FACTORS INFLUENCING MOTIVATION AND BEHAVIOUR IN UTILISING PHARMACY INFORMATION SYSTEM AMONG PHARMACEUTICAL STAFF IN MALAYSIA

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INSTITUTE FOR ADVANCED STUDIES
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FACTORS INFLUENCING MOTIVATION AND BEHAVIOUR IN UTILISING PHARMACY INFORMATION SYSTEM AMONG PHARMACEUTICAL STAFF IN MALAYSIA

ABSTRACT

The study has been performed in order to evaluate the factors influencing motivation and behavioural intention in using the Pharmacy Information System (PhIS) that has been conducted among Pharmaceutical Staff in Public Healthcare in Malaysia. PhIS has been developed after previous Hospital Information System (HIS) in Malaysia but there were several issues after the implementation of HIS including the resistant and negative thinking due to the unexpected performance occurred after the system implementation. Thus, the study has been conducted in order to evaluate the factors influencing towards users' motivation and behavioural intention during the training session of the current system of PhIS. The research was using quantitative data and about 500 questionnaires have been distributed and collected among the Public Pharmaceutical Staff in Malaysia. However, according to the sample size needed, there were 310 respondents selected. These respondents selected among the Pharmaceutical Staff of Public Healthcare in Peninsular and East Malaysia to whom attended and represented their departments during the training. Based on the finding and analysis conducted, there were significant relationship between the teaching presence, cognitive presence and social presence. Each aspect in the study has been indicated positive relationship with each other in regards to the respondents' perception, motivation and behavioural intention in using the system. Only minority who were not agreed to the benefit of using PhIS in their workplace. It draws the conclusion that the respondents have shown motivation in using the system after the training conducted despite of the resistance attitude towards the implementation of the previous system. In the study, the PhIS users at the Government's Hospitals and Clinics in Malaysia show encourage feedback after the teaching, cognitive and social

presence; and it was recognized that motivation is necessary to encourage good performance to continuously using the system. However, it needs further support from the supervision, facility and system management in order to meet their job requirement. The management of hospital, particularly in Pharmacy department need to be more curious and continuously monitoring the PhIS performance. It is because insufficient support from their subordinates could in turn hindering good performance. The study suggests possibilities for future research in order to investigate the work performance among the staff that using the system in their facilities. The motivation expressed is hopefully could enhance the job performance among the system users in their workplace. There were several of previous studies have been conducted in Hospital Information System (HIS). However, the study conducted has indicated that most of the government hospitals and clinics staff members were still motivate in utilizing the PhIS application despite of the issues occurred from the previous HIS implementation, which influenced by the factors that keep employees feel motivated in relation to the current information system implementation.

Keywords: Motivation, Behavioural Intention, Pharmacy Information System, Pharmaceutical Staff in Malaysia

FAKTOR-FAKTOR YANG MEMPENGARUHI MOTIVASI DAN KECENDERUNGAN UNTUK MENGAPLIKASI SISTEM MAKLUMAT FARMASI DALAM KALANGAN KAKITANGAN FARMASEUTIKAL DI MALAYSIA

ABSTRAK

Kajian ini telah dilakukan untuk menilai faktor-faktor yang mempengaruhi motivasi dan kecenderungan diri dalam menggunakan *Pharmacy Information System* (PhIS) yang telah dijalankan dalam kalangan kakitangan Farmaseutikal di hospital kerajaan dan klinik di Malaysia. PhIS telah dibangunkan selepas *Hospital Information System* (HIS) dilaksanakan terdahulu di Malaysia, tetapi terdapat beberapa isu selepas pelaksanaan HIS termasuk sifat penolakan dan pandangan negatif disebabkan oleh prestasi yang tidak dijangka berlaku selepas pelaksanaan sistem. Oleh itu, kajian ini telah dijalankan untuk menilai faktor-faktor yang mempengaruhi motivasi dan tingkah laku pengguna semasa sesi latihan sistem yang baru iaitu PhIS. Kajian ini menggunakan data kuantitatif dan kira-kira 500 soal selidik telah diedarkan dan dikembalikan dalam kalangan kakitangan Farmaseutikal di Hospital dan Klinik kerajaan di Malaysia. Walau bagaimanapun, mengikut saiz sampel yang diperlukan, hanya 310 responden dipilih. Responden ini dipilih dalam kalangan kakitangan kerajaan Hospital dan Klinik di Semenanjung dan Malaysia Timur yang telah menghadiri dan mewakili jabatan mereka semasa latihan PhIS. Berdasarkan hasil penemuan dan analisis yang dijalankan, terdapat hubungan yang signifikan antara kehadiran pengaruh pengajaran, kognitif dan sosial dalam kalangan pengguna. Setiap aspek yang dikaji menunjukkan hubungan positif antara satu sama lain berkaitan dengan persepsi responden, motivasi dan kecenderungan dalam menggunakan sistem. Hanya minoriti yang tidak bersetuju dengan manfaat menggunakan PhIS di tempat kerja mereka. Sebagai kesimpulan, responden telah menunjukkan motivasi dalam menggunakan sistem selepas latihan yang dijalankan walaupun wujudnya sikap

penolakan terhadap pelaksanaan sistem sebelumnya. Dalam penyelidikan ini, pengguna PhIS di Hospital dan Klinik Kerajaan di Malaysia menunjukkan maklum balas positif selepas pemberian pengajaran, kognitif dan sosial; dan diakui bahawa motivasi diperlukan untuk menggalakkan prestasi yang baik untuk terus menggunakan sistem. Walau bagaimanapun, ia memerlukan sokongan lanjut daripada pihak pengurusan dan penyeliaan, kemudahan dan pengurusan sistem yang baik untuk memenuhi keperluan pekerjaan mereka. Pengurusan hospital, terutamanya di Jabatan Farmasi perlu lebih menumpukan perhatian dan terus memantau prestasi aplikasi PhIS. Ini kerana sokongan yang tidak mencukupi daripada setiap kakitangan boleh menjejaskan prestasi yang baik. Kajian ini mencadangkan kemungkinan penyelidikan di masa hadapan untuk memantau prestasi kerja dalam kalangan kakitangan yang menggunakan kemudahan sistem PhIS dalam pekerjaan mereka. Motivasi yang dinyatakan diharapkan dapat meningkatkan prestasi kerja dalam kalangan pengguna sistem di tempat kerja mereka. Terdapat beberapa kajian yang telah dijalankan mengenai Sistem Maklumat Hospital pada masa lalu. Namun, hasil kajian ini dilihat mampu merapatkan jurang yang ada antara pengguna dan sistem maklumat di sektor ini yang masih menunjukkan motivasi walaupun menghadapi cabaran dan isu penggunaan daripada sistem sebelumnya. Selain itu, kajian ini juga dapat mengetahui lebih lanjut mengenai faktor-faktor yang mendorong motivasi dan kecenderungan penggunaan sistem dalam kalangan para pekerja dengan pelaksanaan sistem informasi semasa.

Kata kunci: Motivasi, Kecenderungan Diri, Sistem Maklumat Farmasi, Kakitangan Farmaseutikal di Malaysia

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ACOT	:	Apple Classrooms of Tomorrow
BI	:	Behavioral Intention
COI	:	Community of Inquiry
CD	:	Compact Disc
DPTB	:	Decomposed Theory of Planned Behaviour
EA	:	Early Adopters
EHR	:	Electronic Health Record
etc	:	Et cetera
HIS	:	Hospital Information System
ICT	:	Information and Communication
IT	:	Information Technology
ITS	:	Information Technology System
MF	:	Mainstream Faculty
PLS-SEM	:	Partial Least Square and Structural Equation Modelling
PBC	:	Perceived Behavioural Control
PhIS	:	Pharmacy Information System
SP	:	Social Presence
THIS	:	Total Hospital Information
TPB	:	Theory of Planned Behavior
TDI	:	Theory of Diffusion of Innovation
TRA	:	Theory of Reasoned Action

CHAPTER 1

INTRODUCTION

1.1 Background of Study

1.1.1 Implementation of Information System

Implementation defines as a "*specified set of activities designed to put into practice an activity or program of known dimensions*" (Fixsen et al., 2005, p. 5). On the other hand, the definition of implementation also refers to "*active and planned efforts to mainstream an innovation*" (Greenhalgh et al., 2004, p. 582). Throughout the time, the implementation process needs objective with purposeful activities which can be described and evaluated by an external observer. The changing and implementation process permeates the "*human services infrastructure*" (Fixsen & Blasem, 2009, p.1). In regards to information system, it is need to be inducted and implemented into organization by gradually putting theories from teaching presence into practice (Karakoyun & Lindberg, 2020).

At the meantime, the process of change in information services and technology will be characterized by influencing factors such as unpredictability of the services and diversity of staffing personality. The changing working environment is needed as an ubiquitous element of organizational life. By understanding the factor(s) of how interaction and response to change occurs, will determine the steps of how to increase the level of motivation to respond effectively and thus decreasing the level of change resistance. These two aspects are crucially needed to define the level of success or failure towards the organizational change.

The integration of technology according to organizational change required professional skills in order to influence system users beyond necessary Information

System skills, resulting in minimal resistance towards change and behavior. As for examples, Information System related skills are required to perform tasks such as looking for information on the Internet, through search engines, software for presentation programs, office programs, and so forth which vital in any operation or task force in organization (Aslan & Zhu, 2017)

1.1.2 Change and Implementation of System

According to the change and implementation of system, the government hospital and clinics in Malaysia has been implemented the new hospital system which called as Pharmacy Information System (PhIS). It is a current information system that has been developed and implement to replace the previous Hospital Information System which has been introduced since 1994 to hospital management in private and government sectors in Malaysia. Prior, there were many reports of confusion among users toward the concepts and terminology of previous Hospital Information System (HIS) thus the design and development of a new system to meet the requirement of government hospital and clinic in Malaysia. In 1999-2000 when it was first introduced to the subject of Total Hospital Information System (THIS), there were various related articles reported on what a hospital management system is meant to be.

At overall, related hospital management system deals with IT, medical records (Sharon, Jennifer & Diana, 2012; Jones et al., 2014; Meeks et al., 2014, Nur Azzah, Noraziah & Noorhayati, 2017; Spetz, Burgess & Phibbs, 2014; Wager, Lee & Glaser, 2009), and information technology that has been implemented in various hospital, department setting and capacities including system applications analyst, in collaboration with the clinical and Information Technology (IT) unit. However, there were many hospitals had been adapted after the implementation and usage of it.

By comparing to the HIS feature and requirement with the new system development, Pharmacy Information System (PhIS) is an Information and Communication Technology (ICT) application system that has been implemented and to be applied thoroughly in all government hospitals and clinics in Malaysia. This new system designed and developed to best suits the requirement by Ministry of Health in Malaysia. The implementation of Phase 1 PhIS has been introduced since 2011 in government's hospitals and clinics under the Ministry of Health. In regard to the application of this Pharmacy information system, it is accessible to Pharmaceutical staffs or authorize health service providers which are involving Pharmacists, Assistant Pharmacist, Medical Officers, Nurses and Medical Assistant to whom utilising the system.

In fact, the motivation towards the application of the new system is crucially needed at the vital unit care of pharmacy department and hopefully will be more efficient and user-friendlier in health management and information systems. This information system is expected to optimize the service quality and increase the level of performance dealing with information management, specifically in pharmacy unit management. A study by Fixsen et al. (2005) has emphasized the mobilizing support, consensus, and commitment in conjunction with specifying the feasibility of how changes management will be accomplished within the existing systems. Exploration, adoption, built in, and preparation prior to implementation of an innovation are the necessary components of changing management toward the implementation of new system replacing the old and conventional tools (Kilinc, Tarman & Aydin, 2018). During the process of implementation on adherence towards the adoption model, the motivation and attitude toward innovation and change were addressed to be more focused.

1.1.3 Motivation and Definition

Motivation as define in Lindner (1998, p. 3) is referring to "*the psychological process that gives behaviour purpose and direction, a predisposition to behave in a purposive manner to achieve specific unmet needs, an unsatisfied need, and the will to achieve, respectively*". Meanwhile, Young et al. (2000, p. 1) suggested motivation in difference routes, according to each individual perception. In the study, whenever to ask somebody in the city, you may get feedback such as "it's what drives us" or "it's what make us do the things we do." In the other words, motivation is the inner level of encouragement, direction and commitment to accomplish any task or job. Meanwhile, Halepionota (2005, p. 16) defines motivation as "*a person's active participation and commitment to achieve the prescribed results*." In addition, Halepota referring motivation as a state of flexibility toward adaptability in order to increase self-performance and productivity at different occasions and without any procedure that can convince the best outcomes in every situation.

In brief, the terminology of motivation could be defined by dividing the processes occurred into three main parts as stated by Greenberg and Baron (2000, p. 190);

"*The first part looks at arousal that deals with the drive, or energy behind individual(s) action. People turn to be guided by their interest in making a good impression on others, doing interesting work and being successful in what they do. The second part referring to the choice people make and the direction their behaviour takes. The last part deals with maintaining behaviour clearly defining how long people have to persist in attempting to meet their goals."*

Motivation as referred to the above definitions is coherent or less coherent with the basic concern of the presence factors or events that able to encourage, guide and direct a particular person to behave or not behave during the situation occur or future event.

However, in return someone need to pay back in most appropriate way. It is merely to say that motivation is crucially needed in order to be strong in facing any obstacle ahead while doing any task or in daily activities. However, the level of motivation may increase or decrease individually according to their surrounding influencing factors such as financial condition and social factors besides inner state or psychological factors.

Meanwhile, by referring to more realistic and simple definition of motivation as stated by Greenberg & Baron (2003), motivation is to consider most situation encountered and adopted by individual that affecting his / her performance. Here, Greenberg & Baron defines motivation as:

"*The set of processes that arouse, direct, and maintain human behaviour towards attaining some goal*". (Greenberg & Baron, 2003, p. 190)

1.1.4 Motivation for Performance Appraisal

In human resource management, performance appraisal is one of the most important aspects to be considered and accomplished logically and in systematic way. Based on the previous report acquired through performance appraisal, it gives establishments to enroll and choosing a new information system application, pre-implementation training and system improvement. Other than that, also to keep motivating and enhance the job performance regardless of every challenge and trouble occurred due to system performance.

A human resource is crucially needed a strong management toward performance appraisal, hindering all obstacles ahead, and to through away all the trash (s) inside one mind that appear as an inappropriate element toward achieving significance level of performance among employee and the overall organization. This is according to the

absence of formal or standard mechanisms in assessing job performance but, yet to be revised as the vital procedure to improve thus enhancing the quality level among healthcare providers (Armstrong & Baron, 1998).

As defined by DeVries et al. (1981), performance appraisal is a procedure in which enable employers to evaluate and appreciating accordingly employees' job performance towards increasing their motivation level and positive behavior in workplace throughout the duration of work. It will eventually keep their good job performance and increasing productivity and quality in their job. Job performance as stated in the study by Briscoe & Schuler (2004) can be characterized with the presence of several elements of motivation (as triggering aspect), self-efficacy, attitude in workplace and professionalism. Another study also established on particular factors affecting employees' job performance in comparison to another staffs. Among the factors contributing to this performance as stated by Dowling, Welch and Schuler (1999) were include salary, incentive, job description; higher management support; the workplace and the culture at workplace itself.

1.1.5 Factors Influence Motivation

The nature of change could be influenced by various factors but the degree of motivation toward change mostly depends to individual involvement. The implementation of new system or procedure in working environment is among the changing process. An individual's feedback or interactions will determine either the process of change experience is valued and absorbed or dismissed. However, the personal experiences of the individuals need to evaluate which involving responses, motivation factor, and intervention that will be personalized for each individual during the change and improvement process (Hord et al., 2006). Each individual that involves with the process

of change might experience different stages based upon their skills, strengths and weaknesses according to the initiative or innovation for improvement. Skills, feelings and motivation of individuals probably would be change with the experience level thus affecting the individual improvement.

Meanwhile, *integrated theory of change* (Hernandez & Hodges, 2003) is defined as performance implementation that has given benefit to the intended consumer. Performance implementation could be evaluated as the program and practices launched during the initial stage of implementation and within the implementation phase. Here, the change may occur as elsewhere in organizations, which involves transferring mechanism from one state to another state that involved several stages, but the last product is unpredictable. At the whole figure, it involves any process of replacing the previous procedure and policy to advance materials or procedure of doing any task or responsibility (Kilinc, Tarman & Aydin, 2018).

1.2 Problem Statement

The staffs as human resources of most organizations have become important value in affecting the organization's prosperity. In the technology-based century, human resource is viewed as the most imperative resource of any organization (Hafiza et al., 2011). The job performance as evaluated from each employee / staff, including managers, indicated the quality of overall performance of the human resource management as reported in the study of Hellriegel and Slocum (2007, p. 55) stated that, "*Low job satisfaction can result in costly turnover, absenteeism, tardiness, and even poor mental health*". In the study, if the staffs encounter problem in utilizing the PhIS system, it will surely be resulting on their motivation and subsequently on their job satisfaction. Perception towards innovation

is vital and plays as essential variable in predicting the outcome of technology integration in working environment (Aslan & Zhu 2017) and supported by Habibi et al. (2018).

Since most of the organizations tend to be worried about what ought to be done in order to accomplish better job performances, it implies giving close consideration regarding how to encourage employee according to motivating forces, working condition, rewards and significantly their tasks and the organization setting inside which to complete according to their job description. Without increased level of motivation and morale of the employees, the organization risks losing valuable employees and will be at a disadvantage in attracting potential top talents employee. Thus, it is crucially needed to keep improving the quality of instruction towards employees by considering an essential concern with many challenges. Continuous study toward practice of facilitating learning of new system and improving performance in organization is vital for job performance and overcome various challenges in organization or workplace (Armstrong, 2010; Dessler, 2003; Christensen & Knezek, 2017; Fathi & Ebadi, 2020). Here, the motivation among the hospitals and clinics staff at their workplace with the facility provided (utilizing PhIS devices) is crucially important.

Based on the study conducted by Hafiza et al. (2011), employee performance can be affected by several factors such as the opportunities of training and development, conditions in workplace, relationship between employer-employee, security in workplace; company incentive and increment for performance appraisal toward excellence performance among staff. However, incentive and increment are among the most prominent factors that influencing staff's performance. These type of motivation factors are the most extreme significance and also supported in the study conducted by Carraher, Gibbson, & Buckley (2006). In order to accomplish it, employee individually needs to adapt with social routines and have to be built in using ICT for expectation of encountering a new challenge in their workplace. Thus, ICT built in, and adaptation is

crucially needed to become alternative devices and option aside from previous conventional tools in aim to enhance their performance (Kim et al., 2013; Kilinc, Tarman & Aydin, 2018).

Meanwhile, motivation as explained by Page (2008) as the mechanism to drive individual's direction, intensity and continuous commitment in order to achieve on his / her objective. In regard to this objective, individuals, societies and countries are crucially needed to keep their physical health and good environment in workplace toward achieving the vision and mission of organization (Amponsah & Dartey, 2011).

A good interaction with clients or customers plays important roles toward employees' performance. Likewise, organizations need to comprehend ideas, for example, commitment and fulfillment among staff and how the levels of commitment and fulfillment identify with consumer loyalty and generally towards the aspects that encountered by client/s (Newman, Maylor & Chansarkar, 2001). They are various industries (e.g., financial services, retailing, food and beverage service, etc.) requiring the service of staff / employee to be smoothly operated and managed, specifically regarding the service of health care providers. Meanwhile, to work with ICTs is often difficult because some ICTs are new for some users as well as individual and thus required teaching and learning to adapt with built in system of ICT; enhancing their job performances through the usage of a new system which has changed in management of their routine tasks (Kilinc, Tarman & Aydin, 2018; Rahmawati, Suryani, & Akhyar, 2020).

Health care administrators are progressively standing up to the intricate interrelationship amongst enlistment and maintenance of medicinal services experts, and the nature of care and patient fulfillment encounters. The circumstance is especially intense according to the insufficiency of nurse that reported worldwide (Newman, Maylor

& Chansarkar, 2001). Moreover, most of the health care providers tend to look on incentive and financial benefits without concerning more in order to increase their performance on their quality care as part of their responsibility as healthcare providers (Love, Revere & Black, 2008).

Meanwhile, the presence of technology and infrastructure are expected to improve the quality of healthcare towards the best performance among staff members. Based on the study conducted by Atkins et al. (1996) and Fahad (2005), employees with low level of motivation in workplace tend to give bad impact on their job performance. As a healthcare provider, he / she might tend not to treat the patient(s) in a good manner thus worsening the patient's condition. Here, the level of quality care among healthcare providers are crucially needed in order to deliver the best services to every patient and subsequently enhancing the quality level of healthcare sector particularly the government hospitals and clinics in the study.

According to Love, Revere & Black (2008), there were several studies have shown the relationship between staff's performance and patient satisfaction. However, performance appraisal particularly in monetary benefits were undeniable to enhance good motivation level in order to serve patients much better among the healthcare providers. This supported by previous study whenever the expense and incentive have been decreased among the healthcare providers, the level of job performance among them were also affected (Brown, 2002).

The specification of performance appraisal criteria is a continuously monitoring effort. Among the aspects to be focused are attitude in workplace, behaviour and job performance. Attitude and behaviour at workplace conventionally looked like a self-appearance, personality, self-confidence and individual vision aside from job-related behaviours or job performance. Notwithstanding, important activities related to job,

attitude in workplace and job performance observed in person's performance as the activities dealing with behavioural approaches (Chandra & Frank, 2004; Chandra, 2013).

Based on Behavioural Anchored Rating Scales (BARS), the different levels of performance scale have been explained the function of this application and current approach has been initiated toward it. As for example, the measurement scale to assess the behaviours of patient with chest pain is among the list in Behavioural descriptions, by evaluating the low level to high level and borderline state. This effort requires a great responsibility and among the procedures involved in the development of guidelines in clinical practice.

Meanwhile, in order to provide a better and more efficient pharmacy system for healthcare provider and patients, the Health Ministry has currently implemented the Pharmacy Information System (PhIS). As reported in The Sun Daily (2016), Datuk Seri Dr S. Subramaniam as the Minister in charge has mentioned about the purpose of the system developed, which is to encourage the usage of Information Technology in the health service and pharmacy management system. It is also involving tender management system for medicine and non-medical supply in all the ministry's facilities. It will be implemented in almost 1,300 health ministry facilities in the country, including 137 hospitals, 802 clinics and 141 district health offices. He has also mentioned that an efficient system is needed to cope with the increasing number of patients and medical prescription dispensary, which increases about 4% yearly. However, instead of all the purposes of system implementation, there were various perceptions received from users during the training implemented on this system information usage. Perception needs to be scrutinized which it could give impacts as essential variable in predicting technology integration in organizations as supported by study Aslan & Zhu, 2017 and Habibi et al., 2018).

Based on pilot study conducted by the researcher among pharmaceutical staffs towards Pharmacy Information System in their facility; there were different perspective and feedback reported in using this new information technology which will be used to replace their current system or manual procedure. Some of them also expressed on low acceptance toward training of using this software in their daily activities because of time consume of using the new system that they need to apply soon. This presumption mostly reported from hospital staff to whom have been experienced in using the previous Hospital Information System (HIS) as stated in the study by Hafiza *et al*. (2011).

Furthermore, some users also reported that there was insufficient manpower in their facility to perform their duty by using systems and at the same time need to deal with many patients. Here, they were also reported that it will increase their workload for them whenever they must update anything about their daily job in a computerize system aside some of the manual procedure that they need to continuously perform such as reporting and updating the drug or non-drug stock in the bin card as manually procedure for offline reference. Here, the changing process of implementation is complex to various factors which might influence and lead to initial difficulty from transforming systems to changing behaviors especially among veteran category of users by reorganizing the contexts of the institution and daily tasks.

Based on some of the users' reports from the study conducted, some facility and hospital that had been implemented the information system previously has still encountered technical problem which need to configure such as processing time took quite a long duration causing their job pending or the procedure perform did not run smoothly through the system. Some of the users were also mentioned that this system being implemented is only at pharmacy level, prescriptions will still be written manually. However, all the manual processes will remain same, but with advance procedure that

will be implemented: in transcribing the prescription to patient. The manual prescription will be transcribed into the system by a pharmaceutical staff. This is to facilitate the stock checking purpose and data statistic for collection purpose. This system will be executed in the outpatient and inpatient pharmacy consistently and should be refreshed whenever dispensing another medicine to patient.

All of these reported negative perspective and bad presumption of using this information system if continuously will cause a bad impact. Thus, it is crucially need to bridge the gap between current management and working environments with available system-performance technologies by identifying the possible causes of low motivation and negative behavioral towards change. This type of response and attitude towards using this new technology will become an issue or unwanted result which if left ignored potentially will affecting their job performance. Employees may embrace or could not accept the technology directly or passively accept the usage of system. The factors influence had to be determined to locate solutions to overcome negative feedback and encourage the successful implementation of Hospital System (Sharon, Jennifer & Diana, 2012).

Subsequently, in order to standardize the implementation of the system, there might be a few changes in term of organizational structure to adapt with the current requirement in system application. This situation may challenge the status quo and it might challenge the values and perceived rights of hospital staff to whom work to use with it. There were various issues and challenges reported among the hospital staff in certain facility in using the HIS. For some staff, this change is welcome as a challenge and new things that refresh their mind compare to another system (if have) used before and make them curious to know on how far it will benefit them in facilitating their job. These people, among the healthcare provider considered as system adopters and ready for

change, tend to welcome and embrace the challenge of change enthusiastically (Nur Azzah, Noraziah & Noorhayati, 2017).

Meanwhile, some of the PhIS users tend to more prefer remaining in their comfort zone after adapted with the previous manual procedure or system used before. Some users responding neutrally to change by seeking to test the system procedure and examine the changes and benefits before further response. However, for some users, the earlier negative presumption about the new system change and implementation may threaten their motivation level, values and understandings regarding system implementation in their facilities which will become unsettling issue if there is no further action to avoid it. Thus, the level of motivation among users due to the system usage is crucially needed to evaluate in order to figure out the effect of current system into the healthcare providers' job performance in the future.

By understanding how to guide pharmaceutical staff and support staff through systems change process in order to enhance the culture and environment of an institution that nurtures staff in an organization is not a minor challenge. To embrace the challenges of change is to embrace change as a process in which the adults functioning in the institution or organization alter their behavior to facilitate developmental growth in themselves and their colleagues. Here, change is personal within everyone involved with the innovation of current information system. Since change is so unique to the individuals involved within the process of change, how to measure the degree of which an innovation has been implemented presents additional challenges (Hord et al., 2006; Christensen & Knezek, 2017).

In these attempts, application of PhIS is regarded as a new approach for upgrading the delivery of any information, configuring and troubleshooting in regard to system usage in order to overcome any challenges. Application of ICT consists of the utilization

of a computer with streaming the Internet (for maximize usage) with the presence of computer software and hardware; and a set of devices that able to transform the raw data or information in forms of audio, video, text, and images into digital formats (Fathi & Ebadi, 2020).

Based on the observation of current training in this study during the system pre-implementation, pharmaceutical staff or practitioners experience insecurities during the initial phase of implementing this Pharmacy Information System and need additional guidance to overcome personal and external barriers to the change and implementation process. Among the challenge and barriers during the initial implementation stage of this new practice are lack of basic knowledge and application of the new system, fear of change or commit doing any error, forgetting tendency of system procedure (especially among the veteran staff), and question of change in their operational procedure. These opposing forces combining with the complexities of learning new practices produces a snowball effect that has the capacity to stall or possibly disturbing the implementation process of an intervention or innovation by using this new system in their job.

There were many responses and expressions in training session activities may be espoused through the adoption of procedures to enable training and supervision, update information, and collaborate with the new requirement of implementation. System implementation combined with current operational procedure that might give a few amendments with manual procedure which supposed to give benefits of applying it. However, there is need to evaluate or count how far the current system implementation give them advantage. From the recent report conducted by researcher through pilot study, transforming organizations with the innovation applied and changing employee behavior was still continuously monitoring as there are pros and contras reported during the training course of pre-implementation of this new system. Here, there is crucially needed

to evaluate the changing process in line to evaluate their perspective merging with the implementation of the new system innovation (Aslan & Zhu 2017; Habibi et al., 2018).

Here, employees continue to struggle with new technology because of continuously upgrading and advance level of technologies which reported from the pilot study conducted currently. It is become a controversial issue whether the new system would increase the pressure in workplace thus discouraging employees from developing or to keep being competitive with their skills in theory and practical for organizations (Karakoyun & Lindberg, 2020). The changing process is crucially needed to be deeply understand on how change occurs specifically within pharmacy management.

It is important for understanding the forces that drive change and for identifying the personal and institutional interests involved in the process of adopting changes in the pharmacy management systems. Without any concern or consideration on how the socio-institutional environment in organization will response or react toward this changing style of management, it is worried that it might be able to give bad result which may influence negative behavioral towards change in their working environment, procedure related and unwanted impact in their professional development (Behavioural Change, 2016). Therefore, employee themselves need to be mentally prepared and be knowledgeable on the application of new built in ICT system in their facility for the expectation of meeting new challenges in regards to the system features and functions and to thus transformation from conventional to modern technology (Kilinc, Tarman & Aydin, 2018), from previous method or system to PhIS in this study which needs gradually transfer from theories into practices by considering the related influencing factors of usage (Karakoyun & Lindberg, 2020)

1.3 Purpose of Study

The purpose of the study is to investigate and develop a further understanding in regard to users' perception towards managing their job in line with the implementation of new system of Pharmacy Information System in relation to their professional development. The perception will be evaluated into the various aspects of triggering event, exploration, integration, resolution, emotional expressions, open communication, group cohesion, instructional management, building understanding and direct instruction.

Specifically, the study aims to identify the factors influencing the government hospital and clinic Pharmaceutical staffs' motivation and behavioural intention to utilize the PhiS application in managing their daily job in more effective way. Thus, understanding the human motivation and behavioural intention to use the PhIS is the focus of this study (Candra, 2013).

1.4 Research Objectives

There are three (3) research objectives in this study to conduct.

1.4.1 To examine the overall perspective among users which affecting users' motivation towards Pharmacy Information System implementation after the teaching presence (instructional management, building understanding, and direct instruction) conducted among the Pharmaceutical staff at Public Hospital and Clinic in Malaysia.

1.4.2 To identify cognitive presence (triggering event, exploration, integration, resolution) affecting users' motivation towards Pharmacy Information System.

1.4.2.1 To identify the effect of triggering event on users' motivation towards Pharmacy Information System.

1.4.2.2 To identify the effect of exploration on users' motivation towards Pharmacy Information System.

1.4.2.3 To identify the effect of technology integration on users' motivation towards Pharmacy Information System.

1.4.2.4 To identify the effect of resolution on users' motivation towards Pharmacy Information System.

1.4.3 To investigate the relationship between social presence (emotional expression, open communication and group cohesion) affecting the users' perspective and motivation towards applying the Pharmacy Information System in their daily job.

1.4.3.1 To investigate the relationship between emotional expression affecting the perspective of users in applying the Pharmacy Information System (in their daily job)?

1.4.3.2 To investigate the relationship between open communication affecting the perspective of users in applying the Pharmacy Information System (in their daily job)?

1.4.3.3 To investigate the relationship between group cohesion affecting the perspective of users in applying the Pharmacy Information System (in their daily job)?

1.5 Research Questions

These research questions were provided in order to guide into this study.

1.5.1 What is the overall perspective among Pharmaceutical staff after the teaching presence (instructional management, building understanding, direct Instruction) conducted affecting their motivation towards using Pharmacy Information System?

1.5.2 What is the relationship between cognitive presence (triggering event, exploration, integration, resolution) affecting users' motivation towards using Pharmacy Information System?

1.5.2.1 Is there any influence on users' motivation after the triggering event conducted on system usage?

1.5.2.2 Is there any influence on users' motivation after the exploration of system module and function conducted?

1.5.2.3 Is there any influence on users' motivation after the Integration performed due to system usage?

1.5.2.4 Is there any influence on users' motivation after the resolution performed due to system usage?

1.5.3 What is the relationship between social presence (emotional expression, open communication and group cohesion) affecting the users' perspective and motivation towards applying the Pharmacy Information System in their daily job?

1.5.3.1 What is the relationship between emotional expressions affecting the perspective of users in applying the Pharmacy Information System (in their daily job)?

1.5.3.2 What is the relationship between open communications affecting the perspective of users in applying the Pharmacy Information System (in their daily job)?

1.5.3.3 What is the relationship between group cohesion affecting the perspective of users in applying the Pharmacy Information System (in their daily job)?

1.6 Hypotheses

There are three (3) hypotheses in this study.

H_1 1 There is a significance relationship between the cognitive presence (triggering event, exploration, integration, resolution, behavioral intention) and attitude among Pharmaceutical staff towards using Pharmacy Information System.

H_1 2 There is a significance relationship between the teaching presence (instructional management, building understanding, direct instruction) and subjective norm among Pharmaceutical staff towards using Pharmacy Information System.

H_1 3 There is a significance relationship between the social presence (emotional expression, open communication, group cohesion) and perceived behavioral control affecting the motivation level among Pharmaceutical staff towards using Pharmacy Information System.

1.7 Conceptual Framework

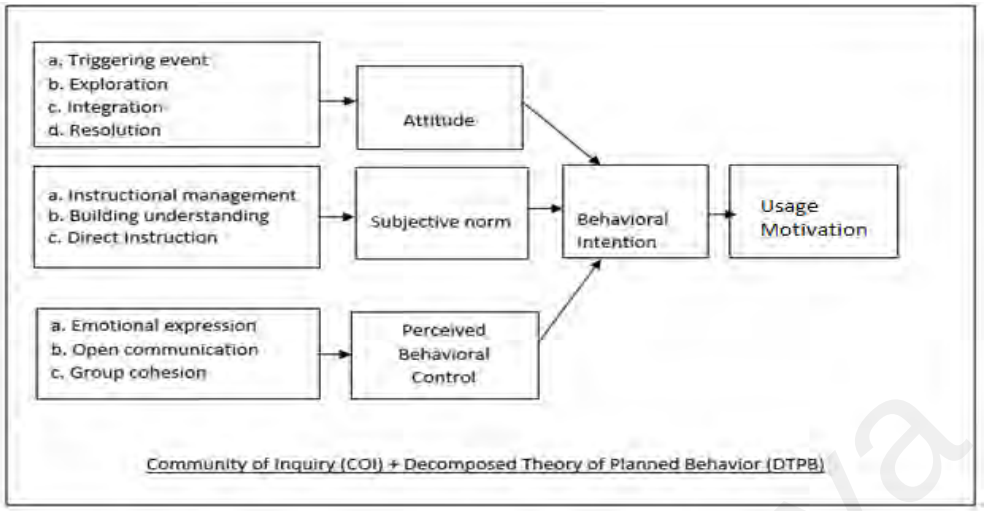

Figure 1.1: Community of Inquiry (COI) and Decomposed Theory of Planned Behaviour (DPTB)

1.7.1 Theory and Application of Conceptual Framework

The study applies the combination of Community of Inquiry (COI) and Decomposed Theory of Planned Behaviour (DTPB) as the conceptual framework and examine how the users' perspective, motivation and behavioral are affected by decomposed attitudes (i.e., system service quality, module satisfaction, and website loyalty) during the training pre-implementation of PhIS conducted in the difference facilities of users. COI theoretical framework selected in this study as it best suits to represent a process of creating and determine the relationship between collaborative and constructivist learning experience in the presence and progression of three interdependent elements such as social, cognitive and teaching presence. Other than that, the attitude is decomposed of system module and function, satisfaction on system application, and website loyalty.

1.7.2 Community of Inquiry (COI)

Based on the conceptual framework applied in this study, the COI defines a good e-learning environment through three major components of Cognitive Presence

(triggering event, exploration, integration, resolution), Teaching Presence (instructional management, building understanding, direct instruction) and Social Presence (emotional expression, open communication, group cohesion).

As stated in Garrison & Anderson (2003, p. 23), *"A critical community of learners, from an educational perspective, is composed of teachers and students transacting with the specific purposes of facilitating, constructing, and validating understanding, and of developing capabilities that will lead to further learning. Such a community encourages cognitive independence and social interdependence simultaneously."* The relationship and function of these components is explained in the following figure.

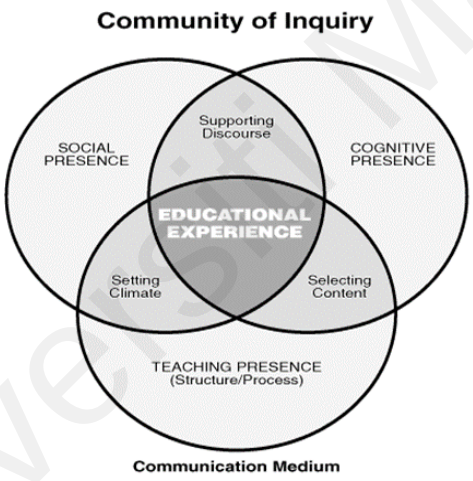

Figure 1.2: The Community of Inquiry Model

Cognitive presence is the degree to which the members in a specific setup of a community of inquiry can build significance relationship through two ways communication. Subsequently, the Social presence is the ability of learners to project their personal characteristics into the community of inquiry, thereby presenting themselves as 'real people.' Meanwhile, Teaching presence is characterized as the design, facilitation, and guidance of cognitive and social procedures to realize crucial important and educational advantageous of learning outcomes. The teaching presence aim to deliver the

related theories that subsequently affecting the practice (Karakoyun & Lindberg, 2020) or system utilization.

In this model, the pivotal role of social presence is not only setting the educational climate but also in supporting discourse and creating the educational experience. Rourke, Anderson, Archer, & Garrison (1999) defined social presence as "the ability of learners to project themselves socially and affectively into a community of inquiry. They were reported to spend some time developing tools to measure social presence in asynchronous text conferencing systems and validating these tools via interviews and surveys (Rourke & Anderson, 2002). This task has been expanded and measured by various researchers (Tu, 2002; Stacey, 2002) reporting among different discoveries that social presence is related with pharmaceutical staff fulfillment and excellent results based on learning outcomes (Richardson & Swan, 2003; Anderson, 2005).

1.7.3 Decomposed Theory of Planned Behavior

The Decomposed Theory of Planned Behavior (DTPB) is originated from Theory of Planned Behavior (TPB) posited those actions are determined by a combination of people's behavioral intentions and perceived behavioral control. Both the Theory of Planned Behavior and the Decomposed Theory of Planned Behavior state that behavior is an immediate capacity of behavioral intention, and both view behavioral intention as a component of attitude, subjective norms and perceived behavioral control with mutual function. In the Decomposed Theory of Planned Behavior attitude, subjective norms and perceived behavioral controls are all decomposed into lower level of belief constructs (Taylor & Todd, 1995).

Using the decomposed model not only allows to get better understand the antecedents' relationship, but also it allows us to uncover specific factors that impact the

adoption or use of new technology. Taylor and Todd showed that the decomposed model has better explanatory power over the Theory of Planned Behavior (Taylor & Todd, 1995). Thus, in relation with the objectives of this study conducted, this model has been selected to explain the motivation and behavioural intention toward using the PhIS to facilitate the Hospitals and Clinics' staffs in Malaysia in their job related.

1.7.4 Relationship between COI and DPTB

As indicated by the theory of human behavior, it is guided by three sorts of contemplations: beliefs about the conceivable results of the behavior (behavioral beliefs), beliefs about the normative desire of others (normative beliefs), and beliefs about the existence of elements that may encourage or hindering the performance of the behavior (control beliefs). In their respective aggregates, behavioral beliefs produce a favorable or unfavorable *attitude toward the behavior*; normative beliefs result in perceived social pressure or *subjective norm*; and control beliefs give rise to *perceived behavioral control* (Fishbein & Ajzen, 2010). In this study conducted, all three of the COI components of cognitive presence, teaching presence and social presence were evaluated towards the users' attitude, subjective norm and perceived behavioural control affecting the users' behavioural intention and usage motivation.

In the other hand, attitude by referring to the behavior, subjective norm, and perception of behavioral control prompts the arrangement and direction of a behavioral *intention*. As a general rule, the more favorable attitude and subjective norm, the greater the perceived control; thus, the stronger should be the person's intention to perform the behavior in question. Ultimately, with adequate level of actual control over the behavior, individuals are relied upon to do their intentions when the open door emerges. Intention is thus assumed to be the immediate antecedent of motivation and behavior. Nonetheless, on the grounds that numerous behaviors present troubles of execution that may restrain

volitional control, it is valuable to think about perceived behavioral control notwithstanding the expectation. To the extent that perceived behavioral control is veridical, it can serve as a proxy for actual control and contribute to the prediction of the behavior in question (Fishbein & Ajzen, 2010).

Based on the belief constructs of TPB, this study applied determinants in order to measure the behavioral beliefs of system's users among hospital staff. After users experience the services provided by system itself, they will have specific positive or negative intentions about becoming future users. Therefore, the perception, motivation and behavioural intention on adoption of system application; are related to the satisfaction and loyalty to measure users' attitudes. In addition, it will further be explaining the relationship between each parameter related in order to figure out the answers to the research questions in this study.

1.8 Significance of Study

This study was conducted in attempt to find out the hospitals and clinics' pharmaceutical staff's perception, motivation and behaviour towards current Pharmacy Information System that has been implemented in their facility. There were several parameters used in assisting to measure their perception: of teaching presence (instructional management, building understanding, direct Instruction), cognitive presence (triggering event, integration, exploration, resolution) and social presence (emotional expression, open communication and group cohesion). Other than that, another relevance information was also investigate in order to support the aims of this study.

There were four important ways in which this study gave importance aspects to be added into collective research literature. First, it will provide much insight into the working environments of pharmaceutical staff regarding employees' level of motivation

and performance because a good motivational procedure is essential to achieve organizations' goal. Effective motivational programs of employees can achieve efficiency to develop a good organizational culture.

Secondly, it would assist healthcare sectors in retaining, satisfying, and attracting qualified employees since motivation has variety of effects; which may be seen in the context of an individual's physical and mental health, productivity, absenteeism and turnover. Job fulfillment among staffs must be overseen in various way. This assists in holding and supporting the genuine devotees "who can convey an incentive to the association or organization."

Thirdly, the study will emphasize on the importance of employee motivation and behaviour in workplace toward job performance and they may apply this as a guideline for employees' motivation in every department. Besides that, it is absolutely for the client / patient that deal with them in their daily tasks.

Fourthly, the data acquired in the study could be used to design and develop toward improving the current model in the future study toward the most advantageous system for pharmaceutical staff to improve their quality care.

Therefore, it is hope that from the finding of this study, it would be able to narrow down the gap between current organizational structure, working environments and available human-based performance technologies. By understanding on how change occurs specifically within pharmacy management, it is important for understanding the forces that drive the requirement of change after evaluating the personal and organization needs and interest involving the process of adopting changes in the pharmacy management systems.

After all, by considering the organizational working environment and community, it could help to measure whether the implementation of new information system would

be able to motivate or inversely demotivate the system users in performing their daily task, by applying the procedure related in using the PhIS and subsequently able to enhance on their job performance.

1.9 Definitions of Terms

1.9.1 Operational Terms

Motivation: in this study, the motivation defined as "*the set of processes that arouse, direct, and maintain human behavior (PhIS users) towards attaining some goal* (in utilizing PhIS). (Greenberg & Baron, 2003, p. 190)

Behavioral intention (BI): defined as a person's (PhIS users in this study) perceived likelihood or "subjective probability that he or she will engage in a given behavior – to utilize the PhIS" as stated in Committee on Communication for Behavior Change in the 21st Century (2002, p. 31).

Pharmacy Information System ((PhIS)): it is a complete and comprehensive system that integrates pharmacy related services with the objectives to gear toward pharmacy excellent care. In this study, it refers to one of the hospitals' information system as developed and implemented thoroughly in all government hospitals and clinics in Malaysia (Pharmaceutical Services Division, Ministry of Health Malaysia, 2019).

Implementation: defines as a "specified set of activities designed to put into practice an activity or program of known dimensions" (Fixsen, Naoom, Blase, Friedman, & Wallace, 2005, p. 5). It also refers to "active and planned efforts to mainstream an innovation" (Greenhalgh et al., 2004, p. 582). The specify set of activities refer to PhIS training in this study.

Pharmaceutical Staffs: in this study, it refers to a group of workers in involving Pharmacist, Nurse and Medical Assistant to whom utilising the Pharmacy Information System. In other term it is categorized to Pharmacy support staff which refers to staff within the pharmacy team who are not registered with Pharmacy Department but have important roles in the dispensing and supply of medicines or medical devices, advising on the use of medicines and medical devices, assisting pharmacy professionals to provide pharmacy services to individuals. These staff work under the supervision of a pharmacy professional to carry out tasks related dispensing and supply of medicines, provide information or deliver pharmacy services. This can include staff working in many different roles (https://www.pharmacyregulation.org/education/education-and-training-requirements-pharmacy-team/unregistered-staff-support-staff).

Triggering event: a certain milestone or event (training) that a participant (PhIS users) in a qualified plan must experience in order to be eligible to receive a distribution from a qualified plan (https: //www.investopedia.com/terms/t/triggeringevent.asp.) such as utilizing PhIS in this study.

Exploration: the act of searching an unfamiliar area in order to learn about it. It involves the discovery of new information. Here, the PhIS users explore even when they have everything, they need to utilize the PhIS (Maggie, 2012)

Integration: integration defines as incorporation as equals into society or an organization of individuals of different groups (of PhIS users in this study - such as gender, ages and races) or demographical profiles in this study (https://www.merriam webster.com/dictionary/integration).

Resolution: a formal expression of opinion or intention made, usually after voting, by a formal organization, a legislature, a club, or other group. The PhIS users in the study conducted. (Dictionary.com Unabridged, 2018)

Emotional expressions : The outward expression of an intrapsychic state and also related to the emotional response where a person (PhIS user) attempts to influence his/her relation to the world (another colleagues) through others than directly (Skinner, 2022).

Open communication: Open communication is an important tool businesses, universities, nonprofit organizations and other organizations can use to improve their groups' efficiency and effectiveness. Organizations (public hospitals and clinics' staff) that want to stay current with their structures and practices (PhIS application) and those that have a desire to always learn should implement open communication practices (Leyla, 2018).

Group cohesion: Group cohesion is a social process that characterizes groups whose members interact with each other and refers to the forces that push group members closer together. A lot of work these days is accomplished in groups. Most people have had both good and bad experiences from participating in such group work. Cohesion has important element that influences one's group work experience. It has two dimensions: emotional (or personal) and task-related (Beal et al., 2003). The group in this study refer to the batch of PhIS users that have been attended for the training session.

Instructional management: Instructional management is defined as those events and procedures involved in the decision to initiate a specific activity for an individual learner (The Management of Instruction; https://eric.ed.gov). In this study, it refers to the new conceptual approach to the analysis of information systems. It centers attention on the instructional management decision- making process, which serves to mediate the activities of the learners and learning environment, so that much of the present confusion surrounding the design of Pharmacy information systems is eliminated.

Building understanding: Consumer (PhIS users) vulnerability is a sometimes misunderstood or misused concept that is equated erroneously with demographic characteristics, stigmatization, consumer protection, unmet needs, discrimination, or

disadvantage (Stacey, James & Terri, 2005). In this study, this term seeks to clarify the boundaries for what is and what is not consumer vulnerability in getting further understanding on the PhIS application.

Direct instruction: Direct instruction is an approach to teaching (PhIS). It is based on skills-oriented among users, and the teaching practices during training implies are trainer-directed. It emphasizes the use of small group of simulation, face-to-face instruction by trainers and aides using carefully articulated lessons in which cognitive skills are broken down into small units, sequenced deliberately, and taught explicitly as stated and suggested by Carnine et al., 2004).

1.10 Limitation of Study

Apart from the significance of the study, there were a few limitations observed. Among the limitation needs to be considered was the duration of training session conducted was in short period. This study is limited by the users' perception towards the usage of information system during pre-implementation of training session which conducted only maximum in 5 days and minimum 1 day for each module or course. Additionally, the research focused on the variables of pedagogical training, gender, subject area and experience and the study was confined to a survey design. This may influence on different feedbacks and perspectives from the pharmaceutical staffs on the level of their concentration and hands on activity during the training session.

1.11 Summary of Chapter

This chapter explained on the purpose of the study was conducted, pertaining to implementation of the current information system used called as Pharmacy Information

System (PhIS) in hospital and the changing of management related. The changing process is crucially needed to be deeply understand on how change occurs specifically within pharmacy management is important for understanding the forces that drive change and for identifying the personal and institutional interests involved in the process of adopting changes in the pharmacy management systems. Here, any concern or consideration on how the socio-institutional environment in organization will response or react toward this changing style of management in order to give good impact which may influence the users' perception and subsequently behavioral towards change in their working environment, procedure related and towards increasing their professional development (Behavioural Change, 2016).

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

2.1.1 Hospital Information System Application in Malaysia

Hospital Information System has been introduced since 1994 to hospital management in private and government sectors. However, there is a lot of confusion in concepts and terminology regarding Hospital Information System (HIS). In 1999-2000 when it was first introduced to the subject of Total Hospital Information System (THIS), there are various articles reported on what a hospital information system is meant to be. In fact, HIS has been implemented for more than twelve years in Malaysia because there are several hospitals that implemented in computerized mode from the start. At overall, HIS deals with IT, medical records (Sharon, Jennifer & Diana, 2012) and information technology in various hospital department setting and capacities including applications analyst, the clinical and IT unit collaboration.

Aside from HIS, Pharmacy Information System (PHIS) is an ICT application system that currently implemented in government hospitals in Malaysia. The development and implementation of Phase 1 of Pharmacy Information Systems ("PhIS") has been introduced since 2011 in government's hospitals and clinics under the Ministry of Health. This Pharmacy information networks are accessible to authorize health service providers at the point of care as an essential component of patient-centric drug information systems and ultimately are more comprehensive in health information systems. These networks are expected to enhance patient health outcomes, patient safety and maximize the efficient use of health care resources, specifically in pharmacy unit management (Pharmaceutical Services Division, Ministry of Health Malaysia, 2019).

Here, Pharmacy Information System (PHIS) is a complex computer system that has been designed to meet the needs of a pharmacy department. By using such Information Technology System (ITS), pharmacists can keep monitoring and contribute on how prescription is performed in pharmacy unit. Some of the activities which PHIS have been employed in pharmacy departments include clinical screening. Through this system, it would be able to assist in patient care management by monitoring the drug interactions, drug allergies and other possible medication-related complications.

2.1.2 Change of Hospital into Pharmacy Information System

Hospital Information System has been introduced since 1994 to hospital management in private and government sectors. However, there is a lot of confusion in concepts and terminology regarding Hospital Information System (HIS) (Nur Azzah, Noraziah & Noorhayati, 2017). After HIS, Pharmacy Information System (PhIS) is an ICT application system that currently implemented and to be applied thoroughly in all government hospitals and clinics in Malaysia. This Pharmacy information networks are accessible to authorize health service providers at the point of care as an essential component of patient-centric drug information systems and ultimately are more comprehensive in health information systems. These networks are expected to enhance patient health outcomes, patient safety and maximize the efficient use of health care resources, specifically in pharmacy unit management.

2.1.3 Change Management in Pharmacy Information System (PhIS)

The Health Ministry is currently implementing the change management of hospital system to Pharmacy Information System (PhIS) to provide a better and more efficient

pharmacy system for patients. Its Minister Datuk Seri Dr S. Subramaniam said the system was developed to encourage the usage of Information Technology in the health service system involving tender management system and medicine and non-medical supply in all the ministry's facilities (The Sun Daily, 2016).

The system also involves online services on patient information, as well as drug prescription and dispensary – and it will be used almost 1,300 health ministry facilities in the country, including 137 hospitals, 802 clinics and 141 district health offices. “This system will help monitor the medical supply in the ministry's facilities, increase efficiency, manage the medical and non-medial inventory management and to ensure the medicine used are of good quality, safe and effective," he said this in a statement. Subramaniam said that an efficient system is needed to cope with the increasing number of patients and medical prescription dispensary, which increases about 4% yearly. He said that PhIS is one of the terms in the privatisation of the medical laboratory and storage facility signed between Pharmaniaga Logistics Sdn Bhd and the health ministry between December 1st 2009 until November 30th 2019.

2.1.4 Effects of Change in Organization

Based on study conducted, change effects are manifested through individuals when communication increases and resistance decreases (Hord et al., 2006). Not only is the change process unique to the individual, how one interacts with the change process revolves around what the change will mean to each person. A person will be concerned about different aspects of the innovation in the process. On a personal level, the very being of the individual contemplates what they value and believe which drives their behavior. Change facilitators, supporters of the change effort, meet the needs of the individuals by building relationships while aiding enhance practitioner knowledge and

skills. In order to manage the change process internally and externally in respect to the users of the innovation, attention and support are provided through interventions addressing the context and the system in which individuals exist (Kilinc, Tarman & Aydin, 2018; Kim et al., 2013).

Implementation and change occur in the context of the community. Knowledge of the strengths and weaknesses of a community is necessary prior to choosing and implementing an innovation. Furthermore, within needs assessment activities, involvement of the stakeholders and buy-in holds true when contemplating change and implementing research-based practices, programs, and treatment interventions (Christensen & Knezek, 2017; Fixsen et al., 2005; Fathi & Ebadi, 2020). "Unless a community recognizes or accepts the premise that a change in corrections is needed, is affordable, and does not conflict with its sentiments regarding just punishment, an innovative project has little hope of surviving, much less succeeding" (Petersilia, 1990, p. 144).

2.1.5 Effect of Changing Culture in Workplace

Inducing change requires organizations to examine the issue of culture in the workplace. Culture is represented by the beliefs and practices that are manifested in how individuals behave within organizations and institutions. The complexity and invisibility of culture may be the most daunting obstacles in the change process. Burke (1992) states that for change to occur at the cultural level, it must go further than "fixing a problem or improving a procedure;" it means, "that some significant aspect of an organization's culture will never be the same" (p. 9).

Galpin (1996) offers insight into cultural components necessary for implementing change such as the following: developing standard operating procedures to facilitate

change while eliminating policies that support apathy toward change, devising goals with measurements to encourage change, establishing new customs and norms supportive of the change initiative, training with experiential activities to create a risk-free environment, reinforcing individual and team change efforts with recognition and events, rewarding teams to cultivate a culture of teamwork, delivering consistent communication through multiple means through the change process, constructing the environment to produce change, and organizing the internal structure to promote system change. Meanwhile, the mandated adoption and implementation of a reform innovation within an educational or a correctional setting is challenging because it is systems change involving both functional and strategic adaptation (Fixsen & Blase, 2009; Aslan & Zhu, 2017).

2.2 Challenges and Barriers in Present Medical Information System

Decision-makers need scientific evidence on the favorable conditions allowing optimal implementation of medical information system that also called as Electronic Health Record (EHR) in specific contexts; however, these data are currently lacking (Lavis et al., 2005). The EHR implementation process is influenced by many factors: at the micro-level by interpersonal factors such as individuals' attitudes and concerns and the material properties of EHR technology; at the meso-level by the operational aspects of implementation such as readiness and resources; and at the macro-level by socio-political forces.

However, few systematic reviews have been conducted to investigate the barriers and facilitators to EHR implementation and most of these studies have focused on health care professionals, particularly physicians Anderson (2006). While the comparisons of the perspectives of various professional groups have been reported in previous literature,

these results have not yet been synthesized (Lapointe & Rivard, 2006; Aslan & Zhu 2017; Habibah et al., 2018). As greater interdisciplinary practice is encouraged in the health care system, understanding and comparing the perspectives of each user group is essential to the successful implementation of e-management system specifically in healthcare facilities.

This study conducted by using a systematic review of the perceived barriers and facilitators of interoperable EHR execution in achieving extreme objective in order to answer genuine difficulties by the board of decision-makers. More specifically, the objectives were to categorize, synthesize, and compare the perspectives of targeted groups of users (public, patients, health care professionals and managers) and to underline factors influencing EHR implementation specific to each user group (Lavis et al., 2005).

2.3 Motivation and Demotivation towards Change and Challenges

The motivation could be triggered due to the high expectations from their head of department and co-workers in the facility, based on their knowledge, skill, capacity, and preference in integrating technologies into their working environment (Gilakjani, 2013). Subsequently, it became reasonable and undoubted fact that system users mostly are now in their comfort zone having technology for their daily job, including using technologies for social networking, communication, entertainment, and surfing for any information (Fluck & Dowden, 2013; Habibi et al., 2018).

Without empowerment of staff as a component of organization structure, the impression of top-down change will cause confidential and moral issues with the implementation of new system. It contributes the idea that communication and positive feedback will be able to guide the vehicle for empowering staff to comprehend and accept change, related activities and the purposes behind the implementation of system. The

political framework within organizations and/ facility is made up of "coalitions of diverse individuals and interest groups" who have different beliefs, opinions, perceptions, information, and agendas (Bolman & Deal, 2003, p. 186).

However, demotivation might occur if the tendency of ignoring the needs of the employees from any organization or institution, the human component, a disconnect emerges and undermines individual clarity of purpose and self-actualization. This demotivation may be manifested though absenteeism, quitting the job, or withdrawal into apathetic survival mode. Other behaviors exhibited by staff are the resistance to any additional change, formation of cliques to undermine the power structure within the organization, or pursuit of a higher job within the hierarchy of the bureaucracy in hopes of being part of the power elite. Lastly, disgruntled staff members may preach to others that their jobs have little incentive and is unrewarding. Even though they have excellence in using technology for personal-purposed, their knowledge is superficial or entirely have not obtained any experience in using technologies during their teaching and learning session (Habibi et al., 2018; Kovalik, Kuo & Karpinski, 2013).

2.4 Managing the Change of Implementation

Petersilia (1990, p.129) champions for an "implementation perspective on innovation--an approach that views post-adoption events as crucial and focuses on the actions of those who convert it into practice as the key to success or failure." What is needed is a refined definition and careful evaluation of the implementation of an innovation and the effects it has on the "practitioners, managers, organizations, and systems" (Fixsen et al. 2005, p.4). What is not needed are more data on program outcomes to influence implementation. Three classes of implementation are paper-based implementation, implementation phase, and implementation of system (Goggin, 1986). Rogers (2002) shares that upon adoption

of an innovation, most businesses use the innovation as the rationale for the written documentation required through policies and procedures.

Here, the initial implementation is the critical piece due to the complexity of changing the way of any facility operates to embrace technology-based practices. Practitioners are embedded within all levels of the bureaucracy and influenced by competing sources of information, societal issues, culture of the community, and competing political and economic pressures. The context of the community requires change to support an overhaul of the environment for initial implementation. The initial implementation stage of an innovation or intervention segues to full implementation as the skill of the staff increases and the innovation procedures become routine. Furthermore, another piece of the initial implementation stage requires time to nurture and guide staff practice of new skills as staff knowledge level and confidence increase (Fixsen et al.,2005; Kilinc, Tarman & Aydin, 2018; Rahmawati, Suryani, & Akhyar, 2020).

Another aspect of implementation was explained by Hernandez and Hodges (2003) as *expressed theory of change* and *active theory of change*. Expressions and activities may be espoused through the adoption of procedures to enable training and supervision, update paperwork, and incorporate the new language of the innovation. Paper-based implementation before the implementation phase gives a smokescreen to what is truly occurring inside the organization. What is genuine might be including of the exercises determined inside the mediation or advancement. Changing management in workplace and influencing staff behavior to accept the new system is totally not easy part towards the implementation phase of the new system. (Beer, Eisenstat, & Spector, 1990; Aslan & Zhu, 2017).

2.5 Barriers to Technology Integration to Adopt Change

The definition of barrier as defined by WordNet (1997) is "any condition that makes it difficult to make progress or to achieve an objective." Meanwhile, the goal of this study conducted is to expand technology integration. The comprehended but then implicit undertone of a barrier is that its expulsion goes about as a guide towards the accomplishment of the goal. Subsequently, the research conducted of barriers as they relate to technology integration that crucially needed since this training could give direction and approaches to upgrade technology integration. In the previous study, Ertmer (1999) reverberated the estimation, in expressing the sources of barriers to the educators and powerful systems to conquer such barriers, and thus to set up for both initial and maintain compelling and practicing the integration of technology toward standard operating procedures at workplace (Christensen & Knezek, 2017; Fathi & Ebadi, 2020).

The impact of barriers on technology integration have been reported in robust body of literature (Anderson, Varnhagen & Campbell, 1998; Bariso, 2003; Beaudin, 2002; Becker, 2000b; Beggs, 2000; Cuban, 2001; Ertmer, 1999; Ertmer et al., 1999). Notwithstanding with vast studies on the goodness of technology integration, there were still need more efforts in order to achieve the objective of the implementation. Among the barriers due to technology integration are the continuous upgrading in technology advancement, worldwide Internet issues and the necessity to increase the computer memory and speed to fulfill the current requirement of technology. Besides, the issue related to technology access particularly in information system (Hadley & Sheingold, 1993; Jacobsen, 1998; Newhouse, 1999; Pajo & Wallace, 2001; Rogers, 2000; Snoeyink & Ertmer, 2002).

The insufficient knowledge in technology access has become the most prominent issue and barrier to technology integration. In a research conducted by Apple Computer (1995) towards the impact on teaching and learning in the presence of technology-rich

environments, more research is now required to explore more on technology integration and progression to such an extent since the completion of the Apple Classrooms of Tomorrow (ACOT). A simple question within ACOT that need to be answered is "*what happens to students and teachers when they have access to technology whenever they need it?"* As mentioned in previously study, this unfettered access issue is essential to be further study as it is synonymous with the concept of a technology-rich environment. Although the study is still conducted in the institution, the technology wealth tends to fill the gaps within missing dimension in presence literature.

2.5.1 Common Barriers of Integrating Technology

The act of integrating technology into teaching and learning or working environment in order to adopt using the technology is a complex process and one that may encounter several difficulties. These difficulties are known as barriers. To establish the framework for this whole segment, it is important to delineate the built-up set of basic technology integration barriers. In spite of the fact that these are regularly named, estimated, and appraised in an unexpected way, most of the researchers (Anderson et al., 1998; Bariso, 2003; Beaudin, 2002; Becker, 2000b; Beggs, 2000; Cuban, 2001; Ertmer, 1999; Ertmer et al., 1999; Hadley & Sheingold, 1993; Jacobsen, 1998; Newhouse, 1999; Pajo & Wallace, 2001; Rogers, 2000; Snoeyink & Ertmer, 2002) have identified these or similar variations as widespread barriers: as such as lack of computers and/ quality software, lack of time, technical problems, users attitudes towards computers and poor funding.

Besides that, the level of confidence of system trainer regarding system usage, resistance to change, poor administrative support, lack of computer skill, poor fit with the curriculum, lack of incentives, scheduling difficulties, poor training opportunities and lack of vision as to how to integrate with the technology. Meanwhile, the previous researchers have been long attempted to categorize barriers according to the similarities

or differences between them. Although dissimilar labels have been applied, similar patterns have repeatedly emerged. The degree to which specificity of classification is employed has both positive and negative ramifications. The more specific the classification, the more difficult it is to generalize findings, while the more general the categorization, the less accurate the generalizations. In addition, challenges such as inadequate data management and miscommunication at different levels of utilising healthcare systems also become barriers result to delays in the delivery of healthcare services (Nobana et al., 2020).

However, if they can be grouped with other like barriers, it is much easier to draw conclusions. Often the label of either internal or external barriers are applied. A consensus exists with reference to the meanings of these terms. Internal barriers are considered those barriers which are developed from attitudes and perceptions towards technology integration, while external barriers are those elements of the process which are recognized as outside of the control of the teacher such as the accessibility of technology and technical support. Towards the barriers in integrating technology, among the hindering factors influencing the integration include lack of resources, inadequate training, insufficient technical support, and lack of time (Aslan & Zhu, 2017; Hinostroza, 2018; Lawrence & Tar, 2018; and Kilinc et al. (2018).

2.5.2 External and Internal Barriers

Both Rogers (2000) and Ertmer et al. (1999) utilized very similar classification systems in their attempts to accurately label technology integration barriers. Rogers labelled barriers as internal, external, or crossovers between the two. For example, internal barriers are those based upon teacher attitudes and skill level, while external barriers are those such as technology support, and access to computers. Crossover barriers are those such as time. Time can be an external constraint, or it can be self-imposed. For instance,

through the process of prioritization, a teacher could be able to find the time to integrate technology. Ertmer et al. have also used the terms internal (second order) and external (first-order) barriers. Where Rogers differs is in the interpretation of lack of time and funding and the institutional culture as being crossovers between the internal and external classifications.

Commonly, barriers are neither classified as external nor internal barriers; they are merely treated independently or are grouped through a factor analysis. This is the approach taken in this study. Among the most cited barriers to technology integration were poor administrative support; problems with time, access, space, supervision, and operations; poor software; curriculum integration difficulties; teacher's attitudes and knowledge concerning to usage of computers; computer impediments and insufficient quantities of computers and absence of specialized assistant in IT (Hadley & Sheingold, 1993). Moreover, the current integration efforts implemented especially in developing countries, among the barriers have been encountered such as fragmentation, low system maintenance, poor standardization, inconsistent system co-ordination and interoperability (Adenuga et al., 2015; Fletcher, 2016; Senyoni, 2020)

2.5.3 The Impact of Barriers

Expanding upon the hindrance work done by Hadley and Sheingold (1993), Jacobsen (1998) recognized comparable discoveries at the post-auxiliary level. The most distinctive was apparent on most of organization nowadays to whom find that technology was currently a satisfactory fit with their educational programs. This finding was in no way, shape or form a segregated occurrence. Indeed, it appears to point of the initial trend. In another research done at a post-auxiliary organization, Beggs (2000) additionally found that an absence of pertinence to the employee's discipline acquire the second lowest barrier rank with about 65% of all respondents rating average to some degree either

crucially needed or not essential. Other parallels between these works were a dominance of external barriers since lack of time, lack of equipment and lack of training were the top-rated barriers to technology integration. Beaudin (2002) kept on researching the part of obstructions into innovation coordination utilizing the instrument planned by Jacobsen yet this time in the K-12 condition.

Although great technological advances had been made between research conducted by Beaudin and the original work done by Hadley and Sheingold, the outcomes were strikingly comparable. External barrier items for example, time and poor openness remained exceptionally considerable. A comparability between the Jacobsen, Beggs, and Beaudin discoveries which are a monstrous uniqueness from the Hadley and Sheingold work was that educators were to the least extent liable to concur with the idea that computers do not fit with the course syllabus or the educational modules. Obviously, a shift in one component of an internal barrier has occurred since fewer instructors now perceive a misalignment between their course content and technology integration. An intelligent inference from this matter is this belief in blend with a technology-rich environment that should just guide personnel in better integrating technology with course or modules provided.

The consistent pre-eminence of external barriers can be misleading, however. Snoeyink and Ertmer (2002) in inquiring about three technology-novice of elementary educators noticed the general example of shifting in obligation. They felt that the teachers attributed their lack of computer use to external barriers rather than accept responsibility for themselves. Similar findings were reported by Bariso (2003) at the post-secondary level. The faculty "*seemed to have confidence, positive attitudes, and high motivation to embrace the Technologies integrated* (p. 88). Responsibility, however, was again placed on external barriers such as lack of time, lack of training, and lack of computers, but the legitimacy of these concerns was not evaluated. The significance of these results for this

study is once more that with the key barrier of access removed, which barriers will be dominant and what the relationship between these barriers and the behavioral, affective, and temporal aspects can be determined (Ogurlu & Sevim, 2017; Schul, 2017; Hinostroza, 2018; Lawrence & Tar, 2018; and Kilinc et al. (2018).

2.5.4 The Barriers Present in Organization

To best indicate the presence of boundaries to innovation incorporation aside from universal, it is important to investigate at the ongoing history of innovation in some association or facility. This enables one to see that as the primary obstruction or main barrier, absence of technology access, was expelled and different barriers were still observed. Nevertheless, common sense dictates that in institutions that lack sufficient access to technology, effective technology integration would be a daunting, if not impossible task.

According to Ertmer (1999) teachers would not automatically integrate technology into teaching and learning even if all extrinsic barriers such as access, time, and technical support were removed. Exploring thoroughly and comprehensive all the barriers related to technology integration should considering all the positive and negative factors influencing the integration; thus, it is crucially recommended to report all the benefits and barriers of technology integration experienced by the system users in order to identify and implementing the best solution accordingly (Günes & Bahçivan, 2018; Lawrence & Tar, 2018; Parkman, Litz, & Gromik, 2018).

Moreover, Cuban, Kirkpatrick, and Peck (2001), in inspecting the recurrence of instructor innovation use in innovation bounteous in some workforce, expressed that decision makers need to convince that making copious access to innovation would prompt an expanded level of innovation use in the personnel or working environment. Nonetheless, while this is apparently a necessity, it is nevertheless an underlying

procedure in advance. They found that major access to technology was insufficient to guarantee technology integration. This means that even in better than average technology-rich environment, the instructor was still not integrating technology to any substantial degree. It seems that even the direct effort of planning a computer lab, nonetheless, affected by various barriers. Although with all of the benefits of technologies implied, the integration of technologies has always had issue (Cresswell & Sheikh, 2013; Calligaro et al., 2017).

The connection between vast technology, upgraded technology integration and barriers does not seem by all accounts, to be clear. In a longitudinal study built around a portable computer program, Newhouse (1999) stated that many of the common barriers associated with the adoption of the innovation were still present. A portion of the boundaries keeping educators from incorporating innovation were poor PC proficiency, absence of time, absence of certainty, and equipment breakdowns. Although access as a barrier had been settled, regardless others might sustain. Comparative suppositions are reverberated by Cuban (2001) since he found that insufficient of time and deficient bland preparing remained innovation incorporation hindrances in technology-rich secondary schools. He likewise noticed that at technology-rich Stanford College, the faculty keep on citing lack of time and low of specialized assistant as boundaries towards advance innovation. This study also supported by Hinostroza, 2018; Lawrence & Tar, 2018; and Kilinc et al. (2018).

2.5.5 Variation of Barrier Intensity

The third concept from which this barrier section is premised; '*the degree to which the intensity of barriers to technology integration is reported differs according to the reporters' level or stage of technology integration,* is evocative. It begins to provide an understanding for the existence and intensity of barriers other than simply the degree of

technology access. The consensus is that teachers rate barriers less problematic as their technology integration skills increase and that the intensity of specific barriers is dissimilar at different levels of the integration process (Anderson**,** Varnhagen & Campbell, 1998; Hadley & Sheingold, 1993; Rogers, 2000).

The research which supports the position that intensity of barriers declines as the level of technology integration increases utilizes different theories and models to group the subjects. However, the support for this position is the important element. The different theories or models used should not cloud the research findings. Anderson, Varnhagen & Campbell (1998) used the *Diffusion of Innovations* framework (Rogers, 1995) as their guide. In a study which contrasted Early Adopters (EA-those who adopt an innovation before the typical group member) with Mainstream Faculty (MF-the typical group member) at the post-secondary level, they found that EAs rated most of the barriers lower than the MF. This finding is confirmed by Rogers (2000) K-12 enquiry which determined that as teachers became more comfortable utilizing technology, their focus on barriers decreased.

2.5.6 Elimination of Barrier to Adopt Change

Suggestions with regards to the techniques of eradicating the technology integration barriers differ based on the type and force of the barriers. In any case, paying little mind to the obstructions included, "if teachers don't have adequate devices, time, preparing, or bolster, meaningful integration will be troublesome, if certainly feasible, to accomplish" (Ertmer, 1999, Obtaining Resources Section, p.1). Based on the previous studies conducted, less complex innovation integrator will require more expert improvement (sessions on approaches to coordinate innovation) and more fundamental in term of technology and/ technical support (who to call when the technology breakdown occurred) because of instability. Meanwhile, the more advanced technology integrator will require

more sophisticated technology support (fastest internet coverage, updated computer hardware and software, upgraded networks, and a sophisticated technology of devices to transform media files unto digital formats) beside advanced professional development which sharing sessions with other advanced integrators (Christensen & Knezek, 2017; Fathi & Ebadi, 2020).

On the other hand, Ertmer (1999) explains that less advanced levels of professional development could mean that teachers will need opportunities to observe models of integrated technology use, to reflect on and analysis their developing mind and thoughts with supervisors and peers, and to team up with others on important ventures as they experiment with their new thoughts regarding instructing and learning with innovation or technology (Developing a Vision section, p. 2). Previous study conducted by Fabry & Higgs (1997) placed that one strategy to empower educators to encounter the capability of innovation is to have them utilize the innovation as profitability, administration, and communication devices. This underlying acquaintance is accepted with be an indispensable stage in the movement toward combination of innovation as a replace to conventional method (Kilinc, Tarman & Aydin, 2018; Rahmawati, Suryani, & Akhyar, 2020).

Further analysis, provided by this study, into the association between barrier intensity, level of use, and stage of concern, discussed in the next section will add depth to this knowledge. Although identification of barriers is paramount when investigating technology integration, it does not provide enough of an understanding. Being able to categorize user responses towards said barriers according to either the user's actual level of technology integration or their feeling towards integration supplies the needed robustness reports; regarding to the barriers and benefits of technology integration experienced (Günes & Bahçivan, 2018; Lawrence & Tar, 2018; Parkman, Litz, & Gromik, 2018). This depth is offered through the application of the DPTB COI.

2.6 Job Performance and Changing Process

Changing process needs to be further understanding in order to grasp the opportunity for job performance and improvement and other benefits gained through it. By viewing any change in the positive ways will be able to facilitate behavioral changes towards achieving the positive outcomes. Concept of changes also involves learning process towards adopting the change. Among the terms used in the process of change involves defining *"what it is, whom it involves, what are its effects, and how might it be managed"* (Hord et al., 2006, p. 4).

Here, it could not be misunderstood unless the probability of encountering problem of accepting the change might be occurred and thus change is not an event. An event is usually considered a one-time occurrence or something that may occur intermittently or even sporadically. Conversely, change occurs over time recursively, developmentally, cyclically, or within stages. The complexities of change relegate those who become change facilitators to recognize and adopt this mantra.

There are several past studies regarding implementation of information system in assisting and handling the hospital, educational setting and administrative task have been conducted. Based on the previous research studies and theoretical framework, the similar model has also been used to study information system applied before. The tested model used in order to compare and assist to support the validity and reliability of this study. Based on study conducted, change effects are manifested through individuals when communication increases and resistance decreases (Hord et al., 2006). Not only is the change process unique to the individual, how one interacts with the change process revolves around what the change will mean to each person. In these attempts, technology integrated through information system is regarded as a new approach to improving the

spread of information and overcoming the challenges (Christensen & Knezek, 2017; Fathi & Ebadi, 2020).

A person will be concerned based on his/her perceptions about different aspects of the innovation in the process involving infrastructure and technological support. The processes are definitely involved professional development, personal beliefs, efficacy and acceptance, skills and knowledge, prior experience of resources, adequate training and sufficient technical support, On a personal level, the very being of the individual contemplates what they value and believe which drives their behavior. Human resources such as change facilitators, supporters of the change effort, meet the needs of the individuals by building relationships while aiding enhance practitioner knowledge and skills. In order to manage the change process internally and externally in respect to the users of the innovation, attention and support are provided through interventions addressing the context and the system in which individuals exist. Besides that, policy, funding or budget, and sufficient time given are among another vital concerns regarding to technology integration (Gunes & Bahcivan, 2018; Lawrence & Tar, 2018; Parkman, Litz & Gromik, 2018).

Implementation and change occur in the context of the community. Knowledge of the strengths and weaknesses of a community is necessary prior to choosing and implementing an innovation. Furthermore, within needs assessment activities, involvement of the stakeholders and buy-in holds true when contemplating change and implementing research-based practices, programs, and treatment interventions (Fixsen et al., 2005). “Unless a community recognizes or accepts the premise that a change in corrections is needed, is affordable, and does not conflict with its sentiments regarding just punishment, an innovative project has little hope of surviving, much less succeeding” (Petersilia, 1990, p. 144).

2.7 Nature and Changing Process in Information System

The nature of change in information services characterized by the factors like diversity and unpredictability of the services and staffing. Here, the change is a ubiquitous element of organizational life; so too is resistance to change. By understanding the reason of restriction to change happens and building up the capacity to react accordingly to signs of change resistance, it is critical to the effect of organizational change either to give advantage or disadvantage of. Change in management of organization on the other hand, includes moving from a known state to another state – one that is somewhat obscure. It includes relinquishing things all this while in aim to improvise to much better by using the new technique and advance skills. It involves letting go of things as they are in order to take up new ways of doing things.

Organizational change challenges the status quo and it may challenge the values and perceived rights of workers and workgroups. Individuals working in organizations react to change in various ways. For a few, change is welcome – triggering, challenging and energizing. These individuals as the early adopters and change pioneers, tend to welcome and grasp change energetically. Others might be more wary – reacting to change by trying to test and look at changes before continuing. For a few, change may undermine their set up qualities and understandings and in this way be profoundly agitating. Thus, integrating technology involving changing process into organization is seen as an added task for them causing rejection either direct or indirectly towards technology integration (Ertmer, Ottenbreit, & York, 2007; Kim et al., 2013; Kilinc et al., 2018; Ogurlu & Sevim, 2017; Schul, 2017).

The response of restricting something that we object or can't help contradicting can be called as 'resistance'. In fact, change in management is initially a profoundly complex process. The vulnerabilities caused by the normal change and in-balance, as an outcome of changes, now and then as response to resistance to change management. The

resistance may antagonistically influence the positive feedback of an individual or team and causing counterproductive. Resistance from change emerges from person's state of mind as opposed to specialized issues of progress.

2.8 Information System - Electronic Health Record

2.8.1 Features and Application

An interoperable electronic health record (EHR) is characterized as a protected and private electronic lifetime record of a person's key wellbeing history and care inside the wellbeing framework. This record is accessible electronically to approved wellbeing suppliers and the individual anyplace, whenever in approaching for excellent care and the individual anywhere, anytime in support of high-quality care. This record is designed to facilitate the sharing of data across the continuum of care, across healthcare delivery organizations, across time and across geographical areas as reported in *Canada Health Infoway and Health Council of Canada* (2006). EHR normally contains data, for example, existing physical conditions, physician visits, lab test, lab results, hospitalizations, and prescribed drugs.

The EHR has the potential to address many of the current challenges healthcare systems face and benefits of its implementation are expected for patients, healthcare professionals, organizations and the general public. EHRs can enable a better quality of care as patients have their essential health data accessible to their different health providers (Wilson & Lankton, 2004 & Staroselsk et al., 2006). EHRs can give significant, opportune, and up-to-date sources of data that adds to knowledge exchange for synergistic basic leadership among multidisciplinary groups of medicinal services experts (Delpierre et al., 2004; Erstad, 2003).

Other than that, EHRs can also support citizen empowerment and participation in decision-making regarding their health Ueckert et al., (2003) and contribute to creating a safer and more efficient healthcare system (Alvarez, 2004; Flegel, 2008; Romanow, 2002; Morgan, 2004). Canadian policy makers recognize the importance of the EHR and are currently working in partnership with federal, provincial, and territorial governments and an interprovincial agency aimed at coordinating EHR implementation endeavors crosswise over Canada - Canada Health Infoway to build up a driven task for its implementation. However, EHR implementation in Canada currently lags other industrialized countries (Protti, 2006; Rich, 2008; Silversides, 2010). A recent study found that only 37% of Canadian family physicians use EHRs, ranking Canada last among the 11 countries surveyed Schoen et al., (2009).

2.8.2 Issues and Implementation

Electronic health record (EHR) or specifically called as a Pharmacy Information System (PhIS) implementation is currently underway in Malaysia, as in many other countries. These eager tasks include numerous stakeholders with extraordinary impression of the procedure related during implementation phase. EHR users have an imperative part to play as they should incorporate the EHR system into their workplaces and utilize it in their daily tasks. Clients hold important, direct learning of what can point of confinement or add to the accomplishment of EHR usage ventures. A thorough union of EHR clients' discernments is vital to fruitful future execution.

Fixsen *et al.* (2005) point out that regardless of the change or reform effort, an implementation perspective on evidenced-based innovations is necessary to understand "system transformation to changing service provider behavior and restructuring organizational contexts" (p. 3). The value of this implementation perspective is that this

lens will provide clarity and an understanding of "*service delivery processes and contextual factors to improve efficiency and effectiveness of program implementation" and "to achieve behavioral health outcomes for children, families, and adults nationally"* (p. 2).

After years of the slow adoption of electronic health records (EHRs), most pioneer hospitals have implemented them and many are now transitioning from one type to another. Hospitals' facilities are exchanging EHRs on the grounds that they have outgrown original frameworks and need a complete EHR, incorporating electronic request passage and clinical documentation among different functionalities, to fulfill more advanced "meaningful use" requirements set in place (Hall, 2013).

In spite of the fact that proof on the long-term effect of inpatient EHRs on nature of care and patient wellbeing is powerful and to a great extent positive, few researches have tended to the transient effect of EHR implementation or exchanging between vendors (Jones et al., 2014; Thompson et al., 2015; Lee, Kuo & Goodwin, 2013; Spetz, Burgess & Phibbs, 2014; Buntin et al., 2011)

2.9 Issues Related to Implementation

Executing another EHR or changing to another is likely a standout amongst the most problematic unsurprising occasions a healing facility can understanding, influencing for all intents and purposes of each employee and working process at hospitals or clinics (Boonstra, Versluis & Vos, 2014; Spetz, Burgess & Phibbs, 2012; Poon et al., 2004; Massaro, 1993; Simon et al., 2013; Gettinger & Csatari, 2012). In the period promptly after usage, work process disturbances made by advances like electronic request passage can offer ascent to a wide exhibit of unintended outcomes, for example, wasteful

workarounds, disruptions in continuity of care, and other electronically enabled errors (Meeks et al., 2014; Singh et al., 2009; Weiner et al., 2007; Campbell et al., 2006).

Quality could also suffer because providers might be distracted by the abrupt change in how they retrieve test results, consultation notes, and prior admission/discharge documentation, and how they document patient care. As anyone might expect, numerous have raised worries that EHR usage or exchanging may antagonistically affect understanding wellbeing and quality in the weeks to a very long time after change (Boonstra et al., 2014; Poon et al., 2004; Massaro, 1993; Simon et al., 2013; Han et al., 2005).

One hospital revealed a dramatically increasing of mortality in the five months after initiating another computerized physician order entry module, a key part of EHR execution (Han et al., 2005). The troublesome that progress may prompt damage is likewise conceivable given that probably less troublesome work process changes, for example, confirmations on the end of the week or the "July effect" of new pharmaceutical staffs beginning in a healthcare's facility, have been appeared to negatively affect the condition of patients, terribly the risk of mortality (Attenello et al., 2015; Bell & Redelmeier 2001; Kostis et al., 2007; Lilford & Chen, 2015; Jena, Sun & Romley, 2013; Young et al., 2011). As for example, one study reported the “weekend effect” to be associated with a 20% increase in the rate of adverse patient safety events. By understanding the effect of EHR usage on here and now results is pivotal to survey whether the procedures that hospitals utilize to relieve the clinical interruption of EHR advances are adequate.

2.10 Changing Procedures from Conservative to Computerized Information System

In a paper-based hospital order-management system, a physician or mid-level provider examines the patient, if necessary, writes an order, hands the order off to the nurse, who in turn hands it off to the unit clerk, who in turn makes sure that it is delivered to the pharmacy or other appropriate services. For medication orders, the pharmacist double checks the order and prepares and dispenses the medication. Finally, the medication is delivered to the unit, and the nurse administers the medication to the patient. For other orders, the appropriate service arranges for the test or other intervention and the patient receives it. This description of the order management process does not reflect the complexity of the actual process, such as the variety of people and disciplines involved and the many opportunities for errors as well as error recovery (Cheng et al., 2003; Hazlehurst et al., 2003; Paris et al., 2008).

2.11 Motivation and Behaviour towards Changing Procedures in Workplace

2.11.1 Origin of Motivation

According to the study conducted by Kreitner (1995), money was viewed as the most vital contribution to the productivity and most trending particularly during the early 20th century until nowadays. Notwithstanding, by continuous inquiries about "Hawthorne Studies", at the Hawthorne Works of the American Western Electric Company in Chicago, the staffs' behaviour intention is still dominantly influencing the job performance comparing to the given incentive or money (Dickson, 1973; in Lindner, 1998). The Hawthorne study conducted about initializing the human relations technique to deal with administration, whereby the motivation influences the behavioural intention of staffs and thus turn into the essential focal point among supervisors (Bedeian, 1993).

Here, the motivation and performance at workplace has cleared path for different speculations and definitions on it.

There have been different meanings of motivation crosswise over various fields in the scholarly community going from the fields of administration, behavioural science to associated sciences. By referring to the study conducted by Kreitner & Kinicki (1998) and further study by Ramlall (2004), the term motivation is driven from "movere" which is the Latin word means intention of movement. Another explanation by Butkus and Green (1999) expressed that motivation is initially came from the word " motivate " that likewise intends to move from the box, push the button of encouragement or influence to act in order to fulfill any necessity. Nonetheless, difference situation has separated between the expressions of “movement” and “motivation” Mol (1992). In the study has also portrayed movement as completing an assignment keeping in mind the end goal to be compensate or compensated while motivation is the willful contribution, and choice of a man to complete an errand.

Page (2008) in his article on non-financial impetuses in the working environment characterized motivation as the procedure that records for a personal drive force, heading and industriousness of exertion toward accomplishing an objective. In Cole (1996), motivation is basically about what drives a man to work especially and with a given measure of exertion. motivation has been characterized as 'a basic leadership process through which the individual picks wanted results and gets under way the practices proper to procuring them' (Huczynski & Buchanan,1991, in Dartey, 2010). Lindner (2004) likewise considers motivation to be psychological process that gives behaviour intention, reason and goal.

Robbins (2005) characterized motivation as the "eagerness to apply large amounts of exertion toward hierarchical objectives, adapted by the exertion's capacity to fulfill

some individual need". He further indicated in his study that “a need is an inside expression that makes certain results seems alluring and an unsatisfied need makes pressure that fortifies drives inside a person.” These drives produce seek behaviour to discover objectives that if accomplished, will fulfill the need and prompt the diminishment of strain.

Aristocrat (1983, in Mol, 1992) likewise characterized motivation as an arrangement of procedures worried about a sort of power that empowers behaviour and guides it towards accomplishing particular objectives. It additionally expresses that motivation can impact execution, as well as impact performance, if took after by incentives or promotion. Carraher, Gibson & Buckley (2006) advocates that there ought to be a successful reward framework to hold the superior workers in associations and reward ought to be identified with their efficiency.

Baron (1983) hence closes associations could profit by actualizing complete reward programs that attention on formal reward arrangements. Shah and Shah (2010) characterized motivation as inspiring individuals to work; exclusively or in bunches so as to deliver best outcomes. It additionally expresses that, motivation is a general term connected to the whole class of drives, wants, needs, wishes and comparable powers. Shah and Shah (2010) noticed that to state that supervisors propel their subordinates is to state that they do those things which they expectation will fulfill these drives and wants and actuate the subordinates to act in a coveted way.

2.11.2 Motivation Process and Strategies

Motivation is clarified by different scholars as a procedure administering decisions. The Motivation procedure might be internal or external to the person that stimulates enthusiasm and ingenuity to seek after a specific strategy. The motivation procedure

begins with a physiological or mental disability or need that initiates behaviour, or a drive that strive to achieve objective (Bhattarcharyya, 2009). As per Arnold, Robertson and Cooper (1991), a requirement related model of the procedure of motivation is started by the cognizant or oblivious acknowledgment of unsatisfied needs. The requirements make needs, which needs to accomplish or achieve for something. Objectives are set up which is accepted will fulfill the necessities and needs, and a conduct pathway is chosen which is required to accomplish the objective (Armstrong, 2010).

As indicated by Palmer (2005), a key piece of a motivation technique must be toward accomplishing the objective of motivational itself. At the end of the day, it could ensure that individual would not surrender amid the execution stage, by outlining a procedure for accomplishing objectives, and to control the motivation skills. The motivation technique is important for directing the daily tasks and persuading workers with shared objectives. It is not only a choice or basic words used to portray the objective, yet in addition utilizing an arrangement of abilities to accomplish it (Palmer, 2005). From the hierarchical perspective, the technique of motivation takes after certain characterized steps, which, as a continuum should be intermittently explored and strategized to ensure the appropriate recharging (Green, 2000). This would be able to keep up the motivation among workers.

Herzberg, Mausner & Snyderman (1959) recommended that a worker's motivation to work is best comprehended when the individual disposition of that representative is comprehended. That is, the inward idea of demeanor which begins from a perspective, when examined, ought to uncover the most practical data for managers or supervisors with respect to the motivation among employees.

2.11.3 Types of Motivation

Motivation at work is for the most part sorted into two kinds, being characteristic and extraneous motivation demonstrating that diverse impetuses distinctly affecting workers' motivation. While intrinsic motivation is tended to expect the rewards from the action itself, the factor of extrinsic motivation are usually external controlling factors as express rewards (e.g., cash, risk) (Herzberg, 2003; Cameron & Pierce, 2002).

As defines by McCullagh (2005), intrinsic motivation as a matter of need for each individual in term of self-efficacy and quality in their job while extrinsic motivation is characterized as the execution of a work progression in collaboration with another each staff in order to attain some separate outcome and noted that, people can be both intrinsically and extrinsically motivated.

Hackman and Oldham (1980) argued that strong intrinsic motivation occur when three psychological states are created, and these are including; experienced meaningfulness of the work, experienced responsibility for the results of the work, and Learning of the genuine aftereffects of the work exercises. They study also emphasized organizations to rebuild work to prompt intrinsic motivation. More prominent expertise assortment, assignment character, and undertaking centrality increment the accomplished importance of work, self-rule raises experienced obligation, and input gives information of results (Hackman & Oldham, 1980).

As indicated by the self-determination theory, intrinsic motivation is expanded in more self-sufficient work circumstances and results in more positive attitudinal and social results (Deci & Ryan, 1985; Ryan & Connell, 1989). Against Frey's (1997) effort to increase the level of motivation, it prompts the contention that external rewards swarm out inherent motivation and lessen the person's work exertion as a result of impetuses which are in strife with the employee's ethical qualities and decisions. Despite that

external rewards can help swarm in intrinsic motivation when supporting the staffs' decisions and qualities.

Intrinsic motivation, withstanding the parts of managing work for its own particular purpose (Osterloh, Frost & Frey, 2002; Ryan & Deci, 2000), promising psychological advantages of prosperity (Ryan & Deci, 2000), accomplishment (Dermer, 1975), increasing responsibility (Kohn, 1993; Herzberg, 2003), self-actualization (Kunz & Pfaff, 2002), and is self-sustaining (Osterloh, Frost & Frey, 2002). Various authors contend that cash is a poor motivator and can really hinder intrinsic motivation, for example, lessening imagination and advancement (Herzberg, 2003). Despite that, Bishop (1987) recommended that compensation is specifically related with profitability and reward system relies on the measure of an organization.

The particular focus on extrinsic motivation may occupy consideration from the errand which has been named as shrouded cost of incentives given. This view has been joined in the swarming hypothesis (Osterloh, Frost & Frey, 2002). At the point when a movement is inherently engaging (say, challenging), the beneficial outcomes can be undermined if outward rewards are likewise connected to the action and crowd out intrinsic motivation (Lee & Whitford, 2007). This swarming out has been additionally explained under the cognitive assessment theory, which recommends that extrinsic motivation can dissolve inner motivation (Kunz & Pfaff, 2002). Reio and Callahon (2004) additionally reasons that both inborn and outward rewards persuade the employee towards much better performances.

2.12 Motivation and Job Satisfaction

Job performance and satisfaction has been characterized in various ways and a conclusive assignment for the term is probably not going to appear. Job performance is a cognitive

idea that alludes to work related dispositions and qualities, for example, pay and reward, arrangements, initiative practices, administration styles and associates (Dartey, 2010). A general method to characterize it in this way is as an attitudinal variable which is characterized underneath: Job fulfillment is a matter of how individuals feel about their employments and diverse parts of their occupations. It is the degree to which individuals like (satisfaction) or abhorrence (disappointment) their works (Spector, 2000).

Armstrong (2010) likewise draws the consideration that job satisfaction alludes to the attitudes and emotions of individuals have about their job. This infers positive and ideal states of attitudes towards the works that show job satisfaction while negative and terrible attitudes towards the job demonstrate job dissatisfaction. Assurance is frequently characterized as being proportional to work fulfillment. It is likewise characterizing "the extent to which an individual's needs are satisfied and the extent to which the individual perceives that satisfaction as stemming from his total work situation."

Gilmer (1961) suggests that morale "is a feeling of being accepted by and belonging to a group of employees through adherence to common goals". He recognizes confidence as a gathering variable identified with how much gathering individuals feel pulled into their gathering and want to remain an individual from it; and occupation disposition as an individual variable identified with the sentiments employees have about their job designation.

Meanwhile, job satisfaction as defined by Cranny, Smith and Stone (1992) is an employee's affective reactions to a job based on comparing actual outcomes with desired outcomes. It is common perceived as a multifaceted develop that incorporates staff sentiments about an assortment of both characteristic and outward employment components (Howard & Frink, 1996). An elective approach is proposed by Sousa-Poza and Sousa (2000), considering the supposition that there are fundamental and widespread

human needs, and that, if a person's needs are satisfied in their present circumstance, at that point that individual will be cheerful.

This framework hypothesizes that job fulfillment relies upon the harmony between work-part sources of info, for example, instruction, working hour, exertion and work-part yields, for example, compensation, incidental advantages, status, working conditions, inborn parts of the activity. If work-part yields (“pleasures”) increment in respect to work-part inputs (“pains”), at that point work fulfillment will build (Sousa, 2000). Rose (2001) sees work fulfillment as a bi-dimensional idea comprising of inborn and extraneous fulfillment measurements. Intrinsic sources of fulfillment rely upon the individual attributes of the individual, for example, the capacity to utilize activity, relations with executive level of staff, or the work that the individual really performs which are representative or subjective features of the job.

Extrinsic sources of fulfillment in another aspect and situational are rely upon nature, for example, salary, advancement, or employer stability; these are money related and other material rewards or focal points of an occupation. As portrayed by Rose (2001), the qualification identifies with the two-sided connotation of "work": The work assignments performed and the post involved by the individual playing out those errands. It is clarified as: The significance of "work" as a post or arrangement is of essential significance. Each activity is an occurrence of the business relationship, epitomizing an agreement (substantive or suggested) to trade a capacity to (work, give benefit, practice creativity, coordinate endeavors of others, and so on.) for rewards (both material and emblematic). Genuine, performing work undertakings gives a flood of encounters, specialized and social, that can invigorate psychosocially reactions; any subsequent information abridging these responses are basic. Although, such information must not be weighted higher than those concerning background of the plain (or apparent) legally

binding terms - most importantly, those concerning pay and employer stability (Robbins, 2005).

2.13 Motivation of Individual and Organization

Meanwhile, according to Greenberg and Baron (2000 p.190) the classification of motivation could be divided into three main parts. The initial segment takes a gander at excitement that arrangements with the drive, or vitality behind individual (s) activity. Individuals swing to be guided by their enthusiasm for establishing a decent connection on others, doing intriguing work and being effective in what they do. The second part alluding to the decision individuals make and the course their conduct takes. The last part manages keeping up conduct plainly characterizing to what extent individuals need to endure at endeavoring to meet their objectives. As per Antomioni (1999, p. 29), "the evaluation of effort from individuals will put in their work depends upon the degree on how they feel on their motivational needs will be satisfied." Then again, people move toward becoming de-persuaded on the off chance that they feel something in the association keeps them from achieving great results.

Greenberg and Baron (2003) is embraced the term of "motivation" in their paper, as it is more reasonable and basic as it thinks about the individual and his performance. Greenberg & Baron characterizes motivation as:

"*The set of processes that arouse, direct, and maintain human behaviour towards attaining some goal*". (Greenberg & Baron, 2003, p. 190)

Bassett & Lloyd (2005, p. 931) presents those two perspectives of human instinct underlay early research into worker motivation. The primary view centers around Taylorism, which observed individuals as essentially sluggish and work – shy", and consequently held that this arrangement of representatives must be spurred by outer

incitement. The second view depended on Hawthorn discoveries, which held the view that staffs are encouraged to function admirably for "its own purpose" and in addition for the social and money related advantages this sort of motivation as per this school was inside propelled.

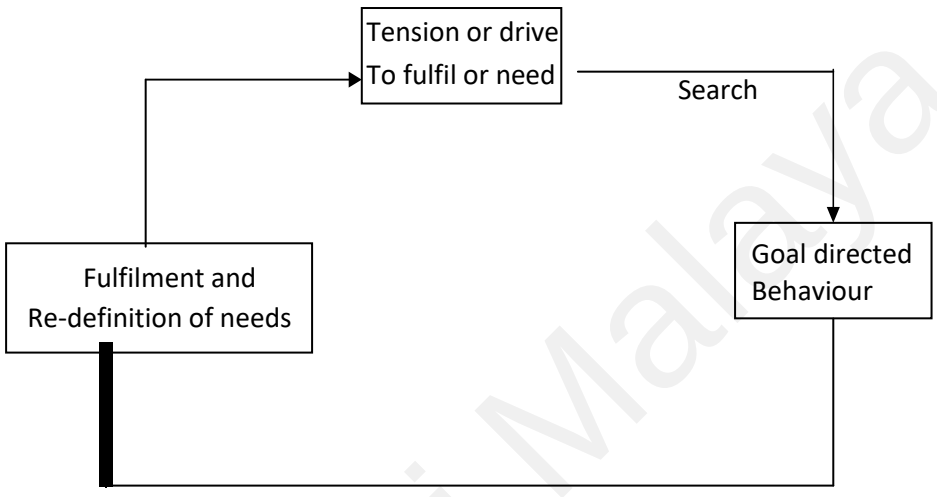

Figure 2.1: The Process of Employee's Motivation

The figure represents that the procedure starts due to pressure inside drives or needs of a representative. Next there is a search inside the organization or teams or inside staff to satisfy his/her needs. The figure illustrates that the process begins because of tension within drives or needs. At the point when the worker is happy with his money related motivation, he rethinks his requests and needs and the procedure is started once more.

These batches of scientists were throughout the years partitioned into what was subsequently marked the substance and theories of motivation. According to Steers, Monday &Shapiro (2004, p.382) the process generated during this period, makes this period referred to as "the golden age of work motivation theories."

"Never before and, some would argue, never since has so much progress been made in explicating the aetiology of work motivation" (Steers et al., 2004, p. 380-383)

Bassett & Lloyd (2005, p. 932) in their study suggests that the "*content theorists led by Herzberg, assumed a more complex interaction between both internal and external factors, and explored the circumstances in which individuals respond to different internal and external stimuli.*" Besides, the process theory where victor Vroom was the primary type considers how factors inside to the individual outcome in various practices. From the concentration purpose of these two categories, one could watch that the procedure hypotheses endeavor or attempt to comprehend the reasoning procedures an individual may experience in deciding how to carry on in a working environment. The essential core interest was on the questions of why and how motivation, from particular behavior starts, developed, encouraged and sustained by time.

Undeniable, a human behaviour is in fact dynamic and could influence the person's close to their nature attitude and elements encompassing that person. These exogenous elements famous from the surrounding in which the individual works produce encouragements to staffs. The staffs generally have their objective/s and search for challenges and expect positive re-enforcement constantly. However, in regards to technology integration, it should not only include the positive factors influencing or affecting the integration, but it is also recommended to observe various aspects in order to enhance motivation among employee (Günes & Bahcivan, 2018; Lawrence & Tar, 2018; Parkman, Litz, & Gromik, 2018).

Thus, it must be of advantage if associations could give these incentives and elements. In spite of the fact that it has been talked about before in this postulation that staffs are fiscally propelled, motivation could be viewed as a moving focus, as what persuades varies among various individuals. Other than that, there might change for a

similar individual over a given timeframe, advancements inside the cutting-edge association has most likely made rousing staffs that always troublesome because of the idea of each person, conduct expanding the multifaceted nature of what can truly persuade any staff.

As indicated by Bassette & Lloyd (2005, p.932) *"expectancy, equity, goal setting and reinforcement theory have resulted in the development of a simple model of motivational alignment. The model suggest that once needs of employees are identified, and organisational objectives and satisfy employee needs. If poorly aligned, then low motivation will be the outcome".*

Meanwhile, Wiley, (1997, p. 264) stated that;

"*Modern approaches to motivation may be organized into three related clusters: (1) personality-based views (2) cognitive choice or decision approaches and (3) goal or self-regulation perspective; where personality-based views emphasize the influence of enduring personal characteristics as they affect goal choice and striving. Workplace behaviour is posited to be determined by persons current need state in certain universal category. Cognitive choice approaches to work motivation emphasize two determinants of choice and action; expectations, and subjective valuation of the consequences associated with each alternative. These expectancy value theories are intended to predict an individual choice or decision. Goal framework to work motivation emphasize the factors that influence goal striving which focuses on the relationship between goals and work behaviour. The assumption is that an employee's conscious intentions (goals) are primary determines of task-related motivation since goals direct their thoughts and action."*

It is important that an in-depth survey of all the various theories specified previously, in aim to motivate employee on putting theories into practices (Karakoyun &

Lindberg, 2020). Although, the personality-based point of view of work motivation inside which Maslow require hypothesis of motivation and Alders ERG hypothesis falls will give the primary help and fill in as an establishment for the examination revealed in this theory. As authoritative researchers have paid a lot of consideration regarding the possibility that individuals are roused to utilize their occupations as systems for fulfilling their requirements. This postulation expects to utilize Maslow's hierarchy of need hypothesis of motivation as an establishment to distinguish the elements that rouse the present staffs, and in the process decide a ranking order of factors that motivates and thus encourages these staffs, the original Maslow theory will be looked at more detail hereof.

2.14 Factors affecting Motivation

In previous studies, the relationship between an employee's motivation and job satisfaction is examined. Various scientists (Heneman, Greenberger & Strasser, 1988; Igalens & Roussel, 1999; Pool, 1997) have reasoned that work motivation and job satisfaction ought to be dealt with independently, so factors of impact can be more promptly distinguished and to take into consideration better understanding. Herzberg's (2003) motivation-hygiene hypothesis recognizes intrinsic motivators (e.g., accomplishment, acknowledgment, the work itself) and hygiene factors which tend to be extrinsic factors (e.g., organization, supervision, compensation). Herzberg's view is that these motivators prompt job satisfaction since they fulfill a person's requirement for self-completion (Maslow, 1954; Tietjen & Myers, 1998).

Expectancy theory, as created by Porter and Lawler (1968), contends that a compensation for-execution framework impacts job satisfaction (Ferris, 1977; Igalens & Roussel, 1999). Supporting this view, Pool (1997) analyzes the connection between work motivation and job satisfaction subsequently finds critical positive affiliation pointers

that, as work motivation expands, job satisfaction increments. In connection to outward motivation, a positive relationship with job satisfaction has additionally been discovered (Moynihan & Pandey, 2007; Wright & Kim, 2004). While the overwhelming contention has been for a positive relationship between extraneous motivation and occupation fulfillment, Frey (1997) contends for a "crowding-in" in actuality.

Intrinsic motivation can increment because of work improvement programs that have expanded passion at work. At the point when the staffs feel happiness regarding their task's increments, inner incentives may undermine the extrinsic motivation (Frey, 1997). The defenders of self-assurance hypothesis contend that compensation can positively affect inner motivation by being strong and empowering staff self-rule and confidence (Deci & Ryan, 2008; Gagne & Deci, 2005).

Notwithstanding, self- determination hypothesis stays quiet on whether extraneous motivation will continuously diminish, if inherent motivation got increments. But the findings of the studies of self-determination theory suggest that supportive work environments, which encourage intrinsic motivation, will result in increased job satisfaction and more effective performance (Gagne & Deci, 2005; Deci & Ryan, 2008; Kunz & Pfaff, 2002). At the point when pay frameworks connect individual and hierarchical execution, the staffs can perceive how imperative their function is, which thusly expands their job satisfaction since they can satisfy high-order needs, such as self-esteem (Wright & Kim, 2004).

2.15 The Relationship of Satisfaction and Dissatisfaction

Herzberg's two factors of inherent level of satisfaction/dissatisfaction inside each factor are the most significant and essential distinction in both factors. On the off chance that motivation incorporates just those things which advance activity after some time, at that

point motivators are the variables that advance long-running mentalities and fulfillment (Ramlall, 2004).

As indicated by Herzberg, Mausner & Snyderman (1959), motivators cause positive occupation states of mind since they fulfill the laborer's requirement for self-completion (Maslow, 1954), the person's definitive objective. The nearness of these motivators can possibly make incredible job satisfaction; although, without motivation, Herzberg says, disappointment does not happen. Now and then administration gives careful consideration to outward rewards, yet characteristic prizes are similarly imperative in staffs' motivation (Andrew & Kent, 2007). Impalpable or psychological rewards like thankfulness and acknowledgment assumes an essential part in motivating the staffs and expanding his performance. Andrew and Kent (2007) conclude in their study that commitment of staffs is based on incentives and recognition.

Nonetheless, hygiene factors, which essentially "move" (cause temporary action), can possibly cause awesome dissatisfaction. Correspondingly, their absence does not incite a high level of achievement. Job satisfaction contains two discrete and independent measurements. These measurements are not on varying ends of one continuum but rather they comprise of two independent and distinguish continua.

The inverse of job satisfaction as stated by Herzberg (2003), is not dissatisfaction, yet rather a less satisfaction. Similarly, the inverse of job dissatisfaction isn't fulfillment, but instead "no dissatisfaction". For instance, consider the hygiene factor, work conditions; if the aeration and cooling system breaks amidst a sweltering summer day, laborers will be enormously disappointed. Be that as it may, if the aeration and cooling system works for the duration of the day obviously, the specialists won't be especially fulfilled by paying heed and being appreciative (Ramlall, 2004).

2.16 Relationship between Motivation and Job Satisfaction

The degree of job satisfaction is influenced by intrinsic and extrinsic motivating factors, the nature of supervision, social associations with the work gathering and the amount of people succeed or flop in their work. Wilson (2010) trust that optional conduct which causes the firm to be fruitful is destined to happen when staffs are all around motivated and feel focused on the teamwork or organization and whenever the task gives them high levels of satisfaction. Based on the previous research findings, the key factors affecting job satisfaction were personal expectations, objectives in career, job opportunities, task influence, teamwork and challenge in workplace.

2.16.1 Personal Expectations

As reported by Tang, Chiu and Luk (2002), unique desires that people convey to the work environment give a third conceivable clarification to ladies' more noteworthy, detailed job satisfaction. Protests about work result from target issues at work, as well as from the desires conveyed to the work circumstance. Tietjen and Myers (1998) places that, as a result of broad work-related isolation, female staffs may have little event to contrast their employments and that of their male counterparts adding to their relative job satisfaction. As a result, they might not have full data on, or possibly day by day indications of, the degree to which they are under-compensated. Along these lines, female staffs who are in occupations with a high convergence of women may not make the kind of correlations that would lead them to be disappointed with their employments.

2.16.2 Socio-Demographical Factors as Determinants of Job Satisfaction

Job satisfaction's determinants regularly connected in examinations performed inside work financial hypothesis incorporate training, work residency, administrative position, the joblessness rate, and conjugal status (Ghinetti, 2007). Residency and having a main position have almost dependably been observed to be decidedly identified with job satisfaction (Clark, 1997). The connections between job satisfaction, level of instruction, the joblessness rate, and wages are interlaced and convoluted (Bryan & Sell, 2011).

The level of education will raise wages and in this manner job satisfaction. It likewise raises desires regarding work substance and in this way the probability of encountering job dissatisfaction (Bryan & Sell, 2011). Many research has additionally demonstrated that staff with higher level of education are less fulfilled than staff with lower education level (Blanchflower & Oswald, 1999). The basic elucidation of this is, job satisfaction relies upon the hole amongst results and yearnings, and that goals are expanded by training. In thinking about a one-of-a-kind level of training, this sort of trouble is disposed of. Senge (1992) affirms in his examinations that the better prepared, taught and motivated the workforce, the more probable it is that an association will be fruitful.

Homogeneity among the team as outcomes from the research conducted of a specific level of training may uncover different systems that are not unmistakable while thinking about various levels of instruction (Clark, 2001). Huge numbers of the prior research on job satisfaction have made a logical qualification amongst men and women as there has been accounted for higher job satisfaction for women (Sloane & Williams, 2000; Clark, 1997). Though Sloane and Williams (2000) find that the distinctions originate from people having diverse kinds of work, Clark (1997) finds that neither

distinctive occupations; their diverse type of job, reveals that neither distinctive occupations; their diverse work esteems; nor test determination represents the gender orientation differential in satisfaction. On the other hand, Clark (1997) proposes a clarification considering prosperity in respect to individual desires.

Staffs from both gender with similar employments and levels of desires would report indistinguishable levels of job satisfaction. In any case, as female staff' desires are lower than male staff', they expected in having been more joined to work home-based, they were also reported a higher job satisfaction than their male staff even given the same working environments and facilities.

According to Ashwathapa (2005), people encounter diverse level of motivation at various phases of their life. Demonstrating that motivation is high at the underlying stage, gets step by step decreased, begins ascending to certain stage, lastly plunges to a low degree. The conceivable explanations behind this marvel are this way. At the point when people join an organization, they may have some unreasonable suspicions about what they will drive from their work. These suspicions make them more fulfilled. Notwithstanding, when these suppositions are out of the mark concerning reality, job satisfaction goes down. It begins rising again as the general population begin the occupations in right point of view and right their suspicions. Finally, especially at the most distant end of the vocation, job satisfaction goes down on account of dread of retirement and future result.

2.17 Dimensions of Job Satisfaction Impacting on Motivation

A critical factor in connection to job satisfaction is salary (Bryan & Sell, 2011). In fact, higher salary will increase job satisfaction, but it is not the only factor that makes you more joyful in your job. Since a higher salary expands by and with higher expectation to

bring live to the fullest. Wage is used as one type of reward along with recognition and future opportunities at the job (Clark & Oswald, 1996).

Staffs are at times propelled by special openings or obligation development. Nabi (2000) expressed Motivation based on career-orientated is among the progression in term of motivation (i.e., aspiration about profession development) and job significance (i.e., the striking nature or centrality of work and career contrasted and different with most issues fulfillment)". This implies a man who is vocation situated has a solid feeling of expert development or gets high fulfillment levels or excitement from the career.

Filipkowski and Johnson (2008) analyzed the connections between measures of employment instability, authoritative responsibility, turnover, non-attendance, and laborer execution within a manufacturer. A positive relationship was found between work instability and expectations to turnover, and a little negative connection was found between proportions of occupation, frailty and organizational duty.

A general job satisfaction assessment as applied by Benabou and Tirole (2006) makes it hard to recognize the two impacts. Absolute, as well as relative wage is thought to be emphatically corresponded to the level of job satisfaction. This is when utilizing the wages of different staffs having similar qualities and kind of occupation for examination (Clark & Oswald, 1996).

Job satisfaction's level might be impacted by capacity along these lines speaking to inconspicuous, stable behaviour of people (Demoussis & Giannakopoulos, 2007). Schneider and Dachler (1978) have demonstrated that the level of job satisfaction changes almost no after some time, recommending that it reflects hidden stable individual auras. This has been tried on an accomplice of German workers by Dormann and Zapf (2001) in a survey on the examinations on the charged security of job satisfaction. The outcome proposed that in the wake of controlling for stable working conditions, the security of

occupation fulfillment reduces to non-noteworthiness, showing that a basic dispositional impact on job satisfaction is not immediate result, however intervened by working conditions This is likewise recommends the level of job satisfaction can be changed by hierarchical of organizational measures.

Ren (2010) likewise examines whether esteem consistency can affect the plan of the association and finds that, esteem harmoniousness is identified with staff investment in basic leadership and self-rule as opposed to control which affect job satisfaction.

2.18 Job Satisfaction and Performance

Organizational researchers have been interested by employee' satisfaction with their tasks in workplace. A few research have inspected predecessors of job satisfaction, particular measurements of job satisfaction, and the connection between work fulfillment and results, for example, work execution (Igalens & Roussel, 1999; Pool, 1997).

Regarding authoritative forerunners, use on R & D (Hadjimanolis, 2000), participation with outer innovation supplier, pioneer's impact (Hage & Dewar, 1973), and compensate framework (Eisenberger & Cameron, 1996; Janssen, 2000; Mumford, 2000) are normally referred to as elements that influence people's imaginative performance.

Kahya (2007) additionally examined on specific factors that influence the job performance. A few research were investigated depicting the impact of involvement, pay, training, working conditions and job satisfaction on execution. Because of the exploration, it has been discovered that few components influenced the staff's execution. The position or review of a staff in an organization was of high beneficial outcome on his or her execution. Working conditions and conditions, then again, had demonstrated both positive and negative relationship on execution. High level of education and qualified

staffs demonstrated disappointment of awful working conditions and therefore influenced their execution adversely. Meanwhile, staff of low capabilities indicated elite disregarding the awful conditions. Furthermore, pass experience indicated positive relationship much of the time, while training did not yield clear association with the execution (Kahya, 2007).

There were several meta-analyses have demonstrated that the connection amongst execution and job satisfaction is certain, however in a small amount (George & Jones, 1997). Nonetheless, study at the hierarchical level has demonstrated that associations with higher normal levels of job satisfaction beat different associations (Ostroff, 1992). A few studies have performed and indicated there is still discourage level of functional comprehension of the way extraordinary factors, for example, work esteems, job satisfaction and execution collaborate with each other (George & Jones, 1997).

Porter and Steers (1973, in Pool, 1997) contended that the degree of job satisfaction among staffs represented the aggregate level of met the staff desires. This implies staffs anticipate that their activity will give a blend of highlights characteristics (e.g. pay, advancement, self-rule) for which the staff has special qualities. The scope and significance of these inclinations fluctuate crosswise over people, yet when the amassing of neglected desire turns out to be adequately huge there is less job satisfaction, and more noteworthy likelihood of withdrawal behaviour (Pearson, 1991).

According to Wheelan (2010), opportunity in education is related to associations that emphasis on teaching and preparing individuals about the specialized parts of their occupations and about viable gathering interest will improve the probability that authoritative gatherings will turn out to be elite groups. Job satisfaction is centered principally around its effect on every staff duty, non-attendance, aims to stop, and real turnover (Agho, Mueller & Price, 1993). Nonetheless, crosswise over research conducted,

the extent of fluctuation in turnover clarified by levels of fulfillment might be littler than initially thought (Hom & Griffeth, 1991; Lee, Law & Bobko, 1999).

Meanwhile, two-year longitudinal research demonstrated that staffs who changed employments and remained in a similar occupation compare to staff who did not change employments by any means (Wright & Bonnett, 1992). Specifically, fulfillment with the aspects of important work and advancement openings were huge indicators of expectations to dismiss an association.

As studied by Mathieu (1991), the contributing factor of job satisfaction and organizational dedication of work found that the impacts of an assortment of precursors on organizational structure responsibility were intervened by their effect at job satisfaction (Tsui, Egan & O 'Reilly, 1992). Parts of the work circumstance have been appeared to be determinants of job satisfaction (Arvey, Carter & Buerkley, 1991). For instance, a wide situational factor, work level, is decidedly associated with fulfillment with all parts of the activity presumably on the grounds that more elevated number of tasks tend to have a better working life.

2.19 Motivation towards Performance Appraisal

Performance appraisal is one of the essential parts in the balanced and orderly procedure of human resource management. The data acquired through performance appraisal gives establishments to enrolling and choosing new contracts, preparing and improvement of existing staff, and spurring and keeping up a quality work compel by satisfactorily and legitimately remunerating their performance. Without a solid performance a human resource management system through appraisal system, bringing about the aggregate misuse of the significant human resources of an organization. This is not to argue that there should be no formal mechanisms for evaluating performance but, rather, it should

be viewed as only one of a number of mechanisms for improving the quality of clinical care (Armstrong & Baron, 1998).

Performance appraisal has been defined by DeVries et al. (1981) as the procedure which enables firms to quantify and thus assess a worker's accomplishments and behaviour over a specific timeframe. As per Briscoe and Schuler (2004) execution can be seen as a blend of a few factors, for example, motivation, capacity, working environments, goal and desires. It has been established that there are certain factors that affect employees‟ performance more than others. These factors, according to Dowling, Welch & Schuler (1999) incorporate the remuneration package; the nature of errand; bolster from higher administration; the workplace and the general corporate culture.

Chandra & Frank (2004) wrote that “performance appraisal systems are designed to objectively evaluate an employee's performance and then outline measures to be taken for improvements, which are essential for an organization to move ahead. The evaluative design is planned to advise individuals of their execution standing. The formative object is proposed to recognize issues as staffs playing out the allocated errand. These frameworks are regularly specific to association as well as healthcare associations."

Meanwhile, Ontario Public Hospitals (1992) ensured that physician performance is appraised, because they are accountable to patients and the community for ensuring that the care delivered meets defined standards and for quality improvement. Berwick (1991) composed that s more associations handle quality from a system-wide point of view, the basic philosophy is assessing an attention on the person to one on the entire system, involving everyone but not focusing particularly.

2.19.1 Performance Appraisal' Objectives

The fundamental cause behind having a performance appraisal program is to monitor staffs' performance, inspire staff and enhance quality of services at hospitals and clinics. In the healthcare providers' facility, observing staffs' performance needs daily documentation, which is done through performance appraisal form. At the point when staffs know that the healthcare providers' facility is aware of their performance, and they could be compensated with augmentation, advancements and promotions that will make them work harder. The spirit of work is enhanced when the staff get acknowledgment or reward for their work.

A compelling performance appraisal program will help the healthcare facility in accomplishing its objectives and goals. Notwithstanding, the necessity of conducting training will be decided and distinguished which tend to amid a performance appraisal review, yet additionally reveals shrouded ability. Through distinguishing the needs of training, staff can play the important role in their employments at the most outstanding level and be in a superior position to address clients", members" and customers" concerns and inquiries. A high credibility staff will probably be proactive, gainful and clever, all that assist to give the healthcare's facility a focused edge, from enhanced client relations to expanded benefits.

At healthcare providers' facility, hence the essential goal of performance appraisal is to enhance the nature of medicinal services to the patients. This is the anticipated result of informing physicians of possible performance deficiencies, as in the model of the quality improvement cycle and the educational model of practice reflection (Berwick, 1989). If insufficient quality of performance identified and distinguished amid review by the Physician Performance Committee, under its current expert, may require

and coordinate thorough assessment, therapeutic knowledge and resulting reassessment towards the best strategies to improve the weakness.

The Department of Health London (1999) in stated in consultation paper of "Supporting Doctors, Protecting Patients" underlined this point by expressing that it isn't the essential point of evaluation to examine specialists to check whether they are performing inadequately yet rather to enable them to merge and enhance great performance pointing towards excellence".

In addition, the employers reported that the appraisals were intended to help improve performance through the identification of training and development needs and to assist with the assessment of future potential and decisions on career progression (Hogg, 1988). In the hospitals and clinics, asset accessibility and staff's ability are fundamental yet are insufficient to ensure preferred execution among staffs (Franco, Bennett & Kanfer, 2002). To acquire execution on quality, cost and patient fulfillment measurements, healthcare organizations will likewise need to fulfill their doctors and staff's requirements (Griffith, 2000). Healthcare conveyance is high work concentrated (Franco, Bennett & Kanfer, 2002) and healthcare sector execution is basically subject to employee motivation (Amaratunga & Baldry, 2002; Martinez & Martineau, 1998).

The ultimate aim of performance management (or performance appraisal), in hospital, is to optimize the quality of work and efficiency in the health system. Quality may basically be characterized as compatibility towards achieving the vision and mission of organization (Acute Care Hospitals, 1991). Most efforts to deal with quality assurance give the regular topic of estimating genuine execution and its examination with either expected or regularizing models.

Having said this, it is pertinent to note that organizations are growing more and more dependent on formal appraisals to make personnel decisions. Hospitals are aware

that well – developed appraisal systems increase the probability of retaining, motivating and promoting productive people. Human resource is crucially needing a proper management as a basic variable influencing a staff's efficiency. Thus, performance appraisals are seen as an essential tool for the effective management of organizational human resource (Latham & Wexley, 1994).

2.19.2 Aspects Involved in Performance Appraisal

Assessment is usually thought of as the measurement of the performance of an individual against a predefined standard. The vast majority of doctors are working independently as consultants or principals. In general practice they do not encounter any form of formal assessment (of knowledge, skills or performance) from the time that they take up their appointment until retirement. Even with the adoption of total quality management the developmental and motivational functions of performance appraisal will continue to be important for the organization's continued existence.

Performance appraisal involves important aspects of people's sense of who they are and what they can accomplish – their competence and effectiveness. (Mohrman, Resnick, & Lawler, 1989). Fisher (1994) explained that the design and structure of the performance appraisal system is important to staff and management and of equal importance to the actual appraisal interview. In the appraisal of performance, it is important to consider who will conduct the appraisal, what performance will be appraised and how and when it will be appraised.

2.19.3 Healthcare Staff Involved in Appraisal Performance

Physicians, nurses, social workers, clinical pharmacists and other professionals often work interdependently to care for patients; but during performance appraisal, they have formal input into each other's appraisals. As hospitals increasingly focus on care delivery processes, physicians may be appraised by other professionals who share the responsibility for patient care and outcomes. Ensuring the quality of medical care is the responsibility of both regulatory bodies and hospitals. The way an organization is structured has a direct bearing on who conducts the appraisal. Hospitals generally use a combination of functional and, team or program approaches. In a functional approach, professionals focus on performing their own functions under the direct supervision of one boss. Teams or programs comprise individual professionals who also belong to traditional functional departments. In this case, however, professionals may have two supervisors - one in the department and one in the team or program.

The peer review program of the College of Physicians and Surgeons of Ontario showed that the office records of randomly selected physicians tended to improve after defects were pointed out (Norton et al., 1998). A British study suggested that the routine practice of doctors and nurses can be influenced by feedback from patients (Hearnshaw et al., 1996). One study reported the feasibility and value of physician performance appraisal by patients (Lewis & Williamson, 1995), peers (Ramsey et al., 1993), and hospital nurses (Wenrich et al., 1993). A past report detailed that the strategy for choosing peer or patient raters (by the doctor, by the agents, or at arbitrary from arrangements of partners or patients) does not influence ratings (Ramsey et al., 1996).

Physician must ensure that standards established by the team are met; both the nursing manager and physician would provide feedback to the nurse in question. Responsibilities of the department head, also called the chief of service. Generally,

the department head is responsible for assessing the clinical expertise and ensuring compliance with expectations; however, many hospitals have not yet fully implemented such a system.

2.19.4 Performance Criteria for Appraisal

The nature of the performance to be evaluated is ambiguous. In many cases, the appraisal considers the practitioner's decisions about when individual practice patterns take precedence over practice guidelines. The jury is out on how to develop expectations for practice, but to assess the quality of a department's service such expectations must be developed. The measure of performance frequently incorporates both expectation of procedure (how the work completes) and result expectations (the outcome of the procedure). Simon (1992) suggested the following criteria to assess the performance of department head in the hospital: quality of service in the specific department, operational efficiency and effectiveness, and budget responsibility and accountability.

Meanwhile, Acute Care Hospitals (1991) decided that in addition to evaluating clinical performance of the hospital employee, appraisers also take into account that employee are expected to work effectively with other staff; in respect bylaws, rules and regulations, related policies and procedures. Other than that, as an active member in board of committees, seminar related to staff development and continuing education. Extensive discussions within the committee generated six broad categories of physician performance attributes in medical knowledge and skills, attitudes and behaviour, professional responsibilities, practice improvement activities, administrative skills and personal health.

As stated by Moorhead and Griffin (1992), the procedure will assess behaviors in work by estimation and correlation with previously established standards, reporting the

outcomes, and conveying them back to the staff. It is an activity between a manager and an employee. General Medical Council, London & Royal College of Physicians and Surgeons of Canada wrote the seven key roles, which are being expected from specialist physician in the hospital as a permanent employee, in their reports. So, any physician can evaluate ted on the basis of these roles.

2.20 Appraising Performance toward System Integration

To date, health care organization literature on performance appraisal methods has tended to focus on employee-employer relationships instead of the practitioner-organization interface. Although, in the new era, most of the doctors are not hospital employees, their performance will be examined in the light of the strategic direction of health care organizations. McAuley, Paul, & Morrison et al. (1990) conducted a peer assessment program in the College of Physicians and Surgeons of Ontario that is mainly covering the office practices.

Kilshaw (1992) said that these programs are traditionally based on peer review and include a well-defined committee structure involving medical staff representatives. The College of Physicians and Surgeons of Alberta (1995) in one report they established five categories of sources of physician assessment - self, patients, medical peers or colleagues, consulting physicians to whom patients are referred and non-physician coworkers in health care (e.g., secretaries, nurses and pharmacists). Lemieux (1989) describe that in hospitals, department heads, various medical committees and ultimately the board of directors are responsible for ensuring standards of medical care. Although hospitals are beginning to formalize the evaluation process; many department heads are reluctant to appraise their colleagues' performance.

Peer appraisal is the system that is most familiar and acceptable to hospital employee. They are most likely to evaluate a colleague's performance through a formal peer evaluation system or to establish goals for their own performance through feedback sessions with the department head. The appraisal is generally led in a face-to-face interview. It is suggested that all appraisers are particularly prepared for this duty. It is important that appraise becomes clear about exactly what to expect from the appraisal, so that any negative feelings and insecurities can (at least in part) be reduced (Jackson et al., 2001 & Wilkinson, 2001). Although there are peer-review instruments that validated by Ramsey et al. (1993), which could be used to assess working relationships with colleagues‟ they are yet to be implemented widely. There are various approaches to assessing performance.

The behavioural approach can be used in conjunction with peer evaluation. Three types of peer evaluation have been described: peer rating, peer ranking and peer nomination (Stone & Meltz, 1993). In peer rating, group members rate each other; in peer ranking, group members assign rankings to one another; and in peer nomination, each member of a well-defined group designates a number of group members as highest (and sometimes lowest) in an aspect of performance. The third type has been shown to distinguish with a high degree of reliability and validity group members whose performance is very good or very poor in the particular area (Kane & Lawler, 1978). When there are few peers in the organization and the practice to be assessed is complex, a peer in the specialty from outside the organization conducts the evaluation.

Outcome approaches such as management by objectives and goal setting focus on the results of performance rather than on behaviours. Results-oriented systems are as many approaches to management as they are appraisal systems; the focus is on setting targets ahead of time so that employees know where to aim. Such approaches are based on the idea that people are more motivated and that their performance is improved when

they have specific goals. There are three reasons why setting goals affects performance: it has a directive effect (channeling energy on a particular path), it requires workers to put forth effort and it requires them to be persistent - to expend directed effort over time (Latham, 1990). Generally, goals and ways of measuring their achievement are mutually established by the supervisor and the subordinate or among peers. In this way issues that are difficult to quantify but relevant to professional work can be addressed. There is a continuing debate over the merits of behavioural versus outcome-oriented performance criteria.

Here, health care organizations depend greatly on a professional work force that is involved in defining its mission and carrying out its strategy. As such organizations become increasingly concerned with their effectiveness, they must pay attention to employee and physician performance. The main challenges lie in developing performance appraisal systems are the demand of flexible and appropriate system to the professional staff. This paper has suggested that performance is improved when outcomes or expectations are defined, goals are set, and timely feedback is given. These principles also apply to physicians, Nurses and other staff of hospital, particularly as their roles are affected by the restructuring of health care.

2.21 Healthcare Performance toward Patients' Satisfaction

Throughout the years many studies have taken a gander at the regions of consumer loyalty and staffs' fulfillment. Late research has put significantly a greater amount of an accentuation on how human resource administration practices, for example, staffs' commitment, acknowledgment programs, and inside showcasing endeavors can build worker fulfillment and maintenance. Less research takes a gander at the immediate effect on staff fulfillment on consumer loyalty. Nonetheless, this research exhibit the

requirement for medicinal services executives to evaluate human resource management practices of their association and endeavors to enhance the quality of care by changing employee engagement, satisfaction, and loyalty.

On the other hand, generally couple of scholarly investigations in the health care sector seems to exist which take a gander at the association between staff and patient fulfillment, those that do take a gander at this theme demonstrate a relationship exists. Numerous health care staffs are progressively demonstrating anxiety for conveying brilliant care in which both the client (patients) and suppliers (representatives) are fulfilled while keeping up a solid budgetary condition (Love, Revere & Black, 2008). This mentions to a move in administration hypothesis from the 1990s when taken a cutting expense and the primary concern overwhelmed issues in the medicinal services industry (Brown, 2002).

2.22 Working Environment and Satisfaction in Organization

As reported by Newman, Maylor & Chansarkar (2001) these working environment and satisfaction in organization interrelated issues influence each other in view of an audit of writing on healthcare enlistment and maintenance, benefit quality, and human asset administration. Newman demonstrates a chain of availability with the end goal that (an) interior conditions and condition influence (b) the administration ability of staff which impacts (c) human services fulfillment which, thusly, influences (d) maintenance of healthcare. Those components can lessen (e) nature of patient care and eventually (f) the level of patient fulfillment.

Health care organizations that give a decent workplace which improves the administration capacity of staff through enabled basic leadership will prompt more fulfilled human services who will probably stay faithful to the association and give a more

elevated amount of care bringing about higher patient fulfillment. Associations that longing to enhance understanding fulfillment should hence be worried about inside issues identified with staffs' fulfillment and view their staffs as clients as well. An association seems to exist between how drawn in a staff is with the staff's part in the patient care process and the level of patient fulfillment. This interrelationship influences fulfillment levels as well as patient dependability and budgetary execution.

2.23 Management in Healthcare Job and Organizational

The expanded enthusiasm from healthcare service providers additionally originates from the conviction that high turnover rates and the absence of responsibility adversely influence the arrangement of care and eventually the financial related execution of associations (Morrison et al., 2007). This perspective helps demonstrate why healing centers are progressively intrigued by deciding powerful approaches to connect with staffs better. Saks (2006) was one of the first to take note of the essential qualification between work commitment and authoritative commitment. He discovered that apparent authoritative help predicts both occupation and association commitment.

Henceforth, health care service providers need to discover approaches to address these interior marketing issues at both activity and authoritative levels. While staff commitment and acknowledgment programs have dependably been imperative to administrators, as recently these practices have seen an expanded level of enthusiasm for health care services because the employee's role in patient care is more evident when considering the scarce resources of hospitals and the overall shortage of healthcare (Freed, 1999).

Then, how can health care organizations change employee engagement at these two levels? Thomas (2007) defines engagement as "a state of aroused behaviour toward

any situation with the presence of specific motivation that is correlated with both attitudinal and behavioural outcomes." Management and organizational culture, along with empowering employees give off an impression of being three of the greatest factors in staffs' commitment levels. Cathcart (2004) demonstrated that traverse of control had some impact on worker commitment and that adding administration positions to lessen the traverse of control helped increment staff's commitment scores.

Another research has demonstrated working environment culture, authoritative correspondence and administrative styles, trust and regard, initiative, and companion notoriety that most impact staff commitment (Lockwood, 2007). High association work practices may upgrade the monetary execution of human services associations (Huselid, 1995 and Harmon et al., 2003). There are several elements that appear to account for differences in empowerment and job satisfaction scores of healthcare include: (1) greater accessibility of healthcare leaders, (2) better support of healthcare services provider implied self-governing basic leadership by social insurance pioneers, and three (3) more noteworthy access to work strengthening structures, for example, opportunity, data, and assets (Upenieks, 2003). These discoveries propose that healing centers that have profoundly available pioneers, offer help for self-governing basic leadership, and give access to strengthening structures have a more prominent probability of expanding staff fulfillment.

2.24 Engagement, Empowerment and Others Impact Healthcare Loyalty and Satisfaction

Several studies have shown how employee empowerment and engagement impact employee satisfaction and loyalty to the organization. Health care services provider that routinely accomplish high level of staff fulfillment scores have a tendency to have the

accompanying in general (1) open authority, (2) visit correspondence, and (3) staffs' engagement to fulfill patients (Fassel, 2003). Internal marketing endeavors have been appeared to grow better connections amongst staff and their associations while expanding fulfillment and maintenance.

Meanwhile, Peltier, Nill & Schibrowsky (2003) determined that structural bonds followed by social and financial bonds have the most impact on healthcare loyalty. A 2004 study by Peltier, Schibrowsky & Nill have determined these three types of bonds influence not only loyalty to the organization, but healthcare satisfaction as well. A 2007 follow-up study by Peltier, Pointer & Schibrowsky have determined that quality of care most impacted healthcare satisfaction followed by the three types of bonds from the 2003 and 2004 study.

A study of healthcare and midwives in London hospitals determined that the three main factors influencing their job satisfaction were patients, the inherent characteristics of nursing, and the nursing team (Newman, Maylor & Chansarkar, 2002). Additionally, their study have discovered that enhancing working conditions was more essential than expanded pay. This is by all accounts in accordance with Peltier et al.'s discoveries that basic and social securities were more imperative than money related securities from an inward showcasing point of view.

Meanwhile, pay for execution exercises may prompt expanded fulfillment and higher nature of care, these kinds of reward frameworks tend to be brief in contrast with other acknowledgment or commitment programs. Besides, by permitting staffs to give higher quality care to patients, the staffs tend to take more noteworthy pride in their activity and like the association and its qualities. Freed (1999) likewise takes note of the significance of managing commitment, something that will help have a dependable effect on staff's fulfillment and the conveyance of brilliant care.

Different manners by which strengthening and commitment increment fulfillment and steadfastness include Reduced Job Stress and Turnover. Observational research has demonstrated a negative connection amongst strengthening and occupation push, proposing that as staffs are more enabled their activity stretch declines (Joiner and Bartram, 2004). Notwithstanding stress, expanded staff fulfillment decreases representative turnover, leaves of nonappearance, and lower business-related incapacity and unacceptable claims (Harmon et al., 2003).

Morrison et al. (2007) plot a few manners by which the absence of commitment and high turnover rates affect healthcare sectors. A portion of these variables incorporate turnover costs, which regards to Waldman et al. (2004) territory in the vicinity of 3.4% and 5.8% of their working spending plan. High turnover rates are additionally thought to prompt higher release costs as indicated by Joint Commission on Accreditation of Healthcare Organizations (JCAHO) (2005) so there are monetary worries to heads past just enrollment and maintenance costs. Furthermore, whenever staffs feel unsatisfied and neglected and leave the association which puts higher workloads and feelings of anxiety on the individuals who remain and eventually would drives down fulfillment for both staffs and patients (Fukuyama, 1995).

2.25 Organizations toward Active Role in Decision Making, Feelings of Support and Accomplishment

Organizations that promote employee empowerment can help healthcare take a more active role in daily care decisions, which is believed to enhance employee satisfaction (Berlowitz et al., 2003). At the point when the staffs are more dynamic in basic leadership in nursing practice and unit administration as well as patient care, they feel more connected with which prompts higher fulfillment and lower turnover rates (Relf, 1995).

Changes in the impression of worker strengthening seem to have enduring constructive outcomes on staffs' fulfillment. Laschinger, et al. (2004) proposes that adjustments in access to basic strengthening affected staff of healthcare services' sentiments of mental strengthening and fulfillment with their occupations over a three-year time span.

Healthcare services at magnet hospitals and clinics encounter more elevated amounts of strengthening and job satisfaction because of more prominent access to work strengthening structures when contrasted and human services from non-magnet healing centers (Upenieks, 2003). Meanwhile, Shortell et al. (1995), Berlowitz et al. (2003) verified that workers of nursing homes where Quality Improvement (QI) hones were embraced shown fundamentally higher job satisfaction than others because of strengthening to play a more dynamic part in everyday decisions. At the end of the day, by enabling staffs to decide, healing facilities can expand staff's commitment and thusly job satisfaction.

The impact of empowering work conditions may play an even more important role at the middle level of healthcare management. Patrick and Laschinger (2006) reasoned that their discoveries towards Kanter's conflict that engaging work conditions significantly affect sentiments of assisting and feeling of achievement at work which may play an integral role in middle management retention and attracting healthcare to management positions. On the other hand, this would propose any associations that do not cultivating and strengthening staffs may encounter issues holding and drawing of middle level managers.

2.26 Improve Relationships with Management

Wagner (2006) established that an essential factor in staff's fulfillment and dedication to that employer is the staff's association with his or her prompt manager or supervisor. This

finding further exhibits the requirement for health care administrators to be worried about staffs' fulfillment as healing centers confront nursing deficiencies. It likewise is in accordance with Curran (2001) discoveries that healthcare sector demonstrated administration that is distant from the substances of patient care prompt lower healthcare fulfillment and unwaveringness. The nature of connections including correspondence amongst administration and representatives impacts the staffs themselves as well as affects hierarchical adequacy by influencing profitability and turnover rates (Brunetto & Farr, 2006). At the point when administration enables a staff to feel connected with other and offers them assistance and human resources plays important role to give quality care to patient, staffs are also happier with their employer as well as continue well-performance and tend to be more faithful.

. While numerous researches demonstrate that commitment and staffs' strengthening in healthcare settings can prompt more prominent occupation and authoritative fulfillment, not every person has discovered an association between the two. Suominen et al. (2006) discovered that considering their research of a multidisciplinary group at the Rheumatism Foundation Hospital in Finland, job satisfaction is not identified with any of the fields of strengthening. While this contrasts from past investigations, it raises the subject of when and how does strengthening and commitment affect staff fulfillment. More relevant to the current research is the relation of employee satisfaction and the impact to patient satisfaction.

2.27 Impacts of Employee Satisfaction on Quality of Care and Patient Satisfaction

Healthcare and other health care employees' satisfaction have been found to have several impacts on the quality of care delivered which ultimately influences the level of patient satisfaction. Newman, Maylor & Chansarkar (2001) chain plots an unmistakable

interrelationship between staff fulfillment, the nature of care, and patient fulfillment. Atkins et al. (1996) demonstrated that staff's disappointment contrarily impacts the nature of care and at last adverse effects persistent unwaveringness and thus healing center gainfulness. Quality change activities were appeared to have a positive relationship with staff fulfillment and in addition customer fulfillment in an investigation of Swedish healthcare sector (Kammerlind, Jens & Rutberg, 2004). Healthcare service providers resolve additionally exhibits a solid connection with understanding fulfillment scores, demonstrating that the absence of responsibility and commitment have extensive effects on something beyond staff turnover (JCAHO, 2005).

Ott and Van (2005) provide a unique study which combined data on employee and client satisfaction. Their discoveries propose that staffs' satisfaction with their organization is a superior indicator of customer satisfaction than staffs' job satisfaction. The authors propose that in view of their discoveries, work related preparing is the movement most pertinent for customer satisfaction despite demonstrating no connection with job satisfaction. Their investigation likewise showed the unpredictable relationship amongst staff and client satisfaction which can be in struggle. For instance, while staffs are more fulfilled when they have general work routines this reductions client satisfaction as staffs are esteemed less accessible to patients. This demonstrates staff and patient satisfaction are connected, yet occasionally at struggle with each other.

The staffs' satisfaction likewise seems to have a solid association with the nature of care conveyed and related expenses. At the point when staffs are more fulfilled it lessens pressure, turnover, leaves of nonappearance, and lower business-related inability and viciousness claims (Harmon et al., 2003; Joiner & Bartram, 2004). These elements help increment the level of care given to patients. Healthcares who are happy with their employments display larger amounts of patient security and less medication errors which help increment quiet fulfillment (Rathert & May, 2007). Satisfied staffs likewise were

found to prompt abbreviated lengths of remain for patients and lower variable costs (Harmon et al. 2003; Karasek, 1990). The diminishments in enrollment and maintenance costs and less staffs missing work joined with bring down patient variable expenses and slip-ups make enhancing staff satisfaction of more engaging executives.

The idea of inward showcasing in the health care sector recommends that the most ideal approach to fulfill patients is by considering and putting staffs as inside clients and that by comprehension and addressing staffs' needs, necessity, desires, and concerns their level of fulfillment will increment in this way prompting better nature of care and higher patient fulfillment (O'Neill, 2006; Bitner, Booms & Tetreault, 1990; Hesket et al.,1997; Testa, Skaruppa & Pietrzak, 1998). A relationship showcasing way to deal with HR hones is one-way medicinal services associations can defeat the worldwide issue of nursing deficiencies. The discoveries from Peltier et al's. thinks about (2003, 2004, and 2007) recommend that by concentrating on enhancing the nature of care, medicinal services associations can enhance quiet fulfillment, as well as enhance staff's fulfillment and dedication to the association. This thusly will additionally affect the nature of care due to the interrelationship of this connection.

2.28 Theoretical Framework

2.28.1 Community of Inquiry

The community of inquiry model defines a good e-learning environment through three major components of social presence, teaching presence and cognitive presence. Social presence is "the capacity of members to relate with the network (e.g., course of study), impart intentionally in a trusting environment, and thus develop strong inter-personal relationships by anticipating their individual identities and attitudes." (Garrison, 2009). Meanwhile, teaching Presence is the plan, assistance, and course of cognitive and social

procedures to realize important and instructively beneficial learning results (Anderson et al., 2001). Cognitive Presence is the degree to which students can build and affirm significance through maintained reflection and talk (Garrison, Anderson & Archer, 2001). The figure below clarified the relationship and function of these components.

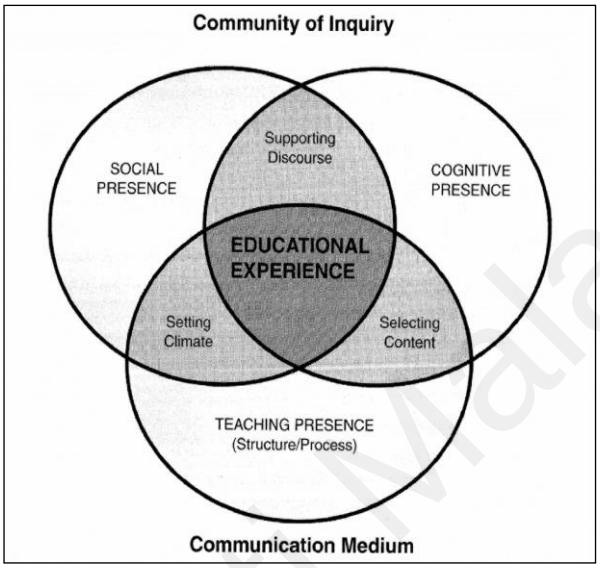

Figure 2.2 Community of Inquiry (CoI) by Garrison, Anderson & Archer (2000)

The Community of Inquiry (CoI) structure is social constructivist in nature and grounded in John Dewey's (1938) idea of practical request. It is a dynamic procedure demonstrate intended to characterize, depict and measure components supporting the improvement of internet learning networks. The three principal elements identified by the CoI model is used in this study which are social presence, cognitive presence and teaching presence. Social presence is characterized as the total members in PC interceded correspondence feel affectively associated to each other; cognitive presence is conceptualized as the degree to which students can develop and affirm significance through maintained reflection and talk; and teaching presence is characterized as the

outline, assistance and course of cognitive and social procedures to assist learning (Swan, Garrison & Richardson, 2009).

Despite the fact that we have been moderately effective in distinguishing the properties of offbeat learning systems, a more top to bottom examination of the instructive and value-based issues requires a hypothetical structure that can give request and stinginess to the complexities of web-based learning. A develop structure that has pulled in extensive consideration in advanced education to fill this need is a network of students. Advanced education has reliably seen network as fundamental to help cooperative learning and talk related with more elevated amounts of learning. Despite the potential for disconnectedness in internet learning networks, there is confirm that a feeling of network can be made on the web (Rovai, 2002a; Thompson & MacDonald, 2005). There is also evidence that a sense of community is significantly associated with perceived learning (Rovai, 2002b; Shea, Li, & Pickett, 2006).

While considerable emphasis was placed on social presence in the early online learning research, it was Henri (1992) that turned attention to the cognitive dimension. This work was a catalyst for Garrison, Anderson & Archer (2000) to develop a comprehensive framework to guide the research and practice of online learning as shown in Figure 2.1. The framework comprises of three components – social, teaching and cognitive presence – and classifications as well as markers to characterize every nearness and to control the coding of transcripts as figured in Table 2.1. The genesis of this framework can be found in the work of John Dewey and is consistent with constructivist approaches to learning in higher education. This framework has resounded with the web-based learning network and gave bits of knowledge and approach to concentrate web-based learning (Garrison & Archer, in press; Garrison et al., 2006).

The CoI framework has been received and adjusted by instructors around the world. In this research it has been used in a variety of ways to inform both research and practice in related information system. The advancement of a typical CoI study has brought about a whirlwind of new research that is moving our comprehension of internet learning. From the application of PhIS shows that the Community of Inquiry model for the major contributions it has made and/or made possible to our understanding of hospital information system. The community of Inquiry model. Copyright 2007 R. Garrison, Anderson, Archer and Rourke et al., University of Calgary, reprinted with permission by Terry Anderson. Table below stated the elements, categories and indicators of Community of Inquiry Coding Template.

Table 2.1: Community of Inquiry Coding Template

Elements	**Categories**	**Indicators (examples only)**
Cognitive Presence	Triggering Event Exploration Integration Resolution Emotional Expression	Sense of puzzlement Information exchange Connecting ideas Apply new ideas Emotions
Social Presence	Open Communication Group Cohesion Instructional Management	Risk-free expression Encouraging collaboration Defining and initiating discussion topic
Teaching Presence	Building Understanding	Sharing personal meaning

2.28.2 Theory of Planned Behavior

As indicated by the theory, human behavior is guided by three sorts of contemplations: convictions about the probable results of the behavior (behavioral beliefs), convictions about the normative desires for others (normative beliefs), and convictions about the existence of elements that may encourage or obstruct execution of the behavior (control beliefs). In their separate elements, behavior convictions deliver a positive or unexpected state of mind toward the behaviour; normative beliefs result in apparent social weight or

subjective standard; and control convictions offer ascent to apparent behavior control. In blend, state of mind toward the behavior, subjective standard, and view of behavioral control prompt the development of a behavioral intention.

When in doubt, the more positive the state of mind and subjective norm, and the more prominent the perceived control, the more grounded ought to be the individual's goal to play out the behavior being referred to. At last, given an adequate level of real control over the behavior, individuals are relied upon to complete their aims when the open door emerges. Goal is in this way thought to be the quick predecessor of behavior. Notwithstanding, because numerous behaviors posture troubles of execution that may restrict volitional control, it is valuable to think about perceived behavioral control notwithstanding aim. To the degree that perceived behavioral control is veridical, it can fill in as an intermediary for real control and add to the forecast of the conduct being referred to. The following figure is a schematic representation of the theory (Taylor & Todd, 1995).

2.28.3 Theoretical Framework

This research is based on Community of Inquiry (CoI) Coding Template by Garrison, Anderson and Archer (2000) and the Decomposed Theory of Planned Behaviour (DPTB) by Taylor and Todd (1995). Thus, both these models can be interrelated to determine the factors that are affecting users' perspective on using new information system in handling their daily job.

Until recent, researchers have developed several models for studying the information system tools adoption of end users. We were examining the likenesses and contrasts among these models with an objective of creating consolidated models with the

presence of more explanatory power. Chen and Li (2010) show in full detail that integrating the theoretical constructs of TPB can increase the accuracy of an integrated model to predict and explain users' behavioral intentions. Thus, DPTB and CoI are chosen as the theoretical basis to develop a research model for better interpretation and forecast of the PhIS adoption and changing behavior of teachers. Applying the foregoing explanation to the study of PhIS adoption, we expect that optimism and innovativeness of both these models could encourage teachers to use this information system tools, and to hold a positive attitude toward the application of current system.

2.28.4 Theory of Decomposed Planned Behaviour (DPTB)

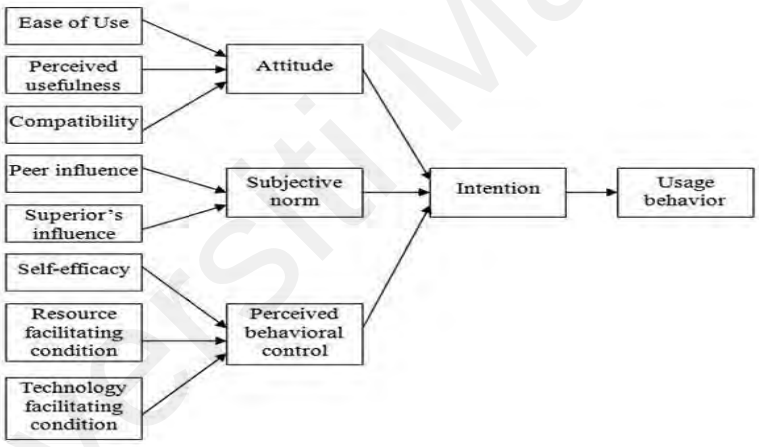

Figure 2.3: Decomposed Theory of Planned Behaviour by Taylor and Todd (1995

As reported by Fishbein and Ajzen (1975), the theory of planned behavior (TPB) is an expansion of the theory of reasoned action that predicts behavior over which individuals don't have finish volitional control. TPB accomplishes this by "counting an indicator of behavioral intention and behavior called perceived behavioral control" (Notani, 1998, p. 248). From the TPB, Taylor and Todd (1995) build up the decomposed TPB (DTPB). This model means to clarify the behavior of clients in view of the connection between beliefs, attitudes, intention and behavior.

As indicated by this model, attitudes, subjective norms, and perceived behavioral control are the components that assist to comprehend the reasons or factors clarifying individual actions, regardless of whether the intention is considered as the best indicator of behavior (Herrero & Rodr guez, 2008). DTPB emphasizing on the distinguishing proof of convictions and factors those impact the three determinants of behavior, in particular attitudes, subjective norms, and perceived behavioral control. This model decomposes attitudes into three factors, specifically perceived usefulness, perceived ease of use, and similarity, and a variable emerging out of Rogers' diffusion of advancement or innovation theory (Rogers, 1995). Similarity is "the degree to which an advancement is perceived as predictable with existing values, past experiences, and needs of potential users" (Rogers, 1995, p 224; In Eastin, 2002, p. 253).

Compatibility is to a great extent utilized as a predecessor of attitude. Chen, Gillenson and Sherrell (2002) propose a model coordinating Theory of Diffusion of Innovation (TDI) and reason that compatibility impacts attitude toward online purchasing and that it is a precursor of perceived usefulness. Chen and Tan (2004), in a research intended to decide the key achievement factors for the acknowledgment of online stores, find that the compatibility factor is a forerunner of perceived usefulness. Based on a study conducted by Chen and Tan (2004), it was intended to decide the factors of key success for the acceptance of online stores. From the previous study, it reveals that the similarity variable is a predecessor attitude among perceived usefulness, perceived ease of use, belief, and perceived quality of service. The more noteworthy similarity is, the higher the probability of the appropriation of online stores. Vijayasarathy (2004) and Lin (2007) likewise demonstrate that compatibility affects attitude toward the acceptance of the Internet as apparatus.

Chen and Li (2010) reported that the attitude of DTPB has more importance than perceived behavior control in determining behavioral intention to use e-service. The result

conforms to the findings reported in prior research. The subjective norm of Theory of Reasoned Action (TRA) refers to "the perceived social pressure to perform or not to perform the behavior." In other words, the subjective norm is related to the normative beliefs about the expectation from other people (Wu and Chen, 2005).

Several empirical studies have shown that subjective norms have a positive and direct impact on behavioral intention, but this influence is usually weaker than that of attitude and perceived behavioral control (Ajzen & Fishbein, 1980; Armitage & Conner, 2001). Gretzel (2006) reported that technologies consumed in private make it less important to consider what other people would think. Intention dictated by perceived behavioral control of TPB and some thought concerning certain encouraging instruments enable users to receive new IT apparatuses easily (Liao, Chen, & Yen, 2007).

In addition, the DTPB considers the perceived behavioral control (PBC) variable. According to Wu and Chen (2005), PBC reflects a person's perception of the ease or difficulty to implement behavior. The literature on the impact of the perceived behavioral control variable shows that this construct influences behavioral intention only, regardless of the context of the studies, which is justified by the fact that the TPB model predicts this relationship (Mathieson, 1991; Taylor & Todd, 1995; Hsu & Lam, 2006; Lu, Zhou & Wang, 2009; Hwang, Lin & Wang, 2010).

2.29 Summary of the Chapter

Since absence of access is a generally alluded to innovation integration barrier, it is normal to accept that if this barrier were evacuated, the level of innovation or technology integration would be higher in technology-rich environments than in environments which still had lack of access as a barrier. This component of the literature review examines whether instructors will simply begin to integrate technology into their teaching if they

are exposed to a technology-rich environment. If this were the case, unlimited access would seem to be the key predictor variable for the level of technology integration. However, the research is mixed in this regard, and the only relevant research for this portion of the investigation is from technology-rich environments. This literature review was also to provide support for the study in terms of processes and research questions. In particular, the literature review lays the groundwork for the methodologies to be employed. The forthcoming chapter takes this framework and transforms it into the relevant components of the processes of this study.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Introduction

The study aims to investigate the users' perspective, motivation and behavioral intention towards Pharmacy information management experiences of using Pharmacy Information System (PhIS). At overall, this study conducted in aims to find out the relationship between the determinants (triggering event, exploration, integration, resolution, emotional expressions, open communication, group cohesion, instructional management, building understanding, and direct instruction) and pharmaceutical staff' behavioral intention and usage motivation towards Pharmacy Information System (PhIS).

In this chapter, the research design and methodology that will be applied in this study as a guidance in order to conduct and achieve the objectives of the study. Besides that, this chapter describes the research methodology used in this study such as research design, sample of population, data sampling, sources of data and data collection procedures. Subsequently, appropriate data analysis methods will be applied in order to find out the answer to each research questions in this study.

3.2 Research Design

In line with the objectives of this study, the perspective and acceptance level among hospital staffs in which affecting the behavioural changes and motivation in applying the Pharmacy Information System (PhIS) in managing Pharmacy administrative task will be measured by using the questionnaire (survey method) as research instrument after considering the research questions, the limitations and the scope of the study.

This research is quantitative mode by using descriptive and inferential statistics as analyzing tools. Besides, it was also used Partial Least Square and Structural Equation Modelling (PLS-SEM) it is an attempt to gather information about the complex relationships that exist amongst key variables regarding the perception of technology into teaching and learning in an integrated technology working environment. This investigation is focus on the affective, reported behavioral, and temporal aspects of the integration process from the pharmacy information system (PhIS) of a hospital / clinic staff in their facility working in this new technology information system. The principal mode of enquiry for this study is in quantitative nature.

This research design helped provides more data to work with and ultimately a more accurate evaluation (O'Neill, 2006). The research design for the quantitative part of this study is also a cross-sectional survey design. In this design, its main purpose is to explain people's attitudes, opinions, behaviours or characteristics that describe the population in general. For instance, it is used to get opinions on hospital staff' perceptions towards the use of Pharmacy Information System (PhIS) in managing Pharmaceutical administrative task. The second characteristic of this survey design is data are collected at one point in time using survey as the main source of data collection (Creswell, 2008).

From this study, the researcher will be able collect the data in order to analyze it to evaluate the participants' perception about their current views or attitudes on certain issues regarding the PhIS application. Here the cross-sectional survey design has been selected in this study based on the criteria needed to find out the answer for the research questions in this study. Among the aim of this study is to investigate the overall users' profile on the Pharmacy information application after training session or experienced using the System. Besides that, the purpose of this study is to find out the relationship between the determinants (triggering event, exploration, integration, resolution. emotional expressions, open communication, group cohesion, instructional management,

building understanding, and direct instruction) and users' behavioral intention towards the use of Pharmacy Information System (PhIS). The participants of this study complete a survey after they have finished the training session.

3.3 Research Sample and Context

3.3.1 Sampling Procedures and Samples

Research sampling is a process of selecting and determining the availability of a group of people, population in appropriate events or behaviour in aim to conduct a study (Burns & Grove, 2003). In this study, the sampling design used is a purposeful sampling where researcher selects participants who fits into a profile with the "logic of yielding insight and understanding of the phenomenon under investigation" (Bloomberg & Volpe, 2008). Sampling is firmly identified with generalisability of the result obtained from the study. The sampling used in this study was non-probable and purposive. In non-probability sampling, the researchers are also use their judgment criteria in order to select the subjects to be included in the study based on their knowledge of the phenomenon (Parahoo, 1997). Therefore, the purposive sampling was used in this study.

Parahoo (1997) portrays purposive sampling as "a *method of sampling where the researcher deliberately chooses who to include in the study based on their ability to provide necessary data*". The method of reasoning for picking this approach was that the analyst was looking for learning about the learners' feeling which the members would give by ethicalness of their experience. In this study only pharmaceutical staff who were eligible were purposively chosen to participate in this study. In this study, the samples are selected among the Pharmaceutical Staff specifically among Pharmacist, Assistant Pharmacist, as well as Nurse and Medical Assistant to whom involved in using the

system. The number of participants is more than 500 respondents from different backgrounds.

However, there were just 310 respondents to whom completed the questionnaires form the study and this amount enough to represent the population by referring to sample size recommended by Krejie & Morgan. This study intends to identify the motivating factors from the view of users from different backgrounds, age, social, and technical backgrounds, thus gaining wider perspectives in regard to utilising Pharmacy Information System (PhIS) usage for managing their daily tasks. The respondents were selected purposely among pharmaceutical staffs or authorize persons to whom utilising the PhIS from government hospitals and clinics represent respondents from Peninsular and East Malaysia.

3.3.2 Context of Study

The participants of this study engaged in the Pharmacy Information System (PhIS) group collaboratively. The objective of the study was explained to the pharmaceutical staff to get their perceptions and intentions towards the usage of Pharmacy Information System (PhIS) in managing their daily task.

3.4 Research Instruments

In this study, data have been collected from questionnaire which includes pharmaceutical staff' current perception, motivation and intentions towards using Pharmacy Information System (PhIS) as a tool to manage administrative task. Among the criteria of this questionnaire is that it is concerned with the affective, behavioral, and temporal aspects of technology integration in their facility. No other methods were required to collect the

data. More specifically, it was designed to investigate the relationships between hospital staff's perception towards the technology integration, level of motivation towards technology integration, concerns toward technology integration, and behavioural intention after exposure to information technology-based working environment. This will hopefully suggest reasons for the degree of facility' technology integration which could, in turn, guide future technology integration planning and professional development endeavors within the hospital staff. This documentation could also be utilized as a benchmark on which to evaluate growth or deterioration in technology integration over time.

3.4.1 Questionnaire Survey

The survey comprised of four sections; Section A (Demographic Characteristics and Technology Background), Section B (Evaluation of Pharmacy Information System (PhIS) during previous Training Session), Section C (Trainees' Perception towards the Pharmacy Information System (PhIS), and Section D (Trainees' Intention to Use Pharmacy Information System (PhIS) based on the Decomposed Theory of Planned Behaviour (DTPB) Scale).

Section A (Demographic Characteristics and Technology Background) comprised of three subscales, which were Demographic Characteristics (9 items), Language Proficiency (4 items), Technology Knowledge and Background (9 items). This section collected information on respondents' demographic characteristics, such as year born, gender, technological equipment owned, job related to system usage, time spent in applying the system, Internet access, and technological backgrounds.

Table 3.1: Section A (Demographic Characteristics and Technology Background)

Aspects	Question	Items
Demographic Characteristics	1	Job Position
	2	Age
	3	Gender
	4	Race
	5	Hometown
	6	Academic background
	7	Working experience
Language Proficiency		How would you rate your language proficiency?
	8	Verbal (English)
	9	Written (English)
	10	Verbal (Bahasa Malaysia)
	11	Written (Bahasa Malaysia)
Technology Knowledge and Background		Please estimate your level of competencies on these areas:
	12	Information System Application
	13	Pharmacy Information System (PhIS) software
	14	Do you have access to the Internet when you are not in the hospital / working place? If yes, what type of Internet access do you have?
	15	How often do you access the Internet?
	16	How often do you access the Internet for communication purposes?
	17	How often do you access the Internet for leisure purposes?
	18 19	How often do you access the Internet for academic purposes? How do you access the Internet to do your work?

Section B is Evaluation of Pharmacy Information System (PhIS) Instruction and Section C (Users' Perception towards the System Benefit) of the survey. The questions were responded based on a five-point Likert-type scale.

Table 3.2: Section B (Pharmacy Information System (PhIS) by Training Session Instruction)

Aspects	Question	Items
Evaluation of Pharmacy Information System (PhIS) **Class instruction**	1	This was my first experience with Pharmacy Information System (PhIS).
	2	Tell us about your level of participation in the usage of Pharmacy Information System (PhIS) in your daily tasks / routine job
	3	How much time will you spend each week working on by applying this Pharmacy Information System (PhIS)?
	4	In my opinion, the type and materials of activities and my daily task related to Pharmacy unit were appropriate to be incorporated with Pharmacy Information System (PhIS).
	5	In my opinion, the time spent in doing the activities and tasks using Pharmacy Information System (PhIS) was well worth the effort required.
	6	I would like to continue using Pharmacy Information System (PhIS) again in the future to assist in my daily tasks.

Table 3.3: Likert-Type scale responses

Scale	Response
1	Strongly disagree
2	Disagree
3	Neither agree nor disagree / Neutral
4	Agree
5	Strongly agree

Table 3.4a: Section C (Learners' Perception towards the Benefits of Pharmacy Information System (PhIS)

Subscale	Question	Items
Motivation	1	Compared with working traditionally, I prefer working on Pharmacy Information System (PhIS) more.
	2	Pharmacy Information System (PhIS) improved my interest in managing my daily task.
	3	The opportunity to post my work for others to review encouraged me to work harder and produce better quality work.
	4	The opportunity to look at other group's work motivated me to put in more effort.
	5	Looking at work done better than ours, motivated me to put in more effort in my own group's work.
	6	I looked forward in participating in any activities using the Pharmacy Information System (PhIS).
	7	I was excited to discuss about the Pharmacy Information System (PhIS) activities and tasks with my peers and colleagues.
	8	I was stimulated to do extra reading and exploration when using Pharmacy Information System (PhIS) for learning purposes.
Group Interaction	1	I learned a lot from my group members and other groups in the Pharmacy Information System (PhIS) during training implemented.
	2	I think the contribution of every member is important. In order to produce the best work or product, everyone needs to try his or her best.
	3	I think interaction among users in the Pharmacy Information System (PhIS) can better improve my pharmacy management task ability compared with only interaction with the superiors.
	4	Overall, the conflict among group members brought more benefits than disadvantages.
Knowledge Sharing	1	Since more people are able to read my group's work, I become more active in doing my task.
	2	When I upload or share my work on the Pharmacy Information System (PhIS), there are more audiences who viewed my work, which makes me more careful in my uploads.
	3	I learn better when reading and examining examples from other group's workplace or unit in the Pharmacy Information System (PhIS).
	4	The features of the Pharmacy Information System (PhIS) allow easy content and knowledge sharing.

Table 3.4 (a), continue		
Subscale	**Question**	**Items**
	5	Opportunities to look at other groups' works provides me with more perspectives as to how the work or task could be done.
	6	I like the application of Pharmacy Information System (PhIS) as it allows me to respond to and share ideas with my peers and colleagues anywhere and anytime.
Confidence in Working	1	Using the Pharmacy Information System (PhIS) in pharmaceutical administrative task helped improve my confidence in working.
	2	I produce more text and input then required in my group page because it can boost my confidence in working.
	3	Comments from peers boosted my confidence in working using the Pharmacy Information System (PhIS).
	4	Comments from supervisor boosted my confidence in working using the Pharmacy Information System (PhIS).
Improvement in Administrative Task and Knowledge	1	Learning collaboratively using the Pharmacy Information System (PhIS) helped enhance the development of my working skills and content knowledge.
	2	Commenting in my own and other group's page helped improve my working skills and content knowledge.
	3	Comments received from peers and superiors helped improved my administrative task and content knowledge.
	4	The technology characteristics of the Pharmacy Information System (PhIS) helped improve my administrative tasks and content knowledge.
	5	I learned a lot from my own and other group members, which in turn enriched my administrative tasks and content knowledge.

There were 35 items in this section. The items are based on the factors in the conceptual framework, which are attitude (perceived usefulness, ease of use, and

compatibility), social influence (peer and supervisor influence), perceived behavioural control (self-efficacy, technology facilitating condition, and resources facilitating condition), and behavioural intention.

Table 3.4b: Section D (Trainees' Intention to Use Pharmacy Information System (PhIS)

Construct	Question	Items
Ease of Use (EU)		
EU_1	1	I feel that Pharmacy Information System (PhIS) will be easy to use.
EU_2	2	I feel that Pharmacy Information System (PhIS) will be easy to incorporate in my administrative task
EU_3	3	I feel that the interface and features of the Pharmacy Information System (PhIS) are easy to be understood.
Perceived Usefulness (PU)		
PU_1	4	I feel that Pharmacy Information System (PhIS) will help me learn more about the administrative task.
PU_2	5	I feel that Pharmacy Information System (PhIS) will improve my satisfaction dealing with pharmaceutical job.
PU_3	6	I feel that Pharmacy Information System (PhIS) will improve my performance.
PU_4	7	I feel that using Pharmacy Information System (PhIS) will improve my evaluation in administrative task.
Compatibility (COMP)		
COMP_1	8	The scope of the course is suitable for Pharmacy Information System (PhIS) to be incorporated in my daily tasks.
COMP_2	9	Using Pharmacy Information System (PhIS) fits well with my area of administrative tasks.
COMP_3	10	I feel that the interface and features of Pharmacy Information System (PhIS) will help makes my collaborative learning process easier.
Peer Influence (PI)		
PI_1	11	Peers, who influence my behaviour would think that I should use Pharmacy Information System (PhIS) in my tasks.
PI_2	12	Peers, who are important to me think that I should use Pharmacy Information System (PhIS) in the tasks.
PI_3	13	My peers think the superiors should use Pharmacy Information System (PhIS) in the administrative task.

Table 3.4(b), continue		
Construct	**Question**	**Items**
Superior Influence (SUI)		
SUI1	14	My superior, who influences my behaviour would think that I should use Pharmacy Information System (PhIS) in my administrative tasks.
SUI2	15	My superior, whom I report to would think that I should use Pharmacy Information System (PhIS) in the hospital.
SUI3	16	My superior convinces me the importance of the use of Pharmacy Information System (PhIS) in managing administrative task.
Self-Efficacy (SE)		
SE1	17	I am confident that I can use Pharmacy Information System (PhIS) professionally.
SE2	18	I could easily use Pharmacy Information System (PhIS) on my own.
SE3	19	I would feel comfortable using Pharmacy Information System (PhIS).
Attitude (AT)		
AT1	20	Pharmacy Information System (PhIS) will be useful for my professional development.
AT2	21	The advantages of using Pharmacy Information System (PhIS) outweighs the disadvantages of not using it.
AT3	22	Using Pharmacy Information System (PhIS) is a good idea for learning my job area.
Social Influence (SI)		
SI1	23	My peers will be using Pharmacy Information System (PhIS) in their administrative tasks.
SI2	24	My superior confirms my ability and knowledge to use Pharmacy Information System (PhIS) in my administrative tasks.
SI3	25	My supervisor thinks it is important that I use Pharmacy Information System (PhIS) for my administrative tasks.
SI4	26	My peers think it is important that I use Pharmacy Information System (PhIS) for my work.
SI5	27	My superior thinks I will benefit from using Pharmacy Information System (PhIS) in my future tasks.

Table 3.4 (b), continue		
Construct	**Question**	**Items**
Perceived Behavioral Control (PBC)		
PBC1	28	Using the Pharmacy Information System (PhIS) is entirely within my control.
PBC2	29	I have the knowledge and ability to use Pharmacy Information System (PhIS).
Behavioural Intention (INT)		
INT1	30	I plan to use Pharmacy Information System (PhIS) in my future administrative tasks.
INT2	31	I intend to use Pharmacy Information System (PhIS) throughout the year

Other than answering the research's questions, the questionnaire was administered to the pharmaceutical staff in order to obtain feedbacks from them in regard to their use of Pharmacy Information System (PhIS) in managing administrative and their daily task. The questionnaire aims to identify the users' perception towards the use of Pharmacy Information System (PhIS) in assisting Pharmacy administrative task via online procedure after the training conducted.

3.5 Reliability and Validity of Measurement

Prior to distributing the questionnaire to the respondents, a pilot study was conducted on sixty (60) respondents in order to measure the reliability and validity of the instrument. The assessment is done in two sequential steps. The first step involves assessing the reliability of the research instrument using the Cronbach's alpha internal consistency method. Next, the validity assessment is conducted using the convergent validity and discriminant validity analysis.

3.5.1 Reliability of Measurement Scales Using Cronbach's Alpha Internal Consistency Method

According to Pallant (2005), the reliability of a scale indicates how free it is from random error. The reliability measurement used is the Cronbach's alpha to check for internal consistency, where the value ranges from 0 to 1, in which the nearer the values towards 1 indicates a greater reliability. Other than that, Gliem and Gliem (2003) in their study have stated that it is important to calculate and report Cronbach's alpha coefficient for internal consistency reliability within the range of scales that will be used in the questionnaire. Based on the scores obtained in a questionnaire, it can be considered reliable and accurate if the individual's score is internally consistent across every item in the instrument (Creswell, 2008).

Chua (2013) recommended that alpha coefficient value of 0.65 to 0.95 is categorized as satisfactory and indicated that the instrument used is reliable. A low alpha coefficient value, which is less than 0.65 means that the ability of the items in the research instrument to measure the concept or variable is low, while a too high alpha coefficient value, which is higher than 0.95, means that the items are similar and overlapping. In addition of examining the Cronbach's alpha values, the item-total correlation values will also be presented. The item-total correlation provides an indication of the degree to which each item correlates with the total score. The value should be higher than 0.30, where values lower than that indicates that the item is measuring something different from the scale (Pallant, 2005).

3.6 Data Analysis

After considering the research objectives and appropriate methodology that could be used in this study, the study would adopt quantitative data gathering technique. A study method

by using survey strategy was applied in order to address the research questions, and thus utilizing the questionnaire survey as the principal instrument. Other than that, existing data regarding change management will be also evaluated in order to investigate the initial feedback during pre-training program.

All the parameters needed will be figured out in order to determine the factors influencing users' perception in using Pharmacy Information System (PhIS) as a tool to manage hospital administrative task. In conducting the study, researcher need to select and choose the most appropriate steps by taking into consideration the previous research that had been use the same study until the execution and analysis of data.

After determining the most relevant study design in this study, researchers have identified the study design and subsequently distributing questionnaires to obtain the required information by using the selected research instruments. The selection of participants in this study were recruited during attending the PhIS training in their facility. The objective of the research was to gather information about the professional development, specifically, the effect of using the technology-based environment in their working place for their task management.

A survey method by questionnaire distribution will be used to collect the data to identify the thorough dimensions for Pharmacy Information System (PhIS) and establishing the reliability of the scale. The survey instrument has been administered to users, restricted to those who had experience attending the training in using Pharmacy Information System (PhIS). Convenience sampling was used and 500 respondents from hospitals and clinic in peninsular and east Malaysia to whom enrolled in PhIS training session have been represented their facility.

3.6.1 Research Matrix

The research matrix informed in Table 3.5 (Appendix B) presents detailed information regarding the current study objective, source of data and analysis of procedure conducted. The data collected from the surveys that has been accomplished will be analyzed quantitatively using IBM SPSS Statistics software version 22.0 and SmartPLS version 3.0.

3.6.2 Data Analyzing Instruments

3.6.2.1 Descriptive and Inferential Statistics

Descriptive and inferential statistics were used in analyzing quantitative data and also using the partial least squares structural equation modelling (PLS-SEM) method in order to find the answers to the research questions in this study. The first research objective will be analyzing using the descriptive statistics, such as frequency, percentages, mean score, and standard deviation, which is to find out the relationship between the determinants involving triggering event, exploration, integration, resolution. emotional expressions, open communication, group cohesion, instructional management, building understanding, direct instruction and users' behavioral intention towards the use of Pharmacy Information System (PhIS).

3.6.2.2 Descriptive Statistics

Descriptive statistics were chosen in this study because the raw data could simply and easily to visualize, especially if there was a lot of data. Descriptive statistics therefore enables to present the data in a more important manner, which permits less complex understanding of the data. The descriptive and frequencies command has been used in

the study in order to determine percentiles, measures of central tendency (mean) and also to measures of dispersion (standard deviation) and subsequently to create histograms.

3.6.2.3 Frequency

In this study, frequency distribution also used as one of the most common ways to describe a single variable. Depending on the particular variables in group categories such as demographical profile, it could be more sensible to determine the frequencies for each value. Here, the values were grouped into ranges and thus the frequencies determined. The frequency was also used in describing the central position of a frequency distribution for a group of data. In this case, the frequency distribution is simply the distribution and feedback of 310 respondents from the lowest to the highest. Besides, this central position also could be describe using several statistics including mean, median and mode.

Other than that, distributions have also been estimated by using percentages. It could show more accurate, specific and transparent score of each group or respondents. In the study, percentages have been used in order to describe the percentage of people in different age ranges, percentage of people in different internet usage and percentage of people in different ranges of standardized test scores (William, Duray & Reddy**,** 2006).

3.6.2.4 Mean

Estimation of mean performed in aim to describe the location of a distribution, such as typical value from the distribution. In fact, there are several different ways to find the typical value, but by far the most used is the arithmetic mean, usually simply called the mean or generally called as average. Here, the large volumes of continuous data may easier to be summarized in statistical tables of means, counts, standard deviations, etc.

3.6.2.5 Standard Deviation

The most widely recognized measures of c distribution width are the standard deviation and the variance. The standard deviation is basically the square root of the variance. It is just a strange measurement of the mean distance between the members of a population and the mean of the population in the study. The standard deviation is a more precise and detailed prediction of dispersion because an anomaly can enormously misrepresent the range. It shows the relation that set of scores has to the mean of the sample (William, 2006).

Without standard deviation, it is difficult to recognize whether the data are near to the normality or whether the data are spread out finished a wide range. Besides that, without the standard deviation; two data sets could not compare effectively. Even though two sets of data have the same average, it does not supposedly mean that the data sets must be the same. Standard deviation can be hard to decipher as a solitary number alone. Fundamentally, a little standard deviation implies that the values in a statistical data set are near the mean of the data set, average, and an extensive standard deviation means that values in the set of data that more distant far from the mean, and average. In this manner, the standard deviation measures how concentrated the information are around the mean; the more concentrated, the littler the standard deviation (Deborah, 2016).

3.6.2.6 Inferential Statistics

By utilizing the inferential statistics, it is an effort to achieve conclusions in expanding the instant data solely after the descriptive statistics performed. For instance, inferential statistics has been used in effort to infer the sample data from what the population might think. Besides that, inferential statistics applied in order to evaluate the likelihood of what

seems contrast between each category that trustworthy and might occurred by chance in this study. In this way, the researchers utilize inferential statistics to make inferences from the source of information (data) to more broad conditions. Beforehand, descriptive statistics have been utilized basically to depict the type of data.

Inferential statistics are strategies that enable us to utilize these samples to make speculations about the populations from which the samples selected. It is, in this manner, essential that the sample precisely reflects to the population. The procedure done toward accomplishing this is called sampling (further discuss in sampling part). Inferential statistics emerge out of the way that sampling normally causes sampling error and along these lines a sample is not relied upon to impeccably speak to the number of populations. The methods of inferential statistics are the estimation of parameter(s) and testing of statistical hypotheses (William, 2006).

Subsequently, in order to test the hypotheses, two inferential statistical analysis methods, which are Pearson product-moment correlation and Partial Least Squares Structural Equation Modeling (PLS-SEM) method. Pearson product-moment correlation will be used to test the second research objective, which is to investigate the relationship between the three factors; attitude, social influence, and perceived behavioural control, with behavioural intention towards the use of Pharmacy Information System (PhIS.) Meanwhile, in order to identify the determinants (triggering event, exploration, integration, resolution. emotional expressions, open communication, group cohesion, instructional management, building understanding, direct instruction), Pearson-product-moment correlation also will be used which best predict users' intention to adopt Pharmacy Information System (PhIS) in the future.

3.6.2.7 Mediating variables

In Partial Least Squares Structural Equation Modeling (PLS-SEM), a mediating variable is simply an intervening variable (Dijkstra, 2014). In this study, Perceived Behavioural Control (PBC) is a mediating variable between Social Presence (SP) and Usage Motivation. On the off chance that there were likewise direct paths from SP as well as PBC towards Usage Motivation, the SP or potentially PBC would preface factors “moderating variables “for Motivation among respondents. However, the motivation would even now be an intervening variable.

A typical kind of " mediator analysis " including simply such mediating and moderating effects is to begin with direct path, as SP to Usage motivation, at that point checking the results when an indirect, mediated path is added, such as SP -> PBC -> Usage motivation. There are several possible findings when the mediated path is added (Gotz, Liehr & Kraft, 2010).

The correlation of SP and Usage Motivation drops to 0, meaning there is no SP> Usage Motivation as the entire causality is mediated by PBC. This is known as a "full control" impact of PBC as a mediating variable. The connection of SP and Usage Motivation stays unaltered, which means mediated path is immaterial. Thus, the condition has "no effect".

The correlation of SP and Usage Motivation drops only part way toward 0, meaning both the direct and indirect paths exist. This condition is called “partial control” by the mediating variable available. The relationship of SP and Usage Motivation builds contrasted with the first, unmediated model and this condition called as "suppression." Example if the effect of SP specifically on Usage Motivation and the impact of SP straightforwardly on PBC were inverse in sign, making a "push-pull" impact.

3.6.2.8 Moderating variables

The expression “moderating variable" has been utilized as a part of various and here and there clashing courses by different creators. A few authors utilize " mediating” and “moderating” reciprocally or flip the definition contrasted with different researchers. For example, a mediating variable as depicted above affects or “moderate” the relationship of factors it isolates in a causal chain and in this manner may be known as a moderating variable. It is likewise conceivable to display associations between dormant factors and idle factors speaking to communications might be considered to include moderating variables. The interactions model between each latent variables is also able in representing the interactions and might be considered to involve in moderating variables. Multigroup analysis of heterogeneity across groups is also a type of analysis of a moderating effect.

In any case, as utilized here, a moderating variable is a prefacing joint immediate or roundabout reason for two factors additionally down in the causal model. Here, SP is modeled as an anteceding cause of both PBC and Usage Motivation. In this study model of PLS-SEM, adding SP to the model may cause the path from PBC to Usage Motivation to remain the same (no effect), drop to 0 (complete control effect of SP), drop part way to 0 (partial control effect), or to increase (suppression effect).

(a) Spurious effects

On the off chance that two factors share a prefacing cause, they as a rule are related yet this impact might be deceptive. That is, it might be an ancient rarity of shared causation. An exemplary illustration is frozen yogurt deals and flames. These are connected, yet when the prefacing shared reason for "heat of the day" is included, the first relationship

leaves. In the model above, similarly, if the original correlation of SP and Usage Motivation disappeared when the mutual anteceding cause PBC was added to the model, it could be inferred that the originally observed effect of SP on Usage Motivation was spurious.

(b) Suppression

A suppression effect happens when the anteceding variable is emphatically identified with the indicator variable (ex., PBC) and adversely identified with the effect variable (ex., Usage Motivation). In such a circumstance the anteceding variable has a suppressing effect in that the first PBC/Motivation relationship without SP in the model will be lower than when SP is added to the model, uncovering its push-pull impact as a anteceding variable. Put another way, the effect of PBC on Usage Motivation initially appears weaker than it really is because, as seen when SP is added to the model, the correlation is suppressed by SP as a moderating variable.

3.6.2.9 Interaction terms

A communication term is an exogenous mediator variable which influences an endogenous variable by method for a non-additive substance joint connection with another exogenous variable. While it might likewise directly affect the endogenous target variable, the interaction is its non-additive substance joint relationship. Without interaction effect, latent variables SP and PBC are modeled as causes of Usage Motivation. If other moderator variable be added as a third cause of Usage Motivation. The researcher may suspect, however, that PBC and Usage Motivation have a joint effect on which goes beyond the separate SP and Usage Motivation linear effects – that is, an

interaction effect is suspected (Dijkstra, 2010). The Partial Least Squares Structural Equation Modeling (PLS-SEM) approach will be used to find out the factors that best predict users' intention to use Pharmacy Information System (PhIS) in future task management.

3.7 Summary of the Chapter

This chapter of research methodology has explained an approach tool in order to guide this study through research design, data sampling, data collection and data analysis in this study. The input in this chapter is also based on research objectives in this study in order to find the answer of each question. It has indicated that quantitative approach is the best for the purpose of studying the perspective among users of Pharmacy Information System (PhIS). The study is conducted in the descriptive approach in attempt to explain the parameters to measure of.

CHAPTER 4

RESULT FINDINGS

4.1 Introduction

In this chapter, the researcher presents the findings after the process of data collection and analysis. The findings of the study are delivered and elaborated to meet the purposes of the research conducted. The reliability of study conducted with demographical profile have been stated. The researcher elaborates on the quantitative findings, by explaining the research questions. Some sub-sections are included in the quantitative findings, namely data preparation, descriptive statistics, SPSS and Partial Least Square Structural Equation Modeling (PLS-SEM).

4.1.1 Reliability

Internal consistency reliability has been performed to test unidimensionality during pilot study and was assessed by Cronbach's alpha. The resulting alpha values indicated high reliability of 0.91, which were above the acceptable threshold 0.70 suggested by Babbie (1992). According to Babbie (1992) and supported by Mohsen and Reg (2011), the value of Cronbach Alpha is classified based on the reliability index classification where 0.90-1.00 is very high (excellent level), 0.70-0.89 is high (good level), 0.30-0.69 (acceptable level) is moderate, and 0.00 to 0.30 is low. The analysis showed the Cronbach Alpha value, higher than 0.90, thus it falls into the classification of high and very high. Meanwhile, further test (Pearson correlation) to re-test the reliability showed reliability coefficient is $r=0.69$ which is at the range of $r=0.65-0.95$, at $p<0.05$.

Table 4.1: Reliability Statistics of
Cronbach Alpha (Reliability Statistics)

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.976	.980	60

From the Reliability Statistics table above, the Cronbach's alpha coefficient is α =.98. This value indicates a very high or excellent level of internal consistency. Therefore, it shows the questionnaire is reliable.

4.2 Demographical Profile

The demographical profile among the respondents stated in three (3) main categories of gender, age and race to represents all the respondents in this study. There are 310 respondents selected to represent the population in this study. Based on sample size by Krejcie & Morgan (1970), this sample size is enough to represent approximately 1600 number of populations in the study.

4.2.1 Gender

Table 4.2 Gender Profile of PhIS Respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	86	27.7	27.7	27.7
	Female	224	72.3	72.3	100.0
	Total	310	100.0	100.0	

Table 4.2a shows most of the respondents participated in this study is female which stated 72.3% compare 27.7% male from the whole respondents. Based on the participant in this study, most of the respondents to whom attended the training is female. There are 224 female pharmaceutical staff (PhIS trainees) participated in this study comparing to 86 of male trainees.

4.2.2 Age

Table 4.3: Age profile of PhIS Respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	21-25	38	12.3	12.3	12.3
	26-30	151	48.7	48.7	61.0
	31-35	51	16.5	16.5	77.4
	36-40	37	11.9	11.9	89.4
	41-45	20	6.5	6.5	95.8
	46-50	4	1.3	1.3	97.1
	51-55	7	2.3	2.3	99.4
	56-60	2	.6	.6	100.0
	Total	310	100.0	100.0	

Age profile most of the respondents were stated in table 1.1b has shown that age category of 26-30 years old is the majority category which represents 48.7% which represents 151 from 310 respondents. Meanwhile, the fewer is among respondents in the category age of 56-60, which is just 0.6% from whole respondents.

4.2.3 Race

Table 4.4: Race Profile of PhIS Respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Other	40	12.9	12.9	12.9
	Mal	126	40.6	40.6	53.5
	Chi	66	21.3	21.3	74.8
	Ind	6	1.9	1.9	76.8
	Kad	24	7.7	7.7	84.5
	Dus	23	7.4	7.4	91.9
	Baj	8	2.6	2.6	94.5
	Ibn	11	3.5	3.5	98.1
	Bdy	4	1.3	1.3	99.4
	Mel	2	.6	.6	100.0
	Total	310	100.0	100.0	

As stated in the table above, most of the respondents participated in this study is among Malay (40.6%), followed by Chinese (21.4%), Kadazan (7.8%), Dusun (7.5%), Iban (3.6%), Bajau (2.6%), Indian (1.9%) and Bidayuh (1.3%).

4.2.4 Internet Usage among Respondents

Table 4.5 Reliability of Questionnaire of Internet Usage among Respondents

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
I1 Internet Access	204.63	961.256	.355	.977
I2 Internet Communication	204.71	966.405	.268	.977
I3 Internet Leisure	204.65	966.897	.298	.977
I4 Internet Job	204.87	960.158	.443	.976

This reliability analysis was carried out on the Internet Usage among respondents with values scale comprising 4 items. The value of Corrected Item - Total Correlation column shows each item correlates with the overall questionnaire score. The value of

Correlations less than r = .30 indicate that the item (s) may not likely belong on the scale. Both questions 2 and 3 are two items that looks problematic considering this criterion. Thus, these two questions have been removed and all other items should be retained. The Cronbach's alpha showed the questionnaires are to reach high reliability, α = 0.97. Most items stated were appeared to be worthy of retention and resulting of decrease in the alpha if any of it will be deleted. The one exception to this were item 2 and 3 (low correlation) and would increase the alpha to α = 0.97.

Table 4.6: Internet Access among Respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		1	.3	.3	.3
	Never	3	1.0	1.0	1.3
	Rare	13	4.2	4.2	5.5
	Seldom	39	12.6	12.6	18.1
	Frequently	99	31.9	31.9	50.0
	Daily	155	50.0	50.0	100.0
	Total	310	100.0	100.0	

Table 4.7: Internet Usage in Job among Respondents

		Frequency	**Percent**	**Valid Percent**	**Cumulative Percent**
Valid	**Never**	5	1.6	1.6	1.6
	Rare	15	4.8	4.8	6.5
	Seldom	92	29.7	29.7	36.1
	Frequently	98	31.6	31.6	67.7
	Daily	100	32.3	32.3	100.0
	Total	310	100.0	100.0	

By referring to the tables above, most of the respondents in this study showed the tendency of using internet daily. There are 50% of the respondents used to access internet, 48.1% used internet as their communication media and 46.8% used internet in their leisure

time. Meanwhile, there were both 31.6% and 32.3% used internet frequently and daily in their job. On the other hand, there are only 1.6% respondents that never used internet in their job.

4.3 Teaching Presence affecting Users' Motivation

Table 4.8: Reliability of Questionnaire on Teaching Presence Affecting Users' Motivation

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
E3 Easy understood	205.46	955.861	.645	.976
M8 PHIS Deep Learning	205.04	958.979	.547	.976
SE2 Self Efficacy-easy & comfortable	205.37	953.374	.696	.976
IF2 Information Management	204.94	956.840	.676	.976

This reliability analysis was carried out towards Teaching Presence Affecting Users' Motivation among respondents with values scale comprising 4 items. The value of Corrected Item - Total Correlation column shows each item correlates with the overall questionnaire score. The value of Correlations less than r = .30 indicate that the item (s) may not within the scale. All questions show total correlation more than .30 and considering passed this criterion. The Cronbach's alpha showed the questionnaires were indicates high reliability, $\alpha = 0.97$. Most items stated were appeared to be worthy of retention and resulting of decrease in the alpha if any of it will be deleted.

Meanwhile, the table below refers to the first research objective outcome which to identify the significance difference among variables. From this table, the teaching presence which including direct instruction (ability to easy understood instruction),

building understanding (self-efficacy) and instructional management (information management) towards users' motivation.

Table 4.9: Frequency of Direct Instruction (Easy Understood)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	8	2.6	2.6	2.6
	Disagree	24	7.7	7.7	10.3
	Neutral	138	44.5	44.5	54.8
	Agree	115	37.1	37.1	91.9
	Strongly Agree	25	8.1	8.1	100.0
	Total	310	100.0	100.0	

From the table above, most of the respondents (44.5%) assumed neutrally in term of easy understood after undergone the Pharmacy Information System training application. Meanwhile, there are 115 of the respondents agreed that the system is easily understood in term of usage and application. On the other hand, there were 24 respondents disagree to easy understood towards the instruction of using the PhIS application. Apart from this, there were only 8 respondents to whom strongly disagree on using the system comparing to 25 respondents expressed on their strongly agree to easy understood on PhIS feature and function during the training.

Table 4.10: Frequency Rate of Teaching Presence (Building Understanding)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	8	2.6	2.6	2.6
	Disagree	18	5.8	5.8	8.4
	Neutral	124	40.0	40.0	48.4
	Agree	133	42.9	42.9	91.3
	Strongly Agree	27	8.7	8.7	100.0
	Total	310	100.0	100.0	

Despite of it, there were majority of 42.9% respondents agreed that they were confidence on their self-efficacy on applying the system easier and more comfortable after the training conducted. Meanwhile, 40% still tend to be neutrally in assuming on their self-efficacy in using the system after the training.

Table 4.11: Frequency Rate of Instructional Management (Information Management)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	2	.6	.6	.6
	Disagree	5	1.6	1.6	2.3
	Neutral	61	19.7	19.7	21.9
	Agree	168	54.2	54.2	76.1
	Strongly Agree	74	23.9	23.9	100.0
	Total	310	100.0	100.0	

In term of information management, table above shows that most of the respondents (54.2%) agreed that the PhIS features, and functions has improved their information management dealing with their job after the PhIS implemented in their facility.

4.4 Cognitive Presence Effects towards Users' Behavioural Intention & Motivation

Table 4.12: Reliability of Questionnaires on Cognitive Presence Effects Users' Behavioural Intention and Motivation

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
S2 System PHIS Application	205.90	968.834	.247	.977
IF1 Information Sharing	204.88	957.398	.687	.976
C2 Confidence Multitask	205.21	952.484	.778	.976
Im5 Improvement-learning enrichment	205.06	953.899	.709	.976
A1 Attitude-Professional Development	205.17	954.499	.763	.976
M8 PHIS Deep Learning	205.04	958.979	.547	.976

The reliability analysis was carried out on the Cognitive Presence Effects towards Users' Behavioural Intention and Motivation among respondents with values scale comprising 6 items. The value of Corrected Item - Total Correlation column shows each item correlates with the overall questionnaire score. Correlations less that r = .30 indicate that the item may not belong on the scale. Question 1 shows total correlation less than .30 and not fulfilled this criterion. Thus, this question has been removed and all other items should be retained. The Cronbach's alpha showed the questionnaires are still shows high reliability, $\alpha = 0.97$. Most items stated were appeared to be worthy of retention and resulting of decrease in the alpha if any of it will be deleted. The one exception to this was item 1 (low correlation) and the deletion would increase the alpha to $\alpha = 0.97$.

4.5 Analysis of Data

After the cognitive presence in regards of triggering event (system PhIS application) exploration (information sharing), integration (confidence multitask) and resolution (improvement by learning enrichment) towards PhIS system application performed; Pearson correlation test performed in order to analyse the relationship between it. The analysis done to evaluate the relationship between cognitive presence towards users' behavioural intention and motivation as represented in appendix B (table B1). Based on the table in the appendix B, the Pearson Correlation observed mostly the r value of 0.51-7.0 with the cognitive presence (information sharing and behavioural intention) stated the higher value of correlation which is .695 with $p < .05$. This reflects the average/ medium degree of correlation but at overall there are significant hypotheses correlation between cognitive presence towards behavioural intention and motivation of system usage after the training conducted.

Table 4.13 Table of Statistic: Cognitive Presence and Usage Motivation

	Mean	Std. Deviation	N
S2 System PHIS Application	2.92	1.048	289
IF1 Information Sharing	3.91	.718	310
C2 Confidence Multitask	3.64	.749	310
Im5 Improvement-learning enrichment	3.80	.662	310
BI2 Behavioural Intention-Professional development	3.65	.731	310
M8 PHIS Deep Learning	3.85	.816	310

According to the above table, information sharing (exploration) showed the highest value of mean which stated 3.91 with standard deviation of 0.718. Meanwhile system PhIS application shows the highest standard deviation of 1.048. For the response of 'neutral' among users, it was considered toward agree by referring to the related context and whether neutral is a meaningful response. This type of response might indicate responses to agree/disagree or predicting agreement or disagreement. In the study, we could predict agreement with positive attitudes by referring to the highest rate of agree/disagree on a five-point Likert scale questionnaire, thus it could put strongly agree and agree into one category (agreeing to response the question in positive way) and neutral, disagree, and strongly disagree in another (by identifying with the rate of agree' response among system users). Whether this is a reasonable strategy depends on the research question and how the survey question was worded in order to receive any response from the system users (William, 2021).

4.6 Social Presence towards Usage Motivation

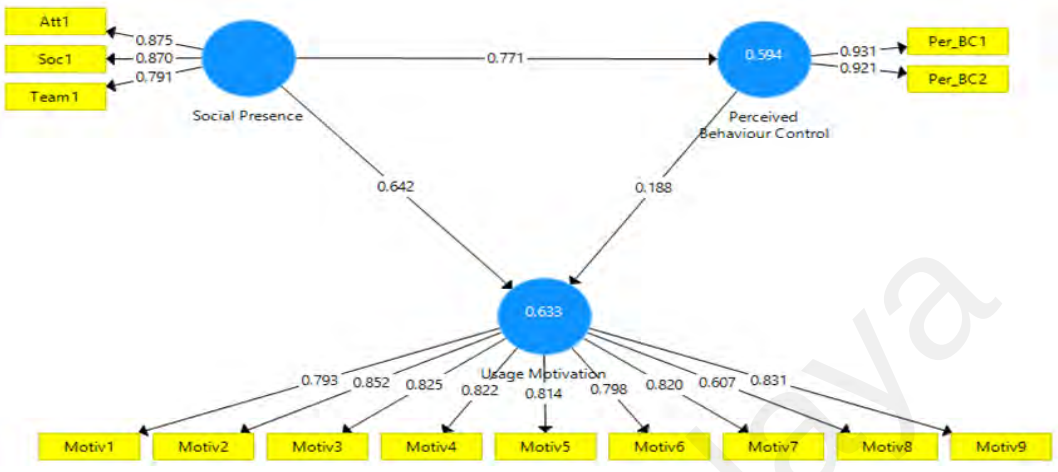

Figure 4.1: Standardized Path of Social Presence towards Motivation

4.6.1 Reliability and Part Multiplication

The path multiplication rule has been used in order to estimate the direct and indirect effects as the data analysis used to figure out the third research objective in this study. There are three variables named as Social Presence, Perceived Behaviour Control (PBC) and Usage Motivation. The Cronbach Alpha of 0.801, 0.834 and 0.928 were indicated the high reliability on these three inner structural variables. Here, one variable (Social Presence) has a direct effect on another (Usage Motivation) as well as in indirect effect (from Social Presence to PBC to Motivation).

From the figure above, the effects of standardized coefficients path are stated as below;

Social Presence -> Usage Motivation: Direct =-0.642; Indirect = n/a; Total = 0.642

Social Presence -> Usage Motivation: Direct = 0.642; Indirect = 0.771*0.188 = 0.145;

Total = 0.642 + 0.145 = 0.787

Perceived Behaviour Control-> Usage Motivation: Direct = 0.188; Indirect = n/a; Total = 0.188. By partitioning the effects, it shows that Social Presence has a smaller total absolute effect on the Usage Motivation than does PBC (.642 vs. .188), with both total effect in positive values. All the data mentioned shows corresponding SmartPLS output. The "Path Coefficients" are the direct effects which by addition with "Indirect Effects" resulting the "Total Effects".

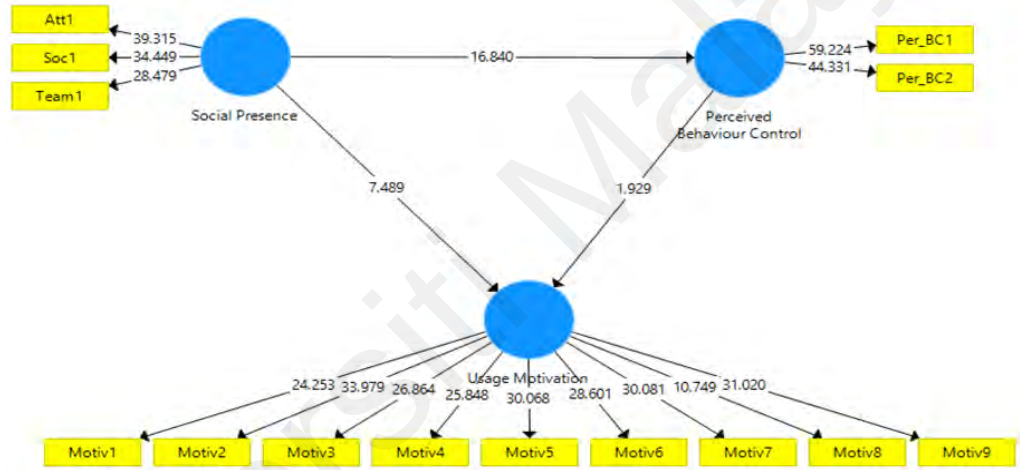

Figure 4.2: PLS Bootstrapping Figure of Social Presence towards Motivation

In the study, using bootstrapping methods has done in conjunction with the PLSc algorithm. After the PLS logarithm conducted, a form of bootstrapping as a nonparametric method has been used to derive standard errors and significance tests for coefficients in the partial least squares model used to analysis the previous data (Davison & Hinkley, 1997). It was observed that all t values are above 1.96 for direct effect of Social Presence towards Usage Motivation. These values indicate the significant at the .05 level.

Table 4.14: Total Effects and Significant Value

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Perceived Behaviour Control -> Usage Motivation	0.190	0.194	0.098	1.929	0.055
Social Presence -> Perceived Behaviour Control	0.771	0.768	0.046	16.840	0.000
Social Presence -> Usage Motivation	0.786	0.788	0.034	22.962	0.000

By referring to this table, the significance level for these three variables are stated the usual .05 cut off for a coefficient and being significantly different from 0 is the default. Thus, from the data findings, there is a significance relationship between the social presence (emotional expression, open communication, group cohesion) and perceived behavioral control affecting the motivation level among hospital staff towards using Pharmacy Information System.

4.7 Summary of the Chapter

By referring to the research findings in the study, it has been answered the three research questions and hypotheses accordingly. The overall research findings are reported significant and thus rejected the null hypotheses. Hereby, the reliability and validity of the findings in the study has also been reported with high degree of reliability and valid in order to achieve the objectives of this study conducted. In the future, further study will be conducted in order to evaluate the impact of PhIS implementation and application in the respective facilities.

CHAPTER 5

DISCUSSION

5.1 Introduction

This chapter discusses the findings and analysis based on the responses to the questionnaires that have been distributed. There are three aspects focused including teaching presence, cognitive presence and social presence which affecting their motivation and behaviour intention towards Pharmacy Information System (PhIS) application. Besides that, there are several factors studied which affecting the motivation towards applying the PhIS among the Public Pharmaceutical Staff that would be able affecting their future work performance.

As stated in chapter two, it has mentioned on the importance of organizations to accomplish good performance in management approaches by evaluating and enhancing the motivation of each staff. In order to win the commitment of the employees and thus will be able to achieve good quality of work and organisation performances; the facilitation including the technology infrastructure starting from training towards implementation must be coherent and capable to achieve the excellence job performance through enhancing motivation of every staffs. Thus, this study has accomplished in order to produce positive feedback from each individual or at least acquire majority significance feedback of population in an organisation due to the system usage.

This analysis was done in order to answer the three research questions as mentioned in chapter 1 in this study. It has been evaluated based on the feedback of the respondents among the hospital and clinics' staff to whom attended the training of PhIS in order to evaluate their perceptions and motivational effects that affecting their behavioural intention on system usage.

5.2 Motivation towards using PhIS after Teaching Presence

Based on the recent research conducted among PhIS users after attended the training, majority of the respondents (44.5%) assumed neutrally in term of easily understood the PhIS usage after undergone the Pharmacy Information System training application. From this figure, the feedback seems encourage because some of them have informed that was the first time, they have attended such training. Several of the pharmaceutical staff have informed that they can understand most of the training session but still worry if they would forget it soon. This factor may influence by their age which some of the respondents were in the elderly age. Meanwhile, there are 115 from 310 of the respondents agreed that the system is easily understood in term of usage and application. These types of respondents usually among the younger users which are still energetic, technology users and ready to explore and accept the new thing. Here, the age factor could influence most of the positive feedback as majority of the younger respondents are between 26-30 years old which represents 48.7% of the respondents.

On the other hand, there were almost half (42.9%) of the respondents agreed that they were confidence on their self-efficacy on applying the system easier and more comfortable after the training conducted. Some of them have mentioned that they were also used another hospital information system prior, which make them tend to be more eager to apply the PhIS whenever implemented soon. Meanwhile, 40% still tend to be neutrally in assuming on their self-efficacy in using the system after the training. They were still could not imagine on how the system would work in their facility later.

In term of information management, most of the respondents (54.2%) agreed that the PhIS features, and functions has improved their information management dealing with their job. It is because they could easily get more information whenever using system

comparing to search it manually. As for example, they tend to know much information such as the total of medicine in their unit or store, stock tacking, checking the new batch, near expire batch of medicine and much more information accordingly.

In regard to the teaching presence, the pharmaceutical staff have been undergone training for PhIS system involving the standard procedure of distribution and management of drugs, identifying the type of intervention, determining the amount of inventory, reporting and managing of costs, and improving the accessibility of information. Besides, another crucially needed ICT skills are by using any search engines to gain in-depth information through online, presentation programs, Microsoft office programs, and so forth in teaching practices or teaching and learning process (Mitchell et al., 2009; Aslan & Zhu, 2017). Other than that, the PhIS features, and functions also help clinical decision-making by alerting users about clinically important drug-drug interactions, drug allergies (Shortliffe & Cimino, 2006), and drug doses (Wager, Lee & Glaser, 2009).

Other than that, it also evaluates patterns of drug use (Wolper, 2004) as well as other possible side effects of drugs. The PhIS may operate as a separate and individual system or as part of a hospital information system (HIS), through standardized operating of information system management (Wager, Lee & Glaser, 2009; Nur Azzah, Noraziah & Noorhayati, 2017). Accordingly, to ensure efficiency and effectiveness of these systems, evaluation of the PhIS is extremely important; the information system management could ultimately influence the safety and quality of care as reported by Mohamadali and Garibaldi (2010). Further, an allocation for more budget in ICT integration, revised policies, continuous training programs, subordinate and peer supports are also among factors influencing motivation as supported by previous studies (Lawrence & Tar, 2018; Alt, 2018)

At the meantime, the pharmaceutical staff (according to their position and authorities as system user) were also eager to learn, identify and eliminate technical problems of health care systems, improve the efficiency and effectiveness of services in order to be more careful on evaluation of those systems. In other words, the teaching presence of information systems, as the key stage in the information system development life cycle (Yusof et al. 2008, Bavier, 2003) can help to assure the technical capacity of these systems, determine the effects of using the systems on users' practices, and allow application of modifications as required (Ammenwerth et al. 2003; Pereira et al. 2011). The effort of teaching practices are vital in their early stage of technology integration. This influencing factor of utilising technology has also been revealed by several previous empirical studies (Hinostroza, 2018; Kilinc et al., 2018; Kim et al., 2013; Lawrence & Tar, 2018, Parkman et al., 2018) that have reported a lack of teaching presence and technical support has become the factors hindering the integration of information technology in organisation.

Throughout these various features and functions, most of the respondents reflected themselves to be more motivated after figuring out the capability of displaying the minimum inventory for each drug, defining different warehouses, and controlling the entry and exit of drugs from the pharmacy. Here, the inventory and purchasing management were considered as core function of PhIS systems. For online checking of inventory and distribution of medicines and equipment, Mahoney et al. stated that pharmacy software systems need to be integrated with other hospital sub-systems. In the present study, the system did also have an order and purchase function. The hospital using such system has separate system which would be use along with the PhIS. This separate system controlled the inventory, order, purchase and payment of drugs supply, and this system had integration system with PhIS.

After the teaching presence including all of the syllabus as mentioned previously, the feedback shows that pharmaceutical staff believed their effort, understanding, and interest could influence on their motivation and performance in using the system. Ability and the teaching method came fourth in the list, implying that pharmaceutical staff believed the intrinsic factors are more influential than the extrinsic factors. Based on the attribution theory of motivation (Dembo & Seli, 2008), how pharmaceutical staff tend to look unto the reason for their success or failure and thus to decide how they will approach the specific undertaking, and to what extent they will hold on at it. Thus, pharmaceutical staff' level of knowledge relates positively to their technology integration during the teaching and learning process (Valtonen et al., 2018)

Since the pharmaceutical staff attributed the causes of their learning outcome to their own effort, they can be expected to choose the correct learning strategies, such as seeking help from the trainer or more expert peer as some of the pharmaceutical staff done during the training session in order to overcome their problems due to system application. They would be more likely to try harder in future and persist on difficult tasks. These types of pharmaceutical staff appear to have the characteristics of a self-directed learner. However, it is worth nothing that attribution does not always reflect, particularly in their workplace (Habibah et al., 2012).

According to the findings and several feedback in the study, the level of motivation among the respondents to whom undergone the training presence have been demonstrated an encourage feedback on using the PhIS after the training conducted. Here, there are significant positive relationship ($p < .05$) between the teaching presences towards the users' motivation of using the PhIS application after the training conducted. Even though they were almost half of the respondents stated their feedback in borderline but the degree of freedom appears higher (16) where both neutral and strongly agree with the significance value, $p < .05$.

5.3 Cognitive Presence Effects towards Users' Behavioural Intention and Motivation

Most pharmaceutical staff who have responded to the questionnaire gave their positive response, felt more motivated and confident in using the PhIS and further applying it in their workplace after implemented soon. Even among those who were not very confident, most of them were still express their motivation on using the system. However, some of the findings from observations on pharmaceutical staffs' (as trainees) attitude in class and the trainers' perceptions of trainees' behaviour seem to contradict with the respondents' responses from the questionnaire. Here, perceived motivation is difference between observed motivations. This difference may perhaps to be influenced by the training session and learning approaches or the training environment.

Other than that, in several observations during the training periods, some class distractions were noted. Lack of technical support and unstable internet connection are other factors reported which encountered by the staff/s during utilising the system. This kind of learning environment can be distracting to other staffs in term of cognitive quality. The distractions may affect negatively on staffs' actual motivation, which also depends on the time of the day it was held, and the topic covered during the time of interruption occurred (Dembo & Seli, 2008). One possible reason for the discrepancy is perhaps related to the staffs' inability to remain persistent during the training and subsequently performing their tasks. Here, providing facilities with more stable Internet connections, besides should be supported by skillful and technical assistants who understand how to configure with software problems and hardware technical issue in their facilities (Hinostroza, 2018; Kilinc et al., 2018).

It was observed that trainees paid attention to the trainer when explanation and emphasis was made on the topics, thus, indicating an influence of the performance goal.

However, the frequency data of pharmaceutical staffs' learning goals from the questionnaire showed that pharmaceutical staffs' foremost goal was to gain understanding, instead of just wanting to attend the training. And as opposed to the general perception, poor cognitive of some pharmaceutical staff need to put more priority in understanding the course material whenever they learned the system. Following understanding, pharmaceutical staffs' goal was to deep learning, and the least favorable was just to attend the training session as required by their department. This finding implied that most pharmaceutical staffs put mastery of learning goal as priority, and this supports their feedback from the informal interviews. Learning goals are associated with the way of pharmaceutical staffs think and behave and play a very important role in motivating pharmaceutical staff and predicting good job performance (Habibah et al., 2012).

After the cognitive presence in regards of triggering event (system PhIS application) exploration (information sharing), integration (confidence multitask) and resolution (improvement by learning enrichment) towards PhIS system application performed; Pearson correlation test performed in order to analysis the relationship between it. The analysis done to evaluate the relationship between cognitive presence towards users' behavioural intention and motivation; the Pearson Correlation observed mostly the r value of 0.51-7.0 with the cognitive presence (information sharing and behavioural intention) stated the higher value of correlation which is .695 with $p < .05$. This reflects the average/ medium degree of correlation but at overall there are significant hypotheses correlation between cognitive presence towards behavioural intention and motivation of system usage after the training conducted.

In order to achieve better understanding on PhIS concepts and application, the pharmaceutical staff may require external intervention. Conversely, pharmaceutical staffs have a better control in preparing themselves for the implementation of system in their

facility. For those pharmaceutical staffs that have a higher level of learning beliefs and self-efficacy in PhIS system application and performance perhaps because they are familiar with the previous hospital information system used before and thus have a better control in their learning strategies (Alireza et al., 2016). Assessment questions and simulation are mostly learning based, thus, can be mastered using drill and practice strategies. On the other hand, since concept understanding is more dependent on their cognitive ability particularly according to the pharmaceutical staffs' age factor, then those pharmaceutical staffs have less control in the learning strategies.

However, from the observation of respondents' learning beliefs and self-efficacy; meta-cognitive regulation are the two most used strategies related to concept understanding and performance. They have moderate effect on pharmaceutical staffs' performance but have weak links with concept understanding. Learning beliefs and self-efficacy is the most significant predictor on understanding any concepts and performance. This finding is reliable with considering the studies performed by Wolters and Pintrich (1998) & Kosnin (2007), who look unto self-efficacy to predict performance. From their studies, they have stated that self-directed learning would be able to increase the level of confidence of pharmaceutical staffs and view themselves as students. Here, their confidence level in utilization of different procedures to manage their training towards system implementation are vital in their multitasks accomplishment (Zimmerman, 1989; Valtonen et al., 2018). Self-efficacy particularly in cognitive functions and quality represents pharmaceutical staff' beliefs on their performance capability in a particular domain; whilst control of learning reflects pharmaceutical staff' perception on having internal control of their own learning and effort and thus affecting their confidence level in using the system (Pintrich, 2004; Gunes & Bahçivan, 2018).

On the other hand, according to the study finding in the table of 4.15, information sharing (exploration) showed the highest value of mean which stated 3.91 with standard

deviation of 0.718. Meanwhile system PhIS application shows the highest standard deviation of 1.048. Based on the previous table 4.4.1, it shows the degree correlation r: 1, which indicated highest level of correlation. Here, the respondents in this study tend to be more motivate in acquiring more information on the system application. Based on their attitude on daily internet usage and application, most of the respondents (50%) used to access internet, 48.1% used internet as their communication media and 46.8% used internet in their leisure time. Meanwhile, there were both 31.6% and 32.3% used internet frequently and daily in their job. There are only 1.6% respondents that never used internet in their job. From these figures, it could reflect on how their cognitive thinking and acceptance of information technology indirectly motivate them in PhIS usage.

5.4 Social Presence affecting Users' Perspective and Motivation

In order to establish the level of performance from perspective and motivation of the Hospitals and Clinics' workers including Pharmacy heads of department, officers and assistant officer of each unit involved in using the information system; they were asked on their opinion on their motivation level towards using the system. There are three variables named as Social Presence, Perceived Behaviour Control (PBC) and Usage Motivation. The Cronbach Alpha of 0.801, 0.834 and 0.928 were indicated the high reliability on these three inner structural variables. Here, one variable (Social Presence) has a direct effect on another (Usage Motivation) as well as in indirect effect (from Social Presence to PBC to Motivation).

Other than that, in effort to ensure the capability of every pharmaceutical staff, the trainer urged for the non-performing pharmaceutical staff, seeking help from other pharmaceutical staff or supervisors to whom could help them to perform better in using the system. A simulation activity which was performed in group hopes to assist some of

the pharmaceutical staffs in their incapability to perform well in using the system. However, from some observations on group activity, there were some pharmaceutical staffs appear to be hesitant in order to seek their assistance when encountered any problem.

The trainer also conducted pairing activity for those pharmaceutical staffs that could not follow each topic. This is usually faced by the pharmaceutical staff to whom acted passively during the training and subsequently to lose interest in learning the course. It should be noted that pharmaceutical staff who attribute the causes for their difficulties to 'uncontrollable' factors, such as the teaching method and learning environment, are less likely to seek help or put additional effort to improve. It is also possible that the learner does not seek help because they do not want to appear incompetent (Dembo & Seli, 2008; Lawrence & Tar, 2018). Therefore, if this is the case, some external intervention is necessary to guide this type of pharmaceutical staff to be self-regulated learners.

Due to this situation, it is possible these pharmaceutical staffs are influenced by both internal and external regulations. Boekaerts (1999) suggested if pharmaceutical staff used internal regulation, they would specify their own learning goals and choose own learning strategy. Conversely, if they rely upon external regulation that they would expect from others in order to coordinate their learning. Therefore, the pharmaceutical staff may need external intervention to help them achieve their mastery learning goals (Alt, 2018).

Meanwhile, anxiety is another motivation predictor, which was found to significantly affect the pharmaceutical staffs' performance. During the training and group simulation, some of the pharmaceutical staffs expressed their anxiety on using the system after implemented in their facility. It is because they might forget what they have been learned during the time. Anxiety usually causes any pharmaceutical staff to adopt

performance avoidance strategies or to procrastinate, thus, causing them to have poor results in assessments. This finding is consistent with works reported by Wolters and Pintrich (1998). However, anxiety was not found to affect concept understanding probably because the pharmaceutical staffs knew that the concept marks do not contribute during the PhIS implementation but are purely used in this study. In this manner, they could take the concept test in a more comfortable way with sufficient training as also supported in the study by Alt (2018).

However, it should be noted that some anxiety can give positive effect, pushing pharmaceutical staffs to do better in their learning and group simulation activity. But generally, anxiety that occurs before and during implementation can interfere with pharmaceutical staffs' concentration and performance. Negative association between anxiety and system performance reflects that pharmaceutical staff probably used more negative motivational strategies, like the self-handicapping strategies. Self-handicapping procedures more often than not brought about diminishing exertion in studying and tarrying in learning or finishing any assignments contrast with peer/group learning methodology. Meanwhile, professional development by continuous learning would be able to prevent the negative perspective towards utilising system (Pintrich, 2004 ; Aslan & Zhu, 2016).

Even though, there are motivation strategies that pharmaceutical staffs can use to control the negative effects of anxiety. Pintrich (2004) cited anxiety researchers with respect to two methodologies, self-talk ("don't stress over evaluations now") and cautious negativity. Meanwhile, Wolters (1998) suggested that by invoking negative effects (such as shame or guilt) pharmaceutical staffs may be able to motivate themselves to persist at a task. Here the head officer, subordinate and peers support plays important role to avoid any integration resistance towards utilising system (Lawrence & Tar, 2018)

On the other hand, from the informal conversation with the pharmaceutical staffs during group simulation activity, some of them perceived the efficacy of the new system was still not adequate to satisfy the employee's motivational level at a reasonable standard. Several of them (especially in the middle level) were perceived that the system's implementation would be instead give them more workload, and one quarter who felt that their job performance would possibly decrease. However, almost half of the respondents felt that they would be well-adapted with the change management in their facility and working environment with the system usage.

In fact, the staff of any industry are key resources to that industry's success. Human resource in the 21st century is viewed as the most imperative resource of any organization (Hafiza et al., 2011). The execution of each staff (employees), supervisor as well as manager, decides to a vast degree, the nature of workers as communicated by Hellriegel and Slocum (2007: p.55) that, *"Low job satisfaction can result in costly turnover, absenteeism, tardiness, and even poor mental health*".

Since all associations are emphasized on the procedure to be done in order to accomplish high or outstanding amounts of execution through individuals, it implies giving close consideration on how individuals can best be propelled through such means of motivations, working condition, rewards and critically; the job description and the association setting inside that they handle out and could not be ignored (Armstrong, 2010). Without expanded motivation and confidence among the workers, the association is in tendency of losing profitable employees and will be off guard in drawing the inner potential of workers (Dessler, 2003).

In line with the study, Hafiza et al. (2011) have likewise expressed on a few factors that can influence employee execution like preparing and improvement openings, working conditions, employer-employee relationship, employer stability and company

over all policies and procedures in giving any incentives or appreciation to the employees. Among the elements that influence worker execution and motivation that accompanies rewards is of most extreme significance (Carraher, Gibbson & Buckley, 2006). Here, motivation as the important aspect that guides to a worker's task force, course and perseverance of exertion toward achieving an objective (Page, 2008). Wellbeing at work and solid workplace are among the most profitable resources of people, networks and nations (Amponsah & Dartey, 2011).

By partitioning the effects, it shows that Social Presence has a smaller total absolute effect on the Usage Motivation than does PBC (.642 vs. .188), however total effect in positive values. Based on their response toward it, about 75% perceived it to be great while a quarter felt it was not good enough.

Meanwhile, in the study, using bootstrapping methods has done in conjunction with the PLSc algorithm. After the PLS logarithm conducted, a form of bootstrapping as a nonparametric method has been used to derive standard errors and significance tests for coefficients in the partial least squares model used to analysis the previous data. It was observed that all t values are above 1.96 for direct effect of Social Presence towards Usage Motivation. These values indicate the significant at the .05 level.

5.5 Theoretical Framework

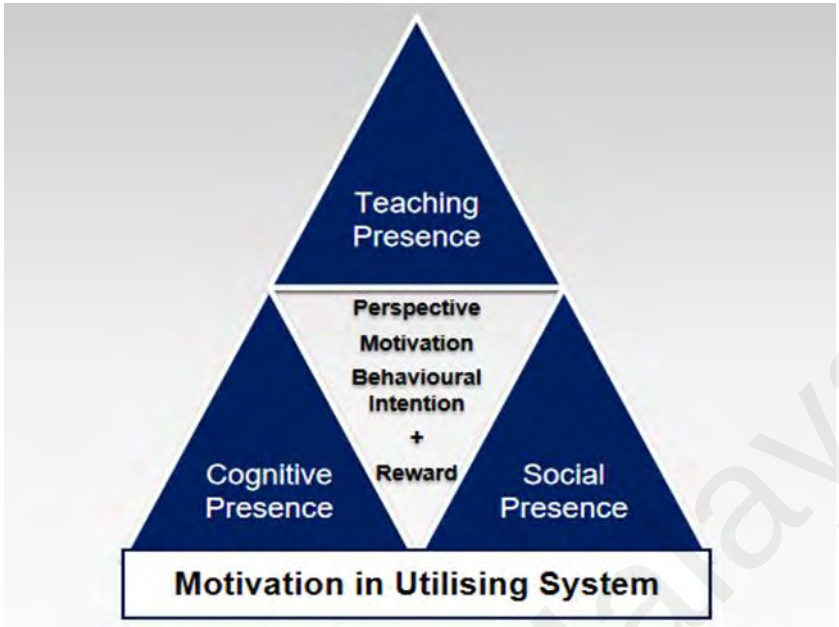

Figure 5.1: Theoretical Framework for System Usage Intervention

This research is based on Community of Inquiry (CoI) Coding Template by Garrison, Anderson & Archer (2000) and The Decomposed Theory of Planned Behaviour (DPTB) by Taylor and Todd (1995). Combination of these two conceptual frameworks have been used to predict users' behavioural intention and usage's motivation to use the PhIS. From the theoretical framework of this study, the perspective, motivation (internal and external), behavioural intention combined with reward (incentive) among users have significantly influenced the motivation in utilising system of PhIS.

Until recent, researchers have developed this model for studying the information system tools adoption of end users. The similarities and differences among these models with a goal of developing combined models with more explanatory power which is dealing with users' motivation in using e-management system. Based on the findings and analysis done before, each of the elements (Teaching Presence, Cognitive Presence and Social Presence) have shown significance relationship with each other towards users'

motivation on system. Meanwhile the differences of this theoretical framework are by introducing the rewards that would be able to enhance the users' performance in their job. These rewards are intrinsic in term of self-efficacy in multitask, positive learning of new thing, adaptation to the system, thus subsequently leads to vast areas of professional development.

5.6 Theory of Planned Behavior

The theory of planned behavior (TPB) as theory of reasoned action (Fish & Ajzen, 1975) used in the study which also predicts behavior over which people do not have complete volitional control. TPB accomplishes this by "including a predictor of behavioral intention and behavior called perceived behavioral control" (Notani, 1998, p. 248). Here, the pharmaceutical staffs' behavior likewise surveyed and assess considering the connection between the respondents' convictions on their self- efficacy and attitudes after the training done, observing the behavior intention seems influencing the pharmaceutical staffs' motivation.

Based on the aspects studied in this model including attitudes, subjective norms, and perceived behavioral control, all these elements have assisted the researcher to understand the reasons or factors clarifying individual action, regardless of whether the intention is perceived as the best indicator of behavior (Herrero & Rodr guez, 2008). By concentrating on the distinguishing proof of convictions and components those impact the three determinants of behavior, in particular attitude, subjective norms, and perceived behavioral control, this model disintegrates attitude into three factors, in particular perceived usefulness, perceived ease of use, and compatibility, a variable emerging out of Rogers' diffusion of innovation theory (Rogers, 1995).

Compatibility is largely used as an antecedent of attitude in the study. It is "the extent to which an innovation is perceived as consistent with existing values, past experiences, and needs of potential users" (Rogers, 1995, p.224; In Eastin, 2002, p.253). Meanwhile, by referring to Chen and Tan (2004), the key success factors for the acceptance of this study, it was finding that the compatibility variable is an antecedent of attitude among perceived usefulness, perceived ease of use, trust, and perceived service quality which have been implied in this study as also supported by studies of Aslan & Zhu (2017) and Habibi et al. (2018). Vijayasarathy (2004) and Lin (2007) likewise demonstrate that compatibility affects attitude toward the acceptance of the Internet as apparatus.

The assessment of respondents' attitudes as supported by Chen and Li (2010) also reported has more importance than perceived behavior control in determining behavioral intention to use e-service through DPTB. By referring to the prior research, the result was also conforming a unity. The subjective norm which refers to "the perceived social pressure also has been performed and indicated the user's behavior." Even though, Gretzel (2006) has reported that technologies consumed in private make it less important to consider what other people would think but intention as determined by perceived behavioral control of TPB and some consideration concerning certain facilitating mechanisms help to evaluate the users' tendency in the study to adopt new PhIS as their information technology (IT) tools with ease (Liao, Chen & Yen, 2007). Here, the DTPB considers the perceived behavioral control (PBC) as studied by Wu and Chen (2005), but it reflects the respondent's perception of the ease or difficulty to implement and the behaviour intention among them.

5.7 Factors related to Motivation among Respondents

In the motivation aspects, it has sought to explain the respondents' motivation by holding on to the assumption that all individuals possess the same set of needs and therefore prescribe the characteristics that ought to be applying in their jobs as stated by previous studies by Maslow, (1954); Herzberg, Mausner, & Snyderman, (1959); Alderfer, 1972). Here, they feel motivated to study the application of PhIS as they need to use it in their workplace. Based on the study from these theorists, the respondents have afforded opportunities to manage and design motivational schemes to influence performance.

Here, the concerns of study are emphasizing the factors of motivation which drive the performance of employees in using PhIS. Even though directors and associations have connected motivation theories to a similar behaviour in various nations and organizations, the developing acknowledgment that conventional models of motivation do not clarify the diversity of behaviours found in organisational settings have brought to fore the need for a socially sensitive approach in the study (Oppu, 2006; Kilinc, Tarman & Aydin, 2018; Rahmawati, Suryani, & Akhyar, 2020).

Therefore, motivation is about what the pharmaceutical staff wants and about their emotional state, which drives them in the direction of achieving what they want and needs (Mullins, 2010). The conceptual framework applied in this study helps to evaluate the motivation level among PhIS users, based on the idea that individual needs toward change must be properly managed to achieve the expected results in the behaviour or action. As suggested by Rotter (1966), the occurrence of a particular behaviour is dependent not only on an individual's, specifically the PhIS users' objective reinforcement history (the behaviourist view), but additionally on the individual's anticipation that the behaviour will result in a specific outcome and the abstract evaluation of the expenses and advantages related with the outcome (the cognitivist perspective).

As Porter and Lawler (1968) sets, minor exertion is insufficient and before the exertion will be powerful, it needs to deliver the coveted performance. These builds are promptly unmistakable in the study of theory conception of motivation expectancy, which gives the hypothetical linkage amongst motivation and behavioural intention that drive job performance which fundamental the decision of the criterion variable utilized as a part of this study. Thus, in applying theories related to technology integration by training and learning, it is crucially needed to consider every aspect of pre-implementation in order to motivate system's user. (Ramlall, 2004; Karakoyun & Lindberg, 2020).

5.8 Limitation of the Study

This study was not using exploratory in approach, since there was need to have more insight on this issue, considering the efforts already made and the complexity involved that needs information from the most affected. Besides, it also used a purposive sampling technique to select the respondents in order to include those who have a high chance of providing the required information as some of the respondents did not completing the research questions. Other than that, some of the pharmaceutical staff sometime did not submit their feedback. Here, it is recommended that on the future study, there is need to conduct a study to measure the level of acceptance among users after the new system has implemented in their own facility.

In this research, only quantitative methods were used in order to establish the reliability of the data. The respondents were drawn from the employees of Hospital and Clinics of Government to whom attended for the PhIS training only because they were the population under study in order to achieve the objectives of this study conducted.

From the study conducted, the possibility of teaching presence might only influence users during the training of PhIS but the effect during the implementation at their

workspace need to be study in order to evaluate the system's performance in the future. The presence of cognitive and social intervention during the study aside of teaching presence were among the factors affecting motivation in utilization of system during the training but the other factor of rewards (benefits of system features and functions) was significantly giving positive impact among system' users. Thus, continuous system evaluation and monitoring is crucially needed in their facilities.

5.9 Recommendation

The study established that there are several alternative measures identified to improve the performance among the Pharmaceutical staff at the Government's Hospitals and Clinics in Malaysia. They need internal training of system usage in order to be well-equipped with their job requirement dealing with the system. They also need adequate training funds to meet workers training needs, improvement in supervisions in order to promote good performance, monitoring and managing on the departmental budget line and office facilities. Besides that, there is need to provide adequate information and fair workload for official duty, duties need to be clearly specified using the job specification documents, need for the top management to develop a management style that will be embraced by the subordinates (Maund, 2001; Gunes & Bahcivan, 2018; Lawrence & Tar, 2018; Parkman, Litz & Gromik, 2018).

A further effort to motivate workers is required by the organisation. Issues to be addressed include the necessity to improve on some of the preconditions as stated by Herzberg, which therefore calls for improving certain specific baseline factors through; improvement on supervision of the employees at all levels among the Pharmaceutical staff at the Government's Hospitals and Clinics in Malaysia, the need to improve on the working conditions at the Government's Hospitals and Clinics especially for every level

and to improve for the job security of the system's users. Other than that, management should also improve on the management of information system by guiding the employees through regular staff meetings and training. Once all the intrinsic and extrinsic factors are improved then the motivators as stated by Herzberg will have an increased impact than they already have.

5.10 Conclusion

To conclude, intrinsic and extrinsic factor which might influences motivation including effective training, good supervision, well-equipped devices and instrument in facilitation and overall system and workload management need to be achieved in order to increase the motivation elements among the staff to make them satisfy with the system's function and quality. All these factors if ignored could act as a big hindrance to motivation and behavioural intention of PhIS usage. It cannot even be stated explicitly that these factors have been met as stated above in absentia of guarantee of good facility provided in their facility could be able to create the triggering baseline that will adequately be potential to demotivate the workers during using the system or whenever attended the prior training conducted in using PhIS.

5.11 Summary of the Chapter

This chapter presents the discussion based on study's findings, limitation and delimitation, conclusions and recommendations of the study. The study sought to find out if the current system of Pharmacy Information System training and implementation towards the motivation and behavioural change and subsequently job performance levels among the Pharmaceutical staff at the Government's Hospitals and Clinics in Malaysia

particularly. Here, the research also means to assess the level of satisfactory apart from motivational level measurement that existing in place to boost workers motivation to perform well, whether there is a positive relationship between system implementation, motivation and behavioural intention which alternatively would measures in order to identify at the meantime to improve future job performance.

CHAPTER 6

CONCLUSION

6.1 Research Implication

6.1.1 Practical Implications of Pharmacy Information System (PhIS) in Organization

Various level of people within the organization including the top management, middle managers and other employees are always looking for information technology (IT). In general, of Information System (IS) usage, Pharmacy Information System (PhIS) in particular, enables this various group of people to improve their services and products in their workplace. The use of IS in healthcare environment helps healthcare organizations to improve inventory and pharmaceutical processes, control cost and respond to the demand for quality care through systems such as clinical decision support, physician order entry, computerized surveillance and patient safety (Nur Azzah, Noraziah, & Noorhayati, 2017).

This so-called Pharmacy Information System (PhIS) have transformed the management of administrative, information system, financial, inventory and pharmaceutical aspects of a hospital. It is important that hospitals adopt PhIS to improve their operations and services. This system was not only used to manage information efficiently and quickly. They are also used to provide a better access to the information, e.g., the patient's medical history. This is very helpful to healthcare providers in making any decision, particularly in a critical situation where only small margin of errors is allowed.

Moreover, PhIS manages all the information processing activities within hospital to achieve high-quality patients care services and medical research. Public hospitals and

clinics, particularly the hospitals, has complex system application. This public sector of healthcare provider has more unpredictable workflow than other hospitals or clinics. The government's hospitals and clinics have vast number of patients– from the high class to the lower level of society to whom wanted for medical treatments, dissimilar to the private healthcare's facilities that put concern more to the wealthy people who could afford to pay costly medical expenses.

In line with this situation, the vast number of patients in public healing centers may prompt perplexing and convoluted condition. This may likewise prompt the implementation of inefficient system; patients need to wait for quite a while before getting their medical services. This issue is identified with low quality of healthcare services provider in public hospitals. In fact, the statistics by the Ministry of Health shows increasing number of negligence cases reported between 2000 and 2008 (Ministry of Health Malaysia, 2009). Hence, Hospital Information System (PhIS) is hoped to improve the quality of healthcare services.

6.1.2 Implication for the System' Users at Facility (Hospitals and Clinics)

Based on the study, it has indicated that PhIS users at the Government's Hospitals and Clinics in Malaysia show encourage feedback after the teaching, cognitive and social presence, and it was recognized that motivation is necessary to encourage good performance to continuously using the system. The relation between motivation and behavioural intention as discussed in theoretical framework has shown that there has positive relationship with each other.

The study has realized that the system performance during training among the Public Pharmaceutical Staff in Malaysia are quite adequate but from the response of most respondents on the system feature and functions, it needs further support from the

supervision, facility and system management in order to meet their job requirement. Here, the management of hospital, particularly in Pharmacy department need to be more curious and continuously monitoring the PhIS performance. It is because insufficient support from their subordinates could in turn hindering good performance.

Other than that, the study also indicates that performance among the Public Pharmaceutical Staffs in Malaysia needs to be more satisfy because of several complaints being made by the general public because of inability of some facility to reduce the waiting period during early implementation as reported in some facility if any issue dealing with system usage (Nur Azzah, Noraziah & Noorhayati, 2017). Some of the staff have reported that they almost forgot what they have learned during training whenever the system implementation done because of the period of training and implementation was quite long for them. The system vendor and hospital management need to be alert with this situation thus staff not to influence the staff motivation, skill and knowledge on using the system.

The study also established that in some instance, work regulations are not followed by the employees during the phase 1 implementation stage. They tend to go back using the manual procedure after fail to use the PhIS flow and such issue could be a big loss as too many expenses have been used by the government in order to develop, training and implement this system. The hospitals and clinics need to take seriously with such issue. Any problems dealing with the system usage needs to be clearly settle with the system's vendor and management. The study has realized that office facilities such as computers at the Government Hospitals and Clinics are not sufficient to facilitate good performance. In this case, hospital management needs to prepare adequate device and instrument so that not interrupt with the facility's workflow and operation.

Based on the previous study has been established regarding the shortcoming exists particularly in management part, which subordinates are taken care of. Some of the issues related with the system usage such as online inventory and prescription have been pending for so long-time during system implementation phase 1. Here, management and head of department need to monitor and act promptly in order to settle it.

Here, the study set out to analysis the obstacles hindering workers performance of implementing the information system during early implementation among the Pharmaceutical staff at the Government's Hospitals and Clinics in Malaysia; that is the reasons why another staff at other facility were not performing satisfactorily or else reluctantly during another training session. Other than that, are also to evaluate which motivation measures are currently in place and to ensure each obstacles hindering solved clearly.

In regards to the crisis of recent pandemic of covid-19 outbreak, the system of E-management in hospitals and clinics undoubted plays important roles to facilitate any tasks, saving more time, paperless, and certainly in avoiding more physical contact (Ain, Syafiqah, & Mohamed, 2020) in order to follow the standard operating procedure due to the pandemic (Crisis Preparedness and Response Centre (CRPC), Ministry of Health, 2020. Throughout the online procedures, pharmaceutical staff could work from home through the system during the movement order control with the feature and function of the e-management of information sharing itself facilitate in accomplishing any related online tasks accordingly.

6.1.3 Implications of Theory

Theory of planned behavior (TPB) as the element included in DPTB has been recognized as the powerful of intentions in measuring behavior and significant when the behavior is under individual volitional control (Bozionelos, 1999). TPB is widely use in identify predictor of health behavior and health behavior change interventions. In this research of PhIS conducted, the individual behavior is obviously to be mandatory, specifically in term of motivation in utilizing PhIS. Therefore, we need to be careful in testing the perceived behavioral control which is added to cover not volitional behavior. Perceived behavioural control possessed two dimensions which are internal (the acquisition of information, skill, emotional and pressure) and external (surrounding and situational factors).

The researchers have been revised the theory applied and subsequently extended studying the theory applied in DPTB called theory of planned behavior. Here, one of the objectives of TPB is to predict individual's behavior which have partial or not fully volitional control. The three variables which are the belief (gain from Teaching Presence, Cognitive Presence and Social Presence), the intention (motivation) and the behaviour (usage behaviour) are the backbone of the model. According to TPB, an individual actual behavior is determined by the person intention to the behavior which influenced by the attitude towards the behavior, subjective norms about performing the behavior and the perception whether an individual can successfully perform the behavior. Subjective norms are the consequence of normative belief and the motivation to comply.

Meanwhile, perceived behavioural control are determined by the control belief and perceived facilitation. Perceived behavioural control means the level of perceived ease or difficulty an individual encounter when an individual is going to perform the behavior. The perceived behavioral control can be differentiated into two distinct components which are facilitating condition and self-efficacy. Facilitating condition refer

to the resources needed when using a particular IS while self-efficacy refer the level of confidentiality an individual possessed to perform the behavior (Han, 2003).

Even though TPB is applied in different environment and argue that belief has less powerful in predicting behavior but belief has strong affection power over intention (Weber & Gillespie, 2001). In fact, TPB has been applied in many types of technologies and the model itself also has been decomposed and modified to encompass other constructs to increase the predicting power. Application of TPB in healthcare explains an average of 41% of the variance in intention and 31% in behavior in prospective studies (Tolma et al., 2006). However, Taylor and Todd (1995) show that decomposition of the attitudinal belief will result better understanding of the relationship between the belief structure and the behavior intention. A decomposed TPB has better explanatory power than the pure TPB as explained in this chapter previously.

6.1.4 Implication for the Researcher

The study able to evaluate a positive relationship exists between motivational measures, behavioural intention toward good performance in system usage and what alternative measures can be identified in order to ensure improvement in workers performance in the future study. Meanwhile, the positive relationship between workers motivation and the resultant good performance except for their perception on motivation and performance need to be further established and discussed with the hospital management.

Other than that, the study has established that performance among the Pharmaceutical staff at the Government's Hospitals and Clinics in Malaysia is need to be further measured after the overall implementation of all facilities and the kind of motivation measures in place which in turn can acquire adequate elements to promote

good performance. However, the researcher also needs to further study about the available incentives at the Government's Hospitals and Clinics in Malaysia in order to encourage the workers to perform well namely; provision of good facilitation of system in their working environment, continuous appraisals, thanking a worker for the work that has been well done, provision of office facilities, provision of future training and good team work among the workers.

This study also emphasizes the necessity to enable more infrastructure aids in affecting a new system integration, such as access to reliable hardware, providing high-tech quality software, easy access to Internet, further technical support, proper administrative, and continuous subordinate and peer support might be viewed as extrinsic incentives. Meanwhile, employees' beliefs, easy access of technology, and self-efficacy in using system might be viewed as intrinsic incentives. However, further allocation for more technology integration budget, revised policies, ample time for conducting any training programs, and continuous peer supports are also recommended by some previous research (Lawrence & Tar, 2018; Alt, 2018).

Lastly, the PhIS users at the Government's Hospitals and Clinics in Malaysia were also found to be having good relations amongst each other, which was an incentive to good performance. The intrinsic motivators, for example, accomplishment, progression, obligation, acknowledgment is recognized to be all around communicated amid the training. Supervision and performance assessment at the Government's Hospitals and Clinics in Malaysia were seen to be good. Although some incentives seem to be in place, the study establishes that they need to be continuously adequate and there is also need for improvement for every aspect in order to achieve good performances.

6.2 Further Study

The study is need to be further evaluate whether there are positive relationship exists between motivation, behavioural change and good job performance as the feedback of this study acquired during the training. On the other hand, this study able to reflects, because it reveals that motivation is good among the Pharmaceutical staff at the Government's Hospitals and Clinics in Malaysia and yet complaints about unsatisfactory performance exist. On the other hand, the heads of departments and heads of section agree with the elements that create a feeling of achieving the aspirations and plans within workplace, feeling of recognition upon good job performance, having that sense of responsibility over their job, feeling of advancement in their career are very important motivators for performance.

The future study further will further to establish the elements such as factors of intrinsic and extrinsic in motivation including adequate pay or incentives, good technology infrastructure, working conditions, reliable job security, and good working relations are important to motivate workers. Besides that, several aspects such as continuous supervision, performance appraisal, further training were seen to be crucially needs for workers to encourage good performance. Other than that, it is hoped that by investigating their perception on the factors that best predict users' intention to use this or any hospital system in the future will also be explored. However, changing the punitive culture of secure hospital information systems such as those operated will be wrought with obstacles such as the beliefs, attitudes, and concerns of staff.

6.3 Conclusion of the Study

In regards to the implementation of Pharmacy Information System in Government Hospitals and Clinics in Malaysia, it has been designed and developed after the different

perspective and resistance towards the previous system of Hospital Information System. This therefore creates a dilemma whether this situation might continuously occur and thus are sufficient enough to create a solid baseline which had gave bad credential of using the system in their facilities which crucially needed to study in order to overcome issues related to system implementation (Oppu, 2006; Gunes & Bahcivan, 2018; Lawrence & Tar, 2018; Parkman, Litz, & Gromik, 2018).

In line with the issues of system integration resistance, the findings of this study could mean several things either the Pharmaceutical staff at the Government's Hospitals and Clinics in Malaysia might be more concerned with protecting the image of their department other than their own interests; or the dysfunctional behaviour among the system's users may be characteristic of most public organizations in the country and not attributed to lack of motivation but rather the relaxed disciplinary procedures. Other than that, the respondents are either not aware that their performance is unsatisfactory, or the salary component is perceived so important that it undoes all the other good initiatives. Further research is needed in order to confidently clarify on these issues.

At overall, the study has shown that there is a significance relationship between factors influence motivation with behavioural intention to use the PhIS system toward improving job performance among the Pharmaceutical staff at the Government's Hospitals and Clinics in Malaysia. Even the study also revealed a dimension of unsatisfactory performance, with most of the middle level of staff consenting to have heard complaints about unsatisfactory performance but this is just minority and not foreseen to decrease the job performance amidst good motivational measures among the majority of staff themselves.

The focal assumption of the study was that motivation of staffs can prompt great performance while poor motivation can make disappointment and could turn to poor job

performance. The framework that helped to guide the study was the theoretical perspectives of the theories Decomposed Theory of Planned Behaviour (DPTB) and Community of Inquiry (COI) as the theory applied in this research in order to answer the research questions and thus achieved the research objectives of the study. Other than that, the body of literature that deals with performance management approaches, intrinsic motivators, extrinsic motivators, organisation performance and the human resource management paradigm in relation to PhIS application and implementation were also studied and reported.

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