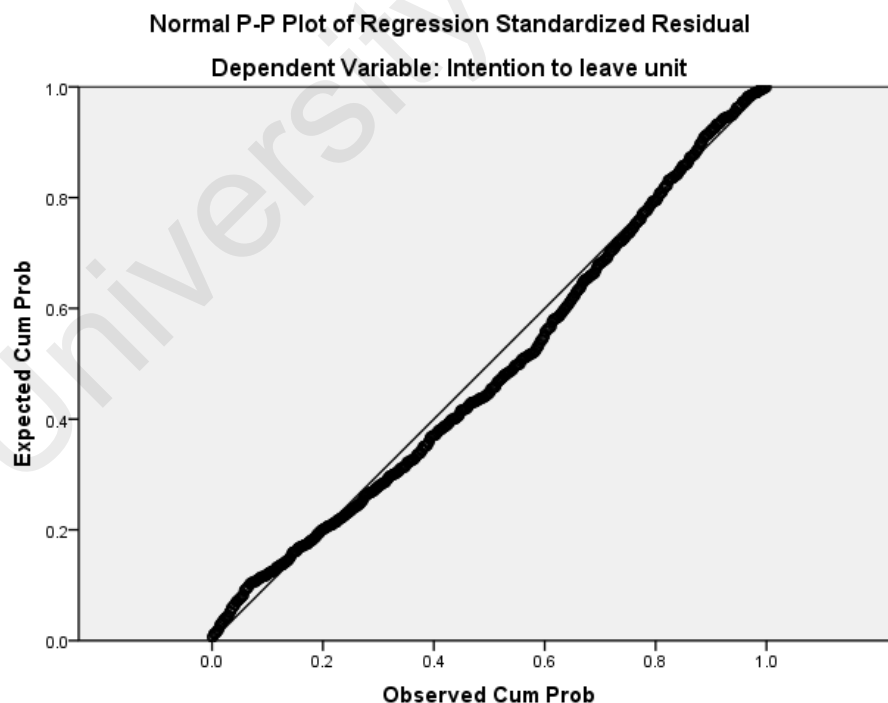

Figure 4.23. Normal P-P plot for NPE, *nursing*-EC, *non-nursing*-EC, and intra-organisation TI
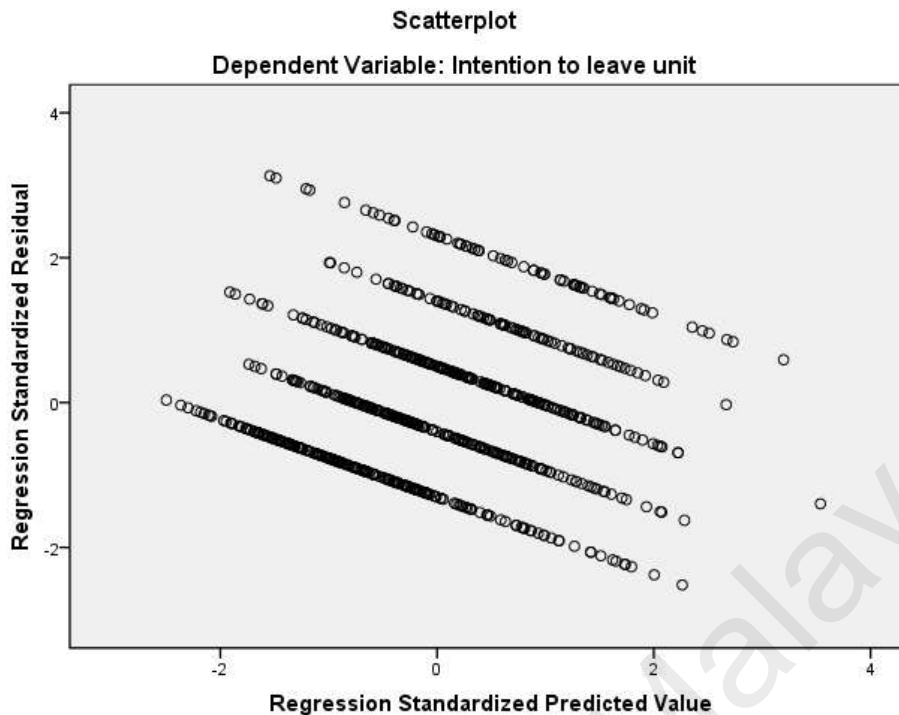
Figure 4.24. Scatter plot for NPE, *nursing*-EC, *non-nursing*-EC, and intra-organisational TI

In the analysis, the tolerance of variables was used to measure multicollinearity. The values of tolerance in this study were larger than .1 ranging from .89 to .99 which indicated that the assumption of multicollinearity has been fulfilled. Additionally, the Durbin-Watson value of the study was 1.82 which range between 1.5 and 2.5 and was deemed to be as independence. The multivariate outliers were detected through the use of mahalanobis distance. Mahalanobis distance was assessed as chi square with degree of freedom equate to the number of IVs (Tabachnick & Fidell, 2013). In the current analysis, there were six variables. Thus, cases with a Mahalanobis distance greater than chi-square value of 22.458 based on table of critical values of chi square in Tabachnick and Fidell (2013, p. 952) were considered as multivariate outliers. The range of Mahalanobis distance was between 2.017 and 17.417. Thus, no multivariate outliers were detected.

The ability of NPE, *nursing*-EC and *non-nursing*-EC to predict intra-organisational turnover intention was estimated using hierarchical multiple regression. Socio-demographic variables (i.e., average monthly income, dependent responsibilities, and educational sponsorship bond dummy variables) were controlled. The results were displayed in Table 4.47.

Table 4.47

Hierarchical Regression Model of NPE and EC on Intra-organisational TI

	R	R^2	R^2 change	B	SE	β	p	t
Model 1	.14	.020*	.017*					
- Dependent responsibilities				.25	.09	.10*	.008	2.67
- Income				.13	.09	.05	.164	1.39
- EducS.				.20	.09	.08*	.024	2.26
Model 2	.40	.162	.158**					
- Dependent responsibilities				.25	.09	.10*	.004	2.87
- Income				.15	.09	.05	.089	1.70
- EducS.				.09	.09	.08	.286	1.07
- *Nursing*-EC				.16	.01	.38**	.000	11.76
Model 3	.45	.205	.200**					
- Dependent responsibilities				.21	.08	.08*	.013	2.50
- Income				.15	.09	.06	.071	1.81
- EducS.				.03	.08	.01	.723	.36
- *Nursing*-EC				.14	.01	.32**	.000	9.63
- *Non-nursing*-EC				.08	.01	.22**	.000	6.58
Model 4	.47	.224	.219**					
- Dependent responsibilities				.21	.08	.08*	.010	
- Income				.15	.08	.06	.066	
- EducS.				.01	.08	-.00	.905	
- *Nursing*-EC				.13	.01	.31**	.000	
- *Non-nursing*-EC				.08	.01	.21**	.000	
- NPE				-.02	.00	-.14**	.000	

Note. EducS. = Educational sponsorship, SE = standard error. Statistical significance at $p < .05$*; $p < .001$**

Firstly, socio-demographic dummy variables were entered in Model 1. The analysis revealed that the socio-demographic variables explained for 2.0% (R2) of the variance in intra-organisational turnover intention (F [3, 816] = 5.62, p = .001). Dependent responsibilities (t = 2.67, p = .008) and educational sponsorship bond (t = 2.26, p = .024) had significant regression coefficients in predicting intra-organisational turnover intention. However, monthly income was revealed insignificant regression coefficient (p > .05). In Model 2 (step 2), *nursing*-EC was added and the model explained 16.2% (R2) of variance in intra-organisational turnover intention (F [4, 815] = 52.28, p = .000) which indicated that *nursing*-EC explained additional 14.2% of the variance in intra-organisational turnover intention. Furthermore, *nursing*-EC revealed significant coefficient (t = 11.76, p = .000).

Subsequently, in Model 3 (step 3), the variance in intra-organisational turnover intention were 20.5% (R2) after the inclusion of *non-nursing*-EC and explained additional 4.3% of the variance in intra-organisational turnover intention. In Model 3, dependent responsibilities (t = 2.50, p = .013), *nursing*-EC (t = 9.63, p = .004), and *non-nursing*-EC (t = 6.58, p = .002) revealed significant regression coefficients. Nonetheless, monthly income and educational sponsorship bond revealed insignificant regression coefficients (p > .05). Furthermore, in Model 4, the variance in intra-organisational turnover intention was 22.4% (R2) after the inclusion of NPE and explained additional 1.9% of the variance in intra-organisational turnover intention. Thus, the hierarchical multiple regression analysis revealed that nursing exit choice (regardless *nursing*-EC and *non-nursing*-EC significantly) and NPE contributed to intra-organisational turnover intention. In conclusion, the results explained that *nursing*-EC contributed the most in intra-organisational turnover

intention in the relationship of *nursing*-EC, *non-nursing*-EC, and NPE on intra-organisational turnover intention.

Associations of NPE, nursing-EC, and non-nursing-EC on inter-organisational TI. In the earlier analysis, educational sponsorship bond was the only socio-demographic variable found to have significant associations with inter-organisational turnover intention ($p < .05$). Thus, the variable was included in the hierarchical multiple regression analysis. The variables were coded into dummy variables prior to the regression analysis. Socio-demographic variables which did not showed significant associations with inter-organisational turnover intention were excluded in the regression analysis.

Testing regression assumptions were conducted prior to the analysis. In terms of the ratio of subjects to IVs, the sample size must fulfil at least 20 times bigger than the number of predictors in the study. In the current analysis, the study consisted of four IVs (NPE, *nursing*-EC, *non-nursing*-EC, and educational sponsorship bond). Thus, the least required size of a study sample (*n*) was (20 X 4) which yielded 80. The assumption for ratio of subjects to IVs was met because the total valid responses of the study were 820 which exceeded the minimum sample size requirement. Furthermore, the assumption on normal distribution was assessed through normal P-P plot of the standardised residuals. The normal P-P plot of regression standardised residuals was shown in Figure 4.25. The plots were found to be closed to the line in the normal P-P plot which indicated normal distribution. Henceforth, the assumption of normality of the data was fulfilled. Hence, as shown in Figure 4.26, the scatter plot between standard residual and standard predicted values of DV revealed fulfilment of homoscedasticity and linearity assumptions.
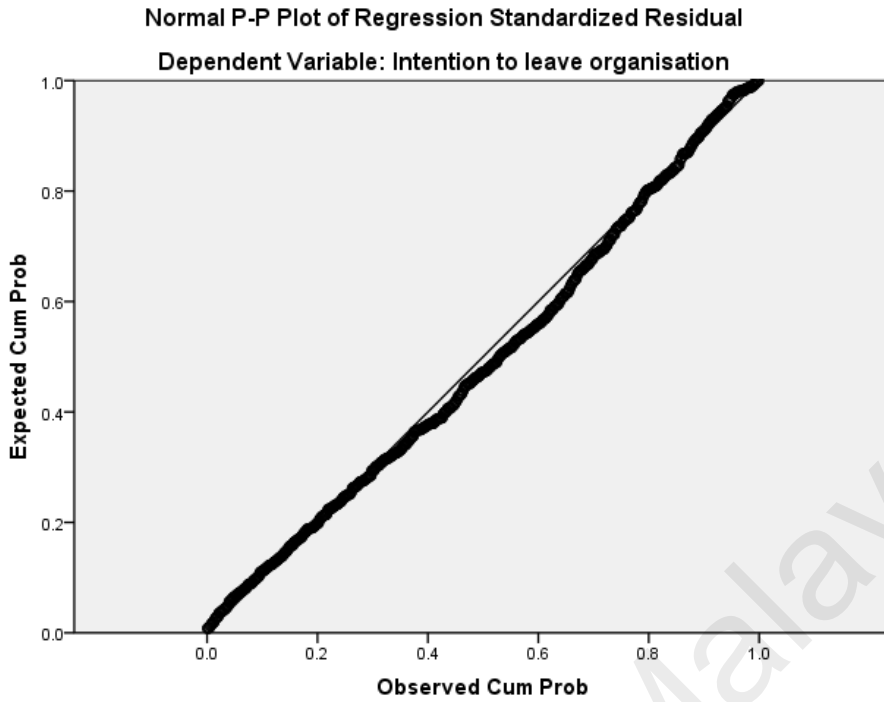
Figure 4.25. Normal P-P plot for NPE, *nursing*-EC, *non-nursing*-EC, and inter-organisation TI
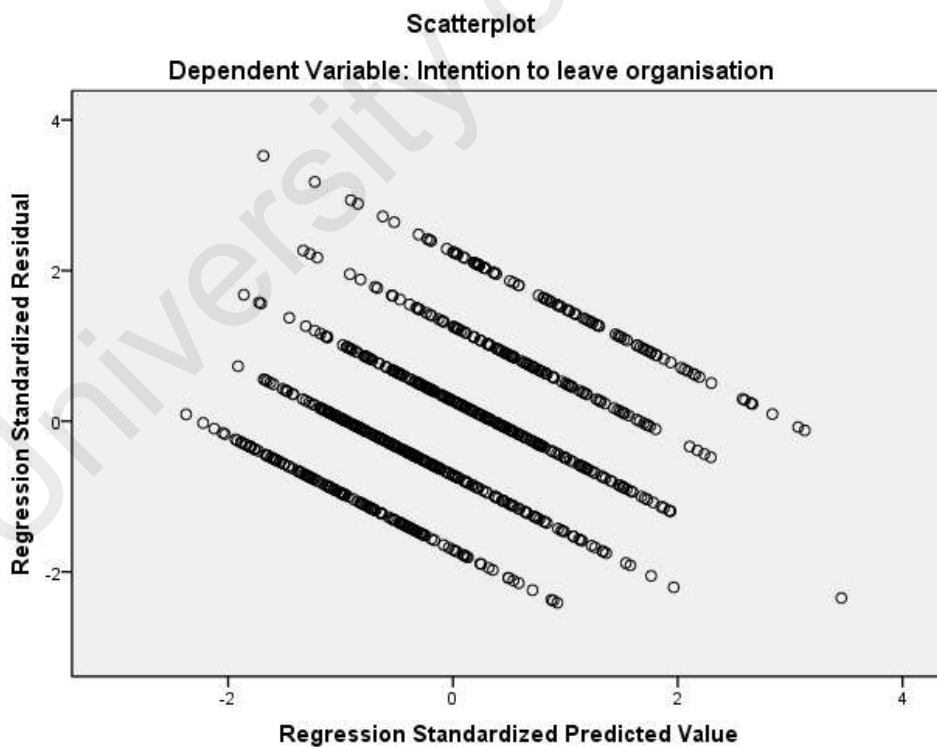

Figure 4.26. Scatter plot for NPE, *nursing*-EC, *non-nursing*-EC, and inter-organisational TI

In the analysis, the tolerance of variables was used to measure multicollinearity. The values of tolerance in this study were larger than .1 ranging from .89 to 1.00 which indicated that the assumption of multicollinearity has been fulfilled. Additionally, the Durbin-Watson value of the study was 2.02 which range between 1.5 and 2.5 and was deemed to be as independence. The multivariate outliers were detected through the use of mahalanobis distance. Mahalanobis distance was assessed as chi square with degree of freedom equate to the number of IVs (Tabachnick & Fidell, 2013). In the current analysis, there were four IVs variables. Thus, cases with a Mahalanobis distance greater than chi-square value of 18.467 based on table of critical values of chi square in Tabachnick and Fidell (2013, p. 952) were considered as multivariate outliers. The range of Mahalanobis distance was between .992 and 14.295. Thus, no multivariate outliers were detected.

The ability of NPE, *nursing*-EC and *non-nursing*-EC to predict inter-organisational turnover intention was estimated using hierarchical multiple regression. Socio-demographic variable (i.e., educational sponsorship bond dummy variable) was controlled. The results were displayed in Table 4.48.

Table 4.48

Hierarchical Regression Model of NPE and EC on Inter-organisational TI

	R	R^2	R^2 change	B	SE	β	p	t
Model 1	.18	.031**	.030**					
- EducS.				.45	.09	.18**	.000	5.11
Model 2	.50	.252**	.250**					
- EducS.				.31	.08	.12**	.000	3.99
- *Nursing*-EC				.20	.01	.47**	.000	15.52
Model 3	.57	.324**	.322**					
- EducS.				.23	.07	.09**	.000	3.15
- *Nursing*-EC				.17	.01	.39**	.000	12.91
- *Non-nursing-* EC				.11	.01	.08**	.000	9.36
Model 4	.61	.365**	.362**					
- EducS.				.18	.07	.07*	.014	2.47
- *Nursing*-EC				.16	.01	.38**	.000	12.77
- *Non-nursing-* EC				.10	.01	.27**	.000	9.08
- NPE				-.03	.00	-.21**	.000	-7.28

Note. EducS. = Educational sponsorship, SE = standard error. Statistical significance

at $p < .05$*; $p < .001$**

Firstly, socio-demographic dummy variable was entered in Model 1. The analysis revealed that educational sponsorship bond explained for 3.1% (R2) of the variance in inter-organisational turnover intention (F [1, 818] = 26.15, p = .000). Educational sponsorship bond (t = 5.11, p = .000) had significant regression coefficients in predicting inter-organisational turnover intention. In Model 2 (step 2), *nursing*-EC was added and the model explained 25.2% (R2) of variance in inter-organisational turnover intention (F [2, 817] = 137.377, p = .000) which indicated that *nursing*-EC explained additional 22.1% of the variance in inter-organisational turnover intention. Furthermore, *nursing*-EC revealed significant coefficient (t = 15.52, p = .000).

Subsequently, in Model 3 (step 3), the variance in inter-organisational turnover intention were 32.4% (R2) after the inclusion of *non-nursing*-EC and explained additional 7.2% of the variance in inter-organisational turnover intention. In Model 3, educational sponsorship bond ($t = 3.15$, $p = .000$), *nursing*-EC ($t = 12.91$, $p = .000$), and *non-nursing*-EC ($t = 9.36$, $p = .000$) revealed significant regression coefficients. Furthermore, in Model 4, the variance in inter-organisational turnover intention was 36.5% (R2) after the inclusion of NPE and explained additional 4.1% of the variance in inter-organisational turnover intention. In Model 4, educational sponsorship bond ($t = 2.47$, $p = .014$), *nursing*-EC ($t = 12.77$, $p = .000$), *non-nursing*-EC ($t = 9.08$, $p = .000$), and NPE ($t = -7.28$, $p = .000$) revealed significant regression coefficients. Thus, the hierarchical multiple regression analysis revealed that nursing exit choice (regardless *nursing*-EC and *non-nursing*-EC significantly) and NPE contributed to inter-organisational turnover intention. In conclusion, the results explained that *nursing*-EC contributed the most in inter-organisational turnover intention in the relationship of *nursing*-EC, *non-nursing*-EC, and NPE on inter-organisational turnover intention.

Associations of NPE, nursing-EC, and non-nursing-EC on country TI. In the earlier analysis, age, nursing experience, marital status, and educational sponsorship bond were the socio-demographic variables found to have significant associations with country turnover intention ($p < .05$). Nonetheless, in view of multicollinearity between age and nursing experience, both variables were excluded from analysis. Thus, for the analysis, only marital status, and educational sponsorship bond variables were included in the hierarchical multiple regression analysis. The variables were coded into dummy variables prior to the regression analysis. Socio-demographic

variables which did not show significant associations with country turnover intention were excluded in the regression analysis.

Testing regression assumptions were conducted prior to the analysis. In terms of the ratio of subjects to IVs, the sample size must fulfil at least 20 times bigger than the number of predictors in the study. In the current analysis, the study consisted of five IVs (NPE, *nursing*-EC, *non-nursing*-EC, marital status, and educational sponsorship bond). Thus, the least required size of a study sample (*n*) was (20 X 5) which yielded 100. The assumption for ratio of subjects to IVs was met because the total valid responses of the study were 820 which exceeded the minimum sample size requirement. Furthermore, the assumption on normal distribution was assessed through normal P-P plot of the standardised residuals. The normal P-P plot of regression standardised residuals was shown in Figure 4.27. The plots were found to be closed to the line in the normal P-P plot which indicated normal distribution. Henceforth, the assumption of normality of the data was fulfilled. Hence, as shown in Figure 4.28, the scatter plot between standard residual and standard predicted values of DV revealed fulfilment of homoscedasticity and linearity assumptions.
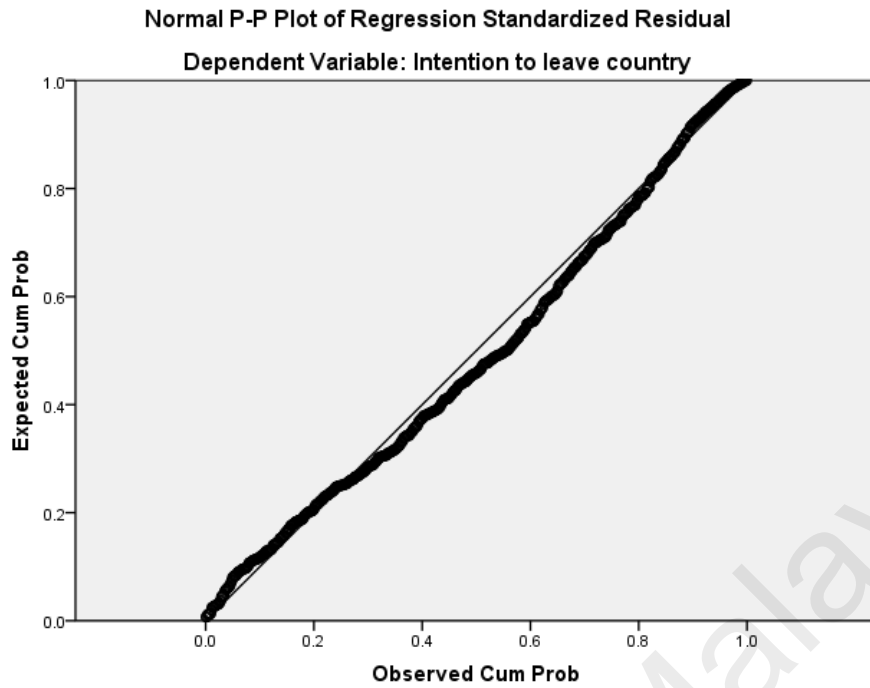
Figure 4.27. Normal P-P plot for NPE, *nursing*-EC, *non-nursing*-EC, and country TI
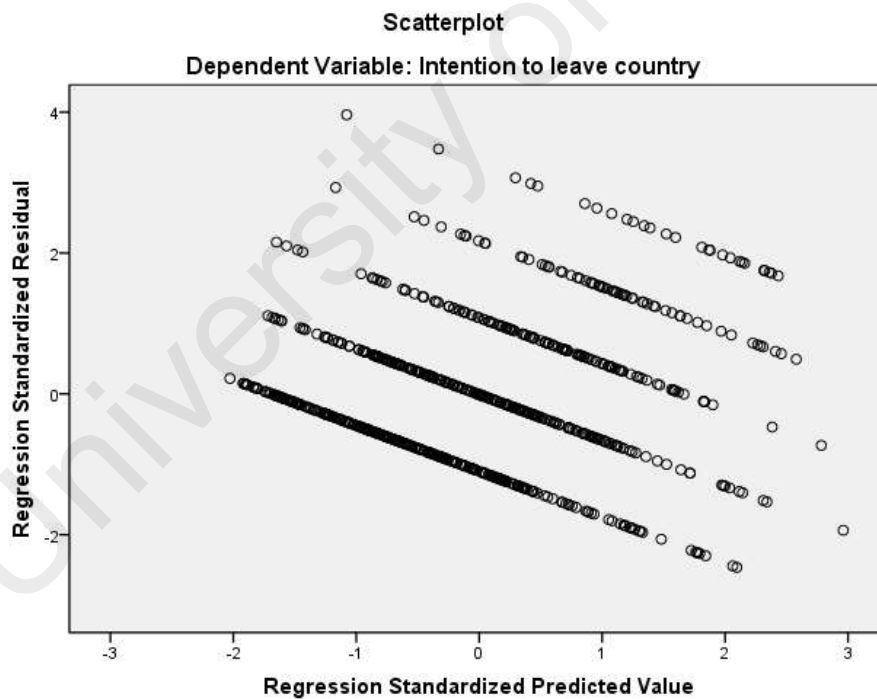

Figure 4.28. Scatter plot for NPE, *nursing*-EC, *non-nursing*-EC, and country TI

In the analysis, the tolerance of variables was used to measure multicollinearity. The values of tolerance in this study were larger than .1 ranging from .88 to .98 which indicated that the assumption of multicollinearity has been fulfilled. Additionally, the Durbin-Watson value of the study was 1.97 which range between 1.5 and 2.5 and was deemed to be as independence. The multivariate outliers were detected through the use of mahalanobis distance. In the current analysis, there were five IVs. Thus, cases with a Mahalanobis distance greater than chi-square value of 20.515 based on table of critical values of chi square in Tabachnick and Fidell (2013, p. 952) were considered as multivariate outliers. The range of Mahalanobis distance was between 1.514 and 14.645. Thus, no multivariate outliers were detected.

The ability of NPE, *nursing*-EC and *non-nursing*-EC to predict country turnover intention was estimated using hierarchical multiple regression. Socio-demographic variables (i.e., marital status and educational sponsorship bond dummy variables) were controlled. The results were displayed in Table 4.49.

Table 4.49

Hierarchical Regression Model of NPE and EC on Country TI

	R	R^2	R^2 change	B	SE	β	p	t
Model 1	.19	.037[**]	.035[**]					
- Marital status				.33	.08	.15[**]	.000	4.33
- EducS.				.22	.08	.10[*]	.003	2.94
Model 2	.54	.287	.284[**]					
- Marital status				.15	.07	.07[*]	.030	2.17
- EducS.				.12	.07	.05	.070	1.81
- *Nursing*-EC				.19	.01	.51[**]	.000	16.92
Model 3	.54	.295	.292[*]					
- Marital status				.15	.07	.07[*]	.029	2.18
- EducS.				.10	.07	.04	.141	1.47
- *Nursing*-EC				.18	.01	.48[**]	.000	15.40

	R	R^2	R^2 change	B	SE	β	p	t
- *Non-nursing-EC*				.03	.01	.10*	.002	3.14
Model 4	.55	.299	.295*					
- Marital status				.14	.07	.06*	.035	2.11
- EducS.				.08	.07	.04	.205	1.27
- *Nursing*-EC				.18	.01	.48**	.000	15.27
- *Non-nursing-EC*				.03	.01	.09*	.003	2.99
- NPE				-.00	.00	-.06*	.048	-1.98

Note. EducS. = Educational sponsorship, SE = standard error. Statistical significance at $p < .05^*$; $p < .001^{**}$

Firstly, socio-demographic dummy variables were entered in Model 1. The analysis revealed that marital status and educational sponsorship bond explained for 3.7% (R2) of the variance in country turnover intention (F [2, 817] = 15.65, p = .000). Marital status (t = 4.33, p = .000) and educational sponsorship bond (t = 2.94, p = .003) had significant regression coefficients in predicting country turnover intention. In Model 2 (step 2), *nursing*-EC was added and the model explained 28.7% (R2) of variance in country turnover intention (F [3, 816] = 109.45, p = .000) which indicated that *nursing*-EC explained additional 25%% of the variance in country turnover intention. Furthermore, marital status (t = 2.17, p = .030) and *nursing*-EC (t = 16.92, p = .000) revealed significant coefficient. Nonetheless, educational sponsorship bond revealed insignificant coefficient (p > .05).

Subsequently, in Model 3 (step 3), the variance in country turnover intention were 29.9% (R2) after the inclusion of *non-nursing*-EC and explained additional .8% of the variance in country turnover intention. In Model 3, marital status (t = 2.18, p = .029), *nursing*-EC (t = 15.40, p = .000), and *non-nursing*-EC (t = 3.14, p = .002) revealed significant regression coefficients. In Model 4, the variance in country turnover intention was 29.5% (R2) after the inclusion of NPE and explained additional

.4% of the variance in country turnover intention. Furthermore, marital status ($t =$ 2.11, $p = .035$), *nursing*-EC ($t = 15.27$, $p = .000$), *non-nursing*-EC ($t = 2.99$, $p = .003$), and NPE ($t = -1.98$, $p = .048$) revealed significant regression coefficients. Thus, the hierarchical multiple regression analysis revealed that nursing exit choice (regardless *nursing*-EC and *non-nursing*-EC significantly) and NPE contributed to country turnover intention. In conclusion, similarly with the findings obtained for intra-organisational and inter-organisational turnover intention, the results explained that *nursing*-EC contributed the most in country turnover intention in the relationship of *nursing*-EC, *non-nursing*-EC, and NPE on country turnover intention.

Associations of NPE, nursing-EC, and non-nursing-EC on professional TI. In the earlier analysis, educational sponsorship bond and working areas were the socio-demographic variables found to have significant associations with professional turnover intention ($p < .05$). Thus, the variables were included in the hierarchical multiple regression analysis. Socio-demographic variables which did not showed significant associations with professional turnover intention were excluded in the regression analysis.

Testing regression assumptions were conducted prior to the analysis. In terms of the ratio of subjects to IVs, the sample size must fulfil at least 20 times bigger than the number of predictors in the study. In the current analysis, the study consisted of five IVs (NPE, *nursing*-EC, *non-nursing*-EC, educational sponsorship bond, and working areas). Thus, the least required size of a study sample (n) was (20 X 5) which yielded 100. The assumption for ratio of subjects to IVs was met because the total valid responses of the study were 820 which exceeded the minimum sample size requirement. Furthermore, the assumption on normal distribution was assessed through normal P-P plot of the standardised residuals. The normal P-P plot of

regression standardised residuals was shown in Figure 4.28. The plots were found to be slightly skewed in the normal P-P plot which indicated skewed distribution. On the other hand, as shown in Figure 4.29, the scatter plot between standard residual and standard predicted values of DV revealed fulfilment of homoscedasticity and linearity assumptions.
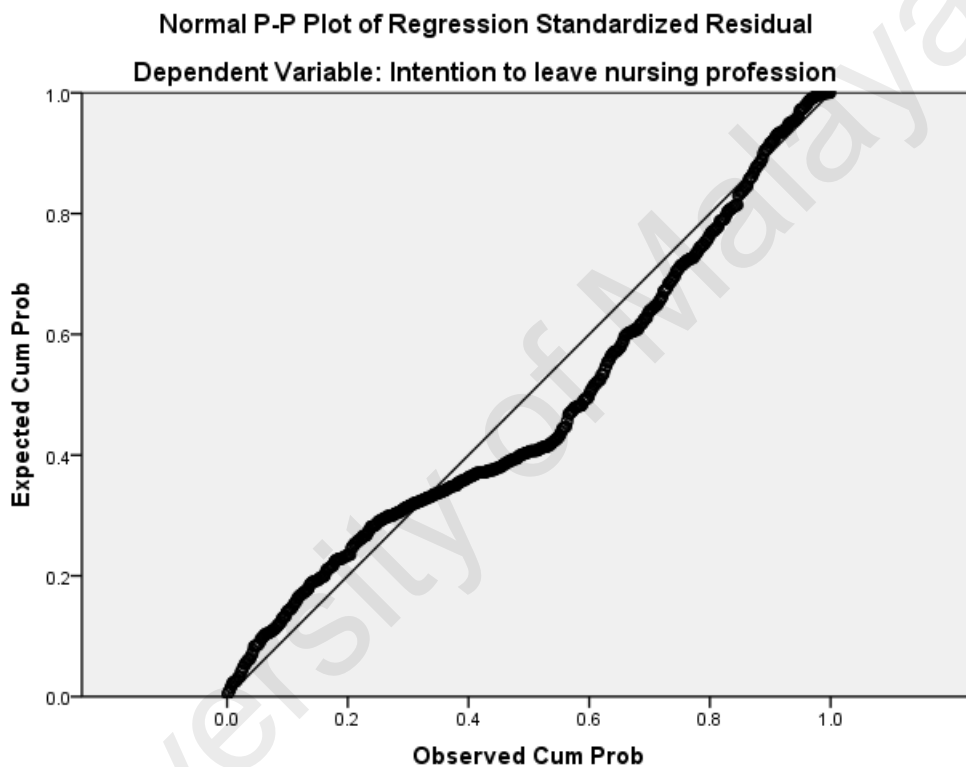

Figure 4.29. Normal P-P plot for NPE, *nursing*-EC, *non-nursing*-EC, and professional TI
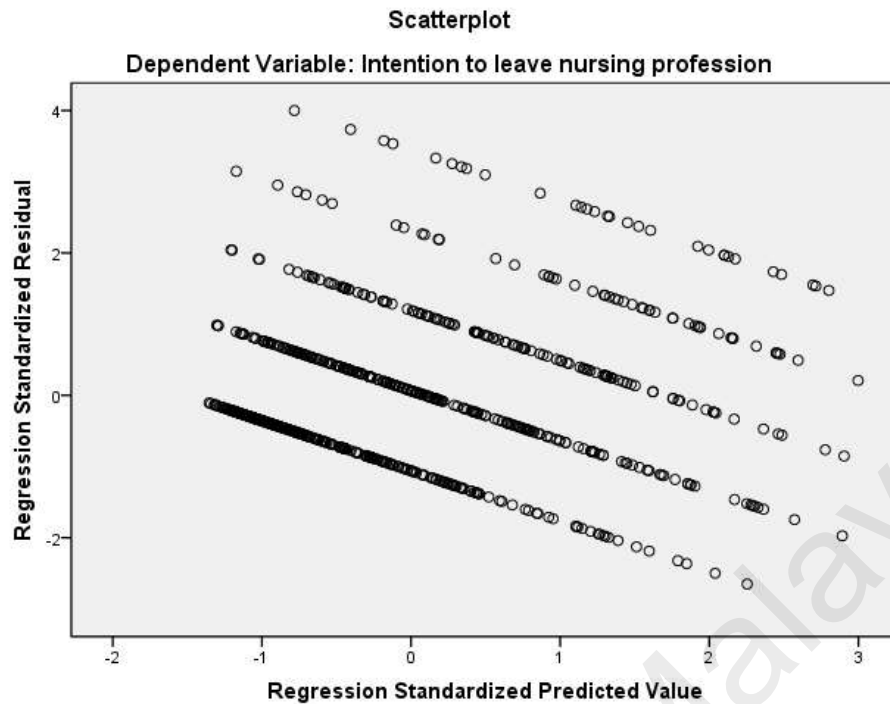
Figure 4.30. Scatter plot for NPE, *nursing*-EC, *non-nursing*-EC, and professional TI

In the analysis, the tolerance of variables was used to measure multicollinearity. The values of tolerance in this study were larger than .1 ranging from .98 to .99 which indicated that the assumption of multicollinearity has been fulfilled. Additionally, the Durbin-Watson value of the study was 1.89 which range between 1.5 and 2.5 and was deemed to be as independence. The multivariate outliers were detected through the use of mahalanobis distance. In the current analysis, there were five IVs. Thus, cases with a Mahalanobis distance greater than chi-square value of 20.515 based on table of critical values of chi-square in Tabachnick and Fidell (2013, p. 952) were considered as multivariate outliers. The range of Mahalanobis distance was between 1.883 and 14.847. Thus, no multivariate outliers were detected.

The ability of NPE, *nursing*-EC and *non-nursing*-EC to predict professional turnover intention was estimated using hierarchical multiple regression. Socio-

demographic variables (i.e., educational sponsorship bond and working areas dummy variables) were controlled. The results were displayed in Table 4.50.

Table 4.50

Hierarchical Regression Model of NPE and EC on Professional TI

	R	R^2	R^2 change	B	SE	β	p	t
Model 1	.12	.014*	.011*					
- Working areas				.16	.08	.07*	.035	2.12
- EducS.				.19	.08	.09*	.012	2.53
Model 2	.57	.329	.327**					
- Working areas				.08	.06	.04	.219	1.23
- EducS.				.02	.06	.01	.704	.38
- *Non-nursing-EC*				.19	.01	.57**	.000	19.59
Model 3	.58	.333	.330*					
- Working areas				.07	.06	.03	.236	1.19
- EducS.				.01	.06	.00	.888	.14
- *Non-nursing-EC*				.18	.01	.56**	.000	19.33
- NPE				-.01	.00	-.06*	.030	-2.18

Note. EducS. = Educational sponsorship, SE = standard error. Statistical significance at $p < .05^*$; $p < .001^{**}$

Firstly, socio-demographic dummy variables were entered in Model 1. The analysis revealed that working areas and educational sponsorship bond explained for 1.4% (R2) of the variance in professional turnover intention (F [2, 817] = 5.65, p = .004). Working areas ($t = 2.12$, $p = .035$) and educational sponsorship bond ($t = 2.53$, $p = .012$) had significant regression coefficients in predicting professional turnover intention. In Model 2 (step 2), *non-nursing*-EC was added and the model explained 32.7% (R2) of variance in professional turnover intention (F [3, 816] = 105.47, p = .000) which indicated that *non-nursing*-EC explained additional 31.6% of the variance in professional turnover intention. Furthermore, *non-nursing*-EC revealed significant

coefficient (t = 19.59, p = .000). Nonetheless, working areas and educational sponsorship bond revealed insignificant coefficient (p > .05).

Subsequently, in Model 3 (step 3), the variance in professional turnover intention were 33.3% (R2) after the inclusion of NPE and explained additional .6% of the variance in professional turnover intention. In Model 3, *non-nursing*-EC (t = 19.33, p = .000), and NPE (t = -2.18, p = .030) revealed significant regression coefficients. Nonetheless, *nursing*-EC revealed insignificant regression coefficients (p > .05). Thus, the hierarchical multiple regression analysis revealed that *non-nursing*-EC and NPE significantly contributed to professional turnover intention. However, *nursing*-EC was not significantly contributed to professional turnover intention. In conclusion, the results explained that *non-nursing*-EC and NPE have the ability to predict professional turnover intention. The subsequent section would present the findings pertaining to the role of exit choice in influencing the relationship between NPE and overall turnover intention.

Regression coefficients among variables and results of partial correlations. In the current study, the DV was TI while, NPE was the predictor. The mediators were *nursing*-EC and *non-nursing*-EC. In order to confirm *nursing*-EC and/ or *non-nursing*-EC as mediator(s), firstly, the analysis needed to testify that NPE (predictor) had significant relationships with TI (DV) and *nursing*-EC (mediator) as well as *non-nursing*-EC (mediator). The regression analysis was run to examine these assumptions and the results were displayed in Table 4.51.

Table 4.51

Regression Coefficients among NPE, TI, Nursing-EC, and Non-nursing-EC

Paths	R	R^2	*F*	*p*	*B*	β	*t*	*p*
A: NPE → TI	.26	.07	55.28	.000**	-.02	-.26	-7.44	.000**
B: NPE → *nursing* EC	.10	.01	8.59	.003*	-.32	-.10	-.293	.003*
C: NPE → *non-nursing* EC	.12	.01	11.42	.001*	-.32	-.12	-3.38	.001*
D: *Nursing*-EC → TI	.52	.27	289.30	.000**	.11	.52	17.01	.000**
E: *Non-nursing*-EC → TI	.51	.26	285.16	.000**	.09	.51	16.89	.000**

Statistical significance: $p < .05$*; $p < .001$**

The analysis revealed that NPE explained for 7% of the variation of TI (F [1, 796] = 55.28, *p* = .000), 1% *nursing*-EC (F [1, 796] = 8.59, *p* = .003), and 1% *non-nursing*-EC (F [1, 796] = 11.42, *p* = .001). Furthermore, *nursing*-EC explained for 27% of TI variance (F [1, 796] = 289.30, *p* = .000), and *non-nursing*-EC explained for 26% of TI variance (F [1, 796] = 285.16, *p* = .000). Both, *nursing*-EC and *non-nursing*-EC were significant predictors for TI. Thus, the results indicated that NPE had significant relationships with TI, *nursing*-EC, and *non-nursing*-EC. In addition, *nursing*-EC and *non-nursing*-EC were predictors for TI. Henceforth, the first criterion for testing mediating effect was fulfilled.

Secondly, *nursing*-EC (mediator) and *non-nursing*-EC (mediator) had to predict TI (DV) when NPE (predictor) was controlled. Thirdly, there was a reduction of the relationship between the NPE (predictor) and TI (DV) when the *nursing*-EC /

non-nursing-EC (mediator) was in the equation. Henceforth, the mediating effects were analysed using partial correlation.

The analysis revealed the correlation between *nursing*-EC and TI ($r = .51$, $p = .000$) was significant when NPE was controlled. Similarly, the correlation between *non-nursing*-EC and TI ($r = .50$, $p = .000$) was significant when NPE was controlled. Subsequently, when *nursing*-EC and *non-nursing*-EC was controlled in the relationship between NPE and TI, the correlation index was found to have reduced. However, the correlation between NPE and TI was still remained as significant despite controlling for *nursing*-EC ($r = -.24$, $p = .000$). Similarly, when *non-nursing*-EC was controlled, the correlations between NPE and TI was still remained as significant ($r = -.23$, $p = .000$). The relationship relating the NPE (predictor) and TI (DV) did not show zero when the mediator was in the equation. Henceforth, the results indicated that the relationship between NPE and TI was not influenced by *nursing*-EC and *non-nursing*-EC. Both, *nursing*-EC and *non-nursing*-EC were not significant mediators in the relationship of NPE and TI. Henceforth, the analysis results failed to reject the null hypothesis of the study.

In conclusion, ECs be it nursing related or vice versa have direct influence on the relationship between NPE and TI. In another word, the reinforcement of either nursing related or non-nursing related EC does not change the relationship between working environment and TI. Henceforth, the results failed to support the proposed conceptual framework which envisaged that *nursing*-EC and *non-nursing*-EC mediated the relationship of NPE and TI.

Summary

The findings of the study revealed that professional turnover intention among the Malaysian private hospital nurses were relatively low, and non-nursing related tasks were in general, not their preferred exit choices. This was a positive result because it indicated that nurses were still very much devoted towards their profession. However, organisational turnover intention was found to be relatively higher in which, majority of the nurses had indicated their exit choices such as pursuing advanced nursing qualification, and practicing nursing either in another country or/ and organisation. Henceforth, these results had somehow supported the study findings on nurses' commitment in which professional commitment was found to be higher than organisational commitment. Furthermore, the working environment of the Malaysian private hospitals were found to be favourable particularly in the aspects of collegial physician-nurse relationship, constructive managerial and leadership skills among the unit/ ward nurse supervisors, and support in the delivery of quality patient care. However, inadequate of nurse staffing and lack of nurses' autonomy were found to be hindrances towards sustaining the favourable working environment.

The findings suggested that turnover intention was influenced by exit choice, NPE, professional commitment, and organisational commitment. *Nursing*-EC and organisational commitment contributed the most towards turnover intention. Furthermore, exit choice and commitment (i.e., professional and organisational commitments) did not mediate the relationship between NPE and turnover intention. The next chapter discussed on the research findings, implications, recommendations, and conclusion.

CHAPTER 5

DISCUSSION, IMPLICATIONS AND CONCLUSION

Introduction

The research and its findings were summarized in the first sections of the chapter. Subsequently, the findings of the study were discussed, and followed by elaborations on the study implications, recommendations, and limitations.

Research Summary

The study aimed to determine Peninsular Malaysian private hospital nurses' turnover intention, exit choices (*nursing*-EC and *non-nursing*-EC), perceptions towards their nursing practice environment, professional, and organisational commitment. A conceptual framework which incorporated the six variables was developed to guide the study. The linkages of the variables were supported by previous research findings and eight research questions were constructed for this study as follows:

1. What are the characteristics of nursing practice environment (NPE) as perceived by the Malaysian RNs?

2. What is the estimated degree of professional commitment (PC) and organisational commitment (OC) among the Malaysian RNs?

3. What is the estimated degree and proportion of turnover intention (TI) among the Malaysian RNs?

4. What is the proportion of exit choice (EC) in terms of organisational, education, country and entrepreneurship among the Malaysian RNs?

5. Do NPE, PC and OC predict TI when controlling the socio-demographic variables?

6. How do PC and OC influence the relationship between NPE and TI among the Malaysian RNs?

7. Do EC contribute to TI among the Malaysian RNs?

8. How does EC influence the relationship between NPE and TI among the Malaysian RNs?

Five instruments were used for data collection and analysis: TIQ, ECQ, PES-NWI, PCS, and OCS. The results of the pilot study testified the instruments' validity and reliability. The study was a cross-sectional inferential survey study which adopted the objectivism epistemology stance and quantitative research methodology. There were two stages of sampling in the study where, the first stage was for hospitals' sampling through simple random sampling. The second stage was for nurses' sampling through convenient sampling. Ethical approvals from institutional research ethics committees were obtained. Data collection commenced once the permission granted from the respective private hospitals. A total of 1290 questionnaires were administered and 820 responses (response rate 64%) from four private hospitals were deemed valid for analysis. The sample size met the adequacy and assumptions of the statistical analysis methods used in the study.

SPSS version 18.0 was used for data entry and analysis. Two people have proofread almost half of the original data against the computerized data entered in the SPSS before data analysis. Tests for normality and assumptions for regression analysis performed and the data revealed acceptable normality, linearity, and homoscedasticity. Issues pertaining to multicollinearity and multivariate outliers were addressed accordingly prior to analysis. Descriptive statistics such as frequency,

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percentage, mean, and standard deviation were used to answer research questions pertaining to the characteristics of nursing practice environment, turnover intention, exit choice, professional, and organisational commitment. The relationships among the variables: turnover intention, the different forms of turnover intention, NPE, professional commitment, organisational commitment, *nursing*-EC, and *non-nursing*-EC were ascertained through inferential statistics such as hierarchical multiple regressions and t-test. Furthermore, partial correlations were used to determine the mediator effects of professional commitment, organisational commitment, *nursing*-EC, and *non-nursing*-EC on the relationship between NPE and turnover intention.

Research Findings Summary

In summary, the study revealed that the Peninsular Malaysian private hospital nurses had moderate turnover intention. Inter-organisational turnover intention was found to be the highest, while professional turnover intention was the lowest. In terms of exit choice, nursing related exit choices (*nursing*-EC) such as advancing in nursing education, practicing nursing in another country and organisation were found to be the most preferred exit choices. Furthermore, the study results revealed professional commitment was higher than organisational commitment. Affective domain was found to be the strongest in professional commitment. Conversely, continuance domain was found to be the strongest in organisational commitment. In addition, the working environment of the Peninsular Malaysian private hospitals was categorized as favourable. All the five subscales of PES-NWI attained the least cut-off value to be considered favourable practice environment.

Furthermore, the study results testified that NPE, professional commitment, organisational commitment, *nursing*-EC, and *non-nursing*-EC were the predictors for

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the overall turnover intention after controlling the socio-demographic variables. Moreover, organisational commitment was found to be the main contributor in the relationships of NPE, professional commitment, organisational commitment, and turnover intention. Furthermore, the study highlighted the distinctive predictors for the different forms of turnover intention. Organisational commitment and NPE were found to be significant predictors for organisational turnover intention (i.e., intra-organisational TI and inter-organisational TI). However, organisational turnover intention was not influenced by professional commitment. On the other hand, country and professional turnover intention was not influenced by NPE. Conversely, country turnover intention was only influenced by organisational commitment while, professional turnover intention was only influenced by professional commitment. On the other hand, *nursing*-EC was found to be the main contributor in the relationships of NPE, *nursing*-EC, *non-nursing*-EC and turnover intention with *nursing*-EC as the main contributor in the relationship. Nevertheless, the relationship between NPE and turnover intention was not mediated by nurses' commitment (neither professional nor organisational commitment) and exit choice (neither *nursing*-EC nor *non-nursing*-EC).

Discussion of the Research Findings

      Turnover intention and the different forms of turnover intention. The results indicated that the proportion of inter-organisational, intra-organisational, country, and professional turnover intentions among the participants were 53.2%, 45.6%, 27.9%, and 25.1% respectively. The findings of the study should be viewed seriously in view that approximately more than a quarter of the participants had indicated some forms of turnover intention. Inter-organisational turnover intention

was found to be the highest, followed by intra-organisational, then country and professional turnover intentions. The findings of the current study were concurred with previous studies in which intent to leave organisation was also found to be the highest across all the different forms of turnover intention (Derycke et al., 2012; Flinkman et al., 2008; Heinen et al., 2013; Gurková et al., 2013). However, the findings were in contrast with studies by Simon et al. (2010), Lin et al. (2011), and Lee et al. (2015) which reported higher intention to exit professional than organisation. Furthermore, the findings were not consistent with studies by Lu et al. (2002) and Zurmehly et al. (2009) which reported insignificant difference between inter-organisational and professional turnover intention.

Inter-organisational turnover intention. In terms of inter-organisational turnover intention, the study found moderate level of intention to quit organisation with approximately 53.2% of the participants indicated intent to leave organisation. The findings of the study were found to be slightly higher than the results of former studies (Biegger et al., 2016; Heinen et al., 2013; Ganz & Toren, 2014; Gurková et al., 2013; Leone et al., 2015). Nonetheless, the findings were comparative with studies by Coetzee et al. (2013) which also found the proportion of inter-organisational turnover intention between the range of 51 and 59 percent among the South African nurses. In addition, comparison with the findings of a recent Malaysian study investigated by Ramoo et al. (2013) in a government university hospital, the respondents of the current study tended to have higher inter-organisational turnover intention. Ramoo et al. (2013) reported approximately 40% of the participants indicated inter-organisational turnover intention. It can be concluded that the proportion and degree of inter-organisational turnover intention among the Malaysian nurses were towards the higher side.

Boredom and lack of excitement as a result routine nursing duties, imbalance work-life working hours, and constraints in working environment could be the possible reasons which contributed to the high inter-organisational turnover intention. In general, the private hospitals in Malaysia were predominating by young diploma holder nurses who were still serving their educational sponsorship bond. The educational sponsorship system being imposed by the private hospitals had indirectly forced the nurses to be constraint within the same organisation or unit/ ward for as long as the duration of the contract bond. These constraints and factors may have led to lack of enriching career experience. Henceforth, it may trigger their thought of searching excitement and opportunity in other organisation.

On the other hand, the educational sponsorship bond has been viewed as cost burden among the nurses. The educational sponsorship bond was the reason that holds the nurses to be remained in the organisation. Once the nurses completed and fulfilled their obligation towards the educational sponsorship bond, the nurses choose to leave their organisation. The reason that could be associated with the high proportion of inter-organisational turnover intention of the current study was that the data collection procedure was conducted almost nearing to the completion of the nurses' sponsorship contractual bond. In addition, the competitiveness of the extrinsic rewards (i.e., contractual bonus, additional allowances, and incentives) and remuneration (i.e., annual leaves, staff trip, educational support, and medical/ dental benefits) being offered by other organisations may have attracted the nurses' intention to leave organisation.

Intra-organisational turnover intention. On the other hand, the high level of intra-organisational turnover intention (45.6%) of the current study was inconsistent with findings of former studies (Derycke et al., 2012; Galletta et al., 2011; Galletta et

al., 2013). Former studies commonly found low level and less proportion of intra-organisational turnover intention. Nonetheless, the findings of the study were congruent with the findings reported by Hinno et al. (2012) and Lee et al. (2015) which also revealed high proportion of intra-organisational turnover intention with approximately 57% and 45% respectively.

The high intra-organisational turnover intention could be related to the career entry motivation. Majority of the private hospital nurses did not get to practice in the unit/ ward of their choices due to shortage of staff in the various units. Furthermore, ward managers and hospital administrators were usually reluctant to relinquish their nurses to other units once the nurses attained a certain level of competency, independence, and seniority. The nurses were expected to progress in the units. Unfortunately, this management style did not align with the expectation of the nurses. Commonly, nurses aspired to progress in the profession meaning gaining enrich experience and competency in the specialty area of their choices. The intent of leaving the unit was viewed positively due to the fact that nurses were still willing to progress within the organisation. However, the insensitivity of the nurse managers and hospital administrators may cause the nurses in considering leaving their unit and subsequently organisation if interventions were not implemented to improve their status and motivation in the respective units.

On the other hand, the high proportion of intra-organisational turnover intention of the study could be related to the circumstance that most of the registered nurses were still serving their educational sponsorship bond. Nurses were not able to leave the organisation until the completion of educational contract bond due to continuance commitment. Henceforth, another alternative to leave their current work environment would be to explore for career opportunities within the same

organisation. This study results were viewed positively because nurses were searching for alternative options within the same organisation. Actual inter-organisational turnover can be prevented if the hospital administrators and nurse managers executed appropriate timely interventions.

Country turnover intention. In terms of country turnover intention, the results revealed that the degree in considering leaving the country was moderate with a mean value of 2.01 ($SD = 1.09$). Although country turnover intention was not the highest concern, nevertheless, the proportion of intent to leave country had exceeded a quarter (27.9%) of the sample size. The findings of the study were in contrast with former study by El-Jardali et al. (2011) which reported exceeded half (67%) of the respondents specified country turnover intention. Furthermore, in terms of degree of country turnover intention, the findings were slightly lower than the results reported by Lansiquot et al. (2012). Nonetheless, the findings were relatively congruent with a former study (Gurková et al., 2013).

One of the most imperative reasons that lead nurses to leave the country was the economic factors. Majority of the nurses chose to work in another country particularly in Singapore and the Middle East countries (such as Saudi Arabia and Dubai) was due to higher salary and the profitable currency exchange rate. In addition, with the multiple financial commitments, and huge household debts faced by some of the nurses and their family members, country turnover intention could be a solution to improve their financial situations.

Furthermore, improving quality of life has been identified as one of the reasons for nurses in considering leaving the country. Developed countries particularly countries in the west were the target countries for the nurses. Nurses perceived that the developed countries will be able to provide them and family with a better career

prospects, professional development opportunity, and work-life balance. Therefore, the proportion of nurses working abroad had been multiplying each year.

Professional turnover intention. Even though professional turnover intention was found to be relatively low among the different forms of turnover intention, it should not be taken lightly because recent studies have found escalating intent of professional withdrawal among nurses (Li et al., 2010). The current findings revealed approximately 25% of the participants have affirmed their tendency of professional withdrawal. The proportion of professional turnover intention found in the current study was higher than some of the past studies which ranged between 5% and 17% (Heinen et al., 2013; Simon et al., 2010). Nonetheless, comparison between the Asian studies, the findings of the study were found to be lowered compared with studies by Lin et al. (2011) and Lee et al. (2015). Both the studies reported 49% and 59% of professional turnover intention respectively. Furthermore, the findings were consistent with recent studies by Gurková et al. (2013) and de Oliveira et al. (2017) which reported 28% and 22% of professional turnover intention respectively.

The reasons for the higher proportion professional turnover intention could be related to the recognition and public image towards the nursing profession in the country. In most of the countries particularly among the developed countries, nursing profession was viewed as a noble and highly respected profession. However, nursing profession in Malaysia was commonly not the first career choice among the Malaysian nurses. Majority of the private hospital nurses pursued nursing profession due to the availability of educational sponsorship and guaranteed employment upon graduation.

In addition, the huge dependent responsibility roles among the Asian women such as taking up the roles as mothers, daughters, wives, and daughter-in-laws may influence the thought of professional turnover intention. At times, professional

turnover intention could be temporary in which, nurses detached from their profession for an interval and resume their profession at a later time. For example, it was not uncommon for nurses to withdraw from profession in order to care for their young children. When the children grew up and stabilised, the nurse would return to the profession. Similar situation would occur when nurses were required to care for family members who were ill since nurses would be the most qualified person to provide nursing care.

Furthermore, lack of career advancement opportunity may lead to nurses' intent to leave profession. In general, upward mobility in the nursing profession requires additional qualifications such as post basic/ advance diploma nursing specialty, bachelor degree, and master degree. However, inflexibility of working environment and rigid nursing education academic programmes (i.e., bachelor degree, and advanced diploma/ post basic certificate programmes) may cause frustration among the nurses which influenced them to consider leaving the profession.

On the other hand, the salary scale for nursing profession was depriving the nurses. For example, there were incidences where bachelor degree nurses were paid diploma nurses salary scheme due to the lack of recognition towards the pre-registration bachelor degree nursing programme. Thus, the phenomenon frustrated the nurses and may influence them to considering venture into other profession which enables faster career progression and satisfying/ compatible rewards. Additionally, nurses were not satisfied with their heavy workload situation. They were "under-paid" and yet, "over-worked". In view of shortage of nurses, private hospital nurses have been obligated to work mandatory "over-time" and "double-shift" duties. In addition, the workload per shift and staffing issues were overwhelming. All these situations impacted nurses' well-being and influenced nurses to consider leaving the profession.

The influence of nurses' socio-demographic variables on turnover intention. The literature review highlighted numerous socio-demographic determinants influencing the different types of turnover intentions. Past studies had attested that nurses' age, nursing experience, educational level/ specialisation, marital status, dependent responsibilities, educational sponsorship, wage, and working areas were significant predictors for turnover intention. A comparison of findings was discussed in the subsequent section.

Nurses' age. Nurses' age has becoming a significant predictor for turnover intention. In the current study, age was found to be insignificant towards the overall turnover intention. Nonetheless, younger nurses (between the age of 20 and 30 years old) were found to have higher intention to leave country while other forms of turnover intention such as intra-organisational, inter-organisational, and professional turnover intention were not predicted by nurses' age.

In terms of professional turnover intention, the findings were not consistent with former European studies (Gurková et al., 2013; Hasselhorn et al., 2003; Heinen et al., 2013) which testified age as significant predictor for intention to exit profession. Similarly, the findings of the study were also inconsistent with former intra-organisational turnover intention study conducted by Lee et al. (2015) which found age as significant predictor. Furthermore, in terms of inter-organisational turnover intention, the findings were incompatible with a local study conducted by Ramoo et al. (2013) among the public hospital qualified nurses which found that younger Malaysian nurses had higher inter-organisational turnover intention. In the global perspective, the the association between age and inter-organisational turnover intention was also found to be in contrast with few of the past studies conducted among the Slovak, Czech, Korean, and Portuguese nurses (Gurková et al., 2013; Lee

et al., 2014; Leone et al., 2015). These studies revealed inter-organisational turnover intention was more common among the mature nurses who aged between 31 and 40 years old.

In terms of country turnover intention, the findings were congruent with former studies by El-Jardali et al. (2011) and Lansiquot et al. (2012) which found that nurses who were younger (below 30 years old) were more likely to exit country. Nevertheless, the results were contrasting with Gurková et al. (2013) in which the study found that mature Slovak and Czech nurses (between 31 and 40 years old) were more probable to exit country. The rationale for higher country turnover intention among the younger nurses could be related to work pressure, remuneration system which linked with seniority, boredom and frustration towards work. Young nurses were enthusiast towards their profession and willing to explore nursing profession. Furthermore, younger nurses tended to be more IT savvy. Thus, the advancement in communication technology had allowed them to search for information pertaining to global mobility in nursing profession. Henceforth, it was acceptable for their age to influence their thought of leaving country and explore nursing career in the international platform. Moreover, the competitiveness of the neighbouring countries (i.e., Singapore and Brunei) and Middle East countries (i.e., Saudi Arabia, Dubai, and Bahrain) may influence nurses to have intention to leave country for better remuneration. In addition, majority of the young nurses were still single and did not have much commitment and kinship dependent. Henceforth, most of the nurses would opt to practice nursing outside the country to improve individual financial status and gained international nursing experience.

Nursing experience. The literature reviews clearly pointed out that nursing experience was a significant predictor for all the different forms of turnover intention.

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However, in the current study, nursing experience was found to be insignificant for the overall turnover intention as well as three out the four turnover intentions: intra-organisational, inter-organisational, and professional turnover intention. Henceforth, the findings were inconsistent with former studies (Gurková et al., 2013; Lee et al., 2015; Ramoo et al. (2013) which revealed significant relationship between nursing experience and turnover intention.

Interestingly, nursing experience was only found to have significant on country turnover intention. Nurses with six years of experience or less were more likely to exit country. The findings were relatively congruent with El-Jardali et al. (2011) which also reported that country turnover intention was higher among the nurses with less than six years nursing experience. The rationale for the findings was related to the completion of educational sponsorship contract. Majority of the Malaysian private hospitals had imposed a five-year contract mechanism for their employee who had undertaken the educational sponsorship. Hence, it was not uncommon for the younger nurses to have higher intention of exiting country. The nurses may start planning and triggering their thoughts of leaving through conversation with senior nurses who had left and with the use of social media had influenced the younger nurses to have higher degree of thoughts. Furthermore, the rationale for the associations could be related to the transition phase of adapting to the hospital environment and climate. External stressor and organisational expectation may trigger the nurses to consider changing work place. On the other hand, younger nurses who had been thinking of plans of working abroad (exit choice) while waiting for their educational sponsorship bond to complete had higher tendency opt for country turnover intention.

Organisational tenure. In the current study, organisational tenure was found to have insignificant relationship towards the overall turnover intention and the four different forms of turnover intention. Henceforth, the findings were found to be inconsistent with former studies which revealed organisational tenure as significant predictor for inter-organisational turnover intention (Choi et al., 2013; Ganz & Toren, 2014). Furthermore, in terms of country turnover intention, the findings were congruent with findings reported by Lansiquot et al. (2012) which revealed insignificant influenced of organisational tenure on country turnover intention.

Marital status and dependent responsibilities. In general, the study found that marital status and dependent responsibilities were insignificant for the overall of turnover intention. However, the study found that single nurses have higher tendency for country turnover intention. Nonetheless, marital status was found to be insignificant for intra-organisational, inter-organisational, and professional turnover intention. Conversely, nurses with dependent responsibilities were found to have higher intra-organisational turnover intention.

In terms of country turnover intention, the findings were consistent with former studies (El-Jardali et al., 2011; Gurková et al., 2013) which reported nurses who were not married were more likely to exit country or practice nursing in another country. The rationale for such results could be related to the obligations among the married nurses who need to take care of their spouse and children. Nevertheless, the findings related to other forms of turnover intention were in contrast with former studies (Gurková et al., 2013; Lu et al., 2002) in which single nurses were also reported to have higher intent for exiting profession and vice versa as reported by Lee et al. (2015).

On the other hand, the findings pertaining to the association between dependent responsibilities and intra-organisational turnover intention were not consistent with former studies which testified that nurses with dependent responsibilities tended to have low turnover intention (Nooney et al., 2010; Simon et al., 2010). Nonetheless, the rationale of the findings could be related to the intention of moving to another unit or department within the organisation which can match the needs of fulfilling the caring responsibilities for the dependents. For example, there were instances where nurses requested to be transferred to work in the clinic which operates office hours instead of shift hours in order to fulfill the needs to prepare meal for their children at home.

Extrinsic motivators. In the current study, average monthly income was found to have significant relationship with the overall turnover intention. Furthermore, in terms of types of turnover intention, nurses who earned higher salary were found to have higher intra-organisational turnover intention. However, monthly income was insignificant for inter-organisational, country, and professional turnover intention. In terms of country and profession turnover intention, the findings were consistent with Gurková et al. (2013) which revealed insignificant relationships. Nonetheless, in regards to professional turnover intention, Lu et al. (2002) and Flinkman et al. (2008) reported otherwise. Both of the studies revealed that wages were the main reason for professional turnover intention particularly among the young nurses.

Hence, the rationale for these research findings was that the cohort of nurses who were able to achieve higher income scale was normally the more experienced nurses, and probably has higher education attainment. On the other hand, the cohort of nurses could also be referring to those who have been working exceptionally harder (i.e., double shifts duties, over-time, on-call) where they obtained additional

allowances for their monthly income. Henceforth, the reason for leaving intention could be either for further progressing in the career or seeking respite from burnout/ mental exhaustion due to over-work. Henceforth, the findings of the current study provide useful information for the ward manager and human resource department to initiate strategies on duty roster, recruitment, revise the existing nursing salary scale and chart the career path for the nurses to progress intra-organisationally.

Educational level and nursing specialisation. Furthermore, past studies had found that educational level showed significant influence on intra-organisational, inter-organisational, and professional turnover intention (Coetzee et al., 2013; Lee et al., 2015; Lu et al., 2002; Nogueras, 2006; Ramoo et al., 2013). On the other hand, Leone et al. (2015) emphasised on the importance of nursing specialisation in influencing inter-organisational turnover intention. The study found that nurses with additional qualification like nursing specialization were less probable to quit organisation.

In the study, both, educational level and nursing specialisation did not influence on the overall turnover intention as well as the different forms of turnover intentions. Hence, the findings of the study were not consistent with former studies which revealed significant relationship between educational level/ specialisation and turnover intention. The findings of the study reflected that nurses did not view or consider additional qualifications as the opportunity or reason for them to exit unit, organisation, country, or profession.

Educational sponsorship. The study revealed that educational sponsorship showed significant influenced on the overall turnover intention. Furthermore, nurses with educational sponsorship contract were found to have higher intention to leave unit, organisation, country, and profession. The variable of educational sponsorship

was rarely being investigated in turnover intention studies. Hence, comparison for intra-organisational, country, and professional turnover intention was not possible in view of scarcity of similar studies. Literature review yielded one similar study investigated by Tei-Tominaga (2013). Hence, in regard to inter-organisational turnover intention, the findings were in contrast with the results reported by Tei-Tominaga (2013). The Japanese study revealed that nurses without an educational sponsorship contract were more likely to have inter-organisational turnover intention.

The reason for the contrasting results was due to culture differences. Japanese employee is known for loyalty towards their employer and furthermore, if the company has sponsored the employee, the sense of gratitude and belonging were stronger and therefore intention to leave was lower. Nonetheless, that was not the case for Malaysian nurses. Educational sponsorship bond was viewed as a "business deal", where both parties have "win-win" situation and therefore, the nurses accepted the educational sponsorship and agreed upon the contract bond. However, over the years of fulfilling the obligation to serve the contract bond, nurses lost the sense of belonging towards the employer. The educational contract has becoming a "burden" to them, and therefore they were merely waiting for the completion of bond and leave their workplace. During the contract tenure, nurses have sorted out their exit choices once their contract bond completed. This phenomenon was very discouraging because the employer has invested much on human capital with the intention of sustaining the nursing supply and workforce. Yet, the nurses choose to exit their organisation after all the hefty investment put into them.

Working areas. Additionally, working areas (such as general multidisciplinary unit versus specialty units) were found to have insignificant influenced on the overall turnover intention. Further analysis revealed that working

areas were only significantly related to professional turnover intention. Nurses working in the general multidisciplinary unit were found to have higher professional turnover intent than those working in the specialty units. The findings of the study were relatively congruent with past findings (Lee et al., 2015) in which revealed significant relationship between working area and intention to quit profession. Nonetheless, Lee et al. (2015) also reported significant relationships of working area on intra-organisational and inter-organisational turnover intention. However, the findings of the current study were inconsistent with the findings reported by Lee et al. (2015).

Thus, the rationale for the findings could be related to the fact that majority of the nurses working in the general multidisciplinary unit did not have a specialisation qualification. Thus, it was relatively difficult and not acceptable to request for intra-organisational transfer when other general multidisciplinary units were performing similar tasks and specialty units require some forms of specialisation training. Hence, the similar perception would occur for inter-organisational and country turnover intention. Thus, boredom and lack of excitement towards nursing job may trigger the nurses to consider leaving nursing profession and venture into other non-nursing jobs or opportunities. Hence, the existing educational status and nursing experience would qualify the nurses to consider for entrepreneurship and embarking into other healthcare or caregiving occupation which may offer better salary scale, work-life balance, and enriching experience.

Types of hospitals. In the literature review, past studies had highlighted dissimilarities turnover intention between the nurses in the government and private hospitals. Coetzee et al. (2013) reported that nurses in the government hospitals had greater inter-organisational turnover intention while, Lee et al. (2014) reported vice

versa. The current study was conducted among the private hospital nurses and the overall degree of turnover intention was revealed as moderate level with average value slightly lower than the midpoint score on the measurement scale. Furthermore, the highest proportion of turnover intention was found in inter-organisational (53.2%) while, the lowest was found in professional turnover intention (25.1%).

Hence, in comparison with local study conducted among the nurses in the government university hospital, the proportion for inter-organisational turnover found in the current study was slightly higher than the former study by Ramoo et al. (2013). Nonetheless, at the national-level comparison, the findings of the study somewhat congruent with past findings reported by Lee et al. (2014) in which nurses in the private hospitals tended to have greater intention of quitting organisation than the nurses in the government hospitals. The rationale for the difference was related to sense of job security and pension benefits among the nurses in the government hospitals. Nurses in the government hospitals were entitled for pension and other remuneration benefits. Furthermore, the proportion of entitlement was correlated with the duration of service with the government sector. Hence, such benefits do not exist among the private healthcare sectors. Thus, lack of job security and dissatisfaction towards compensation/ reward mechanism may induce the nurses in the private hospitals to have higher degree of quitting organisation.

Exit choice. In the current study, nursing related exit choices such as advancing their nursing qualifications, practicing nursing in another organisation, and country were found to be more preferred exit choices compared with non-nursing related exit choices. Thus, the findings were congruent with previous studies which also found nursing related exit choices as preferred choices (El-Jardali et al., 2011; Homburg et al., 2013). For example, former studies reported that practice nursing in

another country was one of the nurses' exit choice (El-Jardali et al., 2011; Lansiquot et al., 2012). In a separate study, Homburg et al. (2013) reported that working as nurses in another hospital was the most preferred exit choices among nurses. Nonetheless, the findings were not consistent with the findings reported by Gök and Kocaman (2011) which revealed 69% and 51% of the respondents pursued non-nursing related education and worked in non-nursing related occupation respectively.

Furthermore, the findings of the study on more than half of the participants indicated advancing nursing qualification as their exit choices (58%) were indeed a positive result. The findings reflected that the participants were keen to progress within nursing profession and therefore they have the desire to advance academically in order to progress in the nursing career ladder. It was a fact that in order has upward career mobility, higher nursing educational qualification such as post-basic qualification; bachelors and master's degrees have become the criteria for certain nursing positions promotion and recruitment.

Nevertheless, the findings in terms of the proportion for non-nursing related exit choices such as "pursuing non-nursing further qualification" (28%) and "working non-nursing job in another organisation" (24%) were found to have serious connotation towards nurses' professional withdrawal. The reasons that could contribute to the non-nursing related exit choices were that nurses have lost their passion and excitement towards their profession. In addition, the over-worked situation which comes with hefty responsibilities influenced professional turnover intention. Furthermore, the attractiveness of other careers and occupations in terms of remuneration, advancement opportunity, social status, and flexibility to manage work-life balance may have contributed to the exit choices. Subsequently, the discussion would focus on the comparison findings related to NPE.

Nursing practice environment. The overall PES-NWI composite mean score of the study was at 2.83 (*SD* = .32) which was relatively high compared with previous studies which attained mean scores of less than 2.8 (Anzai et al., 2014; Ganz & Toren, 2014; Havens et al., 2012; Marzuki et al., 2012). Furthermore, all the subscales of the PES-NWI were rated as favourable and thus, the results of the study were contradicted with the findings reported by Marzuki et al. (2012) in which the public teaching hospital nurses perceived their NPE as unfavourable.

On the other hand, the current study found that the subscale related to the provision of quality care was rated the most satisfied. The findings were congruent with previous studies which also found the nurses were highly satisfied towards the area of provision of quality care (Heinen et al., 2013; Liou & Grobe, 2008; Shang et al., 2013). In addition, the findings were compatible with the findings reported by Marzuki et al. (2012) which also revealed provision of quality care as the most satisfied NPE area. The findings reflected that the local nurses placed great value in providing care which of standards to patients. However, there were some discrepancies found among the Asian nurses. In general, majority of the Asian nurses were highly satisfied with the relationship between doctors and nurses (Anzai et al., 2013; Liu et al., 2012; Zhang et al., 2014). The rationale for the dissimilarities could be related to the diversity of the Malaysian cultural background.

Furthermore, the current study found that majority of the nurses was highly satisfied with the areas related to nurse manager support and leadership. The findings were relatively congruent with former studies (Eaton-Spiva et al., 2010; Ganz & Toren, 2014; Liou & Grobe, 2008). Nonetheless, the findings were not consistent with the findings reported by Marzuki et al. (2012) which found area related to manager support and leadership was rated as unfavourable among the nurses in the government

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hospitals. The dissimilarity findings between the government and private hospitals could be related to the bureaucratic and hierarchical management system in the government healthcare settings. In general, there were numerous levels governing the operation of a unit. Thus, the nurses may find the work process relatively burden and unfriendly. In contrast, majority of the private healthcare settings had been adopting a more flatten and decentralised management mechanism. Unit managers were empowered for certain levels of decision making. Thus, nurses may feel more connected and supported in their everyday nursing job operation.

Furthermore, relationship between the doctors and nurses were found to be more favourable in the private hospital setting. Marzuki et al. (2012) reported that nurses in the government hospitals rated unfavourable for the collegial relationship between physicians and nurses. Similarly, to the rationale for nurse manager support and leadership, in the government hospitals, the medical profession carried numerous levels such as trainee doctors, medical officers, senior medical officers, physicians/ consultants, and directors. Nurses usually did not have direct collaborative practice with the consultants. The medical officers' in-charge of the respective units was responsible for updating the consultants of patients' progress. Nonetheless, that was not the case in the private hospitals. Nurses were empowered to care for the patients and nurses were the manager for the patients. The physicians/ consultants managed patient care collaboratively with the nurses. Thus, it was acceptable that the findings of the study revealed favourable of physician-nurse relationship among the nurses in the private hospital.

Conversely, area related to staffing was rated the lowest among the participants. Items on "enough registered nurses to provide quality patient care" and "enough staff to get the work done" were found to have exceptional low scores. Those

findings concurred with preceding studies which were also disclosed nurse staffing as their chief concerns and warrant immediate attention because it may jeopardize patient care (Anzai et al., 2014; Marzuki et al., 2012; Zhang et al., 2014). The explanation for the situation was related to high inter-organisational turnover. The competitiveness of the private healthcare sector within the urban region of the country as well as abroad had influenced nurses to exit their organisation. Thus, alternative recruitment strategies should be innovated in order to ensure adequate staffing for every shift. Subsequently, the discussion would focus on the comparison findings related to the relationship concerning NPE and turnover intention.

The influence of socio-demographic profiles on the NPE. The literature review pointed out that nurses' perception towards NPE was influenced by socio-demographic profiles. Past studies highlighted that some of the socio-demographic profiles had shown significant influence on nurses' perceptions towards NPE such as age, nursing experience, working areas (general multidisciplinary versus specialty units), hospital size, and types of hospitals (private versus government hospitals).

In the current study, age, nursing experience and working area were insignificant towards nurses' overall perceptions towards NPE. Henceforth, in terms of age and nursing experience, the findings were inconsistent with Liu et al. (2012) and Zhang et al. (2014). Furthermore, the findings related to working areas were found to be incompatible with Zhang et al. (2014). Nonetheless, in the current study, educational level, nursing specialization, and educational sponsorship bond revealed significant influenced on nurses' overall perception towards NPE. The study found that nurses with lower educational level and without nursing specialisation have rated their NPE as more favourable than those with higher educational level and with nursing specialisation. The findings were consistent with former studies conducted by

El-Jardali et al. (2011). The rationale for the findings could be related to the fact that nurses with higher educational level and nursing specialisation tended to apply their knowledge and principles in their practice. Thus, it was more likely to have higher expectation in terms of NPE characteristics among this cohort of nurses.

In addition, the current findings supported earlier study by Coetzee et al. (2013) in which the NPE of the private hospitals were more favourable than government hospitals. A comparison with a local NPE study investigated by Marzuki et al. (2012) in the government hospitals; the findings of the current study (private hospitals) were more favourable. The rationale for the positive findings among the private hospitals could be related to the great emphasis on organisational branding and customer-oriented healthcare service in order to compete and enhance brand reputation with other private hospitals in the region. Furthermore, the hospitals strive to attain certain level of NPE in order to maintain their quality accreditation status. Nevertheless, comparison for findings related to educational sponsorship bond was not possible in view of none of the similar studies had been explored formerly.

Furthermore, former studies had also reported that nurses with different socio-demographic profiles had different perception towards the different characteristics of NPE. For examples: Shang et al. (2013) reported that rating for staffing subscale was found to be relatively lower among the nurses in the general multi-disciplinary ward compared with oncology units. Furthermore, Ganz and Toren (2014) found that nurses who had longer duration of organisational tenure and nursing experience tended to rate staffing and provision of patient care as favourable. In addition, El-Jardali et al. (2011) reported that nurses in the smaller hospitals tended to have higher satisfaction for the element of control in practice compared with those who were working in the

larger hospitals. Furthermore, nurses in the large hospital were found to have lower satisfaction towards career progression opportunity (El-Jardali et al., 2011).

Hence, in the current study, areas related to staffing and resources were found to have significant association with hospital location and size. Working area was found to have insignificant association with nurses' perception towards staffing and resources. Thus, the findings of the study were inconsistent with past studies (Shang et al., 2013). Furthermore, nursing experience and organisational tenure were not significant predictors for the subscale related to staffing and provision of quality care. Henceforth, the findings were inconsistent with Ganz and Toren (2014). In addition, the findings of the study revealed that hospital location, marital status, dependent responsibilities, educational sponsorship bond, nursing specialisation, and educational level were significant predictors for subscale related to nurses' control (autonomy) and organisational involvement. Nonetheless, hospital size was found to have insignificant association with the subscale. Thus, the findings were in contrast with El-Jardali et al. (2011). Conversely, in the current study, hospital size was found to have significant influenced on the areas related to nurse manager support/ leadership, staffing, and collegiality between doctors and nurses.

Nursing practice environment and turnover intention. The conceptual model of the study hypothesized significant relationship between NPE and the overall turnover intention. The alternative hypothesis was supported whereby the results revealed significant negative association between NPE and turnover intention. The findings were coherent with previous studies in which, turnover intention was lower

when the NPE was perceived as more favourable (Heinen et al., 2013; Kutney-Lee et al., 2013; Zhang et al., 2014).

In terms of organisational turnover intention (i.e., intra-organisational and inter-organisational), all the five NPE areas revealed significant influenced on nurses' intention to quit unit an organisation. The findings were somewhat congruent with the results reported by Kutney-Lee et al. (2013) and Zhang et al. (2014). In the study, Kutney-Lee et al. (2013) reported that improvement in NPE areas demonstrated significant reduction on nurses' organisational turnover intention. Furthermore, Zhang et al. (2014) highlighted the significant influence of NPE characteristics on organisational turnover intention.

In addition, the study found that nurses were more probable to exit profession when the NPE area of nurse manager support and leadership was not fulfilled. In other words, managers which lacks of managerial and leadership skills were found to hasten the decision of nurses to exit profession. The findings were compatible with past study by Heinen et al. (2013). Nonetheless, the findings were not consistent with studies by Hinno et al. (2011) which reported professional turnover intention was significantly influence by matters related to staffing and resources. Nurses were tended to quit the profession if they were frequently being burden with overwhelming tasks and limited support and resources. The findings were aligned with the analysis of a qualitative study by Alilu et al. (2016) in which the increased workload with scarcity of resources would lead to nurses facing with numerous ethical dilemma when providing care and also placed them at high risk of violation in their practice.

In regard to country turnover intention, the study found that areas related to organisational involvement, manager support/ leadership, and staffing were the key reasons which influenced nurses' intention to exit country. The results were similar

with a study carried out by El-Jardali et al. (2011) in which the study reported that one score of reduction in nurses' organisational involvement could lead to approximately 51% of nurse's likelihood to exit the country. Nonetheless, the findings of the study were inconsistent with Lansiquot et al. (2012) which found insignificant results between NPE and country turnover intention. Additionally, the study found that nurses who perceived their manager support and leadership as unfavourable were twice as probable to quit the unit, organisation, and country. Henceforth, nurse managers and leaders play vital role in retaining nurses. The results were compatible with former study by Hinno et al. (2012).

      Nurses' commitment.   In the nursing literature, professional and organisational commitment was frequently investigated among nurses. The findings of the current study found that nurses' professional commitment was higher than organisational turnover intention. The findings were consistent with the results reported by Duarte (2015). The subsequent section discussed the findings of past studies pertaining to professional and organisational commitment.

      Professional commitment.   In the current study, professional commitment (PC) was found to be at moderate ($M = 4.41$, $SD = .62$). In terms of commitment domain analysis, the current findings revealed affective domain as the highest while; continuance domain was the lowest. The findings were congruent with the findings reported by Nogueras (2006). Nonetheless, the findings were not consistent with the results found by Duarte (2015) and Chang et al. (2015). Duarte (2015) reported that normative domain was the lowest among professional commitment among the nurses. On the other hand, Chang et al. (2015) found continuance commitment as the strongest among the three domains of commitment. The rationale for the moderate level of affective commitment among nurses could be related to the nursing identity that

nurses created for themselves. The nurses were relatively emotionally dependent or have the sense of belonging towards their nursing identity. Furthermore, the relatively high affective professional commitment could be related to the foundation of nursing profession socialisation among the nurses which started as early as during the nursing training years. In general, the nurses were found to be relatively devoted to the nursing profession in view of low degree of professional turnover intention was revealed in the study. Henceforth, the emotional affection towards the profession could be the drive that enables the nurses to contribute and remain in the profession.

The influence of socio-demographic profiles on professional commitment. Furthermore, past studies also attested that socio-demographic profiles influenced professional commitment. In the study, professional commitment was found to be stronger among the nurses who were older. The findings were compatible with Nogueras (2006) and Teng et al. (2007). On the other hand, the study also revealed that nurses with longer nursing experience and organisational tenure were found to have higher commitment towards profession. The findings were consistent with Nogueras (2006) which reported that nurses with longer nursing experience tended to have higher professional commitment. Nonetheless, that was not the case for a study investigated by Wang et al. (2011) which reported insignificant results between organisational tenure and professional commitment. Furthermore, the present study found that married nurses with dependent responsibilities were found to have higher professional commitment. The findings were in contrast with Lu et al. (2002) which reported vice versa. In addition, similar with Wang et al. (2011), the current study revealed insignificant association between educational level and professional commitment. The subsequent section discussed on the association between professional commitment and turnover intention.

Professional commitment and turnover intention. In the conceptual model of the study, professional commitment was anticipated to have significant relationship with turnover intention. Thus, the relationship was confirmed in which the current results revealed significant association between professional commitment and turnover intention. The results were congruent with findings of previous studies (Lu et al., 2002; Nogueras, 2006). The basis for these findings was related to the commonality alignment of nurses' personal beliefs and profession (Chang et al., 2015). Nurses who were passionate about their profession were more probable to stay put in the profession and henceforth less probable to have thought of leaving their current employment.

Furthermore, the current study found that affective and normative professional commitment was the most significant in view that both commitment domains significantly influenced nurses' intention to quit unit, organisation, country, and profession. The findings of the study were partially inconsistent with the findings reported by Nogueras (2006) which reported that affective domain was the strongest predictor for professional commitment. However, the findings were supported by Gambino (2010) which also found normative professional commitment influenced inter-organisational turnover intention. Interestingly, the findings were totally in contrast with Chang et al. (2015) which reported that continuance professional commitment was the strongest predictor for professional turnover intention in view of financial constraint situations. In addition, the findings of the study revealed professional commitment was significant predictors for both, inter-organisational and professional turnover intention. The findings were consistent with former studies (Nogueras, 2006; Simon et al., 2010; Teng et al., 2007).

Organisational commitment. On the other hand, the findings of the study revealed moderate level of organisational commitment. In terms of commitment domain analysis, the current study found that continuance domain was the highest for nurses' organisational commitment while, affective domain was the lowest. The findings of the study were compatible with previous study by Yang et al. (2013). However, the findings were in contrast with former study by Duarte (2015) which reported that affective domain was the highest while; continuance domain (areas related to limited options) was the lowest found in nurses' organisational commitment. In addition, the results were inconsistent with study by Borhani, Jalali, Abbaszadeh, and Haghdoost (2014) which yielded affective commitment as the strongest commitment domain, and followed by normative and continuance commitments.

The rationale for high continuance organisational commitment among the Malaysian private hospital nurses could be related to the influence of the educational sponsorship bond. Nurses who opt to quit from the organisation prior to the completion date of the sponsorship contract were obligated to compensate the organisation. In view of majority of the participants were still serving their educational sponsorship contract, continuance commitment towards organisation was relatively acceptable. Futhermore, competitiveness of the private healthcare organisations may also contribute to the high continuance organisational commitment. Salary, remuneration, bonuses, and other monetary incentives were calculated and perceived as the main reasons that drive the nurses to contribute and stay in the unit/ organisation.

The influence of socio-demographic profiles on organisational commitment.
In addition, past studies ascertained that socio-demographic profiles such as marital

status and types of hospital (accredited versus non-accredited) were found to have significant association with nurses' organisational commitment. In the study, nurses' age, nursing experience, organisational tenure, monthly income, dependent responsibilities, educational sponsorship bond, location of hospital, and marital status were found to have significant association with organisational commitment. Thus, the findings were compatible with findings reported by Lee et al. (2011) which also found nursing experience and marital status as significant predictors for organisational commitment.

Organisational commitment and turnover intention. In the conceptual model of the study, OC was anticipated to have significant relationship with nurses' turnover intention. Likewise, the relationship was supported through the current results revealed significant association between OC and turnover intention. The findings were consistent with previous studies by Liou and Cheng (2010), and Han et al. (2015).

The relationships among NPE, PC, OC, EC, and TI. The conceptual model of the study hypothesized two pathways which may have the ability to predict turnover intention. In the first pathway (commitment pathway), turnover intention was proposed to be predicted by NPE, PC, and OC. Furthermore, the micro-level analysis proposed that NPE, PC, and OC have the ability to predict the different forms of turnover intention. Subsequently, based on the existing literature, PC and OC were anticipated to be the mediators between NPE and turnover intention.

On the other hand, the second pathways (exit choice pathway) proposed that turnover intention was predicted by NPE, *nursing*-EC, and *non-nursing*-EC. Furthermore, the micro-level analysis proposed that NPE, *nursing*-EC, and *non-*

nursing-EC have the ability to predict the different forms of turnover intention. Furthermore, *nursing*-EC, and *non-nursing*-EC, was anticipated to be the mediators between NPE and turnover intention.

The relationship among NPE, PC, OC, and TI. The first pathway of the conceptual framework was supported by the current results in which, the hierarchical multiple regression analysis indicated that in Model 4, these three variables (i.e., NPE, PC and OC) accounted for 14.60% of turnover intention, with socio-demographic variables accounted for 3.8% of turnover intention. In the current study, both PC and OC have the ability to predict on the overall turnover intention. Nevertheless, OC remained as the most influential predictors of turnover intention. The results corresponded with previous studies conducted by Han et al. (2015) and Liou and Grobe (2008). Even so, the affirmation of PC as the predictor for overall turnover intention in the current study was congruent with former studies conducted by Chang et al., (2015), Liou and Grobe (2008), and Yang et al. (2013).

In terms of the different forms of turnover intention, the hierarchical multiple regression analysis findings of the study revealed organisational turnover intention was not influenced by professional commitment. The findings of the study were not consistent with Lu et al. (2002), Gambino (2010), and Simon et al. (2010) which reported that professional commitment significantly influenced inter-organisational and professional turnover intention. On the other hand, NPE only demonstrated significant effect on organisational turnover intention. The findings were consistent with a study by Kutney-Lee et al. (2013). Furthermore, the analysis of the current study revealed that country and professional turnover intention was not influenced by the characteristics of NPE. The findings were consistent with Lansiquot et al. (2012)

which also found that the overall NPE did not influence nurses' country turnover intention.

Conversely, country turnover intention was only influenced by organisational commitment while, professional turnover intention was only influenced by professional commitment. In terms of professional turnover intention, the findings were supported by former studies conducted by Lu et al. (2002), Teng et al. (2007), and Simon et al. (2010) which also found significant influence of professional commitment on professional turnover intention. Nonetheless, literature pertaining to association between organisational commitment and country turnover intention was relatively limited. Hence, comparison of former findings was not feasible.

As for the mediating effects between PC and OC on the relationship between NPE and turnover intention, the regression analysis revealed NPE, PC, and OC accounted for 7%, 5%, and 9% of the variation of turnover intention respectively. Nonetheless, when PC and OC were analysed simultaneously through partial correlation to determine the mediating effects, the analysis revealed that although the correlation index was reduced, the correlation between NPE and turnover intention remained as significant despite controlling for PC and OC. Thus, the current results revealed that the relationship between NPE and turnover intention was not mediated by PC and OC. Those findings were consistent with a study by Teng et al. (2007) and Han et al. (2015). However, other studies reported different findings such as studies by Liou and Grobe (2008), and Liou and Cheng (2010) which found that OC mediated the relationships of turnover intention. In this context, it was clear that OC as an independent factor play integral role in influencing Malaysian private hospital nurses' turnover behaviours.

The relationship among NPE, nursing-EC, non-nursing-EC, and TI. In terms of the second pathway, the conceptual framework was supported by the current results in which, the hierarchical multiple regression analysis indicated that in model 4, these three variables (NPE, *nursing*-EC and *non-nursing*-EC) accounted for 44.50% of turnover intention. Socio-demographic variables accounted for 3.8% of turnover intention. Both *nursing*-EC and *non-nursing*-EC have the ability to predict turnover intention. Additionally, *nursing*-EC was found to be the most influential predictors of turnover intention. Henceforth, the results of the study contributed new knowledge to the existing literature on nurses' turnover intention. It can be concluded that nurses' preconceived EC thought had higher ability to predict nurses' turnover intention.

In terms of the different forms of turnover intention, the hierarchical multiple regression analysis findings of the study revealed that different sets of predictors influenced the different forms of turnover intention. The findings of the study added new knowledge to the existing literature.

As for the mediating effects between *nursing*-EC, *non-nursing*-EC on the relationship between NPE and turnover intention, the regression analysis revealed NPE, *nursing*-EC, and *non-nursing*-EC accounted for 7%, 27%, and 26% of the variation of turnover intention respectively. Subsequently, when *nursing*-EC, and *non-nursing*-EC were analysed at the same time through partial correlation, the analysis revealed reduction in the correlation index yet, the correlation between NPE and turnover intention remained as significant despite controlling for *nursing*-EC and *non-nursing*-EC ($r = -.23$, $p < .001$). Thus, the results concluded that the relationship between NPE and turnover intention was not influenced by exit choices.

Exit choices were not popular in the investigation of nurses' turnover intention. Thus comparison with former studies was a challenge in view of scarcity of

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published results. Henceforth, the results of the current study provided some form of empirical comprehensions on nurses' withdrawal process particularly in the aspect of professional turnover intention.

Theoretical Implications

In terms of theoretical implications, the findings of the study contributed to the knowledge of turnover intention particularly in the aspects of the different forms of turnover intention. Nursing practice environment, professional commitment, organisational commitment, and exit choice were significant predictors for nurses' overall turnover intention, but not the individual forms of turnover intention. Besides, the findings of the study contributed to the philosophical view of nurses' turnover intention. Nurses' turnover intention by itself was an outcome of cognitive and psychological evaluation. Nonetheless, the entire turnover intention phenomenon should be viewed holistically instead of through single or dual lens perspectives. The rationale was that other genre determinants namely the economic and sociological viewpoint contributed tremendously onto the turnover intention thought. Thus, instead of limiting the research inquiry on "why" and "how" nurses' have the turnover intention thought, the findings of the study have shed light on the importance of knowing "where" nurses would go or do if they leave. Early identification of the exit choices would allow the policymakers such as the nursing leaders, regulatory body, education institutions, and hospital administrators to examine the traits that have attracted the nurses to leave the unit, organisation, country, or profession. Henceforth, integration of psychological, economic, and sociological determinants in nurses'

turnover studies were crucial to develop a more holistic framework to explain as well as manage the nurses' turnover phenomenon.

Secondly, the hypothesized conceptual framework of the study contributed to the original conceptual models which were testified by Price (1977) and Price and Mueller (1982). The original causal of turnover model for nurses (Price, 1977; Price & Mueller, 1981) had set out a comprehensive conceptual framework by integrating a holistic view of turnover intention. Numerous scholars have attested the models and confirmed its validity in guiding empirical studies. Nonetheless, in view of globalization and rapid changes in the nursing era, the concepts of the model required updating and expanding. In the current study, the set of organisational-related, and economic-related determinants were updated by the concept of nursing practice environment (organisational-related variable), and exit choice (economic-related determinant). Current empirical analysis has confirmed that the characteristics of nursing practice environment was the benchmark of ideal features for healthcare working environment (quality indicators for magnet hospital recognition worldwide), and studies have attested the direct effect of the characteristics on nurses' turnover intention (Heinen et al., 2013; El-Jardali et al., 2011). In addition, exit choice has been the interest of studies for nursing scholars. Exit choice served to represent the economic-related variable particularly in the aspect of availability of alternatives. In this context, alternatives should be viewed in a broader term in view of globalisation and advancement in the digital technology. Thus, it should not be limiting to job per se. Few past studies have reported that pursuing higher education and starting own business were the escalating trend of choices among the younger cohort of nurses (Gök & Kocaman, 2011). Henceforth, the conceptual framework served as an

expanded and integrated nurse turnover intention conceptual model in explaining the turnover intention among nurses.

In terms of methodology, the current study was pioneering in investigating the distinctive influence of both types of commitments simultaneously which were professional and organisational commitment. The output of the study attested that the influence of professional and organisational commitment on turnover intention differs. Organisational commitment was found to have contributed the most in the relationship of the overall turnover intention. Nonetheless, the results further confirmed that there was distinction between organisational and professional commitment. In this context, the findings contributed to the literature by highlighting the difference found in the commitment and further confirmed that professional and organisational commitment was distinctive.

Besides, the current study was also the pioneering in examining the role of exit choices in predicting turnover intention. Former studies had shed lights on the importance of exit choice (Homburg et al., 2013) and it was common practices for the human resource management to conduct exit interview and find out the subsequent exit destination or plan of the out-going employees. The results of the current study affirmed the significant influence of exit choice (i.e., alternative job availability) on turnover intention. The results provided imperative information to the nursing and organisational management to delay and halt the nursing staff from having the withdrawal thought (i.e., "intention to leave" thought). For instance, the study results revealed more than half of the participants indicated pursuing higher nursing qualification as their exit choice. In this context, nurses may not need to leave the organisation if the higher nursing education institutions were able to revise and design

nursing curriculum which tailored to the needs of the potential students and stakeholders.

Furthermore, hierarchical multiple regression analysis was used in the current study. The analysis method was used in the study because it generated the predictive value of each and individual independent variables (i.e., NPE, PC, OC, *nursing*-EC, and *non-nursing*-EC) on turnover intention and the different forms of turnover intention. The analysis results were important in identifying the contribution weightage of each variable. The hierarchical multiple regression analysis indicated that in the commitment pathway, NPE, PC, and OC explained for 14.6% of turnover intention, with socio-demographic variables accounted for 3.8% of turnover intention. OC (explained 8.7% of the variance in turnover intention) was the most influential towards turnover intention. Henceforth, higher priority on strengthening organisational commitment was needed when strategizing for staff recruitment and retention. Furthermore, elements of organisational commitment needed to be incorporated in the basic nursing education in order to cultivate the sense of obligation towards organisation.

In addition, in terms of the different forms of turnover intention, the hierarchical multiple regression analysis clearly highlighted the specific determinants for each form of turnover intention. The hospital management and administrator should focus on the aspects of improving NPE and organisational commitment in order to retain nurses. On the other hand, the healthcare organisation play significant role in preventing "brain drain" of the Malaysian nursing profession in view that the analysis revealed organisational commitment was the drive that pull the nurses from leaving the country. NPE and professional commitment were not the predictors as revealed in the findings of the hierarchical regression model. Furthermore, nursing

education and collaborative practice in the nursing profession play significant role in enhancing nurses' professional commitment. Nurses themselves need to have the professional affection in order to drive them to sustain in the profession. NPE and organisational commitment were not the predictors as revealed in the findings of the hierarchical regression model. The findings were novelty findings as the current study was pioneering in the investigations of the different types of nurses' turnover intention and its predictors. Figure 5.1 illustrated the proposed conceptual model to summarise the findings of the current study on the relationships among NPE, professional commitment, organizational commitments, and the different forms of turnover intentions.
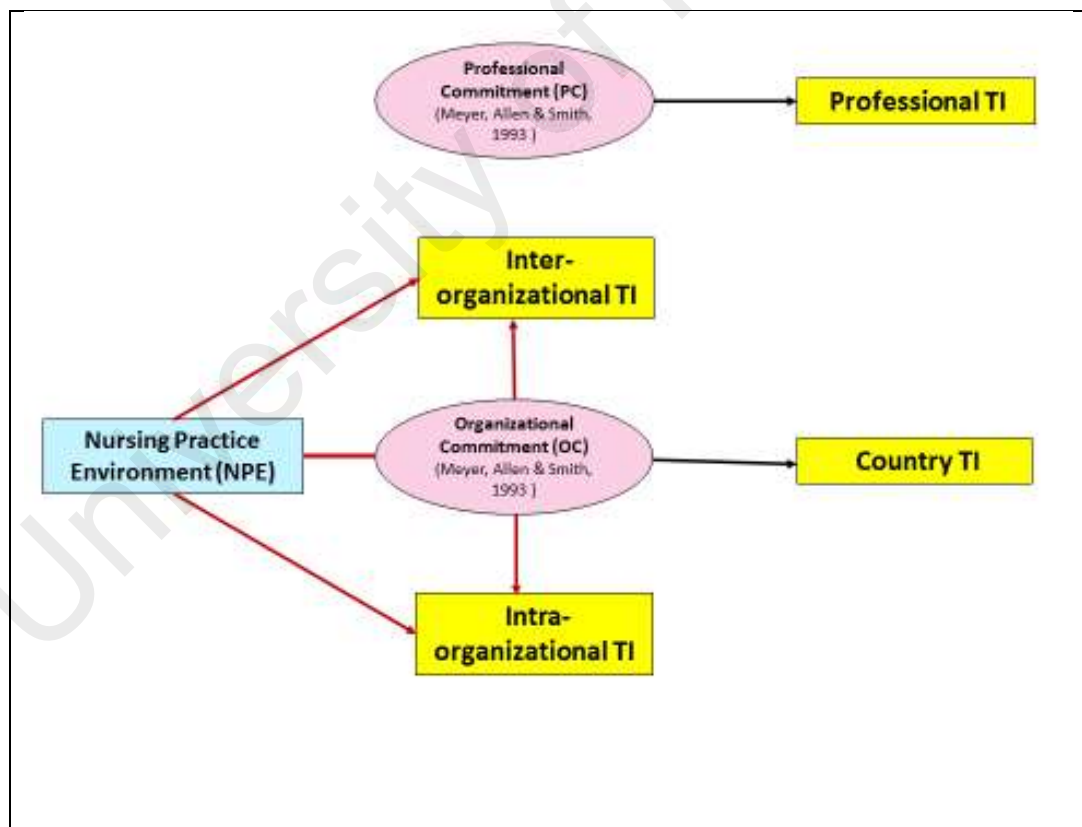

Figure 5.1. Conceptual model for NPE, PC, OC, and the different forms of TIs

On the other hand, in the exit choice pathway, the analysis indicated that NPE, *nursing*-EC, and *non-nursing*-EC explained for 44.5% of turnover intention, with socio-demographic variables accounted for 3.8% of turnover intention. *Nursing*-EC (explained 25.1% of the variance in turnover intention) contributed the most towards turnover intention. The findings on the influence of nurses' exit choices were found to be novelty as the current study was also pioneering in the investigations on the influence of nurses' exit choices on the different types of turnover intentions. Figure 5.2 illustrated the proposed conceptual model to summarise the findings of the current study on the relationships among NPE, Nursing-EC, Non-nursing-EC, and the different forms of turnover intentions.
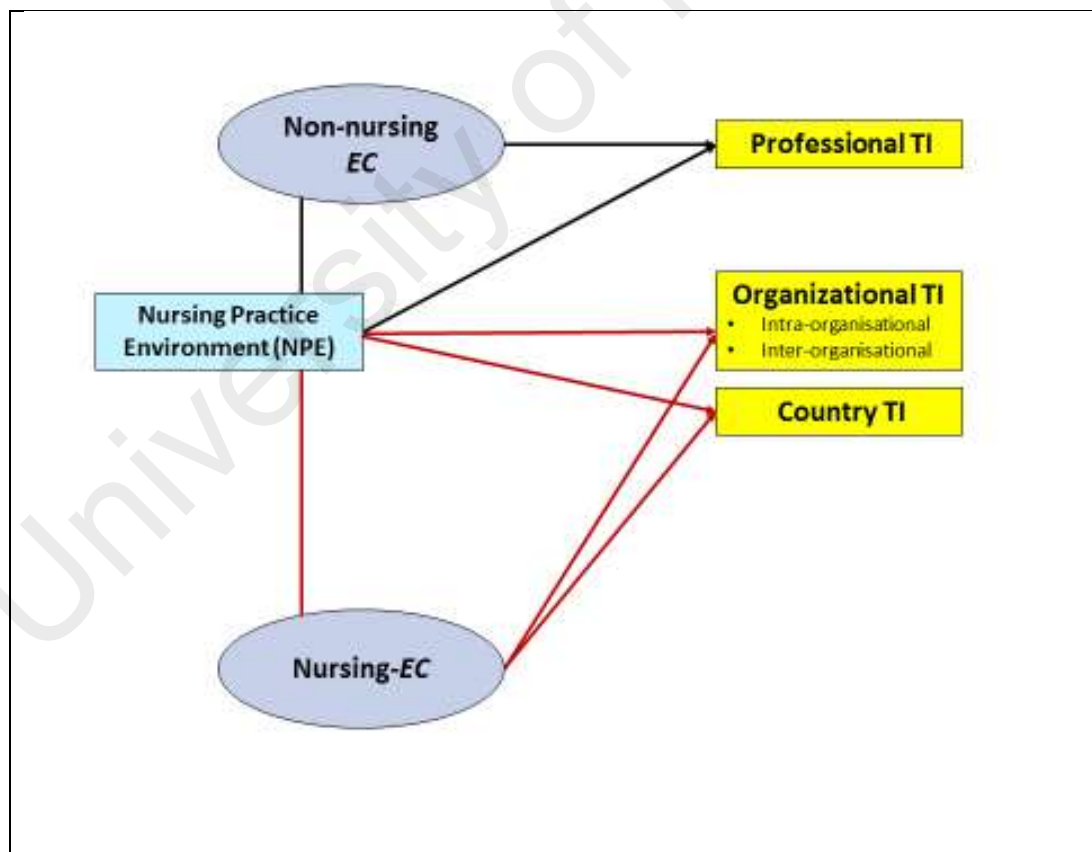

Figure 5.2 Conceptual model for NPE, Nursing-EC, Non-nursing-EC, and the different forms of TIs

Practical Implications

    Nursing practice and management. In terms of practical implications, the findings of the study contributed to the knowledge on the determinants that influences nurses' turnover intention. The findings provided crucial information and direction for the nursing practice and management to come out with appropriate interventions. The present study revealed that the overall nurses' turnover intention was influenced by monthly income and educational sponsorship bond. A multilevel analysis revealed that nurses with educational sponsorship contract were the cohort at higher intention to quit unit, organisation, country, and profession. Nonetheless, marital status and age (aged between 20 and 30 years old) were associated with country turnover intention while, working areas were associated with professional turnover intention.

    The results of the current study demand serious consideration since majority of the Malaysian private healthcare sector nurses were primarily younger, still serving their educational contract. In this context, it was important to empathize on the nurses' perspective. Most of the time, this young nurses were engaged with an educational contract bond as young as the age of 18 years old (the age when they enrolled to pursue their diploma in nursing after completion of Form 5 education). Furthermore, if the hospital which provide the sponsorship was also the same hospital that operate the nursing college, this cohort of nurses was easily remained in the setting for eight years (three years studying for a diploma while, five years serving their contract). The long duration of attachment within an organisation may lead to boredom and lack of drive to achieve in the organisation. Thus, the organisation management especially the ward managers play important role by implementing and suggesting appropriate interventions which can elicit and enhance nurses' experience in the organisation.

The hospital administrators play significant role in diversifying nurses' career experience. Hospital administrators or human resource management should explore opportunities which nurses can involve to enhance their nursing career experience such as providing subsidy/ incentives for nursing related education/ training, short-term internship/ mobility opportunity, and nursing role rotation (such as involvement in nursing related project: education, quality assurance, and community service). These opportunities may in one way or another replace their intention to exit and provide them to consider choices in which they can still remain in the unit/ organisation, country, and profession. Thus, early identification of their exit choices enables the organisation to strategies ways in preventing premature unit/ organisational, country, and profession exits.

Furthermore, the findings of the study confirmed that organisational commitment contributed the most in turnover intention. Furthermore, the findings revealed that organisational commitment significantly influenced intra-organisational, inter-organisational, and country turnover intention. Henceforth, healthcare organisations particularly private hospitals need to strengthen nurses' organisational commitment in order to reduce turnover intention since it has potential influencing nurses' professional withdrawal through professional commitment, as revealed in the results of the study which found significant positive correlation between professional commitment and organisational commitment. Furthermore, attracting and retaining nurses was indeed the most imperative goal of the private healthcare organisation since the results of the current study revealed that areas related to staffing and resources were found to be the highest concern among the nurses and have significant influence on organisational turnover intention.

In addition, improving nursing practice environment particularly in the aspects of enhancing nurse managers' ability in leading, and supporting nurses would definitely promote and elevate nurses' affective commitment towards their organisation in return. The findings of the study also affirmed that favourable NPE was significant predictor for organisational turnover intention. Thus, Gellatly et al. 2014) proposed that nurses' affective commitment can be strengthen through a person-centred approach and relationship-oriented leadership style among the nurse managers. Nurse managers who were sensitive and concern over the emotional needs of subordinates were able to reduce turnover intention in which, the current results revealed that the odds for nurses to consider leaving the unit, organisation, and country were as twice higher if their nurse managers were found to have inadequacy in terms of leading as well as supporting their nurses. Two-way appraisal system (i.e., nurses appraising nurse managers, and vice versa) may be useful in evaluating nurses' performance and nurse manager's role in leadership, and supportive role. In this system, both parties would be able to understand each other role better and complement one another.

In addition, the study found that the chances for nurses in considering leaving the organisation, and country were as twice higher if nurses were not involved with hospital affairs. Henceforth, the management of the nursing division and organisation as a whole need to understand that nurses need to be given the due recognition, and autonomy to govern their own professional practices (Lin et al., 2011). It is crucial for the nurses to experience the trust, justice, value, and support that the organisation has in them which in return will increase their trust in their nurse managers/ management. Thus, this may also improve their affective organisational commitment and reduce the organisational turnover intention.

Nursing education. Nursing education plays significant role in strengthening nurses' affective (emotional attachment towards profession/ organisation) and normative commitment (obligation towards profession). The high intra- and inter-organisational turnover intention was harmful to the whole of healthcare system as proposed by Krausz et al. (1995) that organisational turnover intention had serious connotation towards actual professional turnover. Furthermore, the findings of the study revealed that professional turnover intention was significantly influence by professional commitment. Professional commitment need to be instilled as early as during the nurses were pursuing their basic nursing education which leads them to the registration as registered nurses. A strong nursing education foundation would develop the affective commitment and affection towards nursing profession. Nursing students need to feel inspired and motivated. Hence, the existing pre-registration nursing curriculum requires refinement and re-designing in order to cater to the unique characteristics of the current cohort of nursing students. Nursing education should be borderless and not limited to classroom, clinical skills centre, and hospital/ clinical placement. The elements of commitment and sense of pride towards profession need to be incorporated into the curriculum.

The Malaysia Education Blueprint (2015-2025) (Ministry of Education, Malaysia, 2015) had encouraged the chief executive officers of the numerous national companies of the country to collaborate with the universities in enhancing the quality of the graduates. The similar concept can be applied into the nursing education in which directors or nursing/ nursing matrons should also work hand in hand with the nursing schools in enhancing the nursing graduates. The role of these nursing leaders is very important in inspiring and motivating the students and indirectly nurturing the aspect of affective and normative professional commitment. Furthermore, the nursing

leaders may also provide industrial attachment opportunities, enhance the relationship between the academia and industry (healthcare), and act as advisors for curriculum improvement in order to cater for the changes in the healthcare sector. Thus, it is also timely for the nursing education institutions to set up relevant industry advisory board in order to ensure the curriculum of the nursing academic programmes are in line with the demand and need of the stakeholders.

In addition, nursing profession appreciation activities should be integrated in the nursing curriculum such as participation in community service, nurse's day celebration (national, state, university, hospital or unit levels), interprofessional learning activities, and symposium/ conferences. Henceforth, the enhancement of affective domain would lead to the improvement in normative domain in which nurses (students and registered nurses) developed sense of obligation towards their profession as they socialisation in the nursing profession. The high degree of professional responsibilities would increase nurses' willingness to remain in the nursing profession.

Hence, results pertaining to nurses' exit choices be it related to nursing profession or vice versa serve as important direction to assist policymakers in constructing and improving existing policy and strategies of nurses' retention which targeting at the various forms such as unit, organisational, country, and professional. Based on the current results, advancing further nursing qualification was the most preferred exit choice. These results were very encouraging because it provides straight forward direction to the nursing education implications. It is timely that the higher nursing education providers and nursing profession regulatory body need to seriously consider in re-designing post-registration nursing curriculum which allows nurses to remain active in service while pursuing their advanced qualifications.

Firstly, the admission requirement for practicing nurses who wish to upgrade and advance in their academic learning should be reviewed and allowed some form of flexibility. Nurses' working experience should be taken into credit. The years of nursing experience and contribution made towards the nursing profession during their working tenure should be accredited as prior experiential learning for entry into advanced nursing programmes. Furthermore, self-learning through massive open online courses (MOOCs) should also be respected and recognized for credit exemption into appropriate programmme (Ministry of Education, Malaysia, 2015).

Secondly, a more flexible design of post-registration nursing academic programmes (i.e, bachelor and master degrees) should be initiated. The nursing education institutions should collaborate with healthcare sector in designing appropriate curriculum which matches with the demand of the healthcare sector. Sharing of manpower such as preceptors from the healthcare sectors should be recognised by the education stakeholders. If this was possible, nurses do not need to leave their unit and even organisation in order to pursue higher qualifications. Furthermore, the concept of "glocalisation" should be integrated in the curriculum in which nurses are inspired to think globally but act locally. Nurses genuinely are very much devoted to the country. If possible, they would hope to progress their career in the country. Thus, appropriate initiatives such as creation of relevant nursing career pathways need to be introduced so that nurses can be remained in the country.

Nursing research. Studies on Malaysian private hospital nurses' turnover intention, work environment, commitment, and exit choices were still very much at the initial stage. It was anticipated that the current study findings contributed to the private healthcare policymakers, administrators, ward managers, higher nursing education providers, and professional regulatory body to initiate efforts and processes

to address the nursing practice environment, commitment, and turnover intention issues found in the current study. Thus, the study suggested a conceptual model for turnover intention which incorporated the relevant predictors namely: NPE, professional commitment, organisational commitment, *nursing*-EC, and *non-nursing*-EC on turnover intention. The conceptual model of the study served as a starting point for future studies.

First of all, the findings of the study proposed two pathways for nurses' turnover intention: commitment and exit choice. In the current study, turnover intention was greatly influenced by exit choice be it choices related to nursing profession or vice versa, and followed by organisational commitment. The findings on organisation commitment were somewhat further confirming on the findings of existing literature. Nevertheless, the findings on nurses' exit choices provided new knowledge on the nursing turnover intention literature. Future studies were recommended to include exit choice in their investigations so that the concepts of nurses' exit choice and its outcomes can be further explored, and provide empirical evidence for the conceptual model. The conceptual framework can be expanded by analysing the paths of each exit choices. Henceforth, the use of the conceptual model has the ability to provide answers on "where do the nurses anticipated to go after they leave their current employment, country or profession?"

Next, longitudinal investigation was recommended for future studies so that the stability and trend of nurses' perception of nursing practice environment, commitment, exit choices, and turnover intention can be observed. Additionally, initiatives and interventions that have been implemented can be evaluated and further confirmed. The longitudinal research designs were useful to establish the causal relationship of nursing practice environment, professional commitment,

organisational commitment, exit choices, and turnover intention. In addition, mixed method or qualitative research approach may be commendable and useful in providing in-depth insights as well as triangulation on the trustworthiness of the research findings.

Recommendations

The research findings of the study provided important evidences on some of the challenging issues pertaining to the Malaysian private hospital nursing workforce. Furthermore, the findings pertaining to the exit choice provided clear direction for subsequent actions in order to counteract with the attributes which may have attracted the nurses to leave. In terms of theoretical and conceptual framework recommendations, the researcher recommended that the conceptual framework of the current study warrant updating, expanding, and refining. Future studies were recommended to replicate and adopt the updated and expanded conceptual framework proposed in the current study.

In the aspect of refining, the current study failed to establish the mediating effect of professional commitment, organisational commitment, and exit choice on turnover intention. Nevertheless, those variables were found to be predictors as well as mediators on turnover intention in former studies. Henceforth, a more rigorous research methodology such as longitudinal studies may be appropriate to validate the conceptual framework and establish the cause and effect among the variables. Furthermore, relevant determinants required further exploration in order to identify the effects on the relationship of turnover intention.

In addition, it was recommended that future studies to investigate turnover intention through the lens of both, organisational and professional perspectives. In this

context, the findings of the study provided clear platform that the commitment towards organisation and profession were distinctive. Therefore, future organisational studies need to seriously consider including professional commitment in their investigations particularly when the study population were related to highly professional or skilled personnel.

In terms of recommendations for nursing practice and management, the findings of the current study revealed significant directions which can be considered when planning for nursing workforce retention strategies. Nursing practice environment (particularly in the aspect of staffing, managerial support, and nurses' involvement in hospital affairs), professional commitment, and organisational commitment were found to be significant predictors for turnover intention. Henceforth, current, relevant, and appropriate strategies need to be meticulously considered in order to improve nursing practice environment, professional commitment, and organisational commitment.

The findings of the study revealed that the burden of serving education sponsorship contract for a long duration within units or organisations may have driven nurses to have the tendency thought of leaving as a result of boredom and lack of excitement. Thus, hospital administrators and nursing leaders play significant role in innovating new roles and experience enriching opportunity in order to sustain the excitement and interest of nurses to remain in the unit or organisation. Interventions that can be put into considerations include opportunity of ward rotation to allow nurses to experience the work and roles of different settings, involve nurses in different working groups (such as preparation of a workshop, health campaign, and hospital events) to improve nurses' sense of belonging, and staff mobility/ attachment scheme

with collaboration with other hospitals within same organisation or health related institutions (i.e., universities, research centres, non-governmental organisations).

On the other hand, in the context of organisational commitment, extrinsic motivators are still the main motivator. Extrinsic motivators are useful for short-term measure to attract other nurses to be recruited in the organisation, and at the same time would develop the continuance commitment of the existing employee. Private healthcare organisations may continue to offer competitive salaries, benefits (such as medical insurance scheme, dental benefits, annual leaves, and professional development packages), and contractual bonuses. Nevertheless, reimbursement or incentives for employees who choose to pursue their qualifications would be a better option in retaining employees than retaining nurses through servicing contract.

Alternatively, progression or promotion in career would be better option to encourage nurses to improve themselves. This was suggested in view that the current results found that nurses with educational sponsorship contract bond were found to have significantly higher likelihood to leave their unit, organisation, and country. Furthermore, initiative to retain talented employee (i.e., nurses) may include made known to the employee of the organisation's strategies and career pathways for their career prospect in the organisation. This strategy will instil the employees with sense of belonging towards the organisation which indirectly boost the affective domain of commitment when the employee experiences the care from the organisation.

In terms of nursing education, the findings of the study revealed that the most preferred exit choice among the nurses was to pursue higher nursing education. Henceforth, collaborative practice among all stakeholders including the organisations of the private healthcare, institutions of higher education, and Nursing Board of Malaysia, the professional regulatory body were crucial and strongly recommended.

The higher nursing education providers played significant roles in designing nursing education (such as post basic certificates/ advanced diploma in nursing specialty, undergraduate, postgraduate programmes) which were student-centred as well as nurses' friendly. The curriculum needs to be current, flexible, and simultaneously fulfilling the requisites and demand of the healthcare stakeholders. All stakeholders were obligated and have the responsibilities in designing such curriculum to meet the nurses' intrinsic needs which was imperative in sustaining their commitment and in return reducing their turnover intention. Additionally, nurses' prior work experience shall be credited and accepted for as part of the entry requirement of certain undergraduate and postgraduate programmes.

Conclusion

The healthcare sector whether it is public or private was expanding rapidly in order to meet the high demand of healthcare needs of the ageing population and escalating rate of chronic diseases. Nevertheless, Malaysian nurses were found to have the intention of leaving for various destinations. Research on the different forms of turnover intention (unit, hospital, country, and profession) and exit destinations were scarce. Henceforth, the study findings were valuable for the private hospital administrators, nursing leaders, higher nursing education providers, and nursing profession regulatory body.

The findings clearly indicated that nurses have some forms of turnover intention. The pattern of the turnover intention was found to be dominated towards the organisational level. However, it should not be taken lightly as the unit-level turnover intention was likely to predict the future professional withdrawal. Furthermore, the findings of the study further highlighted that the different exit

choices were found to have significant contribution on nurses' turnover intention. Thus, it is crucial for the respective stakeholders to initiate and implement appropriate interventions to halt the nurses from withdrawing their organisation, country, and profession. Further rigorous studies were required to strengthen the conceptual framework and provide more precise information to enhance and stabilize the nursing workforce of the country.

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LIST OF PUBLICATIONS

1 : Tang, W. M., & Abdul Rahman Idris. (2016). Nursing practice environment as perceived by the Malaysian private hospital nurses. *International E-journal of Science, Medicine and Education (IeJSME), 10*(2), 11-20.

2 : Tang, W. M., & Abdul Rahman Idris. (2016). Leaving intention and exit destinations among the Malaysian private hospital nurses. *International E-journal of Science, Medicine and Education (IeJSME), 10*(1), 24-35.