BURNOUT AND PSYCHOLOGICAL DISTRESS AMONG CHILDMINDERS IN RESIDENTIAL CHILDRENS' HOMES

BY

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ABSTRACT

Burnout and Psychological Distress Among Childminders in Residential Childrens' Homes

Introduction:

Childminders in residential homes are often faced great challenges, when dealing with childrens' behavioural and emotional difficulties. This contributes to psychological distress and burnout among these caregivers. Burnout among childminders give impact on the childcare and it affects the children's life as well as the caregiver in the long term. Burnout has three categorizations consist of exhaustion (EX), cynicism (CY) and personal efficacy (PE).

Aim

The primary objective was to determine the proportion of burnout and psychological distress of childminders and identify their relationship with sociodemographic variables. The second objective was to assess the correlation between burnout and psychological distress.

Method

This was a cross sectional study done among childminders in Kuala Lumpur and Selangor. A total of 150 childminders were selected using universal sampling from 30 children homes between July to October 2015. Assessments were carried out using the Maslach Burnout Inventory- General Survey (MBI-GS) and the Depression Anxiety Stress (DASS-21) scale as the self-reported questionnaires. The relevant personal and socio-demographic data were also collected. The ethical approval for the study was obtained from the Ethics Committee of University Malaya Medical Centre. The data were analysed using SPSS (version 22).

Result: The level of burnout (high) was based on each domain and noted to be 31.3% (n=47) for CY, 28.7% (n=43) for EX and 36% (n=54) for reduced sense of PE. The proportion of the

severe burnout (EX+CY) among the childminders was found at 24.7% (n=37). By attending early childhood training (adjusted OR 0.42, 95% CI 0.18, 0.99), perceived inadequate staff (adjusted OR 0.40, 95% CI 0.17, 0.96) and not working in shift system (adjusted OR 3.41, 95% CI 1.28, 9.07) were significantly associated with EX. The childminders prone to have decrease sense of PE (adjusted OR 4.18, 95% CI 1.15, 15.19). Childminders who had symptoms of stress (adjusted OR 0.24, 95% CI 0.09, 0.68) or not attended early childhood training (adjusted OR 0.30, 95% CI 0.11, 0.79) were at risk of severe burnout. The childminders with 4 children or less at home (adjusted OR 8.5, 95% CI 1.45, 50.39), childminders who were EX (adjusted OR 0.4, 95% CI 0.17, 0.90) or who experienced severe burnout (adjusted OR 0.28, 95% CI 0.09,0.85), were prone to exhibit depressive symptoms. Those childminders who had job stability (adjusted OR 0.30, 95% CI 0.13, 0.68), or were exhausted (adjusted OR 0.15, 95% CI 0.06, 0.37), were prone to anxiety symptoms. Female childminders (adjusted OR 0.34, 95% CI 0.13, 0.90), childminders who demonstrated EX (adjusted OR 0.2, 95% CI 0.08, 0.51) or childminders with severe burnout (adjusted OR 0.24, 95% CI 0.08,0.72), were more likely to develop symptoms of stress. There was a moderate correlation between severe burnout and psychological distress (r= 0.51) to (r=0.60).

Conclusion: These high levels of burnout and symptoms of psychological distress among our childminders, are of great concern to healthcare providers. Screening and detection of burnout and psychological distress among these carers is crucial, as they serve as caregivers to a very vulnerable group: young children and adolescents in residential homes. It is recommended that screening of these symptoms be conducted in all residential homes to ensure quality of care. Referral to the mental health services may be required for further evaluation and treatment when indicated. As this study is the first research done in Malaysia in this area, it can be used as a stepping stone to begin effective intervention programmes that are relevant in the local

setting for the betterment of childminders' mental health and child-care services in the region of South East Asia.

Keywords: Burnout, childminders, stress, psychological distress, residential children homes

ABSTRAK

Burnout dan Distres Psikologi di Kalangan Penjaga Kanak-Kanak di Rumah Kanak-Kanak

Pengenalan: Penjaga kanak-kanak menghadapi pelbagai dugaan besar apabila mengendalikan kelakuan dan kesukaran emosi kanak-kanak. Ini akan menjurus ke arah distress psikologi dan burnout di kalangan penjaga. Burnout di kalangan penjaga kanak-kanak memberi impak kepada penjagaan kanak-kanak. Di mana pada jangka masa panjang ia juga mempengaruhi kehidupan kanak-kanak dan juga penjaga tersebut. Burnout terdiri daripada kategori kelesuan emosi, kekurangan pencapaian peribadi dan sinikal.

Objektif: Objektif utama kajian ini dilakukan adalah untuk mengetahui kadar burnout dan distress psikologi dan kaitan burnout dengan factor sosio-demografik. Objective kedua kajian ini adalah untuk mendapatkan kaitan di antara burnout dan distress psikologi.

Kaedah: Ini adalah satu kajian keratan rentas yang dijalankan di kalangan penjaga kanak-kanak di Kuala Lumpur dan Selangor. Seramai 150 orang penjaga kanak-kanak dipilih secara "universal" dari Julai 2015 hingga Oktober 2015. Mereka telah diuji dengan menggunakan Maslach Burnout Inventori- General Survey (MBI-GS) dan Depression Anxiety and Stress Scale (DASS). Data peribadi dan sosio-demografi yang berkaitan turut dikumpulkan. Kelulusan etika telah diperolehi dari Badan Komiti Etika Pusat Perubatan University Malaya. Data telah dianalisa menggunakan SPSS (versi 22).

Keputusan: Tahap burnout (tinggi) adalah berdasarkan setiap domain dan dicatatkan sebagai 31.3% (n=47)) untuk depersonalisasi (sinikal), 28.7% (n=43) untuk keletihan emosi dan 36% (n=54) bagi kekurangan pencapaian peribadi. Kadar tahap teruk burnout (sinikal+keletihan emosi)

di kalangan penjaga kanak-kanak adalah 24.7% (n=37). Penjaga kanak-kanak yang tidak menjalani latihan awal kanak-kanak (adjusted OR 0.42, 95% CI 0.18, 0.99), kekurangan tenaga kerja di rumah kanak-kanak (adjusted OR 0.40, 95% CI 0.17, 0.96) dan penjaga kanak-kanak yang tidak bekerja di dalam system shif (adjusted OR 3.41, 95% CI 1.28, 9.07) lebih berisiko untuk menghadapi keletihan emosi. Penjaga kanak-kanak juga menhadapi perasaan kekurangan pencapaian peribadi (adjusted OR 4.18, 95% CI 1.15, 15.19). Penjaga kanak-kanak yang mengalami burnout tahap teruk boleh didapati juga di kalangan penjaga kanak-kanak yang stress ((adjusted OR 0.24, 95% CI 0.09, 0.68) atau yang tidak menjalani latihan awal kanak-kanak (adjusted OR 0.30, 95% CI 0.11, 0.79). Penjaga kanak-kanak yang mempunyai anak lebih atau kurang dari 4 di rumah (adjusted OR 8.5, 95% CI 1.45, 50.39), penjaga kanak-kanak yang mengalami keletihan emosi (adjusted OR 0.4, 95% CI 0.17, 0.90) atau yang menghadapi burnout tahap teruk (adjusted OR 0.28, 95% CI 0.09,0.85) boleh mengalami kemurungan. Di mana, penjaga kanak-kanak yang mempunyai pekerjaan yang stabil (adjusted OR 0.30, 95% CI 0.13, 0.68) atau yang mengalami keletihan emosi (adjusted OR 0.15, 95% CI 0.06, 0.37) juga terdedah untuk mengalami kegemuruhan. Penjaga kanak-kanak wanita (adjusted OR 0.34, 95% CI 0.13, 0.90), penjaga kanak-kanak yang mengalami masalah keletihan emosi tahap teruk (adjusted OR 0.2, 95% CI 0.08, 0.51) atau penjaga kanak-kanak (adjusted OR 0.24, 95% CI 0.08, 0.72) juga terdedah untuk mengalami stress. Di samping itu, kajian ini juga mendapati ada kaitan secara sederhana di antara burnout yang teruk dan psikologi distres ((r= 0.51) to (r=0.60).

Kesimpulan:

Dengan penemuan tersebut, ia telah mendatangkan kepekaan di kalangan pemberi kesihatan untuk penilaian awal dan berkala pada masalah ini. Rujukan kepada perkhidmatan kesihatan mental diperlukan untuk penilaian selanjutnya dan rawatan sekiranya diperlukan. Disebabkan kajian ini adalah kajian yang pertama di Malaysia dan di rantau ini, ia boleh dijadikan sebagai batu loncatan kepada intervasi program-program yang releven untuk keadaan tempatan bagi

menjayakan dan menambah baik tahap kesihatan mental penjaga kanak-kanak dan perkhidmatan penjagaan kanak-kanak di rantau Asia Tenggara.

Kata kunci: Burnout, penjaga kanak-kanak, stress, psikologi distress, rumah penjaga kanak-kanak

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Composite International Diagnostic Interview	CIDI
Cynicism	CY
Depression Anxiety and Stress Scale	DASS
Depersonalisation	DP
Diagnostic and Statistical Manual of Mental Disorder	DSM
Emotional Exhaustion	EE
Exhaustion	EX
Hospital Kuala Lumpur	HKL
International Statistical Classification of Disease and Related Health Problems	ICD
Jabatan Kebajikan Masyarakat	JKM
Kementerian Pembangunan Wanita, Keluarga dan Masyarakat	KPWKM
Kuala Lumpur	KL
Lembaga Penduduk dan Pembangunan Keluarga Negara	LPPKN
Maslach Burnout Inventory	MBI
Maslach Burnout Inventory- Educators Survey	MBI- ES
Maslach Burnout Inventory- General Survey	MBI-GS
Maslach Burnout Inventory- Human Services Survey	MBI-HSS
Mini International Neuropsychiatry Interview	MINI
Ministry of Health	MOH
Personal Accomplishment	PA
Personal Efficacy	PE
Structural Clinical Interview for DSM-5	SCID-5
World Health Organization	WHO

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CHAPTER ONE

INTRODUCTION

Children[1] are placed in homes or institutions when they do not have parents or family to look after them. There are many different types of out-of-home care options for children in this state, homes of relative, or non-relative foster homes. There are as well government and non-government run homes.

There is an increasing demand for such residential care of children. The children's family, mental health workers, child welfare, and even the juvenile justice systems recognize the need for such homes and fully utilize these homes. Due to the different background of the children, the residential homes have to deal with children's behavioral, emotional and academic difficulties; thus, the staffs face a variety of changes and challenges (Bravo and Del Valle, 2009; Walter and Petr, 2008).

In recent years, concerns about children in residential care have emerged. Much of these concerns are due to the growth of knowledge and evidence with regards to the attachment theory. *These residential homes as seen as care-providers of the children*, especially those coming from situations of abuse or neglect (James, 2011; Bravo and Del Valle, 2009).

The path to providing care and aid to these children has not been easy. In a study by of children in residential care in Spain, Bravo and Del Valle (2009) reported at least 65% of children's home residents has mental health problem i.e. conflict-related difficulties, such as the use of aggression and defiant behavior. Consequently, there are increasing reports of the child workers struggling to cope handling the children. Policies have looked into the

[1] Children are people 18-years-old and below, unless specify

effectiveness of these homes. Reports speak of retention and work stability, turnover and burnout among these child workers.

Over the last couple of years, burnout among professionals has received much attention. Among professionals working with children, exhaustion leads to negative consequences when dealing with the children in the homes (Shannon and Saleebey, 1980). Deterioration in the quality of work occurs and worsened to the level of derogating and isolating their clients. Burned-out child-workers reported feeling depressed and had low morale, resulting in absenteeism, increased drug abuse, and high work turnover rates (Rose et al., 2010; Boyas et al., 2013; Yoon and Park, 2004; Shannon and Saleebey, 1980).

Handling children with various past experiences and backgrounds is not an easy task. It is stressful working in these conditions (Dale et al., 2007; Decker et al., 2002). Burnout has linked to psychological distress (Sumeet et al, 2014 (unpublished), Ahola et al. 2005, Bruce, 2003, Tennant, 2001). Burnout individual most likely to has anxiety, stress and depressive symptoms. Therefore, it have impact for the children who they are care for. It is very alarming of childminders are psychological distress. They are caring for a very vulnerable group of children. Hence, it is a very pertaining issues in our country as our childminders are not screen for burnout.

The study investigated the level of burnout and psychological distress among the childminders in several NGO's residential children homes in Kuala Lumpur (KL) and Selangor. The investigation aims to look what factors have a significant link with the level of burnout and psychological distress among the childminders. Detecting psychological stress and burnout, and appreciating factors related to these issues will help improve the childminders' mental health, and the service they provide.

Understanding the factors affecting burnout and psychological distress is the stepping-stone in developing programs to reduce and combat the occurrence of burnout and

psychological distress. The study also hopes to provide relevant information needed for the development and betterment of the childminders' mental health and their training programs in Malaysia.

CHAPTER TWO

LITERITURE REVIEW

2.1 WORKING IN A RESIDENTIAL CHILDREN'S HOME

In the recent years, interest in people at work and their subjective well-being has received much attention (Green et al., 2013; Krueger, 2007). Happiness at work is a vital aspect of life.

Job-related well-being is a significant aspect of every individual's well-being (Danna and Griffin, 1999). Being in a job, loving it and able to manage with the challenges at work is essential for one's mental health. Positive experiences with work such as job satisfaction, attachment, and involvement, impacts a person's morale and happiness (Krueger, 2007; Allen et al., 2000). Stressful working conditions affect an individual's well-being negatively, resulting in tension at work, depression, burnout, and alienation from work (Krueger, 2007).

Children's residential treatment facilities have continued to grow in numbers, even in our country. When the family, social service or other services make attempts to work with the family and children, and things do not work out, frequently residential care services are used as an option (Ryan et al., 2008).

Ainsworth and Hansen (2005) refers to residential care as the placement of individuals in any residential building and staffs, or personnel is paid to provide attention and placements. Despite their similarities with other human services professions such as psychology and social work, childminders are a unique profession (Barford and Whelton, 2010). Research have recognized employment in a children's homes remain one of the most challenging and emotive working environments in human social work (Barford and Whelton, 2010; Krueger, 2002), and

one of the most challenging and emotionally exhausting careers (Krueger, 2002).

Residential care represents the most intensive and indeed expensive part of the community especially the child-care system (Cuthbert et al., 2011). Around the past ten years, the role and the responsibilities of the residential childminders have tremendously increased (Williams and Lalor, 2001; Boyd and Schneider, 1997). Many of the child homes function as group homes, residential facilities, correctional facilities, or temporary shelter care center. Using various ideas and principles in the interest of children, much government run or private agencies have looked at providing more appropriate services to cater to the children. In the homes, the staffs are placed on a roster, and they work in shifts. The homes provide **24-hours personal supervision for the children**. Often there is a live-in carer and even if they are off-site, some continue to offer support. Moreover, there are often other facility-based arrangements, where staffs are required to provide care and supervision.

The set-up of the work dealing with children in residential care recognizes children do well when their families do well. However when families are not unavailable, or they need support, children will well **if the community or social back-up structures around them are stable and robust** (Nittoli, 2003). Therefore, the childminders provide services in numerous working roles (Eastwood and Ecklund, 2008; Krueger, 1991). Their roles warrant the care worker taking on the figure of reference for the child, for the unavailable family and anyone else involved (Bravo and Del Valle, 2009; Del Valle et al., 2007). Being the figure of reference, necessitates the childminders having **continuous contact with the children** in their living milieu (Savicki, 2003), and most times they work for long hours. They oversee and are responsibility for the children's daily functioning (Seti, 2008). Invariably, they organized their life around their work, as they are required to have continuous contact with their given set of children (Savicki, 2003; Boyd and Schneider, 1997). With the increasing complexity of the

work task (Cuthbert et al., 2011; Lee and Thompson, 2008), higher demands and high expectations are placed on them (Seti, 2008; Nittoli, 2003; Hicks et al., 1998).

In these homes, there are a few children with lesser behavioral problems. The majority of the children in the facilities, however, have various behavioral and psychological disorders including Attention Deficit Hyperactive Disorder (ADHD), conduct and autism spectrum disorder, learning difficulties and disabilities (Cuthbert et al., 2011; Barford and Whelton, 2010; Bath, 2008; Littlechild, 2005). Some also suffer from chronic medical illnesses. Ryan et al. (2008) found the children in the homes are more likely prescribed a variety of psychiatric medications to stabilize their conditions.

The children are often problematic and disruptive (Ainsworth and Hansen, 2005). Some of them have been abused and abandoned several times (Krueger, 2007), and their behavior continues when in the homes, even escalating (Dishion et al., 2004). Many of these children lack the caring and supportive structures from their family and friends, consequently by the time they enter the homes, they may feel isolated, afraid, and resentful (Knorth et al., 2010). Therefore, it is not shocking many of the children have severe emotional disturbance (Cuthbert et al., 2011; Eastwood and Ecklund, 2008). Their challenging behaviors place them at risk to themselves or others (Ainsworth and Hansen, 2005; Eastwood and Ecklund, 2008). When confronted, these adolescents reduce their involvement and guidance become challenging (Dishion et al., 2004). Some of the children with severe behavioral and emotional difficulties engage in self-harming behaviors. They act out sexually, and some become verbally or physically abusive toward friends and childminders (Ryan et al., 2008; Savicki, 2002), in addition to influencing others (Dishion et al., 2004).

Hence, the residential homes are seen as a continuum of care for at-risk children (Eastwood and Ecklund, 2008). Findings indicate home group residencies handle children who are not only disadvantaged, delicate and vulnerable (Bath, 2008); the children are at higher risk

of delinquency ((Rahman F.N.A. et al., 2013), Ryan et al., 2008; Ainsworth and Hansen, 2005). The literatures have recognized children residential homes as having children with serious emotional disorders ((Rahman F.N.A. et al., 2013), Lyons et al., 1988).

Consequently, the childminders are exposed to numerous health and safety risks in their work environment (McGrath, 2007; Lyons et al., 1988).They endure never-ending negative situations (Lyons et al., 1988) as in many of their connections with their client the interactions is often hostile, and they face much blame and resistance.

These early patterns of behavior and functioning are established to a degree that they can have a long-term influence through childhood and into adult life (Hardy et al., 2015). Consequently, the children have a wide-range of needs and to handle them requires skilled professional assistance to achieve positive outcomes (Hardy et al., 2015; Eastwood and Ecklund, 2008). Mattingly (1995) reported the childminders need to have skills, commitment, and knowledge to manage these vulnerable children.

The childminders are responsible for a surplus of duties, to provide a stable and conducive living environment for this group of children (Ryan et al., 2008; Krueger, 2007; Krueger, 2002; Krueger, 1991). Often their duties include the creation of relationships with children and coaching them in their daily activities (Ryan et al., 2008; Freudenberger, 1977). They not only teach, invariably they have to discipline the children (Freudenberger, 1977). They arrange or provide transportation to and from schools and appointments. Also, to having contacts with the social workers as well as other services and agencies, many of the childminders have to work with parents and families (Ryan et al., 2008; Krueger, 2007; Krueger, 2002; Krueger, 1991).

Due to this delicate matter, many residential homes provide individual and group counseling both in formal and informal settings (Ainsworth and Hansen, 2005). It is hoped the

treatment program offered can help the children change their inappropriate behaviors, thus provide them better opportunities to change and grow into healthy individuals.

Thus, the childminders face a huge and a variety of tasks. They need good teamwork and flexibility to adapt to their immediate and various demands (Savicki, 2002). Indirectly they function as the direct caregiver to the children.

Also with having to deal with the children, the childminders are frequently overworked and underpaid (Boyd and Pasley, 1989; Boyd and Schneider, 1997). Moreover, they have least chances in decision-making and often lack personal recognition in their occupation (Baldwin, 1990; Kent, 1997; Skinner, 1992; Utting, 1991; Wardhaugh & Wilding, 1993). Studies found job one-third of such workers express they are not satisfied with their job, and close to a third intend to leave (Knorth et al., 2010; Del Valle et al., 2007; Manlove and Guzell, 1997).

Being exposed to long hours of interactions with the emotionally intense clients contributes to the residential care workers risk for burnout (Eastwood and Ecklund, 2008; Savicki, 2002; Freudenberger, 1977). Goelman and Guo (1998) reported multiple factors contributed to burnout in childminders. Among factors noted in the studies are:

1. Client behavior and working condition
2. Organizational characteristics and demands
3. Role ambiguity and conflict job description
4. Communication and support
5. Staffs personality, coping and perception of work
6. Education and work experience
7. Fellow staffs
8. Wages, benefits, and working conditions

Todd and Deery-Schmitt (1996) proposed the individual's sources of stress, moderated variables such as professional and personal coping strategies, affecting their cognitive appraisal

processes. Their negative cognitive appraisal of the environment then impacts their thoughts to leave or to remain in the profession.

Among studies reviewing burnout in child-care providers found factors related to burnout were:

1. The role of stress: Stress significantly predicts burnout and intentions to leave. (Boyd and Schneider, 1997; Boyd and Pasley, 1989; Whitebook and Howes, 1980). Two forms of occupational stress i.e. work role conflict and work role ambiguity were clear predictors of all the three facets of burnout (Manlove, 1994)
2. About work stress, work experience and feeling competent significantly correlates with all three facets of burnout (Maslach and Leiter, 2003; Thornburg et al., 1998; Manlove, 1994)
3. Wages: Child care providers received low pay, with poor or no benefits, and not paid for working overtime (Whitebook and Howes, 1980). Having lower pay or being unsatisfied with pay affects workers job satisfaction and turnover (Stremmel, 1991).
4. Social support: Having support buffers the effect of role conflict and role ambiguity (Manlove, 1994). Having support aids individual and affects predominantly emotional exhaustion and depersonalization.
5. Working conditions and the work: Being satisfied with work helps reduce the risk of burnout. Also, to job satisfaction, having communication within the center, relates to lower emotional exhaustion among the center staffs (Stremmel et al., 1993).

The above findings were confirmed by Savicki (1993), who hypothesized greater rates of burnout in beginning childminders could be attributed to low starting salary, lack of respect, and unmet expectations in relation to their role and responsibilities. While the study by Boyd and Schneider (1997) among Canadian child care providers, found organizational roles such as

job satisfaction, communication and clear defined roles helps improve quality of child-care and thus stress reduction and intentions to leave.

2.2 WORK RELATED STRESS IN CHILDMINDER'S CAREER

Children's residential homes have become an integral part of society. Many staffs of different level and responsibility provide these shelters with therapeutic and educational services for the children with severe emotional and behavioral disorders. The centers operate on a 24-hours a day schedule and hence, they have to have enough staffs to operate. The staffs consist of posts such as house mother/ master, house parents, social worker or counselor, teachers, the general workers, and administrators, make-up the staffs of the homes. The extensive verification supports the quality of child care the children receive influences the children's cognitive and social-emotional development (NICHD and Duncan, 2003; Manlove and Guzell, 1997).

For most individuals working in this industry, childcare work involves an incredible experience. The work produces both harmony and tension. It gives the individual enriching opportunity as they see the impact of their work on the change of behaviours of many of the children in their care. The tension and unhappiness arises from carrying out lesson plans to getting the children to comply with the center's regulations, while providing emotional support and discipline in addition to giving basic physical care (Rehm and Samuel, 2002; Manlove, 1993).

Among the childcare providers, the challenges faced by the residential facilities are staff stress, burnout, and turnover (Del Valle et al., 2007; Decker et al., 2002). Stress responses are necessary to motivate the individual to do well; however, long-term stressors have a negative in influence on the individual (Groeneveld et al., 2012). Indirectly, the challenges

affecting the staffs' compromise the development of children the staffs look after, as when the staffs are affected so is their quality of service. The quality of caregiving by the caregivers is recognized as a significant influence on various aspects of the development of the children under their care (de Schipper et al., 2007; NICHD and Duncan, 2003), and the barrier to increasing the quality of child care (Whitebook, 1993).

While many use the term burnout and stress interchangeably, the two terminologies are distinct concepts with very different etiologies (Pines and Keinan, 2005). Schaufeli and Taris (2005) and Gil-Monte (2005) are among authors who specify burnout, is a consequence of chronic job stress.

Job stress among the childcare providers is a critical issue in the profession. Being stress at work affects job satisfaction (Baumgartner et al., 2009; Moriarty et al., 2001) and turnover (Deery-Schmitt and Todd, 1995; Whitebook, 1993). In this childcare service industry, high staff turnover affects service delivery and compromises the development of the children (Whitebook and Sakai, 2003).

The turnover of staffs in the childcare industry far exceeds that of other teaching settings (Baumgartner et al., 2009; Whitebook and Sakai, 2003). Among the childcare workers, the high turnover rates have been linked to staffs' burnout (Barford and Whelton, 2010; Savicki, 1993; Whitebook, 1993; Freudenberger, 1977). When people leave, their leaving results in the loss of talented workers thus reduced the quality of service to clients (Savicki, 1993; Freudenberger, 1977) and it some instances, distress as the force is faced with a shortage. As the service is known to be related high stress and burnout level, it is as well difficult to attract talented or qualified employees.

People leave when they are unhappy or cannot fit into the organization (Lait and Wallace, 2002). This can happen when the ideals, objectives and expectancies of the individual

are not compatible with that of their organization (Lait and Wallace, 2002). When people are unhappy at work, tensions are detected due to the conflicting elements (Rehm and Samuel, 2002). While some unhappy individuals leave to seek meaningful harmony, and purpose (Rehm and Samuel, 2002), others remain, and unhappy or they do not come to work. Research has shown stress may impact continuity of care experiences for young children through impaired job performance of people who are stress at work. When people are stress, the service delivery is affected by absenteeism, they become unwell i.e. ill, poor work quality or they leave the service (Barford and Whelton, 2010; Mann-Feder and Savicki, 2003).

Zerach (2013) found among child-care workers in Israel, stressed staffs were likely to leave and reported feeling easily tired and having reduced compassion to work. In an earlier study done by Shinn et al. (1993) among children residential home workers summarized as factors handling the children and organization factors contributed to them feeling stressed. Among the factors related to the children was their disruptive and uncooperative behavior. While organizational factors were Issues of inadequate staffing, low pay and undesirable schedules. Similar finding were found in other studies (Whitebook and Howes, 1980; Stremmel et al., 1993; Stremmel, 1991; Seti, 2008; Barford and Whelton, 2010).

Burnout is a syndrome comprising of emotional exhaustion, depersonalization of clients, and loss of feelings of personal accomplishment (Maslach et al., 2001). Burnout occurs as a response to prolonged and demanding work conditions having elevated intensities of interpersonal contact (Ganster and Rosen, 2013; Shirom, 2005; Thanacoody et al., 1993). The burnout syndrome is highest in human service workforces due to the emotional demands of their employment (Maslach et al., 2001; Pines and Aronson, 1988; Maslach, 1978). Among

childcare workers it is a concern as one of the most disturbing consequences of burnout is the "dehumanization of the caring process" (Maslach et al., 2001; Pines and Aronson, 1988; Maslach, 1978). This process means in the working environment, a workers' capacity to respond to clients is severely diminished (Mattingly, 1977).

Researchers have examined how stress and burnout among childminders in childcare centers affects their behaviours and mood (de Schipper et al., 2009; de Schipper et al., 2007). The results were from several researchers studying cortisol level and found the association between lower global childcare quality i.e. less positive caregiver behavior and higher cortisol levels in the adults (Groeneveld et al., 2012; De ling et al., 2000). Higher cortisol levels were found in subjects who were more stress (de Schipper et al., 2009).

Stress affects brain functioning, particularly the hippocampus and the adrenal cortex. The hippocampus is necessary for verbal memory and memory of the experiences (Eigenbaum et al., 1992). The hormones secreted by the adrenal cortex are crucial to a person's cognitive performance, and it helps improve the immune response to increasing the natural-killer cell activity and the numbers of some types of leukocytes (Segerstrom and Miller, 2004). When the stress is chronic, the effects of these hormones changes from adaptive into maladaptive (De Kloet et al., 1999). Interestingly, the quality of childcare and child characteristics may contribute to differences in the children's cortisol levels (Groeneveld et al., 2012).

2.3 UNDERSTANDING BURNOUT AND ITS RELATION IN THE CHILDMINDER'S CAREER

Burnout remains an often cited source of dissatisfaction and factor in the decision to leave the child care field (Manlove, 1993; Freudenberger, 1977). Understanding the causes of burnout in childcare providers and the amount of literature regarding burnout, verify it to be an

important step in developing intervention strategies for the staffs and improving the quality of childcare.

Freudenberger (1974) first used the term burnout to denote a condition, which leads to productivity and reduced interest in work. The concept of burnout by Maslach and Jackson (1981) is the most widely recognized burnout model (McGeary and McGeary, 2012; Cordes and Dougherty, 1993). Maslach and Jackson (1981) and Maslach et al. (1986) explained burnout as a syndrome, as a reaction to chronic stress, and portrayed by the presence of ill feelings and approaches toward people they are managing. Maslach (2001) describe the burnout individual being in a state of **emotional exhaustion, depersonalization** and **a decrease sense of personal accomplishment**. They feel drained and are not able to give any more in their work (Schaufeli et al., 2009a; Halbesleben and Buckley, 2004; Maslach, 2001; Leiter and Maslach, 1988).

Burnout is globally accepted and recognized as a danger to the working career (Çavuş and Demir, 2010; Maslach et al., 2001). It has consequences for the individuals and the organization they work in (Maslach et al., 2001; Leiter and Maslach, 1988; Maslach and Jackson, 1981).

The theory further suggests, burnout as an on-going course, such that the affected individual undergoes several stages, from the onset to a identifiable peak (Friedman, 2000). It begins with small warning signals that are often unnoticed or dismissed, and then progresses into a profound and lasting dismay of going or even thinking of going to work. The theory suggests burnout occurs as certain valued assets are absent, are insufficient to meet demands, or when is does not produce the expected earnings (Maslach et al., 2001; Maslach et al., 1986). It starts with the emergence of stress (Friedman, 2000). Stress sets in as there is an initial threat

to resources, and the continued threat to resources, particularly after lots of effort is put in, is said to lead to burnout (Wright and Hobfoll, 2004; Hobfoll, 2001).

Burnout is now universally defined as a reaction occurring among individuals exposed to prolonged, intensive levels of stress at work i.e. as a response to job stress produced by the demands of helping needy clients (Maslach et al., 2001; Leiter and Maslach, 1988; Maslach et al., 1986). It usually affects people-orientated jobs i.e. people helping people, and it occurs when there are chronic, excessive demands on one's energy and resources (Maslach et al., 2001; Maslach et al., 1986), as in *the case of the childminders*.

Burnout is most likely to occur when there is an imbalance of one's internal resources and the expectations placed on them (Maslach et al., 1986; Maslach and Jackson, 1981). When *emotionally drained*, the staffs are no longer able to give anything of themselves while feeling detached (*depersonalization*) and incompetent (reduced the *personal sense of accomplishment*) (Maslach et al., 1986; Maslach and Jackson, 1981). When the individuals are burnout, the usually enthusiastic and dedicated person loses their spirit (Pines and Oreniya, 2001; Pines and Aronson, 1988; Freudenberger, 1974). The individual is no longer interested and uninvolved at work.

The condition manifestation is seen in an individual as at the time the individual's mental, physical and emotional resources are exhausted (Lee and Ashforth, 1990). The feelings of frustration, anger, dissatisfaction, and anxiety i.e. the negative emotions creep in and they become more often and chronic. They feel *emotionally fatigue* and depleted.

When the workers are "feeling worn out and fatigued" i.e. *drained*, at the same time they have diminished interest in their job resulting in reduced efficiency (Freudenberger, 1974). The *emotional exhaustion* is often considered the central component of the burnout response (Maslach, 2001; Maslach et al., 2001).

Depersonalization is the second element in the burnout syndrome (Maslach et al., 2001). It describes the staffs becoming disconnected and distrustful of others they work with or those in need of their services (Leiter and Maslach, 1988). Depersonalization often occurs in response to the state of emotional exhaustion (Maslach et al., 2001). Lee and Ashforth (1990) describes depersonalization is a coping strategy to the emotional strain. A frustrated worker avoids the frustration of not meeting work-related goals by disengaging himself from work (Peterson et al., 2008; Leiter, 1989); the person does not care about having to complete his tasks. In the field of childcare, it is seen as the workers being ‘‘jaded’’ or cynical in their interactions with those needing their help (Barford and Whelton, 2010; Freudenberger, 1977). Jackson et al. (1986) describe the workers as being cold, uninterested and unsympathetic towards people and others related to their job.

The third component of burnout is *reduced personal accomplishment* i.e. there is presence of the diminished perceptions of one's personal accomplishment/ ability (Leiter and Maslach, 1988; Maslach et al., 1986). Maslach et al. (2001) described the presence of unhelpful self-evaluation, with the presence of feelings of ineffectiveness, incompetence, and a lack of achievement. The person perceives they cannot perform as well and are less effective in their job compared to as they did before.

As burnout sets in, the exhausted staffs struggle to maintain a strong involvement, and that was once a meaningful part of their work (Schaufeli et al., 2009b). As the workers lose the obligation to their job and exhaustion continues, as with the reducing feeling of personal achievements, the full extent of burnout follows as a domino effect (Leiter and Maslach, 1988).

Abramson et al. (1978) hypothesize the de-motivating effects are akin to learned helplessness. Coping with the constant feelings of negativity and unfulfilled can run down a person, and eventually, wear them down. When people are in situations where their repeated efforts fail to produce any positive results, ultimately they develop symptoms of stress and may

become depressed (Abramson et al., 1978), when they no longer believe their actions can and do make a difference, they quit trying and depression sets in. While depression may begin as a consequence of the job situation, when depression occurs, it can become a problem as further deterioration of health and impaired work performance follows.

Why is burn out a problem?

A once enthusiastic and energetic person, and in good health deteriorates into a person who is bored and is unable to get excited about his/ her work. They become uninterested in any task or projects, with a decline in their efficiency and quality of work. As time goes by, work becomes more painful and less satisfying to the person; absenteeism occurs and is likely to increase. Even when they are physically present, the burnout individual is often emotionally and mentally absent from his/her job. Health problems and the stress make it difficult to spread oneself to their co-workers and others. Others at work may feel the cooperation from the individual is difficult and they need the cooperation and help to get any job done. While some may complain, others may pull back from the burnout individual. As burnout progresses, it becomes harder for the person to perform. In time a substantial drop in their performance and productivity becomes apparent.

2.4 ANTECEDENTS OF BURNOUT

The literature on burnout has stated numerous factors can cause burnout (Maslach and Leiter, 2003; Cordes and Dougherty, 1993). The factors are:

a) Demographic characteristics

b) Environmental and organizational characteristics

c) Personal factors

The demographic characteristics

The socio-demographic factors said to influence burnout levels in the various fields of employment are the age of the worker, marital status, and the social support (Maslach and Leiter, 2003; Cordes and Dougherty, 1993).

Age is the most efficient in predicting level of burnout (Brewer and Shapard, 2004). Research has reported the younger the workers are, the likelihood they will experience the maximum levels of burnout (Schwartz et al., 2007; Brewer and Shapard, 2004; Cordes and Dougherty, 1993). Studied among childcare providers found similar results (Barford and Whelton, 2010; Decker et al., 2002; Boyd and Pasley, 1989).

Social support from family, friends, colleagues and supervisors assists as an effective defense against work-related stress and the harmful effects of burnout (Baruch-Feldman et al., 2002; Halbesleben, 2006; Maslach & Jackson, 1985). The importance of having support plays a role in helping the residential care workers get through their stressful daily routine (Barford and Whelton, 2010).

Personality has been shown to be one of the factors influencing burnout. According to Costa and McCrae (1992), the "Big Five model of personality" is the leading measure of personality traits. Manlove (1993) reported that the most common personality traits influencing the burnout scores are neuroticism and extraversion. Bakker et al. (2006) reported that many studies have found a relationship between extraversion and burnout. Extraversion was found inversely associated with emotional exhaustion (Bakker et al. 2006). Neuroticism has constantly demonstrated the strongest relationship with all three burnout dimension compared to the other Big Five Personality components (Ghorpade et al., 2007; Kokkinos, 2007; Zeng &

Shi, 2007). Manlove (1993) has mentioned that a person who scores high on the neuroticism scale experiences a great proportion of intensely undesirable and distressing emotions. They tend to be emotionally over-reactive and have trouble returning to a neutral state after the emotionally distressing states.

Environment and organizational characteristics

Many of the work done have focused on the organizational aspects and its relation to burnout. Organizational factors such as role conflict, role ambiguity, work overload, the quality of communications between both co-workers and supervisors, and employee involvement have been most constantly associated with burnout (Maslach and Leiter, 2003; Maslach et al., 2001; Cordes and Dougherty, 1993).

In a study among Canadian child workers, Boyd and Schneider (1997) depersonalization is the facet of burnout with the most and strongest correlations to the work environment dimensions. In their study sample, indicated within the environment, employee's values and shared vision predicted them feeling burnout. Similar to the study done by Barford and W.J. (2010), levels of emotional exhaustion were predicted by degree of work pressure, and roles conflicts and expectations. The study also reveals having support from significant others acts as a buffer to the highly stressful environment. The findings were supported by the study done by Decker et al. (2002) and Del Valle et al. (2007) who found environment and organization characteristics had a significant role in workers' burnout level. Similar findings were found in other studies (Munn et al., 1996; Manlove, 1993; Kruger et al., 1991).

2.5 IMPACT OF STRESS AND BURNOUT, AND IT RELATION TO PSYCHOLOGICAL DISTRESS

Depressive disorders and psychological distress are two different concepts. While psychological distress can be understood as a non-specific current reaction to stressful event, marked with emotional instability, including increased depressive and anxiety symptoms. Meanwhile, depressive disorder and anxiety disorder are more formal psychiatric categories requiring specific psychopathology to fulfil criteria of time and severity, according to Diagnostic and Statistical Manual of Mental Disorders- Five Edition (DSM-5) or International Statistical Classification of Disease and Related Health Problems - 10th EditionICD-10.

Depression is part of psychological disorder that characterized by mood disturbances, loss of interest, lack of pleasure (anhedonia), biological symptoms such as appetite and weight disturbance, sleep difficulties, lethargy and reduced sexual libido that lead to difficulty of concentration, deteriorating of function, feeling of worthlessness, hopelessness, uselessness and may lead to self-harm.

While, anxiety disorder characterized by feelings of anxiety and fear. The anxiety is a worry about future events and fear is a reaction to current events. These anxiety covers four aspects of experiences that an individual may have: mental apprehension, physical tension, physical symptoms such as a racing heart and shakiness, and dissociative anxiety.

Depression and anxiety disorder are assessed and diagnosed by clinical interview. The questionnaires that help in diagnosing depression and anxiety disorders are Mini International Neuropsychiatry Interview (M.I.N.I), Structural Clinical Interview (S.C.I.D) and Composite International Diagnostic Interview (C.I.D.I). While psychological distress is assessed by self-report. In this study, investigator used DASS. The investigator could only reported the proportion of depressive symptoms (suspected depression or probable depressive disorder),

proportion of anxiety symptoms (suspected anxiety or probable anxiety disorder) and proportion of stress symptoms of the participants.

In many instances, the burnout victim may quit his/her job to seek another. However beginning a new job without first understanding the problem or fixing oneself is a set-up for another disaster.

Prolonged and extreme distress frequently result in negative mental health concerns, which in turn may impact the functioning and productivity of the individual and their organizations (WHO, 2001; Harnois et al., 2000; Amagasa et al., 2005). People having mental health difficulties are among the most significant contributors to the burden of disease and disability worldwide (WHO, 2001; Harnois et al., 2000; Woo and Postolache, 2008), and it is worrying. Prolonged exposure to stressful work environment leads to psychological distress (Woo and Postolache, 2008; Amagasa et al., 2005), with impaired psychological well-being is an important of reduced job involvement and absenteeism (Plaisier et al., 2007; Harnois et al., 2000).

As shown in the earlier discussion, burnout has been recognized as one of the major occupational hazard (Schaufeli et al., 2009b). Burnout can manifest in many different ways, with its presentation seen in a variety of physical, psychological, emotional, and attitudinal characteristics (Freudenberger, 1977). Consequently, burnout results in negative responses to the one's job such as absenteeism, frequent turnover, and dissatisfaction with one's job (Brewer and Clippard, 2002). Burnout is linked to sleep deprivation and fatigue (Babson et al., 2010; Rose et al., 2008; Halbesleben and Buckley, 2004), mood and child care-interactions (de Schipper et al., 2008). Burnout is as well linked to anxiety and depression (Pereira-Lima and Loureiro, 2015; Lim et al., 2010; Woo and Postolache, 2008).

High job demands can predict psychiatric morbidity (Bruce, 2009; Woo and Postolache, 2008; Bakker and Demerouti, 2007). Work is an essential activity and a principal

source of individuality for most adults (Tausig and Fenwick, 2011c; Fenwick and Tausig, 2007). Therefore, the relationship between work and mental and emotional well-being is significant (Tausig and Fenwick, 2011c; Fenwick and Tausig, 2007; Wilhelm et al., 2004). Tausig and Fenwick (2011a) hypothesized stress-related consequences of work occur when the individual has to response to demands made in the environment (stressors). On-going handling the tasks or challenges allows the person to regulate their insight of how stressful or manageable the person is handling those demands. The individual's ability is tested when demands are placed on them (Tausig and Fenwick, 2011a; Bakker et al., 2004). When stretched further and his resources are depleting, unable to be in control of his/herself, in turn, will affect the person's job performance (Tausig and Fenwick, 2011a; Bakker et al., 2004).

Wilhelm et al. (2004) reported a stressful work environment is a risk factor for depressive and anxiety symptoms; while Maslach and Leiter (2008) and Schaufeli et al. (2009b) are among researchers who demonstrated burnout occurs from demanding and emotionally charged work. With the unrelenting demands, the human body is unable to restore stability (Tausig and Fenwick, 2011b). Exhaustion sets in as a result of the biological breakdown.

Many other studies have investigated and found the relationship between exposure to environmental demands and stress-related illness.

Karasek (1979) found individuals with high job demands but low employee control demonstrated significantly more exhaustion after work. The individuals had difficulty waking up in the morning, felt depressed, nervous, and anxious and had more insomnia than other workers. According to Karasek (1979), when a worker faced high demands but had more control, his or her stress was lower. This is not surprising as the workforce is becoming more

challenging and competitive (Wang et al., 2009; Wang et al., 2008), such that there is as well change in what employers expected of their employees.

Karasek (1979) explained the relationship between work-related mental strain and psychiatric disorders using the demands-control model. According to him, combinations or interactions between the employment factors cause strain in the employee. When exposed to external stressors, the body response trying to adapt to these changes (Tausig and Fenwick, 2011a; Selye, 1956). The body does what it can to reach some level of equilibrium (Selye, 1956). However, if the harmful stressor (stimulus) persists or increases in intensity and the body is unable to restore equilibrium or that there are not enough resources, biological breakdown ensues (Tausig and Fenwick, 2011a; Tausig and Fenwick, 2011b).

Thus, the literature shows job strains indeed have serious health consequences for one's psychological health (Wang et al., 2008; De Lange et al., 2004; Blackmore et al., 2007). Major depression is a prevalent mental health problem in the working population (Wang et al., 2008; Blackmore et al., 2007). Among employment factors shown to associate with psychological distress are heavy job demands, limited contribution to decision-making procedures, deficiency of skill discretion in the job and poor work-based social support (Karasek, 1979). The presence of high demand or high-job-strain and low control has often shown to be associated with the working individual having depressive or anxiety disorder (Wang et al., 2008; Karasek, 1979).

Among other factors related to higher risk of major depression are persistent exposure to high job stress (Wang et al., 2009) and job insecurity in men (Wang et al., 2008). Imbalance between work and family life was the strongest factor associated with having mental disorders, regardless of gender.

Depression and burnout are two very different units (Ahola and Hakanen, 2007; Aloha, 2007; Ahola et al., 2005). Bakker et al. (2000) added burnout is work-related while, depression is universal in nature and multi-factorial in origin.

Researchers suggest burnout may be a stage in the development of a depressive disorder (Brenninkmeyer et al., 2001; Nyklíček and Pop, 2005), others suggest the existing data reported burnout leads to depressive symptoms (Iacovides et al., 2003; Nyklíček and Pop, 2005). Glass and McKnight (1996) and Ahola et al. (2005) reported burnout and depressive disorders are positively associated; this means the likelihood of having a depressive disorder would increase with the level of burnout. According to Ahola et al. (2006) as well as Glass and McKnight (1996), individuals who are currently depressed experience themselves as burnt out more often than those who have been depressed earlier. Furthermore, psychiatric symptoms have been shown to rise and mental health to decline, as burnout advances (Golembiewski et al., 1992). Ahola and Hakanen (2007) also proposed that in addition to burnout leading to depression, depression also inclines to burnout.

As discussed previously, in research, showed extensively psychological distress is significantly associated with job stress and burnout, to the extent depression and burnout are used as indicators of individuals' mental well being at work (Schaufeli et al., 2009a; De Lange et al., 2004).

Various studies have reported the highly stressful nature of residential environments and the risks of childminders' burn-out. According to Kent (1997), the childminders who were previously capable can be affected by low morale, burnout and depression. These may have impact on the quality of care provided in children's homes (Berridge & Brodie, 1998). Untreated psychological distress could cause serious outcome such as reversible health problem eg: psychosomatic illnesses, hypertension, severe depression and alcohol use disorder. It could also cause irreversible health problem such as permanent disability, premature death, suicide, cardiovascular and neuropsychiatry disease.

2.6 STUDIES DONE ON BURNOUT IN CHILDMINDERS IN MALAYSIA

Several studies now have identified burnout among childcare or minders and were able to specify variables, correlate with the staff burnout. Additionally, it is possible to identify the main problems perceived by residential care workers. Interestingly the literature research showed childcare workers was prone to psychological distress.

To the researcher's knowledge, there are hardly any studies on burnout among childminders conducted in Malaysia and the South East Asia region. The existing research studies in Malaysia were on burnout among teachers, police personal and house-officers.

In Malaysia, the children's home are either set up by the government or government agencies or private run homes. Most of the children are placed in the homes as their parents cannot or will not care for them.

2.7 CONCEPTUAL FRAMEWORK

As a conclusion from a vast academic literature dealing with the issue of burnout amongst childminders. I adapted a theoretical framework based on a research in this area (Lizano E.L. & Mor Barak M.E, 2012). For the purpose of this study, the theoretical or the conceptual framework is simplified to include relevant socio-demographic characteristics, work and family characteristics; burnout and psychological distress as an outcome.

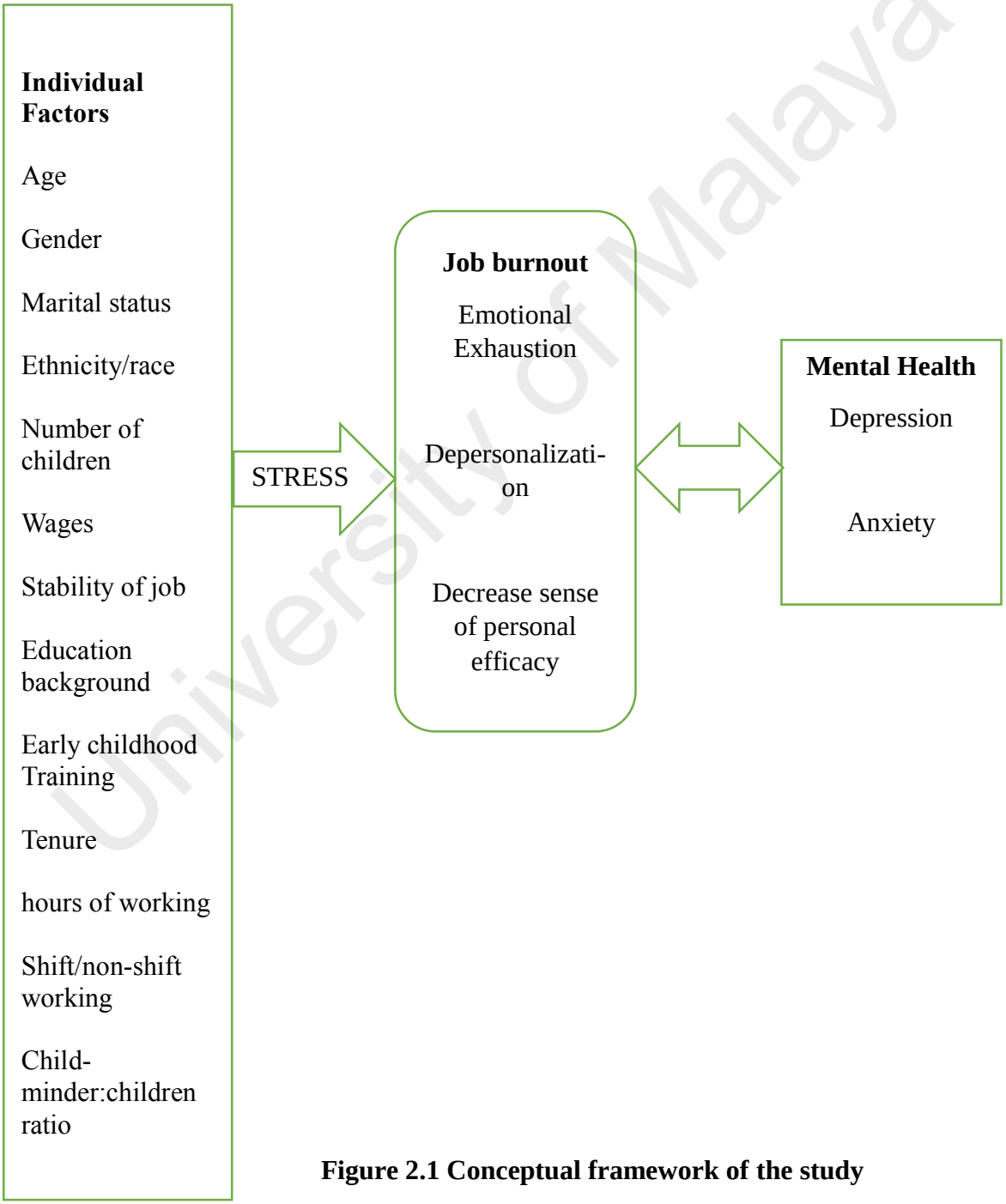


Figure 2.1 Conceptual framework of the study

CHAPTER THREE

RATIONALE AND OBJECTIVES

3.1 RATIONALE OF STUDY

There remains little empirical evidence examining stress and burnout among childminders in Malaysia. Research in South East Asian countries such as Singapore, Hong Kong, Japan and India too, shows a dearth of literature in this area. Published data from other countries such as Australia, New Zealand, Tunisia, Turkish, Greece, Spain, Netherlands, Ireland, Israel, United Kingdom and United States which investigated on burnout among child carers were mainly conducted in schools. The role of caring for children in residential homes is undoubtedly demanding (Annie E. Casey Foundation, 2003; Hicks et al., 1998; Seti, 2008). Children in residential homes are a vulnerable and heterogeneous group, and are at risk of experiencing mental health difficulties. In order to ensure that childminders themselves are psychologically healthy, a good health care plan needs to be evaluated, assessed and operated, such that the needs of the childminders and inadvertently the children, are met. The rationale of the study is to explore and gain a better understanding of the nature of difficulties and contributing factors to their stress among these service providers, so as to bridge the gap in the knowledge. In conducting research in this crucial area, it is hoped that further research follows to help provide uniform health care to youth in homes. This study measures the associated factors related to burnout among childminders and it will provide assistance in recognizing and detecting those childminders who are at risk of stress, burnout and distress. The study also serves as a stepping stone towards a more relevant planning of an intervention program in order to provide a more comprehensive care for the childminders and for the betterments of child and adolescent mental

health and childminders' mental health in Malaysia, South East Asia and worldwide. The study hope to screen for the burnout among all childminders in childrens' homes with burnout questionnaires and help in assessing their psychological distress. It is hope that policies can then be implemented to prevent burnout and psychological distress among childminders in childrens' homes in Malaysia.

3.2 GENERAL OBJECTIVE

The aim of the study is to measure the proportion of burnout among childminders in the residential children homes at Kuala Lumpur (KL) and Selangor area.

3.3 SPECIFIC OBJECTIVES

The objectives for the study are:

1. To identify the impact of socio-demographic characteristics (age, marital status, gender, years of experience, etc.) of the childminders on burnout.
2. To screen for depression, anxiety and stress symptoms among childminders.
3. To identify the socio-demographics factors associated with psychological distress (depression, anxiety and stress).
4. To determine the relationship between burnout and psychological distress among the childminders.
5. To discuss on the possible solutions and prevention of burnout.

3.4 RESEARCH QUESTIONS

The general research question for this study is:

1. Do childminders experience burnout and what is the proportion of burnout of among childminders in KL and Selangor?
2. What is the proportion of psychological distress in childminders of the residential children homes in WPKL and Selangor?

Specifically this research addressed questions:

1. Are socio-demographic characteristics such as age, gender, marital status, work experience etc. related to burnout?
2. Are socio-demographic characteristics related to psychological distress?
3. What is the relationship of burnout with depression, anxiety and stress among the childminders in the residential children homes.

3.5 RESEARCH HYPOTHESES

1. There is relationship between socio-demographic data with burnout
2. There is relationship between socio-demographic data with psychological distress
3. There is relationship between burnout and psychological distress

CHAPTER FOUR

METHODOLOGY

4.1 STUDY SETTING

This study was conducted among childminders of residential children's homes in KL and Selangor. KL is the capital city of Malaysia, and Selangor is one of the thirteen states of Malaysia. According to Department of Survey and Mapping, Malaysia, KL has an estimated population of 1.67 million people in an area of 243 km^2 for the year 2014, while Selangor has an estimated population of 5.79 million people in an area of 7956 km^2 for the year 2013. Shah Alam is the capital of Selangor and it is 32 km from Kuala Lumpur. Selangor was suggested to be the second state for this study because it is an urban state with a high density population in Malaysia, and it is the nearest state to KL.

There are 11 government run children's homes in Malaysia. Rumah Kanak-Kanak Tengku Budriah, Cheras is the only government run children home in Klang Valley. Rumah Tunku Budriah consists of 40 childminders and 150 to 200 children. The children are being referred by Jabatan Kebajikan Masyarakat (JKM) under the court order. They consist of orphans, children from displaced families, underprivileged children, child abuse victims, raped victims and children under court custody or awaiting for the court process for child custody. They are mixed in races and citizenships. Majority of the children are Muslim. The children turn over are fluctuating day by day. Some children stay there for a few days, some months and years. The reason why government childrens' homes were not included in the study because of there was only one government run children's home in the Klang Valley. In the same time, due to

the time limitation of the study period and administrative constraints in conducting research in this institution.

In this study, the childminders interviewed were from various Non-government Organization (NGO) residential children's homes in KL and Selangor. In KL, there were 55 registered childrens' homes and in Selangor there were 119. These centres were registered under the Registry of Societies (ROS), Ministry of Home Affairs Malaysia. The 174 childrens' homes were a mixture of residential childrens' homes, child care centres, child care centres for special needs children or medically ill children, including kindergartens. 33 NGO residential homes were selected, from which 150 child care minders were interviewed. These 33 residential childrens' homes were for orphans, underprivileged children and children from displaced families. This study included 20 childrens' homes from Muslim Organizations, 6 from Church-affiliated centres and 7 non-muslim organizations. The childrens' homes consisted of only Muslim children or only non-Muslim children. In this study, no childrens' homes with mixed muslim and non-muslim children were involved. These children can be sent by the family members to the NGO's residential childrens' homes without undergoing JKM's processes or court order.

The participants involved in this study were made up of childminders and volunteers at the childrens' homes. Most of them carried multiple roles. Even though their positions are different, their duties as childminders are uniform and they worked the same number of hours. For example, a principal of the children home who did administrative work also looked after the children. On the other hand, the child care workers and volunteers who took care of the children were also involved in the administration tasks. Volunteers and staff members who did not interact with children (eg janitorial or administrative support staff) were excluded from participation.

The investigator covered the districts of KL, concentrating on central city areas and expanding towards the peripheries. The districts covered were Titiwangsa, Ampang, Sentul and Cheras. While, in Selangor the investigator explored the districts of Gombak, Rawang, Klang, Shah Alam, Petaling Jaya, Subang Jaya, Kajang, Bangi and Semenyih. From a landmark taken, Hospital Kuala Lumpur (HKL), the nearest children home was 1 km (Titiwangsa) and the childrens' home that was furthest away, was 49.2km (Bukit Beruntung, Rawang). As soon as adequate sample was obtained for the study, the investigator discontinued the data collection. **Table 4.1 showed the list of the children's homes which participated in this study.**

Table 4.1 The list of the children's homes participated in the study

NAMES	NO. OF CHILDREN	AGE OF CHILDREN (years)	TYPE OF HOMES	NO. OF CHILDMINDERS
KUALA LUMPUR				
Titiwangsa				
1.Rumah Titian Kasih, Titiwangsa (female)	95	1month- 22 years old	Muslim	10
2.Yayasan Chow Kit	80	7 – 12	Muslim	6
Sentul				
3.Hichiikok Foundation Home for Children, Sentul	19	4 – 15	Non-Muslim	2
Cheras				
4.Yayasan Sunbeams Homes, Cheras	80	1 – 19	Church-Affiliated	18
5.Rumah Bakti Nur Syaheera, Taman Jaya Baru, Cheras	25	1 - 18	Muslim	6

6.Baitul Ehsan, Taman Maluri	45	3 – 19	Muslim	6
Ampang 7.Rumah Kasih Darul Hasanah	35	3 – 18	Muslim	10
Keramat 8.Rumah Baitul Kasih	16	3 – 14	Muslim	4
9.Rumah Jagaan Kasih Harmoni	30	4 – 12	Muslim	5
SELANGOR **Gombak** 10.Rumah Bakti Dato' Harun, Ulu Kelang	88	7 – 24	Muslim	23
11. Rumah Anak yatim Nur Qaseh (Taman Melawati)	18	2 - 16	Muslim	2
12.Rumah Anak Yatim dan Asnaf Al-Barakh, Jalan Changkat Mulia	43	2 – 17	Muslim	7

13.Rumah Anak-anak Yatim Shifa', Gombak	18	6 – 17	Muslim	2
Rawang 14.Pertubuhan Kebajikan Ehsan Ash-Shakur (PEKEAS), Bandar Tasik Puteri, Rawang, Selangor	17	8 - 17	Muslim	5
15.Rumah Anak Yatim dan Asnaf, Kota Puteri Rawang	50	5 – 15	Muslim	5
Bukit Beruntung 16.Persatuan Kebajikan Kanak-Kanak Mata Air Kehidupan, Bukit Sentosa	15	5 - 17	Non-Muslim	2
Bangi 17.Rumah Kebajikan Amal Rukaiyah , Sg Merab, Bangi	29	11 – 17	Muslim	6
18.Rumah Anak Yatim Nurul Izzah (Bangi- section 12)	19	10 - 17	Muslim	2

19.Rumah AL-KAUSAR, Bangi (Section 4 tambahan)	24	6 – 17	Muslim	2
Semenyih 20.Shepherd Centre Semenyih	86	5 - 23	Church-Affiliated	15
21.Rumah Amal Jireh	16	2 - 8	Church-Affiliated	4
Subang Jaya 22.RACTAR, USJ1, subang jaya	42	3 – 29	Muslim	8
23.Pertubuhan Rumah Kanak-kanak ini Disayangi (KIDS), USJ1	12	7 – 17	Non-Muslim	3
Petaling Jaya 24.Rumah Praise Emmanuel Children's Home, PJ	17	5 - 16	Church-Affiliated	5
25.Rumah Hope	48	5 - 22	Church-Affiliated	10

26.Rumah Juara	39	9 – 17	Non-muslim	3
27.Rumah Ilham ,TTDI	40	10 - 17	Muslim	10
28. Rumah Ozanam	18	4 – 18	Non-muslim	2
Shah Alam				
29.Rumah Amal Kasih Bestari, Kampong Melayu Subang	8	7 - 12	Muslim	2
30. Montfort boys town	300	16 – 20	Church-Affiliated	13
Kajang				
31. Rumah Keluarga Kami	30	6 – 17	Non-muslim	5

Klang				
32.Pertubuhan Anak Yatim & Miskin Sg Pinang	54	7 - 17	Muslim	12
33. Rumah KIDS, Klang	17	4 – 15	Non-muslim	5

*All children in the children's homes above consisted of orphans, underprivileged children and children from displaced families (No children's homes with physically or mentally disabled children included in the study)

List of the Non-Respondents Childrens' homes

1. Pusat Kebajikan Good Shepherd, Ulu Kelang, Selangor
2. Rumah Keluarga Kami, Kajang and five other chains
3. Rumah Harapan Pertubuhan Al-KHADEEM , Jalan Kebun, Klang
4. Rumah Permata Hatiku, Gombak
5. Rumah Juara, Petaling Jaya

4.2 STUDY DESIGN

This is a descriptive cross- sectional study involving childminders of NGO's childrens' residential homes in KL and Selangor. Universal sampling was used in this study where childminders of 33 chosen childrens' homes from 174 centres that fulfilled the inclusion criteria

was invited to participate. The place of study was determined by the Principal Investigator. Initial place of data collection for the first batch of childminders was in Child and Adolescent Unit, University Malaya Medical Centre (PPUM), Petaling Jaya, Selangor during a program with 25 of the childminders. These childminders were from the same 33 homes that responded to the study. The subsequent venues were dependent on the district of collection within the state of KL and Selangor. The investigator also tried to cover various children homes from different organizations originating from different religious bodies. The centres were selected for recruitment in order to represent a wide range of different organizations, for example the Muslim orphanage homes and church-affiliated centres.

4.3 PERIOD STUDY

This study was conducted from July 2015 until October 2015 for a period of 4 months.

4.4 STUDY POPULATION

The subjects were the 150 childminders from 30 non-government organization children homes in Kuala Lumpur and Selangor area.

4.5 CRITERIA

4.5.1 INCLUSION CRITERIA

Definition of childminder

The legal definition of a childminder is a person who works with children for more than 2 hours a day in their own home for reward. (https://www.childcare.co.uk)

Definition of Residential Childminder

Residential childminder is a childminder who is working and staying in the same facility or premise for 24 hours. The children home run by a welfare agency or organization of a home with social-work supervision for children who need more than just housing accommodation, such as children in care or mentally handicapped children etc. (http://dictionary.reverso.net/english-definition/residential%20care)

The inclusion criteria for this study were:

1. Childminders who consented to participate in the study.
2. Childminders aged 18 and above.
3. Childminders who were able to understand, read and communicate in English or Bahasa Malaysia.
4. Childminders also included the various positions such as principals, child-care workers and volunteers.

4.5.2 EXCLUSION CRITERIA

1. Childminder who did not consent to participate in the study.
2. Childminder who already has underlying psychiatric illness.
3. Childminder who took care of chronic medically ill children, special needs children such as Autism Spectrum Disorder, Down Syndrome and Mental Retardation (Learning Disability). If there were any special needs children in that home, the whole centre was excluded from participating in the study, as this could cause confounding results to this study in view of additional conferred stress and burnout.

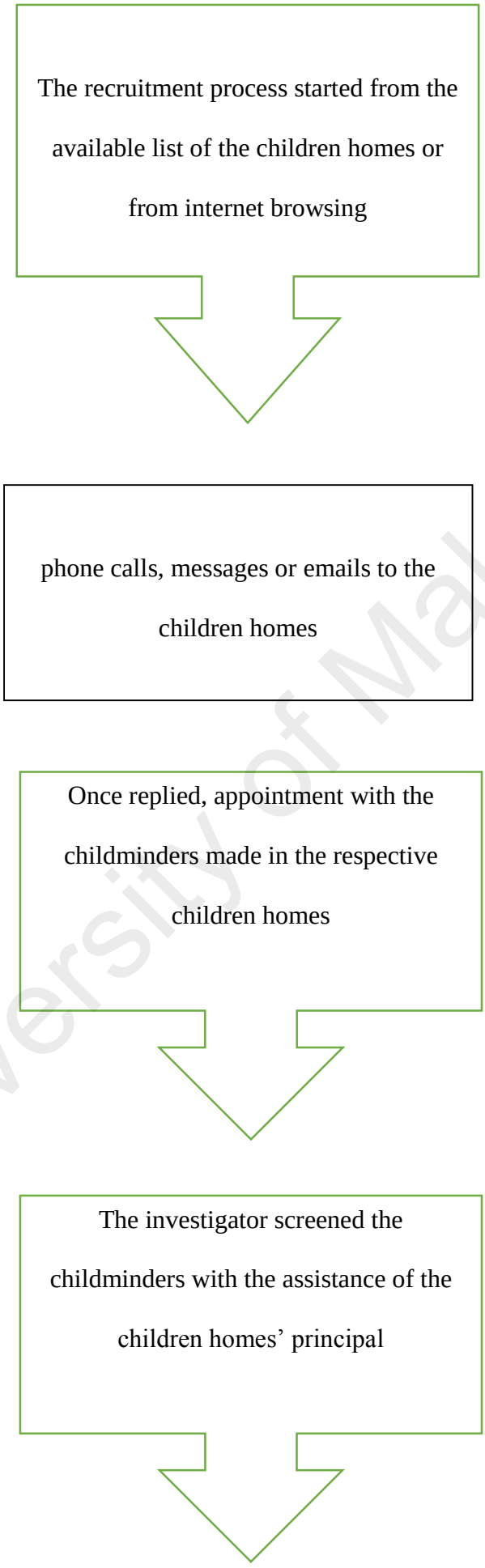
4.6 DATA COLLECTION

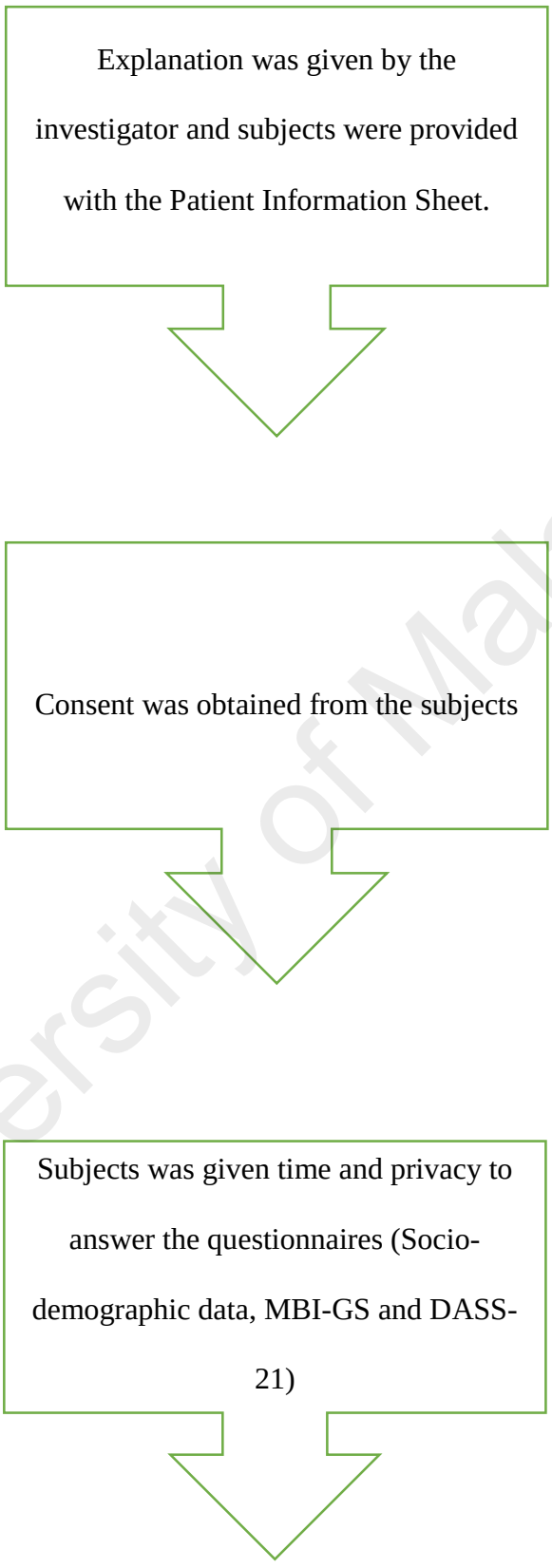
The list of NGO's children homes in Selangor was given by a NGO representative. The additional list of NGO's children homes in KL and Selangor was gathered using internet browsing. The principals of the children homes facilities were contacted using telephone calls, messages or emails to introduce about the study and to find out whether the homes were eligible to be in this study according to the inclusion criteria. If these three method failed, the investigator went to the facilities, explained to the principals of the children homes regarding the study. If there were any special needs children (physically or medically disabled) in the home, the whole centre was excluded from participating in the study, as this could cause confounding results to this study in view of additional conferred stress and burnout. The homes were selected after undergone these processes. If the particular children home has fulfilled the study criteria, permission to collect the data was made through verbal, email or messages from the principal. The investigator had approached more than 40 residential childrens' homes but received permission to collect the data from 33 residential children's homes. Then, an appointment will be made with the particular children home.

During the appointment day, the subjects that fulfilled the inclusion criteria were identified with the assistance of the principal of the children home. Once the subjects were identified, an explanation about the study was then given to them. The subjects were initially given the research information sheet and consent form. They were ensured that confidentiality of the information given in this study would be strictly maintained. The subjects were briefed on the study and if they agreed, then signed the consent forms to be enrolled in the study. In this situation, if 10 childminders were identified to fulfill the criteria of the study and only 6 childminders agreed to be enrolled in the study, then the investigator took all the 6 childminders into the participants pool. Every home differs in the number of childminders involvement. The response rate was maintained at an acceptable 80%.

Once consent was obtained, the subjects were then given the 3 questionnaires which were completed in the presence of the investigator. The subjects were first asked to fill up a socio-demographic data sheet before proceeding to the other questionnaires which included the Maslach Burnout Inventory-General Survey and the Depression, Anxiety and Stress Scale (DASS-21). The questionnaires were available in English version and Malay version depending on the subject's preference. They were requested to answer the questionnaires independently. They were given privacy to answer the questionnaires and in their own time. The subjects were allowed to ask clarification from the investigator if there was anything that they did not understand in regards to the questionnaire. Care was employed by the investigator to not in any way influence the patient's selection of answers and introduce bias. The questionnaires took an average of 30 minutes to complete. After data collection, every subject who participated in the study was asked by the investigator to inform their difficulties and stressors in handling the children. This was done as the investigator did not know which of these stressors could possibly have detrimental effect on them. All subjects who were suspected to experience difficulties were advised to be referred for expert assessment and further management. The subjects were also provided with the information about the availability walk-in psychiatry clinic during weekday in UMMC and Hospital Kuala Lumpur (HKL). Apart from the subjects, any child-minder who suspected any child in their home was having difficulties such as in learning (e.g dyslexia, learning disabilities, learning difficulties), speech difficulties, difficulties in communication and social interaction (e.g Autism Spectrum Disorder), hyperactivities with inattentiveness (Attention Deficit Hyperactive Disorder and Attention Deficit Disorder) or behavioural problems were encouraged to bring the child to the Child and Adolescent Psychiatry Clinic in Hospital Kuala Lumpur (HKL); Hospital Tunku Ampuan Rahimah (HTAR), Klang; University Malaya Medical Centre (UMMC) and University Kebangsaan Malaysia Medical Centre (UKMMC) with the child's nearest guardian and next

of keen. The referral letter for the children would can be written by the principal of the children homes. **Figure 4.1 below illustrated the flow chart of the subject recruitment process for the study.**





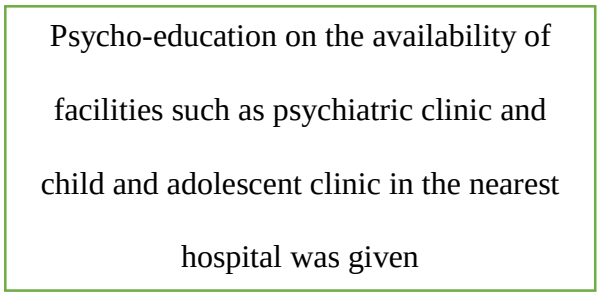


Figure 4.1 Flow chart of the subject recruitment for the study

4.7 SAMPLE SIZE

The sample size calculation is based on the formula used to estimate a population proportion with specified absolute precision (Lwanga and Lemeshow,) WHO, Geneva 1991) as below:

N= [z/d]2 p (1-p)

Whereby;

p- is the anticipated population proportion. The estimated prevalence of depression among childminder is taken as 12 %.

Prior to data collection, it was decided that there would be at least 200 child care workers participants. But, the final sample size was determined through multiple factors:-

This is based on the previous studies by

a) Hamre and Pianta (2004) demonstrated that the prevalence of depressive symptoms in child minders was nine percent (self-report questionnaire of depression). The participants were more than 1000 female child minders.(p1= 0.09)

b) Fish et al., 2005 reported that 27% of child minders demonstrated a significant level of depressive symptoms on the Center for Epidemiologic Studies Depression (CES-D) and the Symptom Checklist-90 (SCL-90). According to Fish at al., 2005 from this proportion of 27% to the population, estimate of 11.5% (i.e., a estimate rate of depressed women in the community), the minimum number of participants needed was only 40. But 40 was an insufficient number of participants if based on the large number of variables in the study and many of which were to be examined through multiple regression models.

So the investigator decided to take p = 0.12 (12%) following the rate of depression in community.

Therefore p= 0.

Z- value is 1.96, for the level of confidence of 95%, which is conventional

d- is the absolute precision required on either side of the proportion; taken at 0.05%

using the formula - N= [z/d]2 p (1-p)

N= [1.96/0.05]2 0.12 (1- 0.12)

= [1.96/0.05]2 (0.12) (0.88)

= 147.5

= 150

An additional of 20% was added for non-respondents:

150 + 30 (20% +/- non-respondents)

Hence, the sample size required is 180

4.8 INSTRUMENTS

4.8.1 SOCIO-DEMOGRAPHIC DATA

This questionnaire was designed by the investigator (Appendix C). It was used to gather information regarding factors that are known to be associated with burnout or psychological distress. These include the child minder's,

a) gender and age

b) The marital status

c) Number and age of children (if any)

d) Position of the child minder

e) The combined household income

f) years of service in children home (tenure)

g) nature of employment(contract, temporary, permanent)

h) nature of salary (weekly, monthly)

i) The number of years in the field and in the current organization (facility)

j) The number of working hours daily

k) amount of child minders in the home

l) amount of children in the home

m) age of the children in the home

n) child-minder and children ratio

4.8.2 THE MASLACH BURNOUT INVENTORY-GENERAL SURVEY (MBI-GS)

(APPENDIX D)

The MBI is widely used in research for burnout, goal standard assessment in assessing burnout and broadly acknowledged as a leading measure of burnout for more than 2 decades. MBI was developed in 1981 by Christina Maslach and Susan Jackson. (Maslach et al, 2001). MBI was developed to study the different aspects of burnout (Maslach et al, 2001; Demerouti and Bekker, 2001; Milfont et al, 2008)

It measures burnout through three aspects (Maslach and Schefauli, 1993);

1) emotional exhaustion considered as main component in development of burnout response which measures feelings of psychological and emotionally after a person being exhausted, overextended and fatigued by work thus unable to support others (McMullen & Krantz, 1998; McMaslach et al. 2001)
2) depersonalization refers to when one become cynical, detached attitude towards work, indifference and active disengagement from work (McMullen & Krantz, 1998; Maslach et al. 2001).
3) Personal accomplishment is the self-evaluation aspect of burnout. Personal accomplishment measures a person's competency and successful achievements at his/her work. This last subscale, is reduced sense of personal accomplishment that inversely related to the other two dimensions. Decrease sense of personal accomplishment described as feeling incompetence, incompetence, ineffectiveness and a lack of successful achievement and accomplishment in one's work (Maslach et al 2001). Feeling of reduced personal accomplishment or personal efficacy when burnout is developing.

MBI has been extended into three versions; namely the MBI-HSS (human services survey), the MBI- ES (educators survey) and MBI-GS (general survey) depending on three defined groups on their job and people they interact with. MBI-HSS was designed to measure burnout as an occupational issue for workers who have direct interactions with clients. MBI-ES was created for measurement of burnout among teaching professional. Both MBI-HSS and MBI-ES have a total pf 22 items from 3 subscales; emotional exhaustion, personal accomplishment and depersonalization (Maslach et al., 1996). The MBI is not restricted to the population of human service professional who involved in helping people. It also assess the burnout of any workers regardless of their profession.

The investigator used MBI-GS which developed by Wilmar Schaufeli, Micheal Leiter, Christina Maslach and Susan Jackson (Schaufeli, Maslach, Leiter and Jackson, 1996). The MBI-GS adapts the MBI and a modified version of MBI-HSS. It can be used to measure burnout to occupations, both without direct personal interaction with service recipients or with casual interaction with people. MBI-GS defines burnout as the perspective in one's relationship and performance at work at in general. It is not necessarily as a crisis of a person's relationship with people at his/her workplace.

MBI-GS is self-rated. It items are scored based on the frequency of symptoms that a person experience. It has a seven-point rating Likert scale ranging from 0 ("never") to 6 ("everyday") (Leiter & Maslach, 2005a; Leiter & Maslach, 2005b; Maslach,2003b; Maslach, Jackson & Leiter, 1996; Maslach & Leiter, 1997; Maslach & Leiter, 2008; Maslach et al.,2009). It consists of 16 items. The three subscales are exhaustion (5 items), cynicism (5 items) and professional efficacy (6 items) (Maslach et al., 1996).

The emotional exhaustion subscale was replaced by exhaustion. Depersonalization has replaced by cynicism whereas personal accomplishment has been replaced by personal efficacy (Maslach & Leiter, 2008)

The depersonalization refers to distancing oneself emotionally from the clients and to the development of cynical attitudes toward them. The cynicism refers to distancing oneself from work itself and to the development of negative attitudes toward work in general. The cynicism construct does neither directly refer to personal relationships at work, nor does it exclude such a reference (Schaufeli et al., 1996). The personal efficacy refer to general feeling of competence, at both social and non-social work (Maslach & Leiter, 2008). According to Bakker, Demenrouti and Schaufeli, (2002), many researchers have mentioned the good psychometric value of MBI-GS and it high reliability in all its subscales.

According to Leiter and Schaufeli, in press; Schaufeli, Leiter and Kalimo (1995), exhaustion and cynicism has strongest correlations (r=0.44 to r=0.61), followed by cynicism and personal efficacy (r= -0.38 to r= -0.57) and the weakest are between exhaustion and personal efficacy (r= -0.04 to r= -0.34).

Each of the three subscales of burnout are measured by a number of items on the inventory which are summed once the inventory is complete and each dimensions are usually report the average rating rather than the total. To determine the average rating for each subscale, divide the total by the number of items responded to. According to Evans et al (2004) and Galanakis et al (2009), a combination of high scores for EX and CY with low scores for personal efficacy demonstrate high level of burnout. On the other hand, Brenninkmeijer V. and VanYperen N. (2003), Maslach C et al (2001) and Shaufeli WB and Enzmann D. (1998) have recommmeded cut off points for severe burnout was set at $\geq 75^{th}$ percentile of the EX total score combined with the total score of CY. Maslach C. et al (1996) reported that personal efficacy or personal accomplishment subscale was not included among the criteria of burnout and high score of EX and CY subscales were indicative of burnout as suggested by previous research.

Table 4.2

CATEGORIZATION: **Professional Efficacy**

	Frequency
High	30 or over
Moderate	24-29
Low	0-23

*interpreted in the opposite direction from EX and CY

Table 4.3

CATEGORIZATION: **Exhaustion**

	Frequency
High	16 or over
Moderate	11-15
Low	0-10

Table 4.4

CATEGORIZATION: **Cynicism**

	Frequency
High	11 or over
Moderator	6-10
Low	0-5

Originally MBI was in English. It has been translated and validated into multiple languages including Spanish, German and French. As Malaysia is a multi-ethnic country and English is

viewed as the second language, the research team decided to validate to a Malay version in 2014. The validation process was done initially through a translation and back translation of the English version. Then, the process followed by a face validity of the Malay version by two co-supervisors. The original English version was translated into Bahasa Malaysia by two bilingual researchers. Two different authors then back translated it to English again. Then, pilot testing was conducted on 20 subjects using both the English and Malay versions. The finalised version of the scale was reviewed by two consultant psychiatrists for content validity and the questionnaire was deemed suitable. The investigator used both MBI-GS (English Version) and MBI-GS (Malay version) in this study.

In Malaysia, other group of researchers has validated MBI in Malay language (Chen et al., 2014, Chen, 2009)

Permission to use the English version of MBI-GS obtained from the authors (Mind Garden) by the co-supervisor and the Malay version of MBI-GS have been permitted by the author.

4.8.3 DASS 21 (Depression, Anxiety and Stress scale)

DASS is a globally used screening tool and a qualitative measure of distress along the axes of depression, anxiety (symptoms of psychological arousal) and stress (the more cognitive, subjective symptoms of anxiety) (Lovibond, S.H., & Lovibond, P.F., 1995) (Appendix E). It is not designed as a diagnostic tool. There is a 42 item and a shorter 21 item version of this questionnaire. It is a self-report scale. The investigator used 21 item questionnaire. This is a 4 point Likert scale that uses each point to indicate the severity of the individuals' symptoms over the previous week; with "0" indicating the symptoms "did not apply" and "3" indicating the symptom "applied very much or most of the time".

The depression items look at the elements of hopelessness, anhedonia, inertia and self-deprecation. The anxiety items look at subjective anxiety, autonomic arousal and muscle responses. Finally the stress items measures presence of chronic non-specific arousal. DASS does not covers sleep, appetite and sexual disturbances. DASS was used in this study because according to Freudenberger (1974), the individuals with burnout usually have low energy, fatigue with emotional exhaustion might leading to depression.

According to Lovibond, S.H., & Lovibond, P.F., (1995) scores on the DASS 42 range from 0-42 and are obtained by summing the scores for each item of the scale which belong to different groups such as D (Depression), A (Anxiety) and S(Stress). As per the manual guidelines, DASS 21 final score of each item groups (Depression, Anxiety and stress) needs to be multiplied by two (X2) (Lovibond, S.H., & Lovibond, P.F., 1995). According to Hadi et al (2009), the DASS -21 has similar factor structures as the DASS-42 and thus is usually used in research purposes as it economises time needed.

The DASS 21 consists of three 7-items scales extracted from the 41-item scale. The reliability scores of the scales in terms of Cronbach's alpha scores rate the depression scale at 0.91, the anxiety scale at 0.84 and the stress scale at 0.90. The cut-off point for the DASS-depression is

equal to or higher than 10, corresponding to a sensitivity of 71% and specificity of 80% for depressive disorder cases. A cut-off point for the DASS-anxiety is higher than 7, corresponding to a sensitivity of 88% and specificity of 56% for anxiety disorders (Lovibond, S.H., & Lovibond, P.F., 1995).

The investigator used both English and Malay Version for the study. The Malay Version of the DASS-21 was used which is also a widely accepted tool for screening for depression and anxiety. The DASS-21 was translated and validated into Malay language by Ramli et al (2007) with good psychometric properties (Ramli M. et al, 2007).The Malay version was shown to have good internal validity and was suitable to be used among the local population (Musa R. et al, 2007; Ramli M. et al, 2009). According to Ramli M.et al (2007), the Malay version DASS 21'S internal consistency is very good; depression 0.84, anxiety 0.74 and stress 0.79.

The investigator has been permitted to use Malay version of DASS by the author and the English version of DASS is open to public and no permission from the authors are required.

The DASS scale, is closely correlated with other scales such as Hospital Anxiety Depression Scale (HADS) (Brown & Morgan, 2013), Beck Depression Inventory (BDI) and Beck Anxiety Inventory (BAI) (Orcult, 2006). However, DASS has been found to be more greater to BDI as it has items on weight loss and insomnia (Loribond & Loribond, 1995)

Table 4.5 below summarizes the DASS 21 score

(To multiply summed scores by X2)

Severity	Depression	Anxiety	Stress
Normal	0-9	0-7	0-14
Mild	10- 13	8-9	15-18
Moderate	14-20	10-14	19-25
Severe	21-27	15-19	26-33

www.psy.unsw.edu.au/dass

4.9 VARIABLES

4.9.1 Dependent variables

1) Burnout
2) Depression (suspected)
3) Anxiety (suspected)
4) Stress

4.9.2 Independent variables

a. Age of the childminder
b. Gender
c. ethnicity
d. Marital status
e. Citizenship
f. Number of children
g. Combine household income (RM)
h. Stability of job
i. Educational Background
j. Attending early childhood training
k. Experience in the field (years)
l. Experience in the facility (years)
m. Number of working hour daily
n. Work shift
o. Number of childminder in the centre
p. Number of children in the centre

q. Staff to children ratio

r. Perceived opinion on adequacy of number of childminders in the centre

4.9.3 Definition of variables

1. Age of the childminder

Age of the participants was taken as a continuous variable and was also categorized into two groups:

a) ≤ 40 years old

b) > 40 years old

2. Gender

There are two genders

a) Male

b) Female

3. Ethnicity

Race was divided into 2 groups:

a) Malay

b) Non- Malay

4. Marital status

Marital status was categorized into married and not married.

5. Citizenship

Citizenship was categorized into Malaysian and non- Malaysian

6. Number of children

There are two categories: those ≤ 4 children and those with > 4 children.

7. Combine household income (RM)

Total monthly income refers to the combined monthly income of each participant and their spouse which contribute to the household. It was divided into two:

1. ≤ RM3000
2. > RM3000

8. Stability of job

The stability of the job of the participants depend on temporary, contract and permanent base. It divided into two categories:

a) Yes (permanent)

b) No (temporary, contract)

9. Educational Background

Education background refers to the highest academic level achieved by the participants. It was categorized into three classes:

a) Primary

b) Secondary

c) Tertiary

But later it re-categorized into two classes:

a) Tertiary

b) Non-tertiary

10. Attending early childhood training

It refers to whether the participant has attended the early childhood training. It categorized into two:

a) Yes

b) No

11. Experience in the field (years)

The years of experience in the field was divided into:

a) ≤ 8 years

b) > 8 years

12. Experience in the facility (years)

The years of experience in the facility was divided into:

a) ≤ 5 years

b) > 5 years

13. Number of working hour daily

The number of working hour daily was categorized into three categories:

a) ≤ 8 hours

b) > 8 hours to 23 hours

c) 24 hours

but later it was re-categorized to two categorized into two categories:

a) ≤ 12 hours

b) > 12 hours

14. Work shift

The work shift variable refers to those who work in the shift system. It divided into two categories:

a) Yes (working in shift)

b) No (office hour/ residential(24 hours))

15. Number of childminder in the centre

The number of the childminder in the centre was divided into two:

a) ≤ 10 childminders

b) > 10 childminders

16. Number of children in the centre

The number of children in the centre was divided into two:

a) ≤ 50 children

b) > 50 children

17. Staff to children ratio

The staff and the children ratio refers to the ratio of a childminder and children during the child minder's working time. It divided into two:

a) ≤ 25 children

b) > 25 children

18. Perceived opinion on adequacy of number of childminders in the centre

This variable refers to the perception and perceived opinion of the childminder whether the number of the childminders in their centre are adequate or inadequate. This was divided into two:

a) Yes (adequate)

b) No (inadequate)

4.10 STATISTICAL ANALYSIS

The descriptive analysis was conducted for the entire variables in socio-demographic characteristics and other personal profile for the analysis. Frequency and valid percentage was used to demonstrate categorical data. Mean and standard deviation were used to demonstrate normally distributed continuous variables. Descriptive analysis was also done for the 3 dimensions of burnout (emotional exhaustion, cynicism and decrease sense of personal efficacy) and psychological distress. The rate of burnout, stress, depression symptoms

(suspected depression), anxiety symptoms (suspected anxiety) among child-minders were obtained.

All the variables were re-categorised into two sub-group such as in age, race, education background and total monthly household income.

Association of burnout and psychological distress with socio-demographic characteristic was analysed with univariate analysis (Simple logistic regression) then multivariate analysis (multiple logistic regression). The multivariate analysis was conducted between dimension of burnout and dimension of psychological distress as dependant variables and significant independent variables from the univariate analysis.

Association between burnout and psychological distress was analysed with Pearson's and Spearman's correlation coefficient test.

The correlation between dependent and independent variables were obtained.

The data was analysed using the Statistical Package for Social Sciences (SPSS) version 22.0.

4.10.1 Descriptive Statistics

The aim of descriptive statistics used in the study was to understand and explore the spread and distributions of the data. All the continuous exploratory variables were subjected to normality test such as histogram, skewness and kurtosis test. Categorisation was taken into consideration in not normally distributed data. Frequency tables were created to demonstrate distribution of categorical variables. All these information enabled to give a basic knowledge on the characteristics of independent variable with the outcome variable. There were no categories were collapse in the study.

4.10.2 Steps in Logistic Regression

The idea of conducting logistic regression is to correctly classify or predict categorical outcome among continuous or/and categorical predictors. The outcome of this study was dichotomous. Outcome of interest coded as "1" and referred to "0". In this study, moderate and high (MBI); mild to extremely severe (DASS) were the outcome of interest coded as "1" and compared to mild (MBI); normal (DASS) which were coded as "0". There were several important steps implemented in determining the associated factors in this study

4.10.2(a) Univariate Analysis (Simple Logistic Regression)

Univariate analysis (simple logistic regression) was used to determined unadjusted association of independent variable with the outcome of the study. Variables with P-value lesser than 0.05 were considered to be shortlisted for multiple logistic regression. Simple logistic regression was demonstrated by including Pearson's Chi square, odd ratio, 95% confidence interval and P-value.

4.10.2(b) Multivariate Analysis (Multiple Logistic Regression)

Multiple logistic regression is an extension of simple logistic regression. Instead of including independent variables one by one, all the independent variables were included in the multivariate analysis. Multiple logistic regression was performed in the study to determine the independent variables that best predict the outcome variable. Independent variables that found significant in the simple logistic analysis and clinically important were subjected to multiple logistic regression.

Association of independent variables with outcome variable was adjusted in the multiple logistic regression procedure. Only independent variables with less than 0.05 P-values were chosen. The adjusted Odds ratios, Wald statistics, 95% confidence intervals and P-values were included in the multivariable result presentation.

4.10.2(c) Correlation

Normally distributed by Pearson's and not normally distributed by Spearman's.

4.10.2(d) Data presentation, interpretation and conclusion

Result of data were presented in both tabular format and graphical format in this study. Presentations of both formats on the same analysis were avoided. Tabulated results were organised well according to the domains and subdomains and interpreted accordingly. Tables and figures were interpreted by focusing on the pattern that pertained to the study objective and hypothesis. Discussion of the study was concentrated on the result and types of analyses used in the study. Relevant studies by other researchers were compared systematically with this study. Contradicting finding of related studies were commented appropriately and justified. Conclusion was drawn about the study whether or not the results support the hypothesis.

Figure 4.2 Statistical Flow Chart

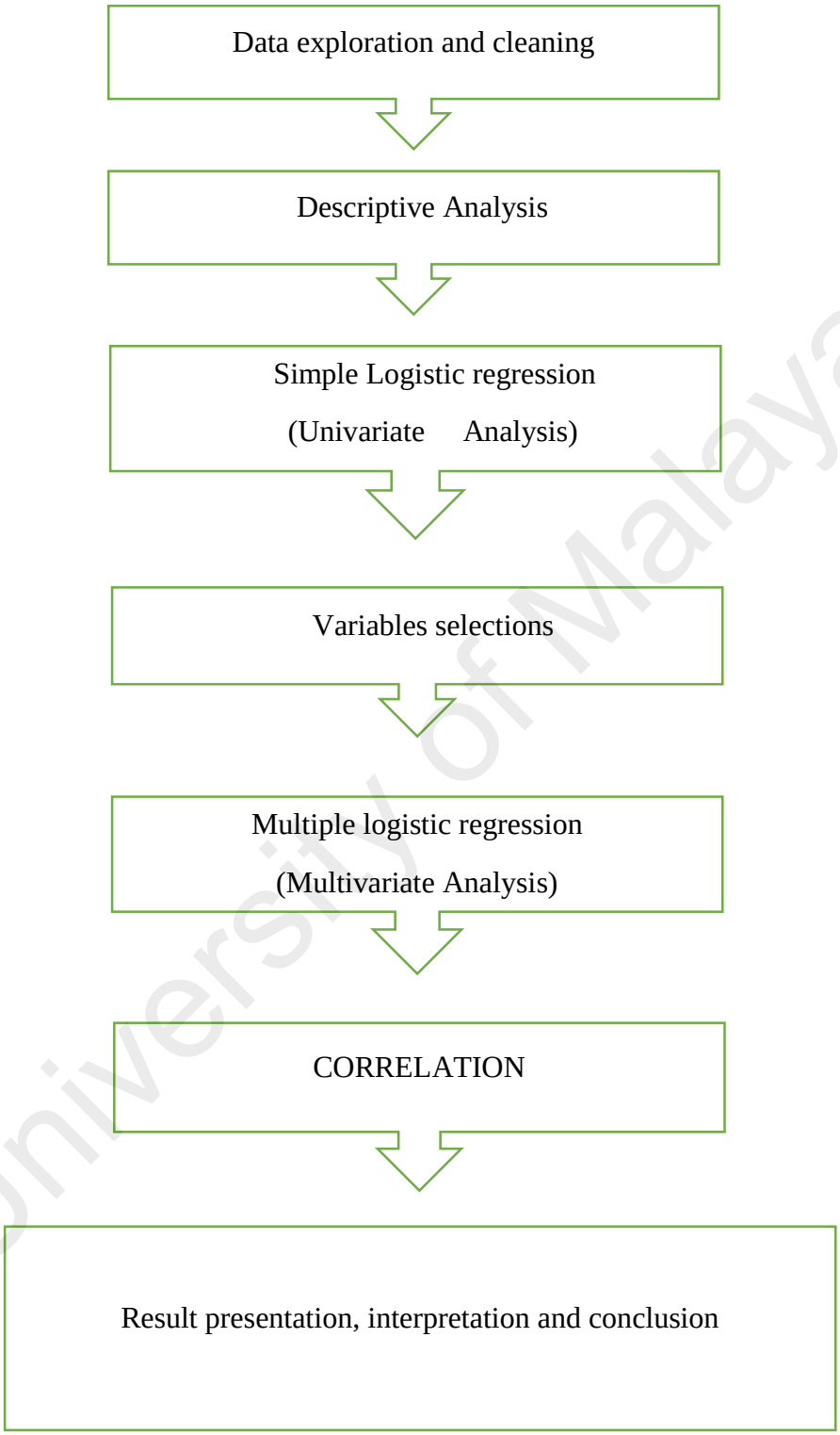


Figure 4.2 Flowchart of statistical method applied

4.11 ETHICAL CONSIDERATION

This study was approved by the Research Committee, Department of Psychological Medicine. Further permission was obtained from the Ethics Committee, University Malaya Medical Centre. (MECID.NO: 201571466) (Appendix F)

An informed and written consent was obtained from all of the study participants prior to each interview. The participants were allowed to withdraw of participating and from the study at any point without the need to give reason(s).

The hardcopy and softcopy data will be kept by the principal investigator for seven years. It will destroyed accordingly thereafter.

The child minders who were found to have significant burnout and psychological distress were offered psychiatric consultation or psychosocial intervention as indicated by the child minder's wishes.

CHAPTER FIVE

RESULTS

5.1 RESPONDENTS' BACKGROUND

This was a cross-sectional study of a proportion of burnout, it association with socio-demographic factors and psychological distress in childminders in children homes in WPKL and Selangor, Malaysia. It was conducted over a four months period, starting from July 2015 to October 2015. During this study period, a total of 180 childminders were approached to participate in the study. However, 8 childminders did not send back the questionnaires and lost it, 1 consented but did not return back the questionnaires, 21 childminders refused to participate. All the remaining 150 childminders managed to complete the questionnaires required in the study. The non respondents were between 18 to 55 years old. There were 10 male and 20 female childminders. The non respondents were the same criteria from those included in the study in terms of age, gender and the eligibilities to include in the study. Therefore, a total of 150 childminders were included in the data analysis.

Thus, a total of 180 childminders fulfilled the requirement to enrol in this study, but only 150 gave full participation (83.3% response rate). Figure 5.1 illustrated the flow chart of the study participants.

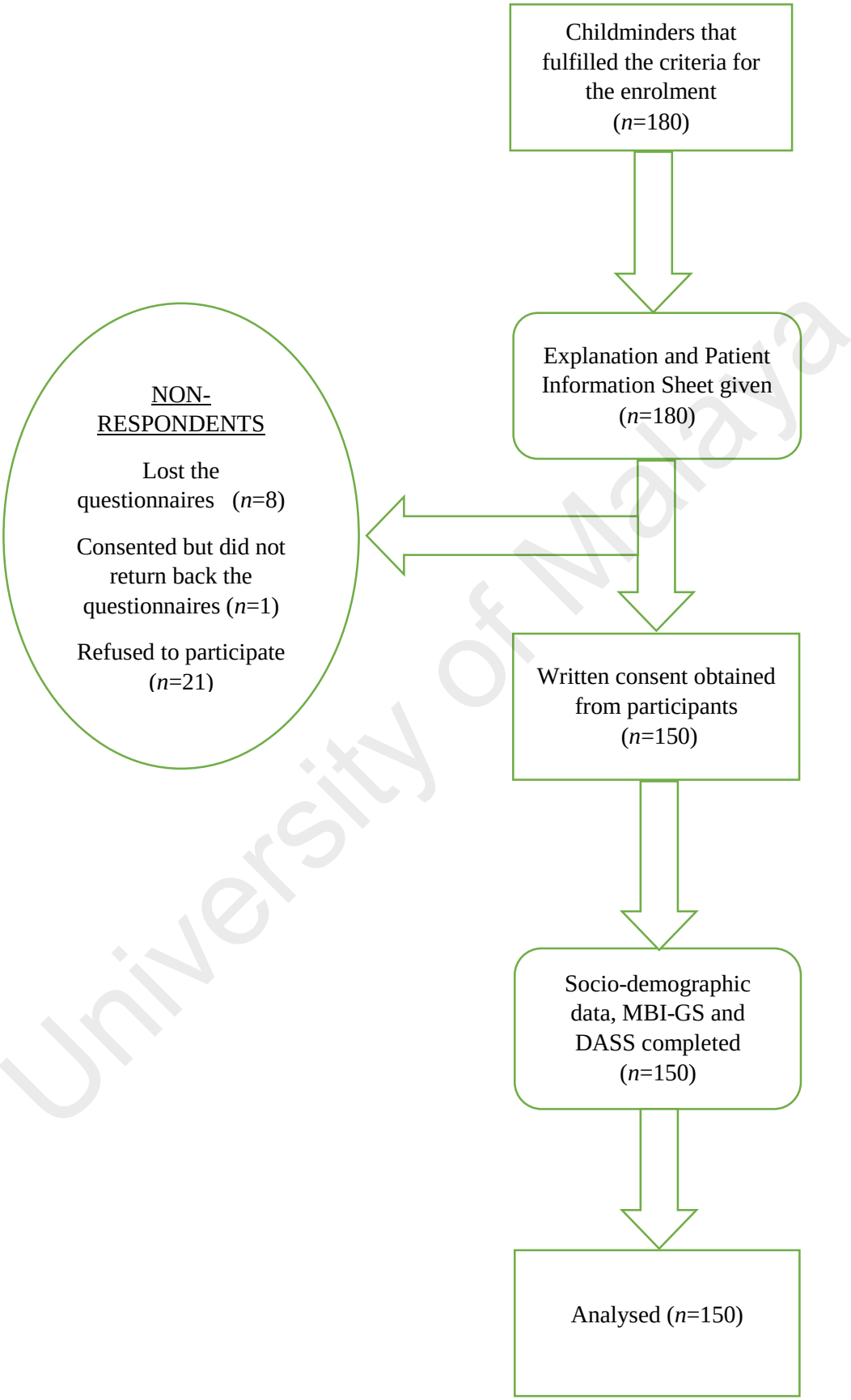


Figure 5.1: Flow chart of the participants

5.2 DESCRIPTIVE STATISTICS

5.2.1 DESCRIPTIVE STATISTICS OF PARTICIPANTS' SOCIO-DEMOGRAPHIC CHARACTERISTICS

Table 5.1: The socio-demographic of the childminders in Selangor and Kuala Lumpur

Variables	**Mean (SD)**	***n* (%)**
Age	40.64 (15.30)	
Gender		
Male		49 (32.7)
Female		101 (67.3)
Race		
Malay		93 (62.0)
Chinese		14 (9.3)
Indian		39 (26.0)
Others		4 (2.7)
Married		
YES		75 (50.0)
NO		
Single		56 (37.3)
Divorced		9(6.0)
Widowed		10 (6.7)
Citizenship		
Malaysian		142 (94.7)
Non-Malaysian		8 (5.3)
Number of children	1.79 (1.91)	
Job		
YES (childminders)		129 (86.0)
NO (volunteers)		21 (14.0)
Combine household income (RM)	1600 (2000)[a]	
Paid of salary		
YES		146 (97.3)
NO		4 (2.7)
Stability of job		
Temporary/contract		56 (37.3)
Permanent		94 (62.7)
Educational Background		
Primary		13 (8.7)
Secondary		79 (52.7)
Tertiary		58 (38.7)
Attending early childhood training		
YES		60 (40.0)
NO		90 (60.0)
Experience in the field (years)	5.0 (8.25)[a]	
Experience in the facility (years)	3.0 (6.10)[a]	
Number of working hour daily	16.65 (7.88)	

≤8 hours		46(30.7)
9-16 hours		26(17.3)
24 hours		78(52.0)
Work shift		
YES		51 (34.0)
NO		99 (66.0)
Number of childminder in the centre	10.35 (7.00)	
Number of children in the centre	42.5 (61.00)[a]	
Staff to children ratio	16.0 (20.00)[a]	
Do you feels this is adequate		
YES		99 (66.0)
NO		51 (34.0)

[a]Median (IQR)

Table 5.1 described the descriptive statistics of the childminders' socio-demographic characteristics. Two third of the respondents were females (67.3%, n=101) and one third were males (32.7%, n=49). The age range of participants in this study was between 18 to 70 years. More than half of the participants were the Malays (62.0%, n=93) and followed by Indian and Chinese, with (26.0%, n=39) and (9.3%, n=14) respectively.

Half of the participants were married (50.0%, n=75) while (37.3%, n=56) of the participants were single while (6%, n=9) and (6.7%, n=10) were divorced and widowed.

The median combine household income for participants was RM1600 with interquartile range of 2000. Of all the 150 participants, (97.3%, n=146) received monthly salary while (2.7%, n=4) childminders without salary. Two fifth of the participants have attended the early childhood training (40%, n=60) while another three fifth did not attended any (60%, n=90).

5.2.2 DESCRIPTIVE STATISTICS OF RESIDENTIAL AND NON-RESIDENTIAL CHILD MINDERS

Figure 5.2 illustrate the descriptive statistics of residential childminders. A total of 150 participants, 78 childminders were residential childminders (worked in the children homes for 24 hours). Therefore, it consists of 52% from the total participants. While the non- residential childminders were 48% (n=72). The non-residential childminders were the combination of childminders who worked in the shift system and without shift system (working during office hours).

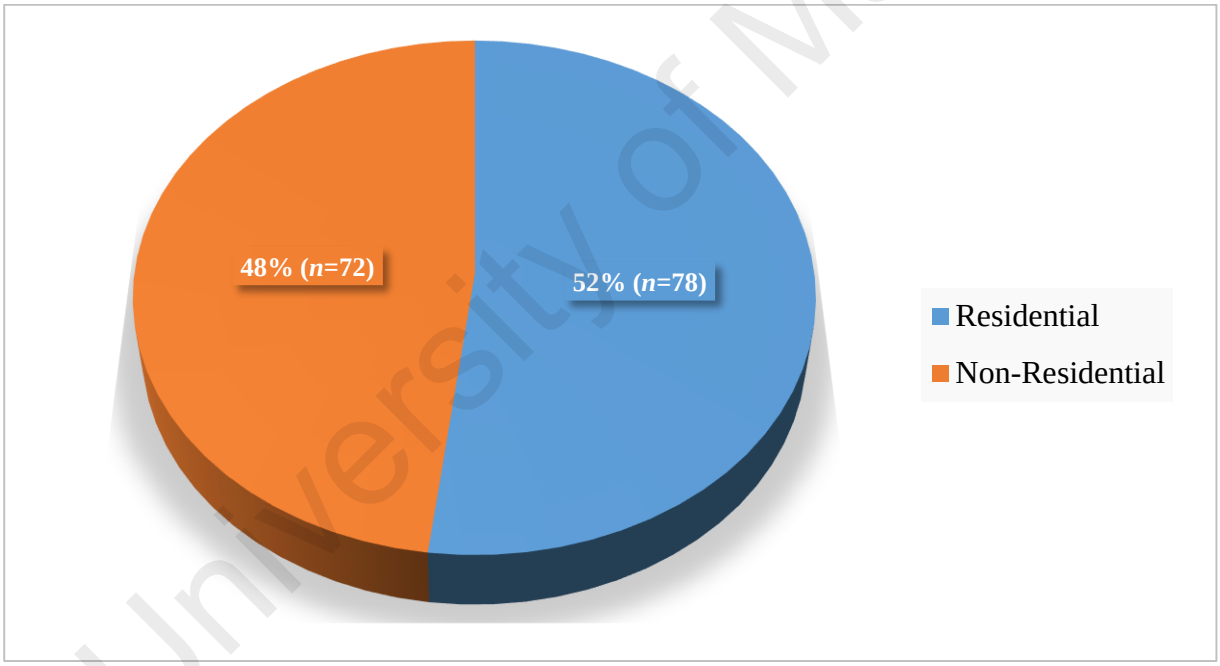


Figure 5.2 Descriptive statistics of residential and non-residential childminders in the children homes in KL and Selangor.

5.2.3 DESCRIPTIVE STATISTICS OF PARTICPANTS' MASLACH BURNOUT INVENTORY-GENERAL SURVEY (MBI-GS)

Table 5.2: Levels of Severity of the Maslach Burnout Inventory-General Survey (*n*=150)

Domain	Low	Moderate	High
	***n* (%)**	***n* (%)**	***n* (%)**
Exhaustion (EX)	84 (56.0)	23 (15.3)	43 (28.7)
Cynicism (CY)	50 (33.3)	53 (35.3)	47 (31.3)
Personal Efficacy (PE)	54 (36.0)	27 (18.0)	69 (46.0)

The levels of exhaustion, cynicism and personal efficacy were based on the normative values provided by Maslach et al (1996). For MBI-GS, The cut off scores for high levels of exhaustion are 16 and more, 11 or over for cynicism and 30 or over for the personal efficacy. Low levels were given as 0-10 for exhaustion, 0-5 for cynicism and 0-23 for personal efficacy.

From Table 5.2, more than one third had low personal efficacy 36.0% (n=54) and high levels of cynicism were seen in a third of them 31.3% (n=47). Close to one third of the participants had high levels of exhaustion 28.7% (n=43).

All this results are illustrated in Figure 5.3.

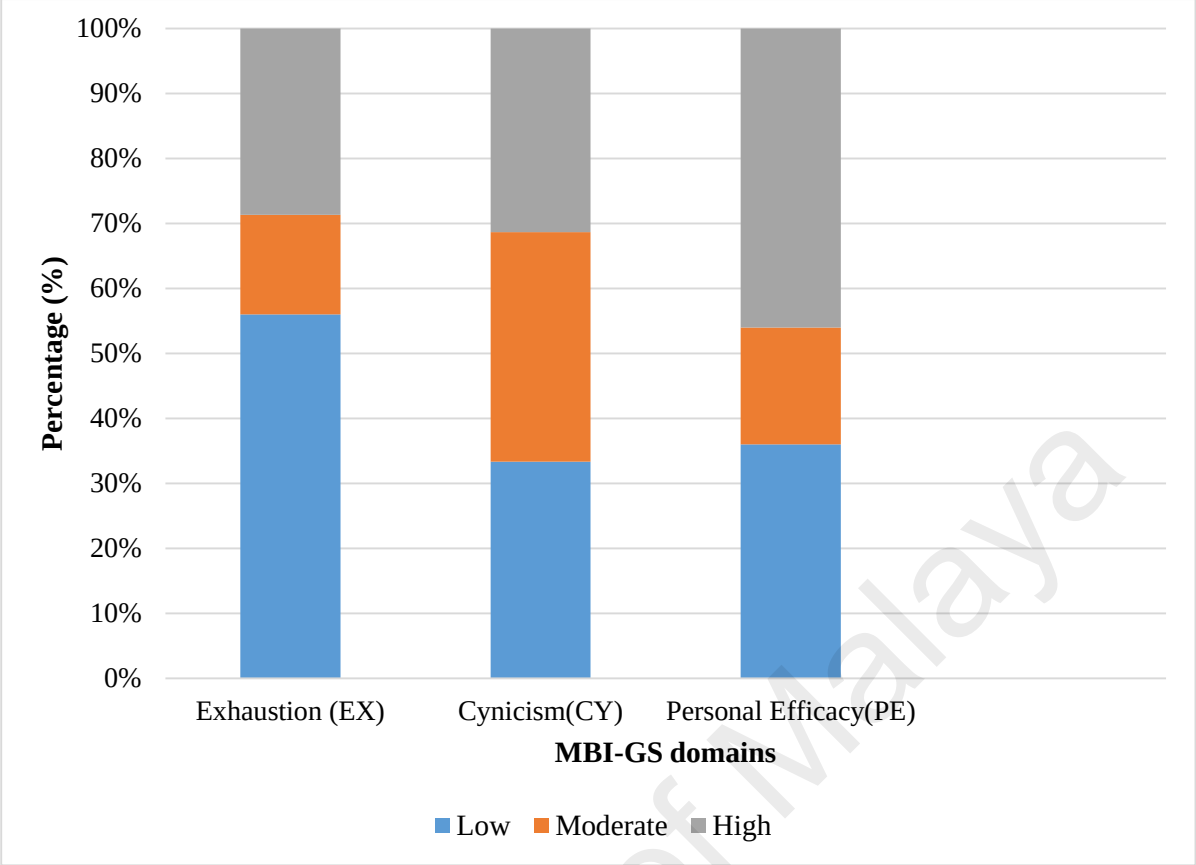


Figure 5.3 Level of Severity of MBI-GS domains

Table 5.3: Scores of the MBI and its sub-scales (*n*=150)

Scale/subscale	Mean (SD)	Min-Max	Percentiles		
			25th	**50th**	**75th**
EX	10.21 (7.48)	0 – 26	4.00	9.00	16.00
CY	8.14 (5.86)	0 – 25	3.75	8.00	12.00
PE	25.17 (9.12)	0 – 36	19.00	28.00	32.00
EX+CY	18.3 (11.59)	0 – 51	8.00	17.50	**26.25**
EX+PE	35.38 (12.26)	0 – 57	29.00	37.00	43.25
PE+CY	33.31 (11.33)	0 – 52	26.75	36.00	42.00
EX+CY+PE	43.52 (15.43)	0 – 76	36.00	44.00	53.00

EX: Emotional Exhaustion; CY: Cynicism; PE: Personal Efficacy; EX+CY: Severe Burnout

The MBI cut-off points for severe burnout was set ≥ 75th percentile of the EX total score combined with the total score of CY based on Brenninkmeijer V. and VanYperen N. (2003). This study found was that cut-off point for severe burnout was at ≥ 26.5 (Table 5.3).

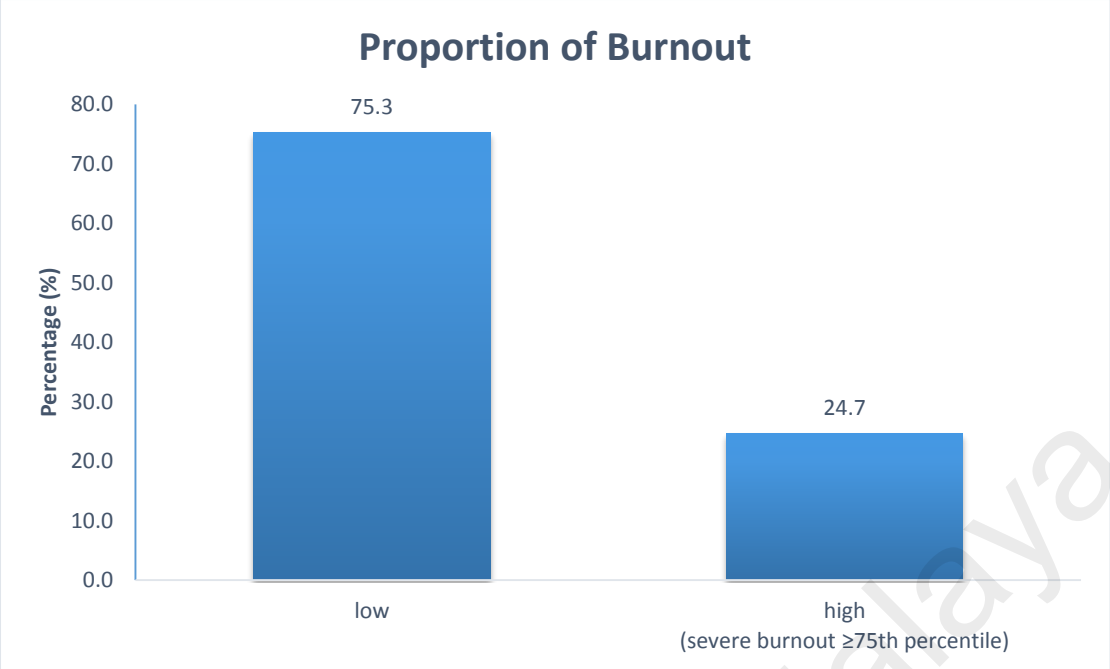


Figure 5.4 Proportion of Severe Burnout

It was found the proportion of severe burnout among the childminders was found at 24.7 % (n=37). It help to fulfil the study's first aim.

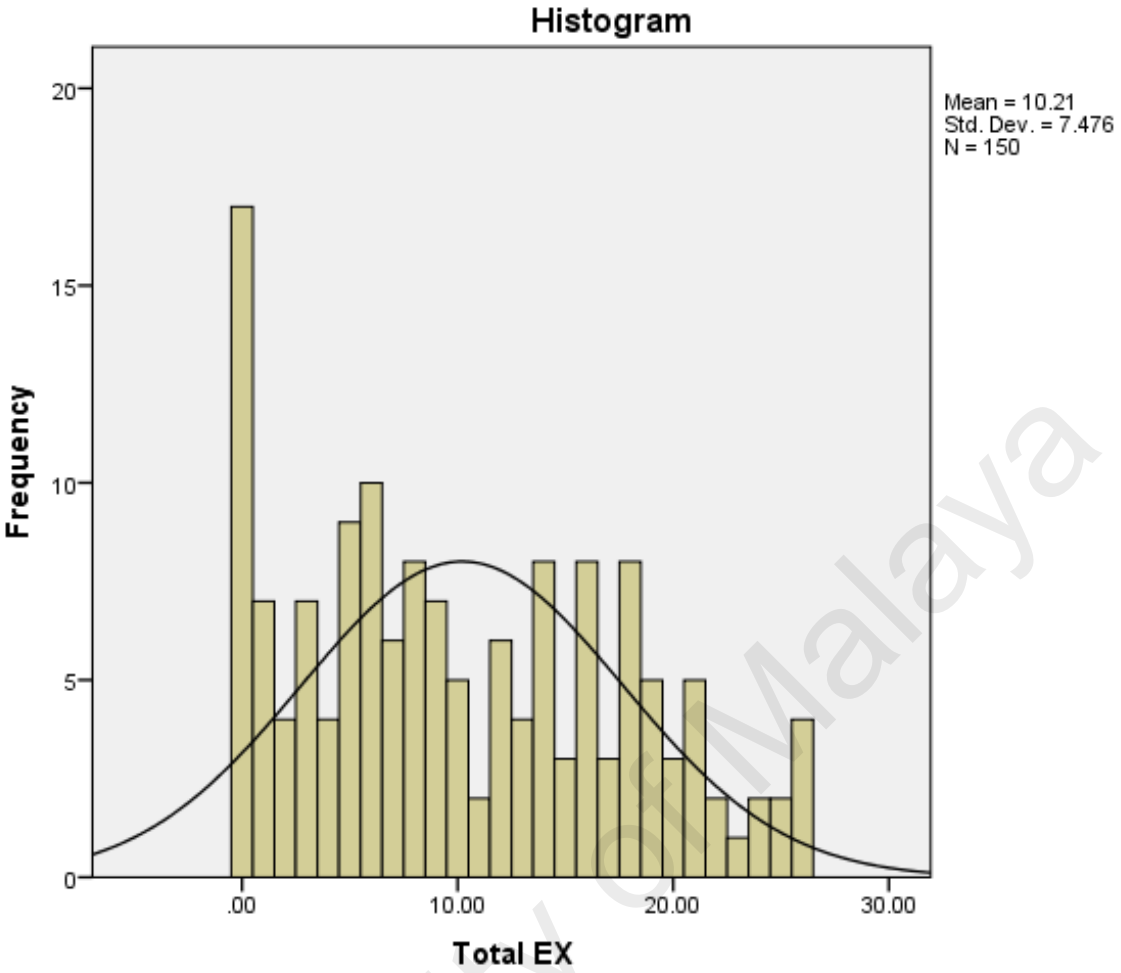


Figure 5.5 Distribution of total EX scores of childminders in residential children homes in KL and Selangor

Figure 5.5 showed the distribution of the total EX score among participants. The data was found to be normal distributed. The participants had a mean total EX score of 10.21 with standard deviation of 7.48.

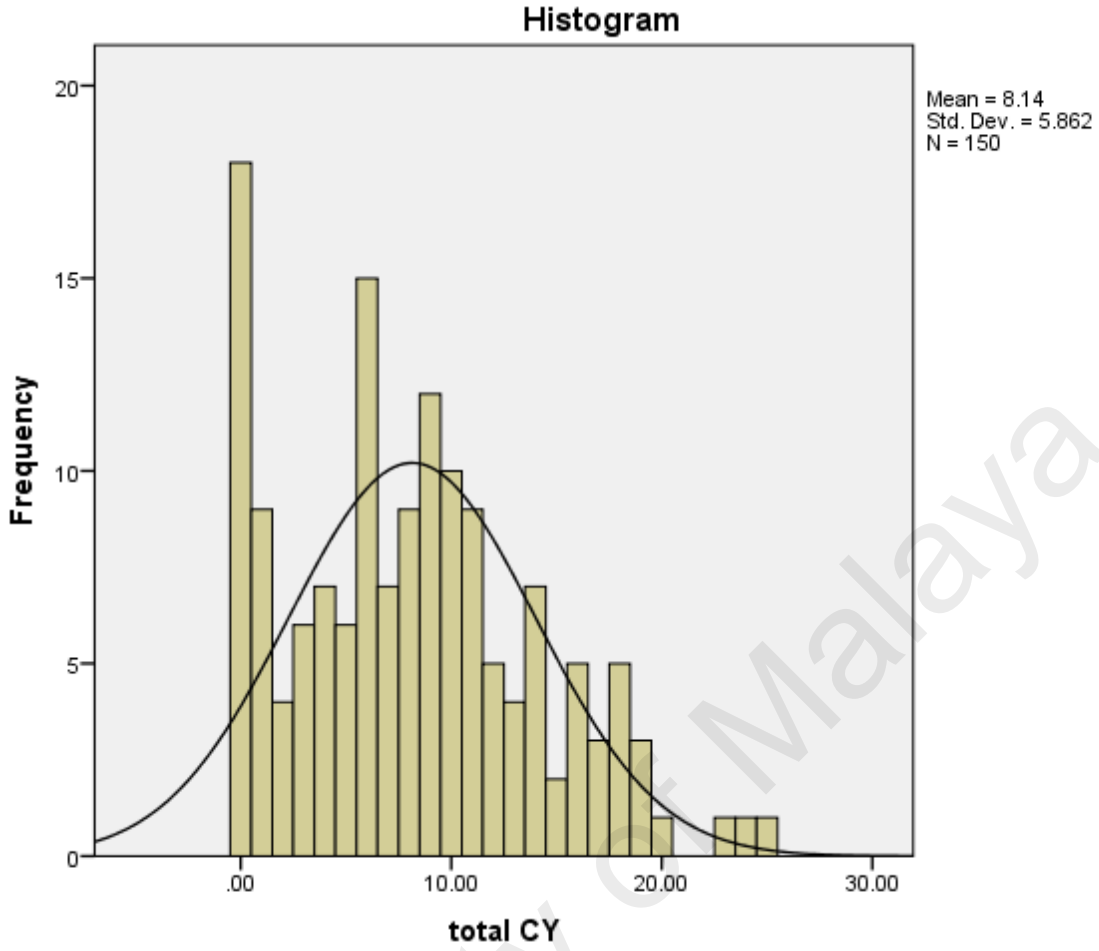


Figure 5.6 Distribution of total CY scores of childminders in residential children homes in KL and Selangor

Figure 5.6 showed the distribution of the total CY score among participants. The data was found to be normal distributed.The participants had a mean total CY score of 8.14 with standard deviation of 5.86.

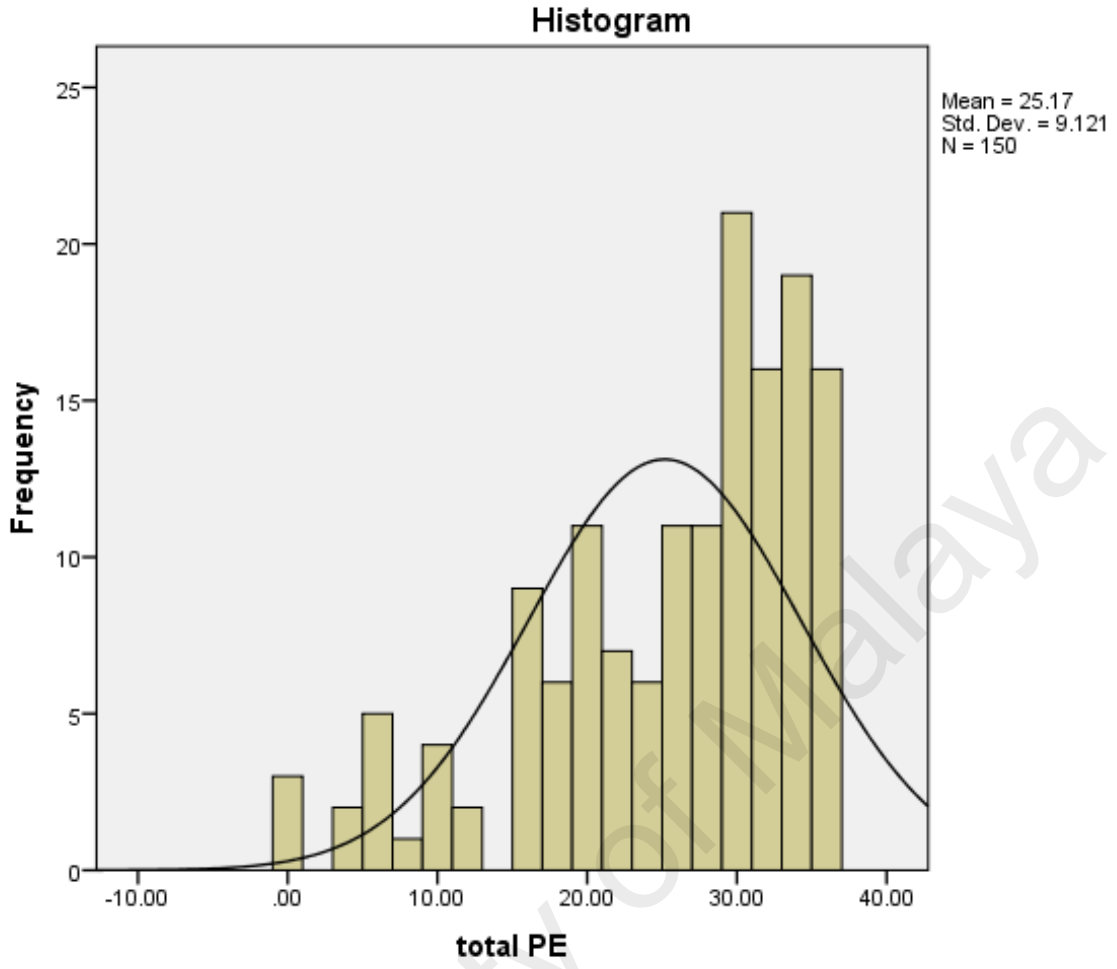


Figure 5.7 Distribution of total PE scores of childminders in residential children homes in KL and Selangor

Figure 5.7 showed the distribution of the total PE score among participants. The data was found to be normal distributed. The participants had a mean total PE score of 25.17 with standard deviation of 9.12.

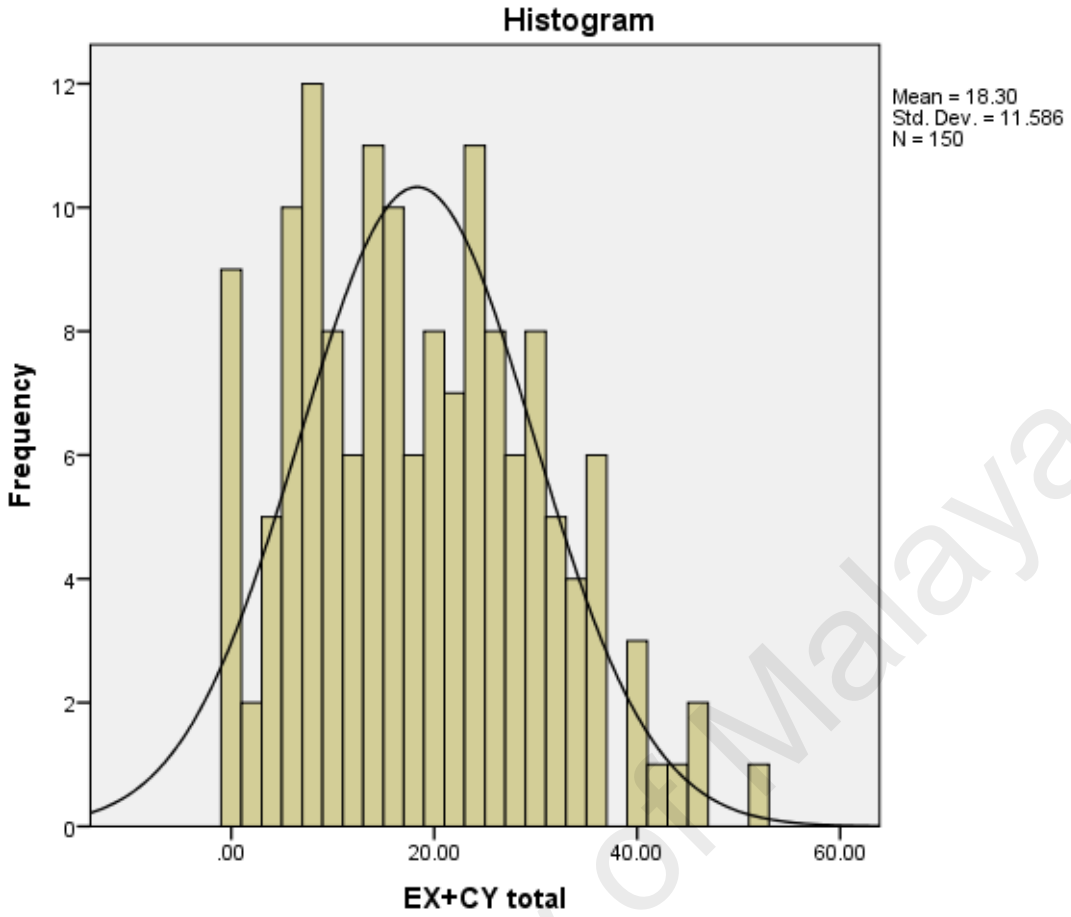


Figure 5.8 Distribution of total EX+CY scores of childminders in residential children homes in KL and Selangor

Figure 5.8 showed the distribution of the total EX+CY score among participants. The data was found to be normal distributed. The participants had a mean total EX+CY score of 18.3 with standard deviation of 11.59.

Table 5.4: Mean Score and Standard Deviation of each Item of the Maslach Burnout Inventory (MBI)

MBI - General Survey	Mean	SD
Q1 : Emotional Exhaustion	1.83	1.712
Q2 : Fatigue	2.55	1.916
Q3 : Apprehension facing daily work	2.08	1.961
Q4 : Work Stress	1.87	1.919
Q5 : Problem solving ability	3.89	1.941
Q6 : Feeling emotionally drained after work	1.87	1.815
Q7 : Feeling effective towards the organisation	4.06	2.089
Q8 : Loss of interest in work from the starting point of work	0.55	1.115
Q9 : Loss of spirit	1.21	1.668
Q10: Self Efficacy	3.99	2.139
Q11: Satisfaction after Completing a Task	4.57	1.964
Q12: Completion of useful tasks	4.34	2.043
Q13: Focus on the task	2.95	2.510
Q14: Cynicism	2.17	2.142
Q15: Self -doubt	1.31	1.768
Q16: Effective problem solving	4.33	2.032

Table 5.4 reports the mean score of each item of the MBI. The question that had the lowest score was question 8 that assesses loss of interest in work (Q8: I have become less interested in my work since I started this job) indicating that the majority of subjects maintained interest in their daily work. The highest score was seen in question 11 (Q11: Satisfaction after completing a task) indicating that the majority of the subjects satisfied after they have completed their tasks.

5.2.4 DESCRIPTIVE STATISTICS OF DEPRESSION ANXIETY STRESS SCALE (DASS)

Table 5.5: Childminders' scores for the DASS based on each domain (*n*=150)

Domain	Mean (SD)	Min.–Max.	Normal	Mild	Moderate	Severe	Extremely Severe
			***n* (%)**	***n* (%)**	***n* (%)**	***n* (%)**	***n* (%)**
Depression	8.64 (6.91)	0-32	82 (54.7)	30 (20.0)	30 (20.0)	6 (4.0)	2 (1.3)
Anxiety	8.31 (6.42)	0-26	69 (46.0)	17 (11.3)	39 (26.0)	16 (10.7)	9 (6.0)
Stress	12.19 (7.92)	0-34	96 (64.0)	28 (18.7)	18 (12.0)	6 (4.0)	2 (1.3)

Note: Normative cut-off scores provided for the DASS scale (www.psy.unsw.edu.au/dass)
Depression * Normal (0-9), Mild (10-13), Moderate (14-20), Severe (21-27), Extremely Severe (>28)
Anxiety ** Normal (0-7), Mild (8-9), Moderate (10-14), Severe (15-19), Extremely Severe (>20)
Stress*** Normal (0-14), Mild (15-18), Moderate (19-25), Severe (26-33), Extremely Severe (>34)

In Table 5.5, shows that more than half of childminders had symptoms of anxiety, 45% (n=68) had symptoms of depression and 36% (n=54) had symptoms of stress. These results show a number of our subjects had high levels of psychological distress.

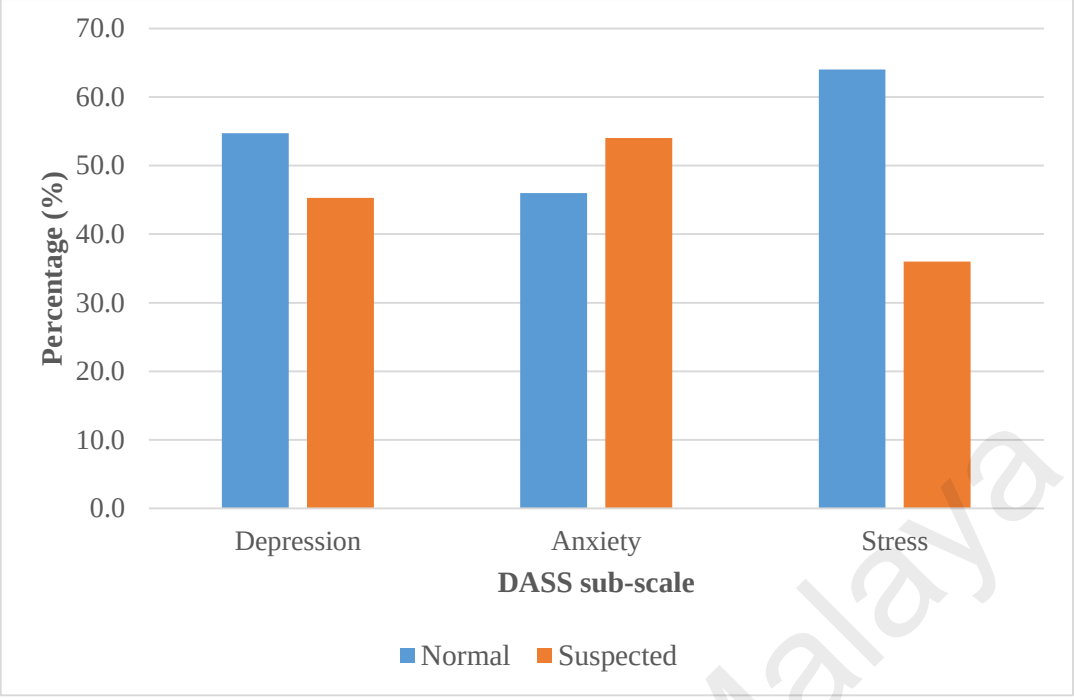


Figure 5.9 Rate of suspected depression, anxiety and stress among the participants

Figure 5.9 showed based on DASS, 68 participants (45.3%) has depressive symptoms (suspected depression), 81 participants (54.0%) anxiety symptoms (suspected anxiety) and 54 participants (34.0%) stress.

This help to fulfil the third aim of this study.

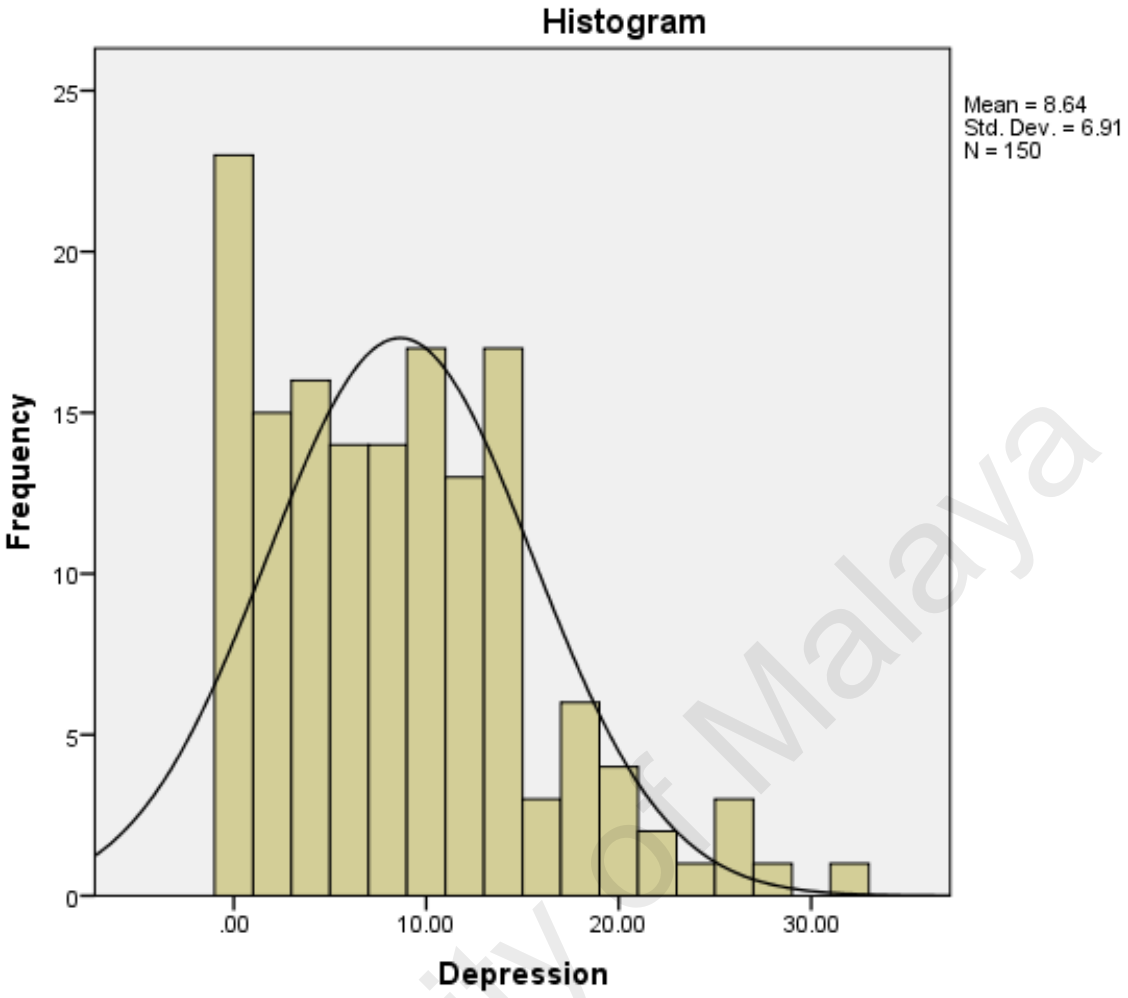


Figure 5.10 Distribution of the depression sub-scale scores of DASS in childminders residential children homes in KL and Selangor

Figure 5.10 showed the distribution of the total depression score among participants. The data was found to be normal distributed. The participants had a mean total depression score of 8.64 with standard deviation of 6.91.

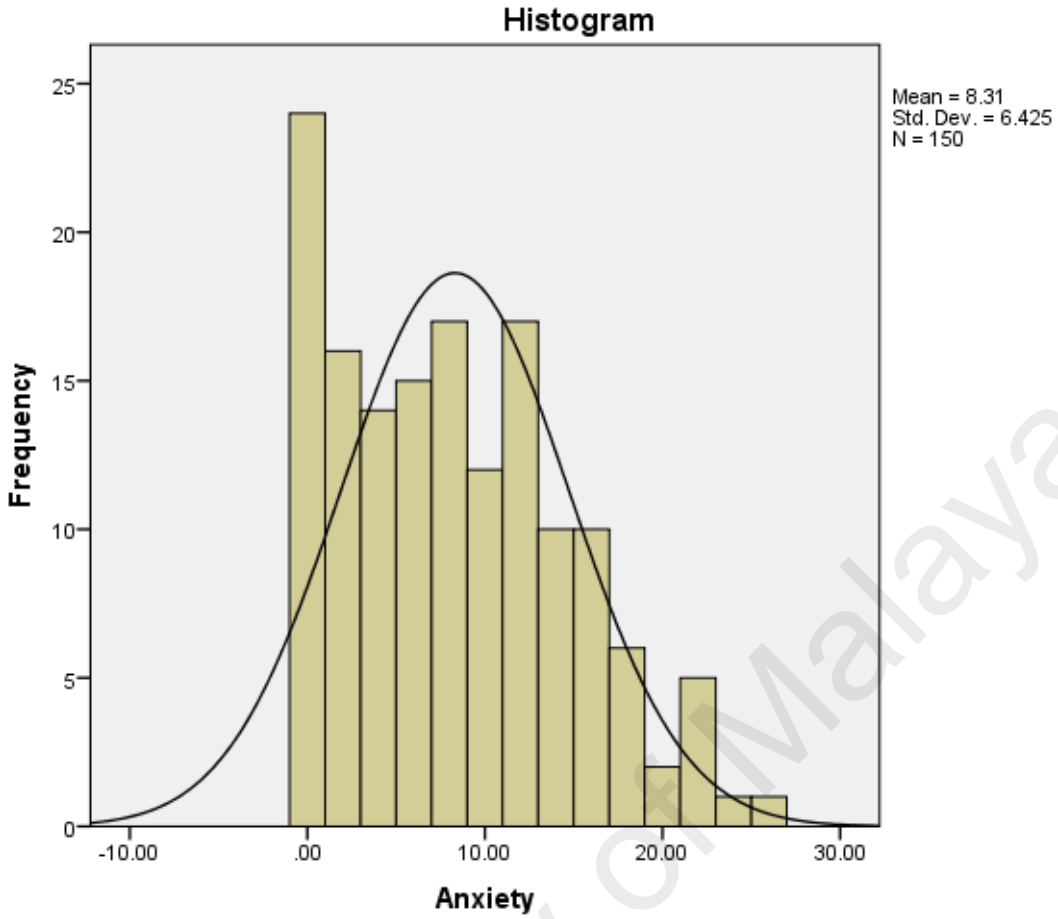


Figure 5.11 Distribution of the anxiety sub-scale scores of DASS in childminders residential children homes in KL and Selangor

Figure 5.11 showed the distribution of the total anxiety score among participants. The data was found to be normal distributed. The participants had a mean total anxiety score of 8.31 with standard deviation of 6.42.

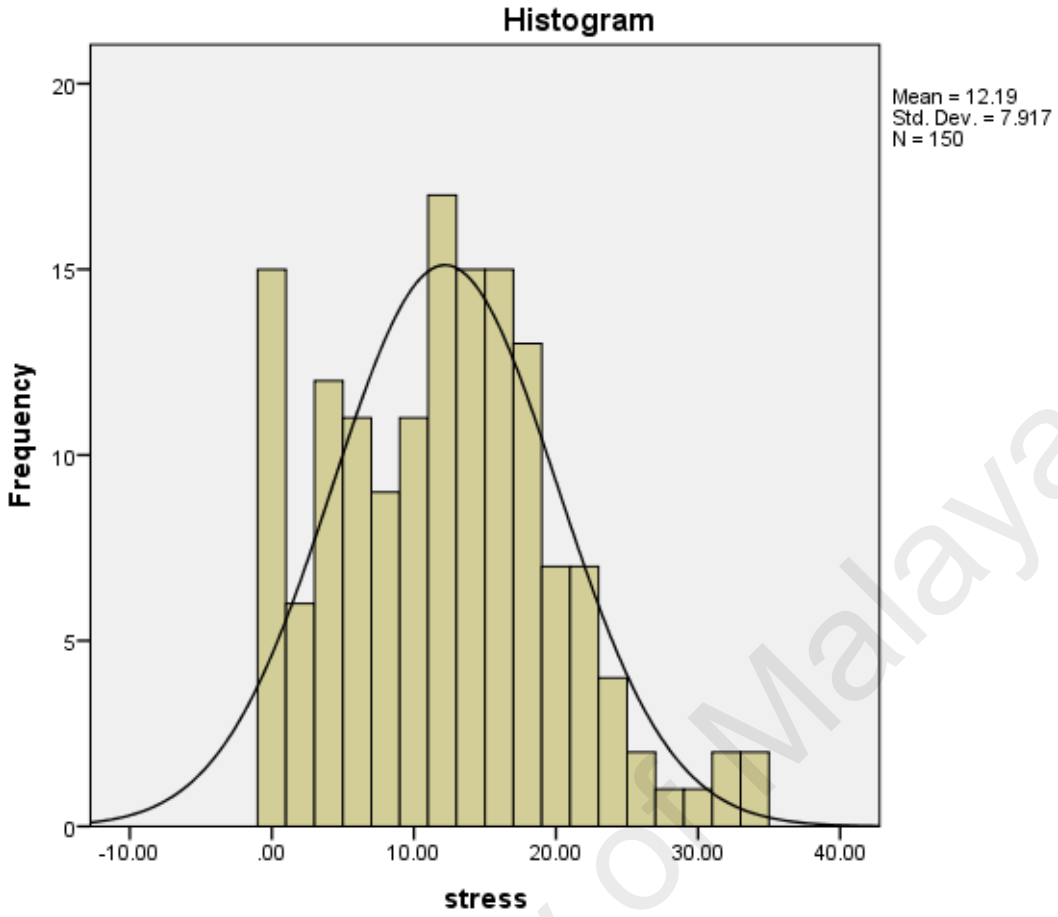


Figure 5.12 Distribution of the stress sub-scale scores of DASS in childminders residential children homes in KL and Selangor

Figure 5.12 showed the distribution of the total stress score among participants. The data was found to be normal distributed. The participants had a mean total stress score of 12.19 with standard deviation of 7.92.

Table 5.6: Mean Score and Standard Deviation of each Item of the Depression Anxiety Stress Scale (DASS)

DASS	Mean	SD
Q1 : Hard to wind down	0.71	0.659
Q2 : Dryness of mouth	0.88	0.768
Q3 : Couldn't seem to experience any positive feeling	0.67	0.728
Q4 : Breathing difficulty in the absence of physical exertion	0.43	0.660
Q5 : Difficult to work up the initiative to do things	0.74	0.728
Q6 : Over-react to situations	0.73	0.694
Q7 : Experienced trembling	0.41	0.647
Q8 : Using a lot of nervous energy	0.97	0.886
Q9 : Worried about situations in which I might panic and make a fool of myself	0.65	0.795
Q10: Felt nothing to look forward to	0.64	0.797
Q11: Found myself getting agitated	0.70	0.784
Q12: It difficult to relax	0.81	0.849
Q13: Felt down-hearted and blue	0.69	0.741
Q14: Intolerant of anything that kept me from getting on with what I was doing	0.97	0.855
Q15: Felt close to panic	0.61	0.731
Q16: Unable to become enthusiastic about anything	0.66	0.713
Q17: I felt worthless	0.59	0.779
Q18: Felt touchy	1.21	0.994
Q19: Aware of the action of my heart in the absence of physical exertion	0.63	0.709
Q20: Felt scare without any good reason	0.53	0.692
Q21: Felt life was meaningless	0.33	0.680

Table 5.6 reports the mean score of each item of the DASS. The question that had the lowest score was question 21 that assesses life was meaningless (Q21: life was meaningless) indicating that the majority of participants felt life were meaningful. The highest score was seen in question 18 (Q11: feeling touchy) indicating that the majority of the participants felt easily touched.

5.3 ASSOCIATION AND REGRESSION

UNIVARIATE ANALYSIS MBI-GS DOMAINS WITH SOCIO-DEMOGRAPHIC CHARACTERISTICS

The following tables 5.7 to 5.10 detail the association of domains of the MBI with the socio-demographic and personal profile of the participants using univariate analysis (simple logistic regression)

Tables' 5.7 to 5.10 show the analysis of the different domains of the MBI with socio-demographic and personal profile of the subjects, which addresses the second aim of the study. A univariate analysis using logistic regression was used for the analysis as similarly done in several similar studies (Aloha K., 2007; Evans G.D et al, 2004)

5.3.1 UNIVARIATE ANALYSIS OF EXHAUSTION (EX) AND STUDY VARIABLES OF THE CHILDMINDERS

Table 5.7: The simple logistic regression of exhaustion with socio-demographic profiles amongst childminders in Kuala Lumpur and Selangor (*n*=150)

Variables	EX		χ^2 statistic	OR	95% CI	*P* value
	Low	**Moderate/High**				
	***n* (%)**	***n* (%)**				
Gender						
Male	30 (61.2)	19 (38.8)	0.806	1.374	0.686-	0.369
Female	54 (53.5)	47 (46.5)		1.000	2.754	
Age						
≤40	43 (54.4)	36 (45.6)	0.167	0.874	0.458-	0.683
>40	41 (57.7)	30 (42.3)		1.000	1.668	
Married						
YES	45 (60.0)	30 (40.0)	0.974	1.385	0.725-	0.324
NO	39 (52.0)	36 (48.0)		1.000	2.644	
Race						
Malay	48 (51.6)	45 (48.4)	1.912	0.622	0.317-	0.167
Non-Malay	36 (63.2)	21 (36.8)		1.000	1.222	
Citizenship						
Malaysian	81 (57.0)	61 (43.0)	1.174	2.213	0.509-	0.279
Non-Malaysian	3 (37.5)	5 (62.5)		1.000	9.620	
Number of Children						
≤4	77 (57.0)	58 (43.0)	0.589	1.517	0.520-	0.443
>4	7 (46.7)	8 (53.3)		1.000	4.424	
Job						
Childminders	74 (57.4)	55 (42.6)	0.696	1.480	0.587-	0.404
Volunteers	10 (47.6)	11 (52.4)		1.000	3.731	
Combine household income (RM)						
≤3000	66 (54.5)	55 (45.5)	0.537	0.733	0.319-	0.464
>3000	18 (62.1)	11 (37.9)		1.000	1.684	
Paid of Salary						
YES	82 (56.2)	64 (43.8)	0.060	0.780	0.107-	0.806
NO	2 (50.0)	2 (50.0)		1.000	5.693	
Stability of Job						
YES	53 (56.4)	41 (43.6)	0.015	1.000	0.493-	0.903
NO	31 (55.4)	41 (43.6)		0.959	1.867	
Education background						
Non-tertiary	47 (51.1)	45 (48.9)	2.331	0.593	0.302-	0.127
Tertiary	37 (63.8)	21 (36.2)		1.000	1.163	
Attending early childhood training						
YES	40(66.7)	20(33.3)	4.618	2.091	1.062-	**0.032***
NO	44(48.9)	46(51.1)		1.000	4.117	

Experience in the field (years)						
≤8	56(56.0)	44(44.0)	0.000	1.000	0.505-	>0.995
>8	28(56.0)	22(44.0)		1.000	1.982	
Experience in the facility (years)						
≤5	57(54.3)	48(45.7)	0.417	0.792	0.389-	0.518
>5	27(60.0)	18(40.0)		1.000	1.609	
Number of working hours daily						
≤12	42(60.9)	27(39.1)	1.230	1.444	0.753-	0.267
>12	42(51.9)	39(48.1)		1.000	2.769	
Working shift						
YES	31(70.5)	13(29.5)	5.280	1.000	0.198-	**0.022***
NO	53(50.0)	53(50.0)		0.419	0.889	
Number of childminder in children homes						
≤10	50(53.8)	43(46.2)	0.497	0.787	0.403-	0.481
>10	34(59.6)	23(40.4)		1.000	1.534	
Number of children in children homes						
≤50	51(56.0)	40(44.0)	0.000	1.005	0.519-	0.989
>50	33(55.9)	26(44.1)		1.000	1.943	
Staff and Children Ratio						
≤25	53(51.5)	50(48.5)	2.754	0.547	0.267-	0.097
>25	31(66.0)	16(34.0)		1.000	1.120	
Do childminder feels adequate						
YES	64(64.6)	35(35.4)	8.835	2.834	1.412-	**0.003****
NO	20(39.2)	31(60.8)		1.000	5.690	

EX: Exhaustion
P statistically significance at * < 0.05 and ** <0.01

Table 5.7 shows the exhaustion with socio-demographic characteristics variables. Based on this table, from 20 variables, 3 variables show significant association. There was significant association between those childminders who attended early childhood training with exhaustion, with an odd ratio 2.091, p=0.032. This would indicate that childminders who attended early childhood training were at greater odds of experiencing exhaustion compared to those child minders without early childhood training. The childminders who did not work in shift system appear to have lesser odds of experiencing exhaustion with an odd ratio 0.419, p=0.022. The

table also shows that there was significant association between those child minders who perceived opinion the number of childminders in the centre were adequate with exhaustion, with an odd ratio 2.834, p=0.003. This would indicate that the childminders who perceived opinion the number of childminders in the centre were adequate were at greater odds of experiencing exhaustion compared to those childminders who perceived opinion of inadequacy of the number of childminders in the centre.

5.3.2 UNIVARIATE ANALYSIS OF CYNICISM (CY) AND STUDY VARIABLES OF THE CHILDMINDERS

Table 5.8: Simple logistic regression of Cynicism (CY) with the socio-demographic and personal variables of the childminders (*n*=150)

Variables	CY		χ^2 statistic	OR	95% CI	*P* value
	Low	**Moderate/High**				
	***n* (%)**	***n* (%)**				
Gender						
Male	12 (24.5)	37 (75.5)	2.561	0.538	0.250-	0.110
Female	38 (37.6)	63 (62.4)		1.000	1.156	
Age						
≤40	24 (30.4)	55 (69.6)	0.655	0.755	0.382-	0.418
>40	26 (36.6)	45 (63.4)		1.000	1.491	
Married						
YES	25 (33.3)	50 (66.7)	0.000	1.000	0.507-	>0.995
NO	25 (33.3)	50 (66.7)		1.000	1.972	
Race						
Malay	36 (38.7)	57 (61.3)	3.183	1.940	0.932-	0.074
Non-Malay	14 (24.6)	43 (75.4)		1.000	4.039	
Citizenship						
Malaysian	47 (33.1)	95 (66.9)	0.066	0.825	0.189-	0.797
Non-Malaysian	3 (37.5)	5 (62.5)		1.000	3.598	
Number of Children						
≤4	44 (32.6)	91 (67.4)	0.333	0.725	0.243-	0.564
>4	6 (40.0)	9 (60.0)		1.000	2.166	
Job						
Childminders	45 (34.9)	84 (65.1)	0.997	1.714	0.590	0.318
Volunteers	5 (23.8)	16 (76.2)		1.000	-4.985	
Combine household income (RM)						
≤3000	40 (33.1)	81 (66.9)	0.021	0.938	0.399-	0.884
>3000	10 (34.5)	19 (65.5)		1.000	2.205	
Paid of Salary						
YES	50 (34.2)	96 (65.8)	2.055	-	-	0.152
NO	0 (0.0)	4 (100.0)				
Stability of Job						
YES	35 (37.2)	59 (62.8)	1.724	1.000	0.299-	0.189
NO	15 (26.8)	41 (73.2)		0.617	1.273	
Education background						
Non-tertiary	32 (34.8)	60 (65.2)	0.225	1.185	0.587-	0.635
Tertiary	18 (31.0)	40 (69.0)		1.000	2.393	
Attending early childhood training						
YES	22 (36.7)	38 (63.3)	0.500	1.282	0.644-	0.480
NO	28 (31.1)	62 (68.9)		1.000	2.554	

Experience in the field (years)						
≤8	33 (33.0)	67(67.0)	0.015	0.956	0.466-	0.903
>8	17 (34.0)	33(66.0)		1.000	1.961	
Experience in the facility (years)						
≤5	38 (36.2)	67 (63.8)	1.286	1.560	0.721-	0.257
>5	12 (26.7)	33 (73.3)		1.000	3.373	
Number of working hours daily						
≤12	18 (26.1)	51 (73.9)	3.019	0.540	0.269-	0.082
>12	32 (39.5)	49 (60.5)		1.000	1.086	
Working shift						
YES	15 (34.1)	29 (65.9)	0.016	1.000	0.453-	0.899
NO	35 (33.0)	71 (67.0)		0.953	2.004	
Number of childminder in children homes						
≤10	31 (33.3)	62 (66.7)	0.000	1.000	0.497-	>0.995
>10	19 (33.3)	38 (66.7)		1.000	2.013	
Number of children in children homes						
≤50	30 (33.0)	61 (67.0)	0.014	0.959	0.479-	0.906
>50	20 (33.9)	39 (66.1)		1.000	1.920	
Staff and Children Ratio						
≤25	31 (30.1)	72 (69.9)	1.549	0.635	0.309-	0.213
>25	19 (40.4)	28 (59.6)		1.000	1.302	
Do childminder feels adequate						
YES	32 (32.3)	67 (67.7)	0.134	0.876	0.430-	0.715
NO	18 (35.3)	33 (64.7)		1.000	1.785	

CY: Cynicism

$^{*}P$ is statistically significant at < 0.05 and **<0.01

Table 5.8 show the cynicism with socio-demographic characteristics variables. None of the variables were found to be significantly associated with cynicism.

5.3.3 UNIVARIATE ANALYSIS OF PERSONAL EFFICACY (PE) AND STUDY VARIABLES OF THE CHILDMINDERS

Table 5.9: Simple logistic regression of reduced sense of Personal Efficacy (PE) association with the socio-demographic and personal variables of the childminders (*n*=150)

Variables	PE		χ^2 statistic	OR	95% CI	*P* value
	Moderate/High	**Low**				
	***n* (%)**	***n* (%)**				
Gender						
Male	33 (67.3)	16 (32.7)	0.354	1.244	0.605-	0.552
Female	63 (62.4)	38 (37.6)		1.000	2.556	
Age						
≤40	49 (62.0)	30 (38.0)	0.282	0.834	0.427-	0.595
>40	47 (66.2)	24 (33.8)		1.000	1.629	
Married						
YES	48 (64.0)	27 (36.0)	0.000	1.000	0.513-	>0.995
NO	48 (64.0)	27 (36.0)		1.000	1.948	
Race						
Malay	57 (61.3)	36 (38.7)	0.780	0.731	0.364-	0.377
Non-Malay	39 (68.4)	18 (31.6)		1.000	1.467	
Citizenship						
Malaysian	90 (63.4)	52 (36.6)	0.444	0.577	0.112-	0.505
Non-Malaysian	6 (75.0)	2 (25.0)		1.000	2.963	
Number of Children						
≤4	87 (64.4)	48 (35.6)	0.116	1.208	0.406-	0.734
>4	9 (60.0)	6 (40.0)		1.000	3.599	
Job						
Childminders	78 (60.5)	51 (39.5)	4.997	0.255	0.071-	**0.025***
Volunteers	18 (85.7)	3 (14.3)		1.000	0.910	
Combine household income (RM)						
≤3000	77 (63.6)	44 (36.4)	0.036	0.921	0.393-	0.850
>3000	19 (65.5)	10 (34.5)		1.000	2.156	
Paid of Salary						
YES	92 (63.0)	54 (37.0)	2.312	-	-	0.128
NO	4 (100.0)	0 (0.0)				
Stability of Job						
YES	59 (62.8)	35 (37.2)	0.166	1.000	0.577-	0.683
NO	37 (66.1)	19 (33.9)		1.155	2.311	
Education background						
Non-tertiary	57 (62.0)	35 (38.0)	0.431	0.793	0.397-	0.511
Tertiary	39 (67.2)	19 (32.8)		1.000	1.584	
Attending early childhood training						
YES	40 (66.7)	20 (33.3)	0.309	1.214	0.612-	0.579
NO	56 (62.2)	34 (37.8)		1.000	2.410	

Experience in the field (years)						
≤8	65 (65.0)	35 (35.0)	0.130	1.138	0.563-	0.718
>8	31 (62.0)	19 (38.0)		1.000	2.300	
Experience in the facility (years)						
≤5	69 (65.7)	36 (34.3)	0.446	1.278	0.622-	0.504
>5	27 (60.0)	18 (40.0)		1.000	2.625	
Number of working hours daily						
≤12	48 (69.6)	21 (30.4)	1.718	1.571	0.798-	0.190
>12	48 (59.3)	33 (40.7)		1.000	3.095	
Working shift						
YES	30 (68.2)	14 (31.8)	0.473	1.000	0.365-	0.492
NO	66 (62.3)	40 (37.7)		0.770	1.624	
Number of childminder in children homes						
≤10	62 (66.7)	31 (33.3)	0.755	1.353	0.684-	0.385
>10	34 (59.6)	23 (40.4)		1.000	2.677	
Number of children in children homes						
≤50	63 (69.2)	28 (30.8)	2.747	1.773	0.898-	0.097
>50	33 (55.9)	26 (44.1)		1.000	3.499	
Staff and Children Ratio						
≤25	71 (68.9)	32 (31.1)	3.471	1.953	0.961-	0.062
>25	25 (53.2)	22 (46.8)		1.000	3.967	
Do childminder feels adequate						
YES	66 (66.7)	33 (33.3)	0.899	1.400	0.697-	0.343
NO	30 (58.8)	21 (41.2)		1.000	2.810	

PE: Personal efficacy, $^{*}P$ is statistically significant at < 0.05 and **<0.01

Table 5.9 shows the personal efficacy with socio-demographic characteristics variables. Based on this table, there was significant association between child minders (staff) with decrease sense of personal efficacy, with an odds ratio of 0.255, p=0.025. This would indicate the child minder were at lesser odds of experiencing decrease sense of personal efficacy compared to the volunteers in the centre.

5.3.4 UNIVARIATE ANALYSIS OF BURNOUT (EX+CY) AND STUDY VARIABLES OF THE CHILDMINDERS

Table 5.10: Simple logistic regression of combination of exhaustion (EX) and cynicism (CY) association with the socio-demographic and personal variables of the childminders (*n*=150)

Variables	EX+CY		χ^2 statistic	OR	95% CI	*P* value
	Low	**High (75th percentile)**				
	***n* (%)**	***n* (%)**				
Gender						
Male	36 (73.5)	13 (26.5)	0.136	0.863	0.395-	0.712
Female	77 (76.2)	24 (23.8)		1.000	1.887	
Age						
≤40	59 (74.7)	20 (25.3)	0.038	0.929	0.441-	0.846
>40	54 (76.1)	17 (23.9)		1.000	1.955	
Married						
YES	58 (77.3)	17 (22.7)	0.323	1.241	0.589-	0.570
NO	55 (73.3)	20 (26.7)		1.000	2.612	
Race						
Malay	69 (74.2)	24 (25.8)	0.171	0.849	0.392-	0.679
Non-Malay	44 (77.2)	13 (22.8)		1.000	1.841	
Citizenship						
Malaysian	108 (76.1)	34 (23.9)	0.749	1.906	0.433-	0.387
Non-Malaysian	5 (62.5)	3 (37.5)		1.000	8.392	
Number of Children						
≤4	104 (77.0)	31 (23.0)	2.109	2.237	0.738-	0.146
>4	9 (60.0)	6 (40.0)		1.000	6.774	
Job						
Childminders	97 (75.2)	32 (24.8)	0.010	0.947	0.321-	0.922
Volunteers	16 (76.2)	5 (23.8)		1.000	2.792	
Combine household income (RM)						
≤3000	88 (72.7)	33 (27.3)	2.287	0.427	0.138-	0.130
>3000	25 (86.2)	4 (13.8)		1.000	1.319	
Paid of Salary						
YES	110 (75.3)	36 (24.7)	0.000	1.000	0.099-	0.987
NO	3 (75.0)	1 (25.0)		0.982	9.737	
Stability of Job						
YES	72 (76.6)	22 (23.4)	0.216	1.000	0.391-	0.642
NO	41 (73.2)	15 (26.8)		0.835	1.786	
Education background						
Non-tertiary	66 (71.7)	26 (28.3)	1.654	0.594	0.267-	0.198
Tertiary	47 (81.0)	11 (19.0)		1.000	1.320	
Attending early childhood training						
YES	52 (86.7)	8 (13.3)	6.912	3.090	1.300-	**0.009****
NO	61 (67.8)	29 (32.2)		1.000	7.345	

Experience in the field (years)						
≤8	76 (76.0)	24 (24.0)	0.072	1.113	0.510-	0.789
>8	37 (74.0)	13 (26.0)		1.000	2.430	
Experience in the facility (years)						
≤5	82 (78.1)	23 (21.9)	1.437	1.610	0.736-	0.231
>5	31 (68.9)	14 (31.1)		1.000	3.521	
Number of working hours daily						
≤12	51 (73.9)	18 (26.1)	0.139	0.868	0.413-	0.710
>12	62 (76.5)	19 (23.5)		1.000	1.826	
Working shift						
YES	34 (77.3)	10 (22.7)	0.126	1.000	0.375-	0.723
NO	79 (74.5)	27 (25.5)		0.861	1.973	
Number of childminder in children homes						
≤10	71 (76.3)	22 (23.7)	0.135	1.153	0.540-	0.714
>10	42 (73.7)	15 (26.3)		1.000	2.462	
Number of children in children homes						
≤50	70 (76.9)	21 (23.1)	0.315	1.240	0.584-	0.575
>50	43 (72.9)	16 (27.1)		1.000	2.634	
Staff and Children Ratio						
≤25	76 (73.8)	27 (26.2)	0.423	0.761	0.333-	0.515
>25	37 (78.7)	10 (21.3)		1.000	1.736	
Do childminder feels adequate						
YES	80 (80.8)	19 (19.2)	4.697	2.297	1.072-	**0.030***
NO	33 (64.7)	18 (35.3)		1.000	4.919	

EX+CY: Burnout; *P is statistically significant at < 0.05 and **<0.01

Table 5.10 shows the combination of exhaustion (EX) and cynicism (CY) association with the socio-demographic variables of the childminders. Based on this table, there was significant association between those attended early childhood training with burnout, with an odds ratio of 3.090, p=0.009. This would indicate that those childminders who attended early childhood training were at greater odds of experiencing the burnout compared to those without early childhood training. The table also shows that there was significant association between those childminders who perceived opinion the number of childminders in the centre were adequate with burnout, with an odd ratio 2.297, p=0.030. This would indicate that the childminders who

perceived opinion the number of childminders in the centre were adequate were at greater odds of experiencing burnout compared to those childminders who perceived opinion of inadequacy of the number of childminders in the centre.

UNIVARIATE ANALYSIS OF DASS WITH SOCIO-DEMOGRAPHIC CHARACTERISTICS

The following tables 5.11 to 5.13 detail the association of domains of the DASS with the socio-demographic and personal profile of the participants using univariate analysis and logistic regression.

Tables' 5.11 to 5.13 show the analysis of the different domains of the DASS with socio-demographic and personal profile of the subjects, which addresses the third aim of the study. A univariate analysis using logistic regression was used for the analysis as similarly done in several similar studies.

5.3.5 UNIVARIATE ANALYSIS OF DEPRESSION AND STUDY VARIABLES OF THE CHILDMINDERS

Table 5.11: Simple logistic regression of Depression with the socio-demographic and personal profile of childminders in Kuala Lumpur and Selangor (*n*=150)

Variables	Depression		χ^2 statistic	OR	95% CI	*P* value
	Normal	**Mild-extremely severe**				
	***n* (%)**	***n* (%)**				
Gender						
Male	31 (63.3)	18 (36.7)	2.171	1.688	0.839-	0.141
Female	51 (50.5)	50 (49.5)		1.000	3.399	
Age						
≤40	35 (44.3)	44 (55.7)	7.232	0.406	0.209-	**0.007****
>40	47 (66.2)	24 (33.8)		1.000	0.788	
Married						
YES	49 (65.3)	26 (34.7)	6.887	2.399	1.241-	**0.009****
NO	33 (44.0)	42 (56.0)		1.000	4.635	
Race						
Malay	53 (57.0)	40 (43.0)	0.533	1.279	0.660-	0.465
Non-Malay	29 (50.9)	28 (49.1)		1.000	2.480	
Citizenship						
Malaysian	79 (55.6)	63 (44.4)	1.005	2.090	0.481-	0.316
Non-Malaysian	3 (37.5)	5 (62.5)		1.000	9.082	
Number of Children						
≤4	69 (51.1)	66 (48.9)	6.887	0.161	0.035-	**0.009****
>4	13 (86.7)	2 (13.3)		1.000	0.740	

Job						
Childminders	68 (52.7)	61 (47.3)	1.419	0.557	0.211-	0.234
Volunteers	14 (66.7)	7 (33.3)		1.000	1.472	
Combine household income (RM)						
≤3000	61 (50.4)	60 (49.6)	4.569	0.387	0.159-	**0.033***
>3000	21 (72.4)	8 (27.6)		1.000	0.942	
Paid of Salary						
YES	80 (54.8)	66 (45.2)	0.036	1.000	0.113-	0.849
NO	2 (50.0)	2 (50.0)		0.825	6.016	
Stability of Job						
YES	51 (54.3)	43 (45.7)	0.017	1.000	0.538-	0.896
NO	31 (55.4)	25 (44.6)		1.045	2.033	
Education background						
Non-tertiary	47 (51.1)	45 (48.9)	1.230	0.686	0.353-	0.267
Tertiary	35 (60.3)	23 (39.7)		1.000	1.336	
Attending early childhood training						
YES	35 (58.3)	25 (41.7)	0.543	1.281	0.663-	0.461
NO	47 (52.2)	43 (47.8)		1.000	2.476	
Experience in the field (years)						
≤8	48 (48.0)	52 (52.0)	5.380	0.434	0.213-	**0.020***
>8	34 (68.0)	16 (32.0)		1.000	0.885	
Experience in the facility (years)						
≤5	55 (52.4)	50 (47.6)	0.738	0.733	0.361-	0.390
>5	27 (60.0)	18 (40.0)		1.000	1.490	
Number of working hours daily						
≤12	36 (52.2)	33 (47.8)	0.320	0.830	0.435-	0.571
>12	46 (56.8)	35 (43.2)		1.000	1.582	
Working shift						
YES	22 (50.0)	22 (50.0)	0.547	1.000	0.645-	0.459
NO	60 (56.6)	46 (43.4)		1.304	2.639	
Number of childminders in children homes						
≤10	48 (51.6)	45 (48.4)	0.921	0.722	0.370-	0.337
>10	34 (59.6)	23 (40.4)		1.000	1.406	
Staff and Children Ratio						
≤25	53 (51.5)	50 (48.5)	1.367	0.658	0.326-	0.242
>25	29 (61.7)	18 (38.3)		1.000	1.330	
Do child minder feels adequate						
YES	58 (58.6)	41 (41.4)	1.805	1.591	0.806-	0.179
NO	24 (47.1)	27 (52.9)		1.000	3.141	

*P is statistically significant at < 0.05 and **<0.01

Table 5.11 shows the depression symptoms with the socio-demographic characteristics. Based on this table, there were 4 variables had significant association with depressive symptoms.

There was significant association between younger age of childminders (≤40 years) with depressive symptoms, with an odds ratio of 0.406, p=0.007. This would indicate that younger age of childminders were at lesser odds of experiencing depressive symptoms compared to older age of childminder (>40 years).There was significant association between married childminders with depressive symptoms, with an odds ratio of 2.399, p=0.009. This would indicate that married childminders were at greater odds of experiencing depressive symptoms compared to unmarried childminders. From the table also shows there was significant between childminders who had 4 or less number of children with depressive symptoms, with an odds of 0.161, p=0.009. This would indicate that childminders who had 4 or less number of children were at lesser odds of experiencing depressive symptoms compared to those who had more than 4 children. There was significant association between combined household income RM3000 and less per month with depressive symptoms, with an odds ratio of 0.397, p=0.033. This would indicate that the childminders who had combined household income RM3000 or less were at lesser odds of experiencing depressive symptoms compared to those who earned more than RM3000/month. There was also a significant association between 8 years or less experience in the field with depressive symptoms, with an odds of 0.434, p=0.020. This would indicate that child minder who had 8 years of experience in the field or less were at lesser odds of experiencing depressive symptoms compared to those who had more than 8 years of experience.

5.3.6 UNIVARIATE ANALYSIS OF ANXIETY AND STUDY VARIABLES OF THE CHILDMINDERS

Table 5.12: Simple logistic Regression of anxiety with the socio-demographic and personal profile of childminders in Kuala Lumpur and Selangor (*n*=150)

Variables	Anxiety		χ^2 statistic	OR	95% CI	*P* value
	Normal	**Mild to extremely severe**				
	***n* (%)**	***n* (%)**				
Gender						
Male	26 (53.1)	23 (46.9)	1.461	1.525	0.768-	0.227
Female	43 (42.6)	58 (57.4)		1.000	3.027	
Age						
≤40	32 (40.5)	47 (59.5)	2.028	0.626	0.328-	0.154
>40	37 (52.1)	34 (47.9)		1.000	1.195	
Married						
YES	37 (49.3)	38 (50.7)	0.671	1.308	0.687-	0.413
NO	32 (42.7)	43 (57.3)		1.000	2.490	
Race						
Malay	42 (45.2)	51 (54.8)	0.069	0.915	0.472-	0.792
Non-Malay	27 (47.4)	30 (52.6)		1.000	1.772	
Citizenship						
Malaysian	66 (46.5)	76 (53.5)	0.246	1.447	0.333-	0.620
Non-Malaysian	3 (37.5)	5 (62.5)		1.000	6.288	
Number of Children						
≤4	60 (44.4)	75 (55.6)	1.315	0.533	0.180-	0.251
>4	9 (60.0)	6 (40.0)		1.000	1.582	
Job						
Childminders	58 (45.0)	71 (55.0)	0.400	0.743	0.295-	0.527
Volunteers	11 (52.4)	10 (47.6)		1.000	1.871	
Combine household income (RM)						
≤3000	51 (42.1)	70 (57.9)	3.737	0.445	0.194-	0.053
>3000	18 (62.1)	11 (37.9)		1.000	1.023	
Paid of Salary						
YES	67 (45.9)	79 (54.1)	0.026	1.000	0.162-	0.871
NO	2 (50.0)	2 (50.0)		1.179	8.598	
Stability of Job						
YES	36 (38.3)	58 (61.7)	6.013	1.000	1.176-	**0.014***
NO	33 (58.9)	23 (41.1)		2.312	4.543	
Education background						
Non-tertiary	40 (43.5)	52 (56.5)	0.609	0.769	0.398-	0.435
Tertiary	29 (50.0)	29 (50.0)		1.000	1.487	

Attending early childhood training						
YES	28 (46.7)	32 (53.3)	0.018	1.046	0.543-	0.894
NO	41 (45.6)	49 (54.4)		1.000	2.014	
Experience in the field (years)						
≤8	45 (45.0)	55 (55.0)	0.121	0.886	0.449-	0.728
>8	24 (48.0)	26 (52.0)		1.000	1.750	
Experience in the facility (years)						
≤5	48 (45.7)	57 (54.3)	0.012	0.962	0.478-	0.915
>5	21 (46.7)	24 (53.3)		1.000	1.939	
Number of working hours daily						
≤12	33 (47.8)	36 (52.2)	0.172	1.146	0.602-	0.679
>12	36 (44.4)	45 (55.6)		1.000	2.183	
Working shift						
YES	24 (54.5)	20 (45.5)	1.830	1.000	0.303-	0.176
NO	45 (42.5)	61 (57.5)		0.615	1.247	
Number of childminder in children homes						
≤10	40 (43.0)	53 (57.0)	0.880	0.729	0.376-	0.348
>10	29 (50.9)	28 (49.1)		1.000	1.413	
Number of children in children homes						
≤50	41 (45.1)	50 (54.9)	0.083	0.908	0.471-	0.773
>50	28 (47.5)	31 (52.5)		1.000	1.751	
Staff and Children Ratio						
≤25	44 (42.7)	59 (57.3)	1.425	0.656	0.328-	0.773
>25	25 (53.2)	22 (46.8)		1.000	1.313	
Do childminder feels adequate						
YES	49 (49.5)	50 (50.5)	1.432	1.519	0.765-	0.231
NO	20 (39.2)	31 (60.8)		1.000	3.018	

*P is statistically significant at < 0.05 and <0.01

Table 5.12 shows the anxiety symptoms with the socio-demographic characteristics. Based on this table, there was significant association between the instability of the job with anxiety symptoms, with an odds ratio of 2.312, p=0.014. This would indicate that the childminders with unstable job were at greater odds of experiencing anxiety symptoms compared to childminders with stable job.

5.3.7 UNIVARIATE ANALYSIS OF STRESS AND STUDY VARIABLES OF THE CHILDMINDERS

Table 5.13: Simple logistic regression of stress with the socio-demographic and personal profile of childminders in Kuala Lumpur and Selangor (*n*=150)

Variables	Stress		χ^2 statistic	OR	95% CI	*P* value
	Normal	**Mild-extremely severe**				
	***n* (%)**	***n* (%)**				
Gender						
Male	37 (75.5)	12 (24.5)	4.185	2.195	1.025-	**0.041***
Female	59 (58.4)	42 (41.6)		1.000	4.702	
Age						
≤40	48 (60.8)	31 (39.2)	0.761	0.742	0.379-	0.383
>40	48 (67.6)	23 (32.4)		1.000	1.452	
Married						
YES	52 (69.3)	23 (30.7)	1.852	1.593	0.813-	0.174
NO	44 (58.7)	31 (41.3)		1.000	3.120	
Race						
Malay	58 (62.4)	35 (37.6)	0.284	0.829	0.415-	0.594
Non-Malay	38 (66.7)	19 (33.3)		1.000	1.656	
Citizenship						
Malaysian	92 (64.8)	50 (35.2)	0.719	1.840	0.441-	0.397
Non-Malaysian	4 (50.0)	4 (50.0)		1.000	7.674	
Number of Children						
≤4	86 (63.7)	49 (36.3)	0.051	0.878	0.284-	0.821
>4	10 (66.7)	5 (33.3)		1.000	2.715	
Job						
Childminders	83 (64.3)	46 (35.7)	0.047	1.110	0.429-	0.829
Volunteers	13 (61.9)	8 (38.1)		1.000	2.876	
Combine household income (RM)						
≤3000	73 (60.3)	48 (39.7)	3.658	0.397	0.150-	0.056
>3000	23 (79.3)	6 (20.7)		1.000	1.046	
Paid of Salary						
YES	94 (64.4)	52 (35.6)	0.350	1.000	0.076-	0.554
NO	2 (50.0)	2 (50.0)		0.553	4.043	
Stability of Job						
YES	58 (61.7)	36 (38.3)	0.577	1.000	0.652-	0.447
NO	38 (67.9)	18 (32.1)		1.310	2.634	
Education background						
Non-tertiary	55 (59.8)	37 (40.2)	1.837	0.616	0.305-	0.175
Tertiary	41 (70.7)	17 (29.3)		1.000	1.244	

Attending early childhood training						
YES	42 (70.0)	18 (30.0)	1.563	1.556	0.777-	0.211
NO	54 (60.0)	36 (40.0)		1.000	3.116	
Experience in the field (years)						
≤8	63 (63.0)	37 (37.0)	0.130	0.877	0.430-	0.718
>8	33 (66.0)	17 (34.0)		1.000	1.788	
Experience in the facility (years)						
≤5	66 (62.9)	39 (37.1)	0.198	0.846	0.406-	0.656
>5	30 (66.7)	15 (33.3)		1.000	1.765	
Number of working hours daily						
≤12	45 (65.2)	24 (34.8)	0.082	1.103	0.564-	0.774
>12	51 (63.0)	30 (37.0)		1.000	2.155	
Working shift						
YES	27 (61.4)	17 (38.6)	0.188	1.000	0.568-	0.665
NO	69 (65.1)	37 (34.9)		1.174	2.428	
Number of childminder in children homes						
≤10	56 (60.2)	37 (39.8)	1.522	0.643	0.318-	0.217
>10	40 (70.2)	17 (29.8)		1.000	1.299	
Number of children in children homes						
≤50	57 (62.6)	34 (37.4)	0.186	0.860	0.433-	0.666
>50	39 (66.1)	20 (33.9)		1.000	1.708	
Staff and Children Ratio						
≤25	64 (62.1)	39 (37.9)	0.496	0.769	0.370-	0.481
>25	32 (68.1)	15 (31.9)		1.000	1.598	
Does childminder feels adequate						
YES	72 (72.7)	27 (27.3)	9.626	3.000	1.481-	**0.002****
NO	24 (47.1)	27 (52.9)		1.000	6.076	

*P is statistically significant at < 0.05 and **<0.01

Table 5.13 shows the stress symptoms with the socio-demographic characteristics. Based on this table, there was significant association between male childminders with stress, with an odds ratio of 2.195, p=0.041. This would indicate that male child minders were at greater odds of experiencing stress compared to female childminders. The table also shows, there was significant association between childminders who perceived opinion the numbers of

childminders in the centre were adequate with stress, with an odds ratio 3.000, p=0.002. This would indicate that those who perceived opinion of adequate numbers of childminders in the centre were greater odds of experiencing stress compared to childminders who perceived opinion the amount of childminders in their centre were inadequate.

MULTIVARIATE LOGISTIC REGRESSION ANALYSIS

5.3.8 MULTIVARIATE LOGISTIC REGRESSION ANALYSIS BETWEEN EXHAUSTION WITH VARIABLES

Table 5.14 to 5.16 show the multivariate logistic regression analysis of the different domains of the MBI with socio-demographic characteristics which p<0.05 on univariate analysis and domains of DASS. Table 5.17 to 5.19 show the multivariate logistic regression analysis of the different domains of the DASS with socio-demographic characteristics which p<0.05 on univariate analysis and domains of MBI. It addresses the second and forth aim of the study.

A multivariate analysis using logistic regression was used for the analysis as similarly done in several similar studies (Aloha K., 2007)

Table 5.14: Multivariate logistic regression analysis of exhaustion with dependant and independent variables.

Variables	EX			
	Adjusted OR	**Wald**	**95% CI**	***P* value**
Attending Early Childhood Training		3.939	0.175-0.989	**0.047***
YES	0.416			
NO	1.000			
Working shift		6.019	1.279-9.066	**0.014***
NO	3.406			
YES	1.000			
Does childminder feels the staff is adequate		4.224	0.167-0.958	**0.040***
YES	0.400			
NO	1.000			
Depression		0.123	0.291-2.364	0.726
NO	0.829			
YES	1.000			
Anxiety		8.566	1.707-14.916	**0.003****
NO	5.046			
YES	1.000			
Stress		8.956	1.702-12.825	**0.003****
NO	4.673			
YES	1.000			

EX= Exhaustion; Depression based on DASS; Anxiety based on DASS; Stress based on DASS; *Significance level: *P*<0.05; ** *P*<0.01

From the univariate analysis conducted, the childminders who experienced exhaustion showed significant association with attending early childhood training, working in shift system and perceived opinion on adequacy of the childminders in the centre, with $p<0.05$. Multivariate logistic regression was conducted as shown in Table 5.14 above.

Table 5.14 shows the association of EX with the socio-demographic variables of the child minders and domains of DASS. Based on this table, there was significant association between those attended early childhood training with EX, with an adjusted odds ratio of 0.416 (95% CI 0.175, 0.989, p=0.047). This would indicate that those childminders who attended early childhood training were at lesser odds of experiencing the exhaustion compared to those without early childhood training. The table shows there was significant association between those who were not working in shift system with exhaustion, with an adjusted odds ratio of 3.406 (95% CI 1.279, 9.066, p= 0.014). This would indicate those childminders who were not working in the shift system were greater odds of experiencing exhaustion compared to those who were working in shift system. The table also shows that there was significant association between those childminders who perceived opinion the number of childminders in the centre were adequate with exhaustion, with an adjusted odds ratio 0.400 (95% CI 0.167, 0.958, p=0.040). This would indicate that the childminders who perceived opinion the number of childminders in the centre were adequate were at lesser odds of experiencing exhaustion compared to those childminders who perceived opinion of inadequacy of the number of childminders in the centre. Based on the table, show that there was significant association between those childminders who did not experienced anxiety symptoms with exhaustion, with an adjusted odds ratio 5.046 (95% CI 1.707, 14.916, p=0.003). This would indicate that the childminders who did not experience anxiety symptoms were at greater odds of experiencing exhaustion compared to those who had anxiety symptoms. The table also shows that there was significant association between those childminders who did not experience stress symptoms

with exhaustion, with an adjusted odds ratio 4.673 (95% CI 1.702, 12.825, p=0.003). This would indicate that the childminders who did not experience stress symptoms were at greater odds of experiencing exhaustion compared to those who had anxiety symptoms.

The table also shows childminders who had depressive symptoms were more at greater odds of experiencing exhaustion compared to those without depressive symptoms but statistically not significant with p<0.726.

5.3.9 MULTIVARIATE LOGISTIC REGRESSION ANALYSIS BETWEEN PERSONAL EFFICACY AND VARIABLES

Table 5.15: Multivariate logistic regression analysis of personal efficacy with dependant and independent variables.

Variables	PE			
	Adjusted OR	**Wald**	**95% CI**	***P* value**
Job		4.721	1.150-15.194	**0.030***
Childminder	4.181			
Volunteer	1.000			
Depression		0.040	0.376-2.214	0.841
NO	0.913			
YES	1.000			
Anxiety		0.836	0.606-3.971	0.360
NO	1.551			
YES	1.000			
Stress		3.113	0.180-1.094	0.078
NO	0.078			
YES	1.000			

PE= Personal efficacy; ; Depression based on DASS; Anxiety based on DASS; Stress based on DASS; *Significance level: $P<0.05$; *** $P<0.001$

From the univariate analysis conducted, the child minders who experienced decrease sense of personal efficacy showed significant association with the type of job of the childminder whether the staff or the volunteer, with $p<0.05$. Multivariate logistic regression was conducted as shown in Table 5.15 above.

Table 5.15 shows the decrease personal efficacy association with the socio-demographic variables of the childminders and the domains of DASS. Based on this table, there was significant association between those childminders (staff) with decrease sense of personal efficacy, with an odds ratio of 4.181 (95% CI 1.150, 15.194, p=0.009). This would indicate that those childminders (staff) were at greater odds of experiencing the decrease sense of personal efficacy compared to those worked as volunteers. The table also shows that there were greater odds of childminders who had depressive symptom, those who had no anxiety symptoms and those with stress symptoms of experiencing decrease personal efficacy but there were statistically insignificant, p= 0.841, p=0.360 and p=0.078 respectively. There was also no

statistically significant if comparing the cynicism with the socio-demographic characteristics variables and DASS domains.

5.3.10 MULTIVARIATE LOGISTIC REGRESSION ANALYSIS BETWEEN CYNICISM AND VARIABLES

Multivariate logistic regression analysis of cynicism with dependant and independent variables could not be generated in view of no significant variables ($p \leq 0.05$) in the univariate analysis.

5.3.11 MULTIVARIATE LOGISTIC REGRESSION ANALYSIS BETWEEN BURNOUT (EX+CY) AND VARIABLES

Table 5.16: Multivariate logistic regression analysis of combination of emotional exhaustion and cynicism with dependant and independent variables.

Variables	EX+CY			
	Adjusted OR	**Wald**	**95% CI**	***P* value**
Attending Early Childhood Trainning		5.954	0.113-0.788	**0.015***
YES	0.298			
NO	1.000			
Does Childminder feels the amount of the childminders in the centre are adequate?		1.120	0.249-1.515	0.290
YES	0.614			
NO	1.000			
Depression		0.293	0.271-2.097	0.588
NO	0.754			
YES	1.000			
Anxiety		2.976	0.100-1.158	0.084
NO	0.340			
YES	1.000			
Stress		7.275	0.087-0.680	**0.007***
NO	0.244			
YES	1.000			

EX+CY= Burnout; Depression based on DASS; Anxiety based on DASS; Stress based on DASS; *Significance level: $P<0.05$; *** $P<0.001$

From the univariate analysis conducted, the childminders who experienced burnout showed significant association with attending early childhood training and perceived opinion on adequacy of the childminders in the centre, with $p<0.05$. Multivariate logistic regression was conducted as shown in Table 5.16 above.

Based on this table, there was significant association between those attended early childhood training with burnout, with an adjusted odds ratio of 0.298 (95% CI 0.113, 0.788, p=0.015). This would indicate that those childminders who attended early childhood training were at lesser odds of experiencing the burnout compared to those without early childhood training. The table also shows that there was significant association between those who had no stress

symptoms with burnout, with adjusted odds ratio of 0.244 (95% CI 0.087, 0.680, p=0.007). This would indicate that those childminders who did not has stress symptoms lesser odds of experiencing the burnout compared to those who had stress symptoms. In the table also shows, there were greater odds in those childminders who perceived opinion the number of childminders in the centre were inadequate, childminders with depressive symptoms and childminders with anxiety symptoms on burnout but it were not statistically significant, p=0.290, p=0.588 and p=0.084 respectively.

5.3.12 MULTIVARIATE LOGISTIC REGRESSION ANALYSIS BETWEEN DEPRESSION AND VARIABLES

Table 5.17: Multivariate logistic regression analysis of depression with dependant and independent variables.

Variable	Depression			
	Adjusted OR	**Wald**	**95% CI**	***P* value**
Age		0.316	0.524-3.215	0.574
≤40	1.297			
>40	1.000			
Married		2.442	0.237-1.176	0.118
YES	0.528			
NO	1.000			
Number of children		5.610	1.448-50.388	**0.018***
≤4	8.541			
>4	1.000			
Combine household income (RM)		0.127	0.417-3.532	0.722
≤3000	1.214			
>3000	1.000			
Experience in the field (years)		1.011	0.623-4.342	0.315
≤8	1.645			
>8	1.000			
EX		4.861	0.172-0.902	**0.027***
NO	0.394			
YES	1.000			
CY		0.000	0.429-2.329	>0.995
NO	1.000			
YES	1.000			
PE		0.969	0.310-1.474	0.325
YES	0.676			
NO	1.000			
EX+CY		5.040	0.093-0.851	**0.025***
NO	0.281			
YES	1.000			

EX= Exhaustion; CY=Cynicism; PE= personal efficacy; *Significance level: *P*<0.05; *** *P* <0.001

From the univariate analysis conducted, the childminders who experienced depressive symptoms showed significant association with age of childminders, marital status, number of children, combined household income and their years of experience in the field, with p<0.05. Multivariate logistic regression was conducted as shown in Table 5.17 above.

Based on this table, there was significant association between those childminders who has 4 or less number of children with depressive symptoms, with an adjusted odds ratio 8.541 (95% CI 1.448, 50.388, p=0.018). This would indicate that the childminders who had 4 or less number of children were at greater odds of experiencing depressive symptoms compared to those childminders who had more than 4 children. There was significant association between childminders who did not experience exhaustion with depressive symptoms, with an adjusted odds ratio 0.394 (95% CI 0.172, 0.902, p=0.027). This would indicate the childminders who did not experience exhaustion were at lesser odds of experiencing depressive symptoms compared to those childminders who were exhausted. The table also show significant association between childminders who did not experience burnout with depressive symptoms, with an adjusted odds ratio 0.281 (95% CI 0.093, 0.851, p=0.025). This would indicate the childminders who did not experience burnout were at lesser odds of experiencing depressive symptoms compared to those child minders who were burnout.

In the table also shows, there were greater odds in those childminders who aged 40 years and less, childminders who were unmarried, who had combined household income RM3000 and less, childminders who had 8 years and less experienced working in the field and childminders who had decrease personal efficacy on depressive symptoms but it were not statistically significant, p=0.574, p=0.118, p=0.722, p=0.315 and p=0.325 respectively.

5.3.13 MULTIVARIATE LOGISTIC REGRESSION ANALYSIS BETWEEN ANXIETY AND VARIABLES

Table 5.18: Multivariate logistic regression analysis of anxiety with dependant and independent variables.

Variable	Anxiety			
	Adjusted OR	**Wald**	**95% CI**	***P* value**
Stability of the Job		8.324	0.128-0.675	**0.004***
NO	0.294			
YES	1.000			
EX		17.355	0.064-0.371	**0.001*****
NO	0.154			
YES	1.000			
CY		0.024	0.402-2.177	0.877
NO	0.936			
YES	1.000			
PE		0.166	0.382-1.878	0.684
YES	0.848			
NO	1.000			
EX+CY		3.143	0.105-1.120	0.076
NO	0.342			
YES	1.000			

EX= Emotional exhaustion; CY=Cynicism; PE= Personal efficacy; EX+CY: Burnout;
*Significance level: *P*<0.05; *** *P* <0.001

From the univariate analysis conducted, the childminders who experienced anxiety symptoms showed significant association with stability of the job, with p<0.05. Multivariate logistic regression was conducted as shown in Table 5.18 above.

Based on this table, there was significant association between those childminders who were temporary or contract worker with anxiety symptoms, with an adjusted odds ratio 0.294 (95% CI 0.128, 0.675, p=0.004). This would indicate that the childminders who were temporary and contract worker were at lesser odds of experiencing anxiety symptoms compared to those childminders who worked permanently. Based on this table also, there was significant association between childminders who were not exhausted with anxiety symptoms, with an adjusted odds ratio 0.154 (95% CI 0.064, 0.371, p<0.001). This would indicate that the

childminders who were not exhausted were at lesser odds of experiencing anxiety symptoms compared to those childminders who were exhausted.

In the table also shows, there were greater odds in those childminders who had cynicism, decrease personal efficacy and child minders who had experienced burnout with anxiety symptoms but it were not statistically significant, p=0.877, p=0.684 and p=0.076 respectively.

5.3.14 MULTIVARIATE LOGISTIC REGRESSION ANALYSIS BETWEEN STRESS AND VARIABLES

Table 5.19: Multivariate logistic regression analysis of stress with dependant and independent variables.

Variable	Stress			
	Adjusted OR	**Wald**	**95% CI**	***P* value**
Gender		4.697	0.126-0.901	**0.030***
Male	0.337			
Female	1.000			
Does Childminder feels adequate?		2.762	0.205-1.140	0.097
YES	0.483			
NO	1.000			
EX		11.615	0.079-0.505	**0.001***
NO	0.200			
YES	1.000			
CY		0.153	0.300-2.233	0.696
NO	0.819			
YES	1.000			
PE		3.690	0.183-1.017	0.055
YES	0.431			
NO	1.000			
EX+CY		6.573	0.082-0.717	**0.010***
NO	0.243			
YES	1.000			

EX= Exhaustion; CY= Cynicism; PE= Personal Efficacy; EX+CY= Burnout
*Significance level: *P*<0.05; *** Significance level: *P* <0.001

From the univariate analysis conducted, the childminders who experienced stress symptoms showed significant association with gender of the childminders and perceived opinion on adequacy of the numbers of childminders in the centre, with p<0.05. Multivariate logistic regression was conducted as shown in Table 5.19 above.

Based on this table, there was significant association between childminders' gender with stress symptoms, with an adjusted odds ratio 0.337 (95% CI 0.126, 0.901, p=0.030). This would indicate that the male childminders were at lesser odds of experiencing stress symptoms compared to those female childminders. Based on the table, there was significant association

between childminders who did not experience exhaustion with stress symptoms, with an odds ratio 0.200 (95% CI 0.079, 0.505, p=0.001). This would indicate the childminders who did not experience exhaustion were at lesser odds of experiencing stress symptoms compared to those exhausted childminders. The table also shows significant association between childminders who did not experience burnout with stress symptoms, with an adjusted odds ratio 0.243 (95% CI 0.082, 0.717, p=0.010). It would indicate the childminders who did not experience burnout were at lesser odds of experiencing stress symptoms compared to those exhausted childminders.

In the table also shows, there were greater odds in those childminders who perceived opinion of the number of childminders in the centre were inadequate, child minders with cynicism and childminders who experienced decrease sense of personal efficacy with stress symptoms but it were not statistically significant, p=0.097, p=0.696 and p=0.055 respectively.

5.3.15 CORRELATION BETWEEN MBI-GS DOMAINS AND DASS SUBSCALES

The test below helps to fulfil the study's' fifth aim, which is the association between burnout and psychological distress as measured by the DASS. The DASS is one of the most reliable and widely used instruments to assess psychological distress.

Table 5.20: Correlation between DASS and Maslach Burnout Inventory (MBI) domains (*n*=150)

MBI-GS	DASS		
	Depression	**Anxiety**	**Stress**
	***r* (*P* value)**	***r* (*P* value)**	***r* (*P* value)**
EX	**0.51 (<0.001)[b]**	**0.58 (<0.001)[a]**	**0.63 (<0.001)[a]**
CY	**0.37 (<0.001)[b]**	**0.35 (<0.001)[a]**	**0.38 (<0.001)[a]**
PE	**-2.63 (<0.001)[b]**	**-1.88 (<0.05)[b]**	**-2.10 (<0.01)[b]**
EX+CY	**0.51 (<0.001)[b]**	**0.55 (<0.001)[a]**	**0.60 (<0.001)[a]**
EX+PE	**0.21 (<0.01)[b]**	**0.29 (<0.001)[a]**	**0.32 (<0.001)[a]**
PE+CY	0.04 (0.656)[b]	1.11 (<0.177)[a]	0.123 (<0.135)[a]
EX+CY+PE	**0.30 (<0.001)[b]**	**0.36 (<0.001)[a]**	**0.39 (<0.001)[a]**

[a] Pearson's correlation coefficient; [b] Spearman's correlation coefficient
[*]Significance level: [*]*P*<0.05;[**] *P* <0.01; [***] *P* <0.001
If r value 0.00-0.25 little or no correlation; 0.26-0.49 low correlation; 0.50-0.69 moderate correlation; 0.70-0.89 high correlation and 0.90- 1.00 very high. (Munro B.H., 2000)

Table 5.20 shows the correlation between depressive, anxiety and stress symptoms with domains of MBI (emotional exhaustion (EX), cynicism (CY) and personal efficacy (PE)). There are significant correlation between the domains of DASS and domains of MBI including the combination EX+CY, EX+PE and EX+CY+PE.

Table 5.20.1: Correlation between depression, anxiety and stress symptoms (DASS) with emotional exhaustion (MBI-GS)

		DASS		
		Depression	**Anxiety**	**Stress**
Emotional Exhaustion (EX) (MBI-GS)	**Correlation coefficient, *r***	0.51[b]	0.58[a]	0.63[a]
	***P* value**	<0.001***	<0.001***	<0.001***

[a] Pearson's correlation coefficient; [b] Spearman's correlation coefficient
*** Significance level: *P* <0.001

The DASS domains are significantly moderate correlation with emotional exhaustion domain, with (r=0.51, p<0.001), (r=0.58, p<0.001) and (r=0.63, p<0.001).

Table 5.20.2: **Correlation between depression, anxiety and stress symptoms (DASS) with cynicism (MBI-GS)**

		DASS		
		Depression	**Anxiety**	**Stress**
Cynicism (CY) (MBI-GS)	**Correlation coefficient, *r***	0.37[b]	0.35[a]	0.38[a]
	***P* value**	<0.001***	<0.001***	<0.001***

[a] Pearson's correlation coefficient; [b] Spearman's correlation coefficient
*** Significance level: *P*<0.001

The DASS domains are significantly low correlation with cynicism domain, with (r=0.37, p<0.001), (r=0.35, p<0.001) and (r=0.38, p<0.001).

Table 5.20.3: **Correlation between depression, anxiety and stress symptoms (DASS) with personal efficacy (MBI-GS)**

		DASS		
		Depression	**Anxiety**	**Stress**
Personal efficacy (PE) (MBI-GS)	**Correlation coefficient, *r***	- 2.63[a]	-1.88[a]	-2.10[a]
	***P* value**	<0.001***	<0.021*	<0.01**

[a] Spearman's correlation coefficient
*Significance level: *P* <0.05
**Significance level: *P* <0.01
*** Significance level: *P* <0.001

Depression symptoms are significantly low correlation with personal efficacy domain, with (r= - 2.63, p<0.001), but anxiety and stress symptoms little correlation with personal efficacy domain, (r= - 1.88, p<0.021) and (r= -2.10, p<0.01). Depression, anxiety and stress symptoms are inversely correlated with personal efficacy.

Table 5.20.4: Correlation between depression, anxiety and stress symptoms (DASS) with combination of emotional exhaustion and cynicism (MBI-GS)

		DASS		
		Depression	**Anxiety**	**Stress**
Emotional exhaustion (EX) + cynicism (CY) MBI-GS	**Correlation coefficient, *r***	0.51[b]	0.55[a]	0.60[a]
	***P* value**	<0.001***	<0.001***	<0.001***

[a] Pearson's correlation coefficient; [b] Spearman's correlation coefficient
*** Significance level: *P* <0.001

The DASS domains are significantly moderate correlation with burnout (emotional exhaustion +cynicism) domains, with (r=0.51, p<0.001), (r=0.55, p<0.001) and (r=0.60, p<0.001).

CHAPTER SIX

DISCUSSION

Childminders in residential children's homes are significant figures in the lives of the children that live there. They look after the children around the clock and play an essential role in their upbringing and nurturing. The responsibility of the child minder is indeed huge. Not only is their role complex and demanding, but also one which is varied. Despite the intense nature of their work, there is worrying evidence that in many settings, these workers often lack adequate training, and receive insufficient support and assistance. Therefore these factors may negatively impact on the staff's wellbeing and hence their ability to care for the children. This study is therefore aimed to examine the proportion of burnout and psychological distress amongst childminders, in the residential NGO's children homes at KL and Selangor.

First, the aims were to determine proportion of childminders with burnout, and the proportion of childminders with symptoms of psychological distress, namely, symptoms of depression, symptoms of anxiety and symptoms of stress. Secondly, the study aimed to examine the association between sociodemographic variables on burnout as well as these symptoms of psychological distress and thirdly; it aimed to study the relationship between burnout and psychological distress.

6.1 SYNOPSIS OF THE MAIN FINDINGS

In this study of childminders in KL and Selangor, close to a third of the participants reported high levels of exhaustion, with 15.3% having moderate level of exhaustion. One third of the participants reported moderate cynicism, with another third, high cynicism. In terms of low personal efficacy, 36% reported this. The proportion of severe burnout among childminders in NGO's children homes in KL and Selangor was 24.7 % (Table 5.3).

Symptoms of psychological distress were reported where 45.3% of the childminders had depressive symptoms; 54% demonstrated anxiety symptoms while 36%, stress symptoms.

From the multivariate regression analysis, childminders who attended early childhood training or who perceived that there was adequate staff, had lesser odds on developing EX Childminders who were not working in shift system had greater odds of experiencing emotional exhaustion compared to those that did.. Even in the absence of anxiety or stress symptoms, there were childminders that demonstrated exhaustion. The childminders had a decreased sense of PE compared to the volunteers.

Other sociodemographic variables such having 4 or more children, posed greater odds of having depressive symptoms, while not being Emotionally Exhausted and not experiencing severe burnout posed lesser odds of experiencing depressive symptoms.

In terms of anxiety symptoms, childminders who had job stability and were emotionally exhausted, were more prone to have anxiety.. Similarly, stress symptoms were more likely in those who were Exhausted, as well as being severely burnout.

This study found an association between the domain of burnout with depressive symptoms, anxiety symptoms and stress (Table 5.20). The DASS and all of its sub-scales were moderately associated with emotional exhaustion (Table 5.20.1) and severe burnout (combination of

EX+CY) (Table 5.20.4). The DASS and all of its sub-scales had low correlation with cynicism (Table 5.20.2) and personal efficacy (Table 5.20.3)

6.2 SOCIO-DEMOGRAPHIC CHARACTERISTICS OF THE STUDY PARTICIPANTS

The following paragraph discuss on the principal findings of the socio-demographic characteristic of the childminders in this study and comparing it with other similar studies.

In this study, the majority of the childminders were females. The female childminders were two third (67.3%) compared to the males childminders (32.7%). Generally the childminder profession is dominated by females, as women account for approximately 98% of all Canadian and American child care professions (Statistics Canada, 1992; Abel & Nelson, 1990b) and 97% of licensed child-care workers are female (Cubed, 2002). Majority of workers in child day care centres in Norway are 90% female (Winsvoid&Guldbrandsen 2009).

The child-care professions is typically perceived as a traditional female occupation, along with other caring professions such as teaching and nursing (Cancian&Oliker, 2000). This finding was similar to a study done by Barford S.W. &Whelton W.J. (2010). In their cross sectional study of 94 childminders from eight government and NGO's child care facilities using MBI-HS, the participants were consisted of 69.1% female respondents and 30.9% male respondents.

The range of the age of participants in this study was 18 to 70 years. The mean age for participants was 40.64 years. Other studies showed respondents were between 19-59 years old with an average age 26 years old (Emolina I., 2011) and a range between 20 – 56 years with an average age of 32.8 (Barford S.W. &Whelton W.J. ,2010). In another study eighty-one percent of child care workers were 40 or younger (Cubed, 2002).

In terms of ethnicity, 62% of the participants were noted to be Malay followed by Indians and Chinese, with 26.0% and 9.3% respectively. This was unexpected as the Chinese ethnic origin usually makes up the second majority of the population in the country.

The Malaysian Department of Statistics reported Bumiputera (67.4%), Chinese (24.6%), Indian (7.3%) and others (0.7%). The Malays was the predominant ethnic group in Peninsular Malaysia (63.1%). The total population was 28.3 million of which 91.8% were Malaysian and 8.2% were non-Malaysian.

From the 30 children homes, 20 Malay children homes and 10 Non-Malay children homes were represented. The possible explanation for this observation is that the Chinese and Indian childminders worked at the Non-Malay NGO's children homes, chain-based centres, faith-based or church affiliated children homes. The investigator did not get cooperation from some of the church affiliated children homes, thus Chinese childminders were under represented. The investigator attempted to recruit several other chain-based centres, but the directors declined to participate.The chain-based centres were the chain of children homes which owned by the same organization. Some of these directors cited corporate policies regarding visitors as a factor in their decision not to participate. The factors why people refuse to participate in the research are failure to follow traditional customs, lack of study benefits, superstition, poor informed consent procedures, ignorance of health research, fear of strangers, a lack of cultural sensitivity, poor timing, and previous bad research experience (Mfutso-Bengo J. 2008). The reasons childminders from church affiliated may not want to cooperate to participate in this research may because they did not realize the study benefits, ignorance of health research, previous bad research experience, fear of strangers or poor timing.

There are no previous local studies on childminders to compare with this study. But similar problem occurred in the study done by Witherell S.L (2013), 101 childminders were recruited

from 14 child care centres located in the metropolitan Detroit and south eastern Michigan area. Only four centres were faith-based or affiliated with a church and one was chain-based centre. The researcher also attempted to recruit several other chain based centred but declined.

In this study, half of the participants were married (50%), while 37.3% were single followed by widowed and divorced, 6.7% and 6.0% respectively. The Malaysian Department of Statistics (2010) reported that 59.6% of the population is married while 35% of adults remain single, with 4.5% widowed and 0.8% divorce. This data is parallel to with the national statistics.

This finding was similar to a cross sectional study done on the 61 childminders of six rural residential children centres in United States, which reported 53% of the respondents were married, 37.5% were single, and 15.6% divorced (Decker J.T et al, 2002). The difference between these two studies was this study done in urban area of Malaysia, the previous study done in rural area of United State.

Amongst the childminders that were included in this study, 52.7% had completed secondary education. This is followed by 38.7% had completed their tertiary education. A low percentage of these child minders (8.7%) had only completed primary education. Contrary with a study done among childminders in rural area of United State demonstrated 70.4% had completed tertiary education, 23.4% had completed secondary education and another 6.3% were missing data (Decker J.T et al, 2002), suggesting that the education levels in this study, represented lower educational levels.

The education level of childminder is frequently included in studies of the quality of child care. Higher educational background of childminders is correlated with higher levels of quality (Burchinal, Cryer, Clifford, & Howes, 2002; Clarke-Stewart et al, 2002; Vandell, 2004). The well-educated childminders show more warmth and support toward children, organize materials better, engage in more age-appropriate play activities, and provide more stimulation

for children's language and cognitive development. They are also less likely to hold authoritarians views towards nurturing compared to the less educated childminders (NICHD ECCRN, 1996).The level education background also associated with the level of burnout. The higher level of education background among workers despite being related with low exhaustion but had decreased sense of personal efficacy, while lower level of education background related to higher level of exhaustion and cynicism.

In this study, the mean combine household income of the childminders was RM2687 and median was RM1600 per month. The Malaysia Department of Statistics (2014) reported, mean monthly household income for Malaysian has increase from RM5000 (2012) to RM6141 (2014). This showed that the childminders in KL and Selangor had low combine household income.

6.3 THE PROPORTION OF BURNOUT

More than quarter of the childminders (28.7%) have high levels of exhaustion while 15.3% have moderate level of exhaustion. Two third of the childmindershad moderate and high levels of cynicism, with a third of them experiencing high levels of Cynicism. Meanwhile, more than a third of our childminders had a low personal efficacy. Alarming still was that almost a quarter of the childminders had severe burnout.

These findings are crucial, as it illustrates the high proportions of our childcare professionals were experiencing burnout. This study reported great numbers of childminders experienced high level of exhaustion and cynicism, along with high level of decreased sense of personal efficacy.

These findings was similar to a cross sectional study done on the 61 childminders of six rural residential children centres in United State using MBI. It reported 22.0% of the childminders had high levels of exhaustion, half the childminders had moderate and high level of cynicism

with 33.0% and 19% respectively, and 54.7% low sense of personal efficacy (Decker J.T et al, 2002).

Other studies done among childcare workers in day care centres in the city of Iraklio, Crete Island, Greece using MBI-ES demonstrated lower level of exhaustion compared to kindergarten teachers but higher levels of depersonalisation and only few feeling of personal accomplishment (Rentzou K., 2013). A study done by Seti C.L. (2008), in a cross sectional study of 5871 Finnish employees using MBI-GS and CIDI in Finland reported a severe level of burnout was 2.3%. This was much lower than the 24.7% that we attained in this study. Therefore the variables, whether it be the individual or the organization itself, that influences burnout needs to be explored, in order to fully understand the burnout perceived by childminders.

6.4 THE PROPORTION OF PSYCHOLOGICAL DISTRESS

In this study, the proportion of depressive symptoms of the participants is 45.3%. These childminders had mild to extremely severe levels of depressive. The proportion of severe and extremely severe levels of depressive symptoms or suspected depressive disorder in the participants is 5.3%.

Higher proportion of depressive symptoms were found in a large study of 1000 female childminders conducted by Hamre and Pianta (2004), where 9% of the childminders demonstrated high levels of depressive symptoms. A study done by Seti C.L. (2008), in a cross sectional study of 5871 workers in Finland revealed prevalence of mild depressive disorder was 10.8% and an alarming 45.3% for severe depressive disorder.

Fish et al (2005) in the metro-Detroit area, Michigan, United State found that 27% of female childminders demonstrated significant depressive symptoms.. Therefore, in comparison, our levels of depressive symptoms are relatively higher. This is indeed of concern.

Are challenges that our child minders face in our country being neglected? There is a worrisome lack of local evidence investigating the emotional and mental health of our childminders, who are already responsible for the welfare of very vulnerable children, from disadvantaged back rounds.

In the context of anxiety symptoms, 54% of the participants had mild to extremely severe levels of anxiety symptoms. Among these participants, 16.7% of them experienced severe to extremely severe levels of anxiety symptoms (suspected or possible anxiety disorder). A cross sectional study of 5871 employees using MBI-GS and CIDI in Finland revealed prevalence of mild anxiety disorder was present among 7.6% of workers, while severe anxiety disorder was 21.0% (Seti C.L. 2008),

Looking into levels of stress, this study found 36% of the childminders had stress ranging from mild to extremely severe levels of stress. Whereby, 5.3% of the participants experienced severe to extremely severe levels of stress symptoms. The findings are comparable to the prevalence of work stress in other Malaysian settings: 23.7% among nurses (Harmy 2001), 21.5% among clerks (Harmy 2001), and 17.5-23.3% among medical lecturers (Huda et. al 2004) .

These information are important because it illustrates the proportion of the high risk group of childminders vulnerable for depressive disorders, anxiety disorders and stress. These groups were more likely to interact negatively with children, were more withdrawn and less sensitive toward the children in their care (Hamre&Pianta, 2004). The childminders that suffer from psychological distress were more likely to report that the children under their care were not cooperative and had behaviour problems. (Clarke-Stewart et al, 2002).

6.5 PREDICTORS FOR BURNOUT

Another contribution of this study is an examination on the role of childminder's factors and socio-demographic characteristics and psychological distress on burnout. The following paragraphs discuss on the findings of this study based on the research hypotheses.

6.5.1 Relationship working in shift system and exhaustion

The childminders who did not work in shift system was found significantly associated with exhaustion with p=0.014. Exhaustion was 4 times more common in childminders who did not work in shift system with an adjusted odds ratio of 3.406. Sixty six per cent of childminders who did not work in the shift system reported higher risk of exhaustion. From this 66% (n=99), 78 of the childminders were staying in the facilities and direct contact with the children for 24 hours (residential childminders) and 21 of the childminderworked during normal working hours. This implies that the long working hours precipitated exhaustion among the childminders.

Similar findings were found in a study of 2549 employees of Norweigian child day care centres using MBI-HS and socio-demographic data. The results corresponded with this present study where by the researchers reported the long hours worked per week significantly correlated with emotional exhaustion (Lovgren Mette 2010).

The demands on the childminders are very high. Childminders are often considered as the "front lines" of care who are responsible in the children's safety and care, supervision, emotional support, discipline, homework and crisis management for 24 hours a day (Bertolini&Thompson 1999). Despite of the main role of responsibilities, the pay for the residential childmindersin Malaysia is comparitively low. In this study the mean combined salary of childminders was RM2687, compared to $8.71 an hour which also perceived as low by United State Department of Labor, 2002.

A review concluding that long working hours were a risk factor of mental health disorders, had most of the evidence related to situations where working hours exceeded 50 hours per week (Spurgeon et al 1997). A previous study also had a similar finding whereby long hours of work were related to increased work-family conflict and therefore indirectly, to psychological distress among employees (Major et al 2002). Again, it explained the finding in this study whereby the mean working hours is more than 50 hours per week.

Interestingly enough, a recent study has shown that contrary to popular belief, working hours was not related to psychological distress. It showed that there was no difference between respondents working less than 36 hours per week and respondents working more than 36 hours per week with respect to the level of psychological distress 15 months later (Eriksen et al 2006).

In the context of Malaysia, the childminders of the NGO's residential childrens' homes are working in a shift or without working system. If in a shift system, they have 3 shifts perday and work 8 hours per day. If without working shift, they work 9 hours during office hours, 9 hours to 16 hours perday or they have to be in the same facility for 24 hours or standby for 24 hours (residential childminders). The difference with the government run residential childrens' homes is that the hospital attendants ("Pembantu Perawatan Kesihatan" (PPK)) and "Pembantu Kebajikan Masyarakat" (PKM) are trained to be the childminders in the homes. They work in shift system with 3 shifts (8 hours per day).

Whereas, in the United Kingdom (UK), it was suggested maximum hours of working should be no longer than ten hours or shorter than two-and-a half hours to protect children's wellbeing and support a positive early education experience (www.nurseryworld.co.uk)

6.5.2 Relationship between attending early childhood training and exhaustion and severe burnout

Another variable that was significantly associated with burnout among our group of childminders was early childhood training. The childminders who had not attended early childhood training were found significantly associated with exhaustion (p=0.047) and severe burnout with p= 0.015. The childminders who have not attended the early childhood training had higher risk of developing exhaustion and severe burnout. From the finding of this study, two third of childminders (n=90) did not attend any early childhood training before or after they started their work. From this group, 46 childminders had a high risk of developing exhaustion and 29 are prone to have severe burnout. This revealed the importance of attending early child training on combating burnout, suggesting that when staff were equipped and provided with adequate knowledge and the know-how to handle the demands of their job, the risk of exhaustion, severe burnout, and depression is reduced.

Training is reported to be one of the important factors in influencing quality of child-care services (Arnett, 1989b). The childminders who participate in training programs can benefits not only from the training they receive but also from the support received from the trainers and other childminders. By attending this session, it portrays to the childminders that their work is valued and important, which could give them a refreshed sense of interest in the field. Training also has a positive effect on childminder professionals' attitudes and perceptions towards the children, improving their competence. These proven by a study done by Fukkink and Lont (2007) which demonstrated how childminders improved on the knowledge, attitudes, and their competency. Training and further education programmes play the vital part in describing the childminder's profession. As mention above, the importance of training as a key factor is not only improving the status of the childminder as a profession but it is also improving the

childminders' practice for the benefit of the children through a team approach in the residential children homes (Kreuger R.A., 1994).

In Malaysia, both government run and NGO's residential childrens' homes provide their childminders with trainings and courses such as social work training, early childhood training, handling disabled children, capacity building and counselling. There were no intervention programs such as stress management training, coping skills training, problems solving courses or burnout prevention workshop for the childminders done in both homes.

6.5.3 Relationship between childminders satisfaction of the number of staff and exhaustion

The childminders who perceived opinion of inadequacy of the number of staff in their centres were found significantly associated with exhaustion with p=0.014. They had higher risk of developing exhaustion compared to those who perceived adequate staff in their centres. In this study 34% of the participants felt the staff were inadequate. From the 51 out of 150 participants, 31 were found to be exhausted. This finding shows that understaffed environment in childrens' homes is an indicator for exhaustion. If a facility suffers from understaffing, the workers are being burden with the extra workload. Prolonged extra workload may lead to development of exhaustion among workers. The appearance of exhausted feeling also depends on the support from working colleagues and organization support. Lack of support from either one could precipitate the development of exhaustion.

A study done among 288 human service workers in a non-urban setting in Central California demonstrated that high workload was found to be the most significant predictors in determining job burnout compared to age, years of experience and education (Thomas et al, 2010).

In Malaysia, the current situation is by law, the childminder to children ratio is 1:5 (below 7 years old) and 1:18 (7 and above) in NGO's residential childrens' homes. According to the

"Akta Pusat Penjagaan dan Akta Jagaan", the requirement of the childminder to children ratio is,

- < 1 year – 1:3
- 1-3 years – 1:5
- 3-4 years – 1:10
- 4-18 years – 1:18

According to the Health and Social Care Board, Northern Ireland, the minimum standard of childminder to children ratio is

- 0-2 years- 1:3
- 2-3 years- 1:4
- 3-12 years- 1:8 (early-years.org)

The minimum standard of childminder to sleeping children ratio is

- 0-18months- 1:5
- 18months-2 and half years- 1:14
- 2 and half years up to 4 years- 1: 18
- 4 years and older- 1:25 (early-years.org)

6.5.4 Relationship between being the childminder with decrease personal efficacy

The participants who work as the childminders were found significantly associated with decrease sense of personal efficacy with p=0.030. Decrease sense of personal efficacy was 5times more risk in childminders compared to the volunteers with an adjusted odds ratio of 4.181. This study also found 39.5% of childminders were having decrease sense of efficacy.This indicate that the childminders experienced more decrease sense of personal

efficacy compared to the volunteers. The present study also indicated that childminders were fairly engaged with their job, but at the same time, felt a reduced sense of pride and accomplishment in their field.

On the contrary,a cross sectional study of 94 childminders from eight government and NGO's child care facilities using MBI-HS demonstrated that even though childminders experience high level of exhaustion, they had low level of depersonalization and high level of personal accomplishment (Barford S.W. &Whelton W.J., 2010).

In 2013, Rentzou K. did a research among 62 childcare professionals and 42 kindergarten teachers who were working in day care centres and kindergartens in the city of Iraklio, Crete Island, Greece using MBI-ES demonstrated lower level of exhaustion among childcare professionals compared to kindergarten teachers but higher levels of depersonalisation and only few of the childcare professions had feeling of personal accomplishment.

This study finding might not be able to portray the difference in personal efficacy bertween the 2 groups accurately, as the number of childminders in this study were 129 while volunteers were 2. Other factors contributing to low sense of personal efficacy need to be investigated such as the childminders' age, childminders' personality trait, their expectation on the job, job satisfaction and job interests, which were not covered in thus study. The differences revealed may also be attributed to social or cultural reasons which may exist in developed countries and developing countries like Malaysia, such as stigma associated, or lack of appreciation, lack of incentives or rewards, in this highly demanding role as a child minder.

6.5.5 Relationship between Psychological Distress and Exhaustion

Another aim of the study was to assess whether the presence of psychological distress was associated with burnout. The exploratory finding from this study, reported that the participants who had no anxiety symptoms were found significantly associated with exhaustion with

p=0.003. Exhaustion was 6 times more risk in childminders without anxiety symptomscompared with anxiety symptoms with an adjusted odds ratio of 5.046. This study also found 46% of childminders had higher risk of developing exhaustion symptoms. This demonstrated that a childminder without any anxiety and stress symptoms could also develop exhaustion. This shows that exhaustion could occur by its own without the presence of psychological distress. Hence in looking for burnout, the absence of anxiety alone, would not rule out the likelihood of a health care worker being burnt-out.

This study also reported that the participants who had no stress symptoms were found significantly associated with exhaustion with p=0.003. Exhaustion was 5 times more risk in childminders without stress symptoms compared with anxiety symptoms with an adjusted odds ratio of 4.673. This study also found 64% of childminders had higher risk of developing exhaustion. This indicated that childminders could develop exhaustion even though he or she did not have any psychological distress symptoms.

This finding is contrary from the typical understanding of burnout or from previous studies which demonstrated relationship between psychological distress and exhaustion or burnout. As previous studies also mentioned, exhaustion (part of burnout) is a consequences of work related stress. The findings in this study may be due to the limitation of its cross sectional study design where the participants answered the questionnaires by themselves; they could be possibly minimizing their symptoms to answer it with socially accepted responses which could lead to information bias.

6.5.6 Relationship between Stress and Severe Burnout

From this study also reported that the participants who had stress symptoms were found significantly associated with severe burnout with p=0.007. The childminders with stress symptoms had higher risk of developing severe burnout. Out of the 150 childminders, the study also found 36% of childminders had higher risk of developing severe burnout. This implies that childminders with prolonged stress symptoms would lead them of developing severe burnout.

The demand of working with children can be physically, intellectually and emotionally exhausted which requires flexibility, compassion and constant energy. Even most dedicated childminders can be stretched to their limit and experience stress and eventually burnout. Every childminder will respond to stressful situations differently and the symptoms of stress vary between people. Some childminders may feel energized by a stressful situation and view it as challenges and opportunity to make changes. Others may create negative feeling and adverse physical symptoms such as muscle tension, headache, dizziness, high blood pressure, tired, insomnia and reduce immunity. The ongoing exposure to difficult situation that are not resolved can lead to conflict, high stress level and leading to burnout where childminders feel exhausted and unmotivated. The childminders may have social and emotional stress symptoms include depression, anxiety and angry. They also could involve in the destructive behaviours such as alcohol consumptions, binge eating, smoking and substance used. Stress also affect the cognitive symptoms whereby the childminders have poor judgement, difficult to make decision and unable to solve problem. Childminders who are under stress can become insensitive and unresponsive to the needs of the children and out of touch of with their interest. Stress reduced the capacity of childminder to care and educate the children. It will also affects the quality of practice and relationship with the children.

6.6 PREDICTORS OF PSYCHOLOGICAL DISTRESS

The following paragraphs discuss on the role of childminder's socio-demographic characteristics and burnout dimensions on psychological distress based on the findings of this study.

6.6.1 Relationship between the number of biological children and depression

The childminders who had 4 or less biological children were found significantly associated with depressive symptoms with p=0.018. These childminders were at 8 times more at risk to harbour depressive symptoms, compared to childminders with more than 4 biological children. This study also found 44% of the participants had higher risk of depressive symptoms. This implies that the higher number of biological children that childminders have, do not mean they are predisposing to depression. This could be most likely due to the group of childminders with 4 or less children being younger, recently embarking into work and family life, as compared to the more mature childminders who are already well adjusted into their career and family life. In this group of childminders, women seem to form the majority of participants which may skew results (Mukundan&Khanderoo, 2009).

6.6.2 Relationship between the stability of the job with anxiety

The other exploratory finding of significance in this study, was the job stanility of the childminder. Childminders who had a stable job in the Centre were found to be significantly associated with anxiety symptoms (p=0.004). The childminders who had a stable job had higher risk of developing anxiety symptoms compared to the childminders who did not have stable job. This study also found 38.7 % of childminders had higher risk of anxiety symptoms. This implies that anxiety symptoms occur more in the childminders who were on a permanent basis of employment, compared to those who were temporary or under a time limited contract.

Job insecurity has detrimental consequences for workers' job attitudes, organizational attitudes, health and to the some extent their behavioural relationship with the organization (Magnus S. et al 2002). However, this was contradictory to this research study's findings. The explanation for this study's finding is even though these childminders had a secure job in the child care facilities, but handling the children in the children homes with a lot of demands, could be draining, and exhausting and hence lead to symptoms of psychological distress such as anxiety, to the childminders. These children often have psychological, behavioural, and emotional problems. It is the job of the childminders to guide the children through their daily routines. Some of the children or adolescents can exhibit difficult behaviours, and resist help from the childminders (Ryan et al. 2008, Savicki 2002). Providing adequate care to these high-risk children and adolescents placed in the children homes, is stressful and challenging. By not having a supportive supervisor, in order to discuss the children's challenging behaviours, and to be unable to separate the child from the behaviour, could lead to negative perceptions of the children, and increase anxiety provoking thoughts and emotions within the childminder. Again, in this case their perceptions of the children in these homes, are of great importance. When comparing with contract or temporary child care workers, temporary staff may not exhibit anxiety symptoms as much as the permanent childminders, as they know they will be working in the facility for short period. There is a need for more extensive research to identify clear mediating factors of psychological distress among childminders with stable or secure jobs.

6.6.3 Relationship between the gender with stress

The female childminders were found significantly associated with stress symptoms with p=0.030. The female childminders had higher risk of developing stress symptoms compared to the male childminders. This study also found 57.4% of female childminders had higher risk of

anxiety symptoms. This reveals that female childminders were more stress compared to the male childminders.

This could be because of high psychological demand associated with work family conflict. When women are mentally tired at work, they reported that their work interfered more with their family activities. This can be explained by the fact that women's family roles involve a lot of psychological needs, and their ability to fulfil these needs gets affected when their works are psychological demanding. However, when women's works were perceived as physically tiring, they reported that their family interfered more to their work. This situation can also be explained by the fact that women's roles at home involve some amount of physical exertion; so when their works involve high physical exertion, their family roles are seen interfering to their responsibilities at work.

These situations are consistent with the "spillover theory" commonly used to explain work family conflict (Evans & Bartolome 1984). Negative "spillover" occurs when the derived problems from one domain are being carried over to another. For example, high physical exertion at home is being carried over to perceived stress in physical exertion at work. Beside looking into this conflict, it is also important to look at other factors such as level of education of the childminder, the working hours, perceived social support and emotion oriented coping. Better educated childminders more privilege over the less educated ones. Better educated childminder had more resources, both personally and socio-economically to help them deal with the conflicts arising from their family and work place. Long working hours creates difficulties for women with families.

Stalker et al (2007) hypothesize that women found themselves caught between a gender socialized ethnics of care, and the struggle for more autonomy and equality. As a result, women care workers are inclined to value the benefits of their work on part of their clients own emotional exhaustion.

6.6.4 Relationship between exhaustion and severe burnout with depressive symptoms

The childminders who were exhausted or who were severe burnout were found significantly associated with depressive symptoms with p=0.027 and p=0.025 respectively. The exhausted childminders and childminders who had severe burnout had higher risk of developing depressive symptoms compared to those who were not.In this study, demonstrated that 44% of childminders who were exhausted had high risk of developing depressive symptoms.While, 24.7% of childminders who were having severe burnout had high risk of developing depressive symptoms.This indicate that presence of exhaustion and severe burnout among the childminders may lead to depression. The recognition that depressive disorders do occur among childminders who are psychological distressed is important; for prevention to take place; for treatment to be offered; thus hindering negative consequences both childminders and the children.

Furthermore, the present results are in line with the findings of previous studies that investigated the relationship between burnout and depressive disorders. In a few cross-sectional designs, burnout and depressive symptoms have found to have positive relationship in human service professions (Belcastro& Hayes 1984, Meier 1984, Firth et al 1986, Landsbergis 1988, Seidman &Zager 1991, Glass et al 1993, McKnight & Glass 1995, Baba et al 1999, Sears et al 2000, Korkeila et al 2003, Kinnunen et al 2004). The consistent and strongest associations were found also between exhaustion and depressive symptoms in human service professions (Firth et al 1986, Jayaratne et al 1986, Lemkau et al 1988, Martin et al 1997, Tselenis et al 2001) and depression (Firth et al 1986, Landbergis et al 1988, McKnight & Glass 1995, Lindblom et al 2006).

According to the study done by Jayaratne et al (1986), which used a modified version of MBI, found great levels of exhaustion and diminished personal efficacy to be associated with depressive symptoms.

In another cross sectional study of 5871 participants using MBI-GS and CIDI in Finland showed burnout and severe burnout was related to major depressive disorder among both gender (Seti C.L., 2008). The depressive disorder was diagnosed for 35% of those who had severe exhaustion, for 33% of those who had severe cynicism, and for 24% of those who had severely reduced sense of personal efficacy. The study also demonstrated all of the dimensions of burnout, both moderate and severe levels were significantly associated to the development of depressive disorder.

6.6.5 Relationship between exhaustion with anxiety symptoms

The childminders who were exhausted were found significantly associated with anxiety symptoms with p=0.001. The exhausted childminders had higher risk of developing anxiety symptoms compared to those who were not. In this study, demonstrated that 44% of childminders who were exhausted had high risk of developing depressive symptoms.This implies that the exhausted childminders have possibility in developing anxiety.

In a few cross-sectional study design among human service profession, significant relationship were found between burnout and anxiety (Richardsen et al 1992, Corrigan et al 1995, Turnipseed 1998); and also between exhaustion and anxiety symptoms (Jayaratne et al 1986, Lemkau et al 1988).

A study done by Seti C.L. (2008), in a cross sectional study of 5871 employees using MBI-GS and CIDI in Finland revealed an anxiety disorder was present among 21% of workers with severe burnout, among 8% with mild burnout, and among 2% with no burnout.

6.6.6 Relationship between exhaustion and severe burnout with stress symptoms

The childminders who were exhausted or who were severe burnout were found significantly associated with stress symptoms with p=0.001 and p=0.010 respectively. The exhausted

childminders and childminders who had severe burnout had higher risk of developing stress symptoms compared to those who were not. In this study, demonstrated that 44% of childminders who were exhausted had high risk of developing stress symptoms.While, 24.7% of childminders who were having severe burnout had high risk of developing stress symptoms.This indicate that if the childminders were exhausted or were having severe burnout, it could link from chronic stress at work.

The work-related stressor also a predisposing factor of the appearance of burnout as a part of the process leading to the development of depression and anxiety (Greenglass& Burke 1990, Golembiewski et al 1992, Leiter &Durup 1994,Iacovides et al 1999, Bakker et al 2000a, Hillhouse et al 2000, Standsfeld 2002, Iacovides et al 2003). Stressors at workplace also has been found to precede the onset of depressive and anxiety disorders (Kessler 1997, Tennant 2001, Standsfeld 2002, Leskela et al 2004, Wilhelm et al 2004, Standfeld& Candy 2006).

6.7 BURNOUT AND ITS CORRELATION TO PSYCHOLOGICAL DISTRESS

Another final contribution of this study is an examination of correlation between burnout and psychological distress. This study hypothesized that there are association between burnout and psychological distress.

In this study, the investigator found that there is significant correlation between exhaustion and cynicism subscales, whereas the personal efficacy has been found to be negatively correlated with exhaustion and cynicism.

From the results of the study, noted the DASS sub-scales were moderately associated with emotional exhaustion and severe burnout (EX+CY). While, the DASS sub-scales had low correlation with cynicism and personal efficacy.

It is clearly beyond the capabilities of the study to examine what the exact association between burnout and psychological distress, other than what has been noted i.e. childminders who were more psychologically distressed were noted to have higher burnout scores in all categories of the DASS i.e. depression, anxiety and stress levels.

6.7.1 Association of burnout with depressive symptoms

From this study, the investigator found there was a statistically significant linear correlation between the measure of depressive symptoms as assessed by total DASS sub-subscale score and the measure of burnout as assessed by the total sub-domain score of MBI-GS where in emotional exhaustion was ($r=0.51$, $p<0.001$), cynicism ($r=0.37$, $p<0.001$), and burnout (EX+CY) ($r=0.51$, $p<0.001$). The depressive symptoms are inversely correlated with personal efficacy ($r= -2.63$, <0.001).From the multivariate logistic regression analysis conducted, this association was found to be statistically significant, with, emotional exhaustion domain ($p=0.027$) and burnout (EX+CY) ($p=0.025$). This evidence is in support of studies done around the world justifying the positive impact of depressive symptoms on burnout (Ahola et al, 2005; Ahola et al, 2006).

6.7.2 Association of burnout with anxiety symptoms

From this study, the investigator found there was a statistically significant liner correlation between the measure of anxiety symptoms as assessed by total DASS sub-subscale score and the measure of burnout as assessed by the total sub-domain score of MBI-GS where in emotional exhaustion was ($r=0.58$, $p<0.001$), cynicism ($r=0.35$, $p<0.001$), and burnout (EX+CY) ($r=0.55$, $p<0.001$). The anxiety symptoms are inversely correlated with personal efficacy ($r= -1.88$, <0.05). From the multivariate logistic regression analysis conducted, this association was found to be statistically significant, with, emotional exhaustion domain ($p=<0.001$). This evidence is in support of studies done around the world justifying the positive

impact of anxiety symptoms on burnout (Su Kom-Tang et al, 2001; Bakker et al., 2004; Shiroma and Ezrachia, 2003; Ahola et al., 2005).

6.7.3 Association of burnout with stress symptoms

From this study, the investigator found there was a statistically significant liner correlation between the measure of stress symptoms as assessed by total DASS sub-subscale score and the measure of burnout as assessed by the total sub-domain score of MBI-GS where in emotional exhaustion was ($r=0.63$, $p<0.001$), cynicism ($r=0.38$, $p<0.001$), and burnout (EX+CY) ($r=0.60$, $p<0.001$). The stress symptoms are inversely correlated with personal efficacy ($r= -2.10$, <0.01). From the multivariate logistic regression analysis conducted, this association was found to be statistically significant, with, emotional exhaustion domain ($p=0.001$) and burnout (EX+CY) ($p=0.010$).

This study has found that burnout and psychological distress (depression, anxiety and stress symptoms) are significantly associated in childminders. These associations can be unidirectional or bi-directional, the findings of which are illustrated below:

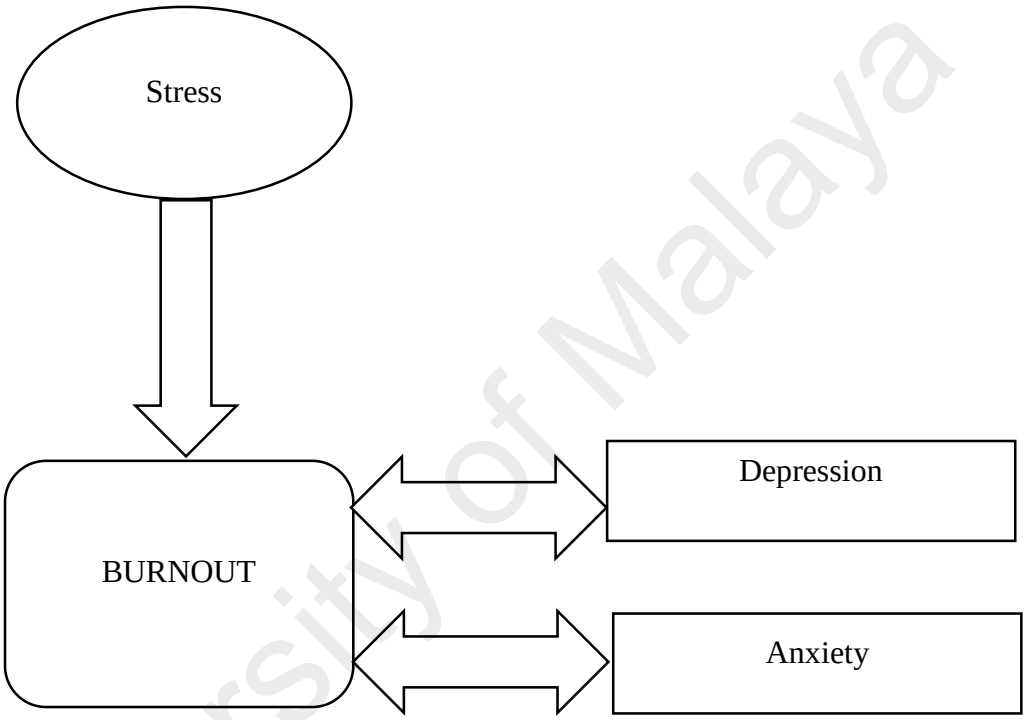


Figure 6.1 Relationship between Burnout and Psychological Distress

6.8 STRATEGIES TO PREVENT AND COMBAT BURNOUT

From the study findings, policy should focus on ensuring that all childminders in homes across Malaysia should work in shift hours, should has adequate staff in each home and should have compulsory attendance of early childhood education. These should be implemented in policies to ensure uniform standard of quality of care in childrens' homes. These factors as seen from the study significantly contributed to burnout. Therefore, addressing these factors would be helpful in reducing burnout among childminders, and reducing the psychological distress.

The mandatory screening of burnout for all childminders in homes should be cooperated in National policies. Therefore, by detecting childminders who have high level of burnout, these childminders can then be assessed for psychological distress. Hence, screening for burnout is an accessable means of early picking up potential employees with psychological distress. By doing annual screening of burnout which is especially needed in human care services hope to prevent burnout.

6.9 ENVIRONMENT FACTOR AND BURNOUT

The environment contributor to burnout among childminders such as location of the homes, facilities available of the homes etc. where not explored in this study as it is beyond the scope of the study. It is definitely relevant to the future research. The Areas of Worklife Scale is a very useful questionnaire often used in accompaniment with the MBI. It studies six areas of workplace surroundings and organizational strengths or pitfalls. It contains 28 items on a Likert scale and assesses job situational stressors that rationally may thought to lead to burnout. The six areas tested are those that are thought to be central to the development of burnout. This hemcompasses ***workload*** or the job demands, followed by ***control*** which tests the employees'

perceived sense of autonomy and ability to influence work decisions. ***Reward***, whether monetary or social is where the employee feels recognised. ***Community*** assesses the quality of social interactions in the workplace environment. Finally, the scale also test the ***Fairness and Value***, which how in the line the individuals' goals and values are compared to the organizations (Leiter & Maslach, 2004). This questionnaire could be used in future researches looking at relationship of environment factors on burnout among childminders.

CHAPTER SEVEN

LIMITATIONS AND STRENGTHS

7.1 LIMITATIONS

This study had limitations that should be taken into consideration when evaluating the results:

1. This was a cross-sectional study, thus the results reflects what is seen during the time the study was carried out. The report would not reflect the consistency or prevalence of burnout, the association of burnout with socio-demographic factors and psychological distress over time and across the syndrome trajectories. The observations were only carried out at a particular time. Thus, the findings of this study cannot conclude the observations made were a constant factor in the study population.
2. The study was conducted in centres, which are located in the urban areas and in centres run by NGO while government-run children's' homes and homes in rural areas were not included. (Gibbs I. & Sinclair I., 1998)
3. The universal sampling method for this study highlighted another potential limitation giving rise to sampling bias. There were more Malays childminders who consented and agreed in this study compared to other ethnics.

For the factors 2, and 3, the result may not be an adequate representation of the Malaysian scene.

4. The questionnaires were both in the English and Malay language. Thus some childminders, primarily from Chinese and Indian descendent, who were not fluent in either language, were excluded due their deficiencies in these languages. This further

limits the generalization of the results. However, the number of the childminders that were excluded from the study was relatively small (3 childminders).

7.2 STRENGTHS

1. This study looked at the prevalence of burnout of childminders, it is association with the subjects' socio-demographic characteristics and psychological distress. To the researcher's knowledge there are hardly any study conducted in Malaysia and in the South East Asia.
2. The study had high response rate (83.3%), comparable to similar studies done in the other countries. The investigator went to all the 30 children's homes and collected the data; none of subjects sent the questionnaires via email or by post.
3. The questionnaires used in this study were validated in the Malay language (DASS in 2010 and MBI-GS in 2013) and has been evaluated through psychometric assessment.
4. The study results were more precise with stronger associations, and the confounding factors could be ruled out by conducting multivariate analysis.
5. The current study provides some clues as to what can be done to reduce the burnout and other psychological distress among the childminders. As noted in the results, a positive organizational climate could be developed by equip the childminders with more skills such as work- based stress management, activities and prevention; parenting skills; childminders skills (early childhood training courses); toilet training skills; rehabilitations skills; anxiety management; and effective coping skills.

CHAPTER EIGHT

CONCLUSION

Childminder profession is at risk and susceptible for being stress, burnout and psychological distress. It is an essential issue that need to be managed effectively for the betterment of childminders' mental health thus providing a better care and practice towards the children.

The findings in this study alerts us as clinicians and health care providers, to the importance of issues related to burnout, and psychological distress that are experienced by childminders. By understanding the characteristics of the risk factors that lead to burnout, this hopes to provides the basis on future research and planning of intervention programs, that promote detecting burnout and psychological distress among childminders in our country.

The effective intervention programmes for this population that are relevant in the Malaysian's setting also should be stimulated. Future research in combating burnout among childminders needs to be encouraged, in order to ensure contintnuity of quality care to our young children and adolescents in residential homes.

In conclusion, it is investigator's humble opinions, for the higher authorities to reinforce a reasonable childminder-children ratio in every children centre; suggest that early childhood training as the compulsory requirement for all the child minders; a baseline psychological assessment for those childminders who interested to join the human care service; and a proper registration with personal documentation of registered childminders should be made and revised regularly thus it would help in recognising and increasing the childminders' social status in the community.

It is recommended that burnout and symptoms of psychological distress be screened for among childminders in all childrens homes in our country, to ensure that staff and children in residential homes are both supported. Screening the childminders with the burnout tools would be feasible and accessable for us to carry out and measure in our own setting for early picking up potential individuals with psychological distress. For that, early interventions could be done. As in the field of Child & Adolescent Psychiatry, we believe the child cannot be optimally treated, if the family is not treated too. And for many of these children in residential homes, the staff and the childminders are the closest they have to a family.

CHAPTER NINE

RECOMMENDATIONS & CLINICAL IMPLICATIONS

9.1 RECOMMENDATIONS

The recommendations of this study are as below:

1. A better study design and type of study such as a longitudinal cohort study could be used in the future in order to obtain clear information, stronger findings and associations between socio-demographic factors, stress, anxiety and depression on burnout amongst childminders in children homes.
2. A qualitative study should be done in the future to look at the child minders' perception toward the children (Heron G.and Chakrabarti M.; Luke N. and Banerjee R., 2012) or a questionnaire on the childminder's perception on the children should be designed and validated.
3. Future studies could incorporate other causes that has been found to be related to burnout such as:
    - The childminder's personality or attitudes, job performance and/or characteristics and health information (Maslach et al.,1996);
    - The personal factors of the individual such as psychodynamic factors (Jackson et al, 1986) and personal traits that cause of burnout (Chang, 2009; Langelaan et al, 2006)
    - The way they cope with burnout (Hsieh, 2004; Savicki,2002; Semmer, 1996)
    - To look at the important of emotional intelligence in preventing and combating burnout (Chan, 2006)

- A cross-cultural research could be as well thought about due to the sociocultural nature in our Asian culture which may affect burnout (Savicki, 2002; Jamal, 1999; Amstrong-Stassen et al.,1994; Schaufeli & Janczur, 1994; Savicki 1993; Green et al.,1991);
- To look at the job role differentiation (Savicki, 1993; Savicki, 2002; Savicki, 1993; Hackman & Oldman, 1980);
- To look at the role conflict and ambiguity which was found to have a great association with burnout (Chang, 2009; Cordes & Dougherty, 1993; Lee & Ashforth, 1996; Leong, 2005) and cause of job dissatisfaction (Ahsan, 2009)
- To look at the work overload and the work demand as the significant factor leading to the dimension of burnout (Gonzales-Morales, 2012; Jin et al, 2008; Burke and Richardsen, 1996; Cordes and Dougherty, 1993)
- To look at organizational roles e.g role ambiguity and role conflict that lead to burnout (Thuraisamy, 2002)
- To look at the unconscious determinants of childminder choice and burnout
- To look at the child minders' quality of life; work-family conflict (AECF, 2003;Nissly et al, 2005).; area of work life survey (questionnaire available);
- To look at the social support such as organization/administrative support (Boyas & Wind, 2010; Decker et al.,2002; Kim, 2011; Lakin et al, 2008; Leong, 1995;Nissly et al,2005); support from co-workers (Pozo-Munoz et al.,2008); family and social support (Boyas and Wind's, 2010; Maslach et al., 1996);
- To look at reward system, job satisfaction and dissatisfaction; limited opportunities both in development and support for childminder; negative attitudes towards childminders (Decker et al., 2002);

- To get information about lack of supervision and guidance; inadequate training among childminders (Heron & Chakrabarti, 2002)
- To look at the child minders' job safety (Decker et al.;2000)
- To assess the burnout and intention to leave (Kim H. & Stoner M, 2008; Manlove et al., 1997; Schudrich W. et al., 2012), anticipated the reasons for leaving the organization or the rate of turnover among the childminders (Kim & Stoner, 2008; Manlove et al., 1997; Mor Barak et al, 2001; Mor Barak E.M et al, 2006; Smith, 2015; Schudrich W. et al., 2012; Zlotnik J.L. et al, 2005).

4. Future studies also could focus on the impact of the programs that are implemented in the different homes (setting) designed to combat burnout and how effective they are on reversing the impact of burnout (Veatch, 2006).
5. A similar study involving data collection from other government children homes and other NGO's children homes in Malaysia could be conducted to make the findings more representative and applicable to the Malaysian population.
6. In near future, a study recruiting and comprising the child minders in the rural and urban areas would be essential. As reported by Abel & Sewell (1999) and Mackie (2008) demonstrated burnout level was different for those in both areas.
7. The study findings would have greater clinical impact to the population if the power of the study could be increased by a larger sample size.
8. The further research should consider to use the MBI-Human Services (HS) questionnaire in view of it is use in occupations handling people.
9. The author recommended future validation study of the MBI and DASS in other local languages such as Mandarin and Tamil to enable the use of these questionnaires in these group present in the local population.

10. To use diagnostic tool such as M.I.N.I (Sheehan 1998), CIDI or SCID-5 to diagnose depression and anxiety for the future burnout studies to determine the actual rate or prevalence of psychological distress or mental health in the population and its relationship with burnout.

    The CIDI provides the estimates for the diagnoses of DSM-IV mental disorders (Andrews & Peters 1998, Wittchen et al. 1998). The CIDI also has been shown to be a valid method for assessing common mental non-psychotic disorders among primary care patients (Jordanova et al. 2004) but CIDI has not been validated in general populations.

11. The use of randomised sampling helps to improve the generalizability of the results in comparison with convenience (universal) sampling.
12. It was hard to find other research of similar interest i.e. on the association of burnout with psychological distress in Malaysia and South East Asia. This study will hopefully be the platform for further research in this area.
13. For improvement to reduce and prevention of burnout, the childminders need to have proper skills in areas of parenting, childminding, early childhood training, rehabilitation works with children, including the positive disciplines to avoid the frequent use of punitive disciplines.

9.2 CLINICAL IMPLICATIONS

9.2.1 PSYCHIATRY AND CHILDMINDERS' MENTAL HEALTH:

Burnout is a major concern in all human service occupations. Recognizing the "risk factors" for burnout among childminders, will help healthcare providers detect work stress and burnout at an early stage among these human care workers.

Child and youth care is considered one of the most difficult and emotionally exhausting careers in the human service industry (Barford & Whelton, 2010; Krueger, 2002; Molepo & Delport, 2015). In fact they are the front-line human service people who work and are in constant contact with the children and youth in the homes. They are particularly responsible for their daily living needs of these children.

Failure to recognize burnout and psychological distress in these may lead to tremendous effect on the childminders' mental health and the care towards the children. Children in residential homes come form disruptive family backgrounds. These children are very vulnerable, and many arrive at the residential homes with emotional and psychological difficulties. Therefore it is from the perspective of clinians such as General Psychiatrists, Child & Adolescent Psychiatrists, Community and Rehabilitation Psychiatrists, Paediatricians and any health care provider, to ensure that these children received appropriate care, by carers whom are well. Our results show that our carers too, are having difficulties, which need assistance from health care providers. The healthcare providers include primary care services in health clinics and public health team. **Figure 9.1 showed overview of the preventive and intervention measures in psychiatric on combating burnout and psychological distress among childminders.**

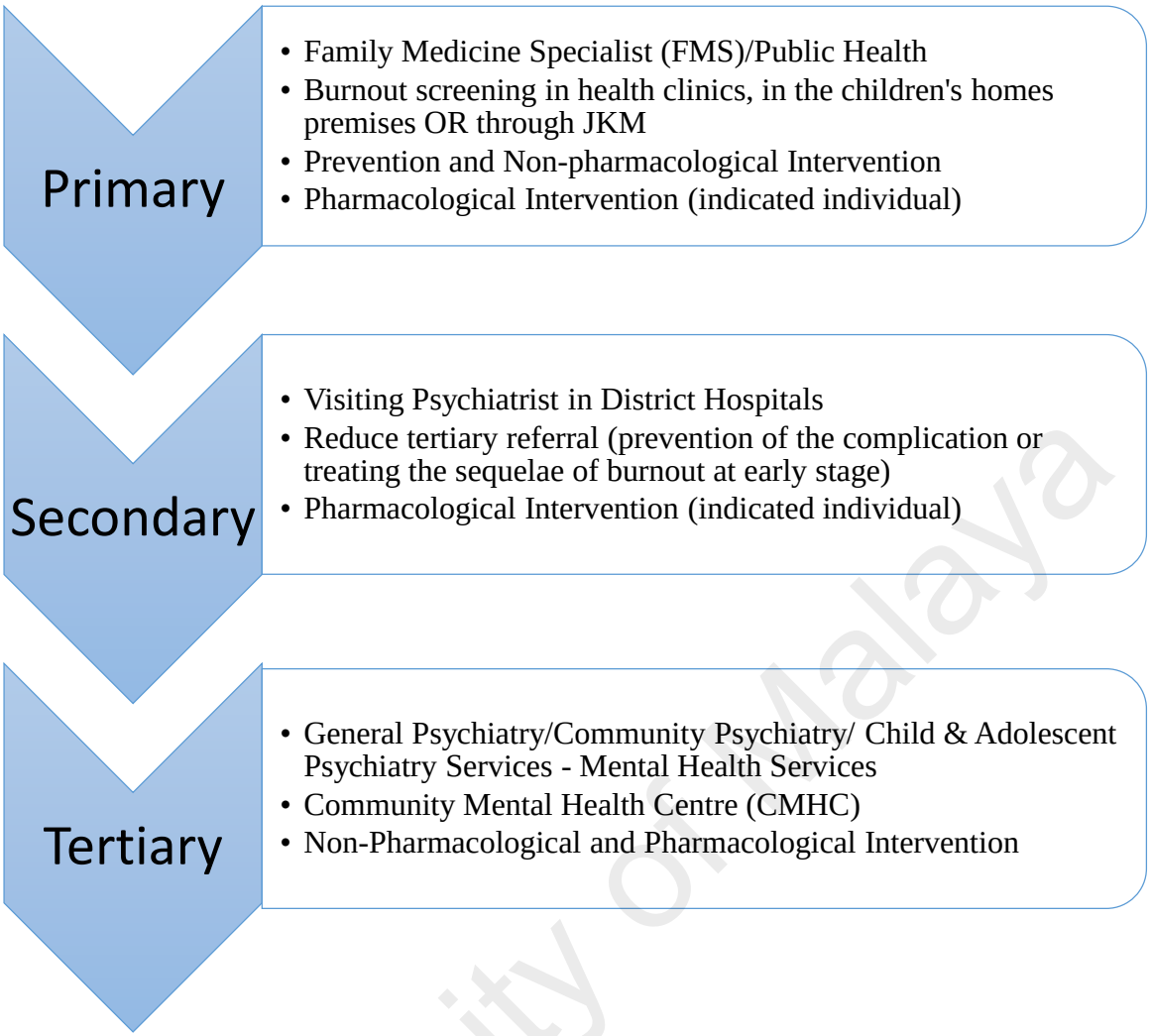


Figure 9.1 Pathway of prevention and interventions on combating burnout

The screening for burnout among childminders could be done as a pre-employment baseline and on annual basis. The JKM officers, the healthcare providers (Ministry of Health) and the organizations of the childrens' homes should collaborate on the screening process and the guidelines for early prevention of burnout. The screening could be done in the childminders' working facilities, in the JKM offices or the nearest health clinics. By detecting childminders who have high level of burnout, these childminders can then be assessed for psychological distress at the primary care level. Non-pharmacological intervention such as counselling, stress

management, problem solving and coping skills are then incorporated to the indicated childminders. While, pharmacological intervention is to be provided at primary care level for childminders having psychiatric illness. The complicated cases can then be discussed by the Public Health Officers or Family Medicine Specialist with the psychiatrists nearby the health clinic. Referral to the district hospital (visiting psychiatrist) and management at secondary care level or psychiatrists at the general hospital could be done accordingly.

There are a few psychiatric services at the tertiary level which can be activated to help these population in prevent and combating burnout and their sequelae. Beside the general psychiatry service, the relevant services for these childminders are the community psychiatry services, community mental health centre services and child and adolescents psychiatry services. Regular visits to the children homes to access the childminders with burnout and psychological distress would help in their treatment process and recovery.

9.2.2 NETWORKING, TRAININGS AND POLICIES

The networking is essential between mental health services with government and non-government organizations to promote the considerable attention and awareness on burnout thus to implement preparation programs in work setting to prevent burnout. From this study itself, there were large number of childminders who were unqualified and untrained staff in residential children homes. These childminders could be trained with early childhood training programmes in order to qualify them as the professional status of childminder in the residential children homes. It would ensure the positive child care practice by meeting the children's total needs thus provide the highest quality care.

Reinforcement on a policy such as to implement a regulation for childminders to register to higher authorities before practicing their job is required. The registration is for the health providers and the higher authorities to monitor the childminders progress, mentally and physically especially those who are under a system of provisional or a temporary registration.

The childminders need to attend early childhood training that had been module by the higher authorities and undergo psychological assessment as the compulsory requirements before registered. This training is essential as it is proven by this study it help in preventing the burnout and other psychological distress.

The issue on the high childminder and the children ratio in the residential children homes also need to be discussed and need to be standardized as the issue of understaff was one of the "risk factors" of burnout in these childminders.

Maximum hours of working among these childminders who are part of human services workers need to be revised by the higher authorities or the policies makers in view of their overworked issue. The extended hours of working had shown to be the predictive factor in developing burnout.

By maintaining these networking it help us to be unite for further improvements in the betterment of the childminders' mental health and the quality of care towards children.

The involved in this sector is Kementerian Pembangunan Wanita, Keluarga dan Masyarakat (KPWKM). Under KPWKM, there are ministry that Jabatan Kebajikan Masyarakat (JKM), Lembaga Penduduk dan Pembangunan Keluarga Negara (LPPKN), NAM Institute for the Empowerment of Women Malaysia (NIEW) and Social Institute of Malaysia (ISM). Under KPWKM, the sectors that pertaining with the investigator's study are JKM (children department) and LPPKN. The other sector to consider is Permata, Jabatan Perdana Menteri (Prime Minister Department).

The childminders department are under JKM. The childminders department are coordinate by a coordinator in each state. The principal in each Government run childrens' homes also monitor the childminders' welfare.

The investigator and her team plan to convey the study finding through a meeting.seminar or workshop attend by the representatives from KPWKM, JKM (national and state level), LPPPKN, Permata and NGO's.

Figure 9.2 showed the pathway of communication and sharing the study findings with the representatives from KPWKM, JKM, LPPKN and Permata.

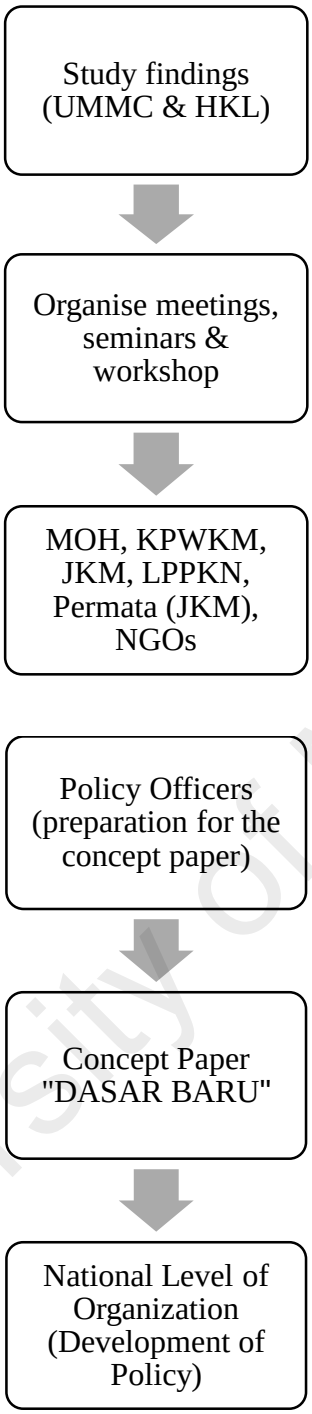


Figure 9.2 Pathway of sharing the study findings with the higher authorities

The presentation of the study findings also could be done to the "Bahagian Kajian, Perancangan dan Pembangunan", JKM, Putrajaya to convey the message and for their further actions.

Beside the enhancement of trainings and courses to the childminders done by JKM and NGO's childrens' homes, the interventions that the KPWKM is currently embarking on changing to deinstitutionalization of childcare focusing more on family related childcare ("Penjagaan Berasaskan Keluarga"). Currently, this issue has been presented and discussed in the Parliament for the changes of Child Act 2001. In this deinstitutionalization of childcare, the children will be taken care by their own family members (parents, grandparents, uncles, aunties or other family members) or adopted families.

9.2.3 ACADEMIC AND RESEARCH

An innovative degree courses in human social care should be encouraged from all level. The childminders should be allowed to improve themselves by furthering their studies in this area and incentives should be given. The higher authorities should encourage the social care workers and the childminders to continue their study up to Masters and PhD level. These also could contribute to the research and academic aspects of the social care. Continued research and development of best practices for childminders who highly involve with emotion and human service relation may help the organization to restructuring the workplace to reduce stressors and reduce risk of stress in workplace that lead to burnout. It is a challenges for the universities and the colleges to make the course in social care as stimulating and worthwhile for both male and female as shortage of male childminders are a global issue.

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APPENDIX A

English version: Information sheet for child minders

Malay version: Maklumat untuk penjaga kanak-kanak

DEPARTMENT OF PSYCHOLOGICAL MEDICINE

PARTICIPANT INFORMATION SHEET

A CROSS SECTIONAL STUDY

STUDY TITLE

Burnout and Psychological Distress Among Childminders In Residential Childrens' Home

Invitation

You are invited to participate in a research study. This information sheet provides you with information about the research. The Principal Investigator (the research doctor or person in charge of this research) or her representative will also describe this research to you and answer all of your questions. Read the information below and ask questions about anything you don't understand before deciding whether or not to take part.

The study is being conducted by Dr Siti Halimatul Saadiah binti Hassan, Medical Officer of Psychological Medicine Department, Pusat Perubatan University Malaya as the Principal Investigator and the co-investigators are Dr. Manveen Kaur A/P Harbajan Singh and Dr Aminah Kassim.

Before you decide whether or not you wish to participate in this study, it is important for you to understand why the research is being done and what it will involve. Please take the time to read the following information carefully and discuss it with others if you wish.

1. **'What is the purpose of this study?'**

The purpose is to investigate whether child-minders of children home experience burnout and is that work related conditions; do demographic factors such as age, gender , marital status , work experience are related to burnout and lead to distress and any relation with manifestation of depression and anxiety.

2. **'Why have I been invited to participate in this study?'**

You are eligible to participate in this study because you are one of the child minder or child carer in the children home and your emotional and psychological state are matters in this study.

3. **'What does this study involve?'**

If you agree to participate in this study, you will be asked to sign the Participant Consent Form. You need to answer the dermographic patient's profile and 2 instrumental tools which are Maslach Burnout Inventory and DASS-21. The tools are self- rater.

This study will be conducted over 4 months. Your involvement in the study will involve only once and no follow up requires.

4. **What is the approximate number of participants involved?**

We are aiming for 150 of child minders

5. **'How is this study being paid for?'**

The study is self sponsored.

6. **'Will I benefit from the study?'**

This study aims to measure the prevalence of burnout and distress among child minders, to assess the impact of socio demographic factors and workplace on burnout and association with depression and anxiety among child minder. It further medical knowledge and may improve our future services in children home.

7. **Whom should I call if I have any questions or problems?**

Please contact the Principal Investigator, Dr. Siti Halimatul Saadiah at

sitihalimatul@yahoo.com , phone no: 0123455504; for all research-related matters.

8. **Is this study cost me anything?**
Participation in this study will not cost you anything.

9. **Will my privacy and the confidentiality of my research records be protected?**

Only the principal investigator has your identifiable information (e.g. names,

contact information, IC nos.) and this will not be released to any other person, including members of the research team. Identifiable information will never be used in a publication or presentation. All your identifiable health information and research data will be coded i.e. only identified with a code number) at the earliest possible stage of the research.

All data collected will be kept in accordance to the University's Research Data Management Policy. Research data used in publication will be kept for a minimum of 10 years before being discarded.

10. 'What happens with the results?'

If you give us your permission by signing the consent document, we plan to discuss and publish the results in the journals, present the result at conferences or other professional forums. In any publication, information will be provided in such a way that you cannot be identified. Results of the study will be provided to you, if you wish.

11. 'What should I do if I want to discuss this study further before I decide?'

When you have read this information, the researcher will discuss it with you and any queries you may have. If you would like to know more at any stage, please do not hesitate to contact her.

12. 'What if I don't want to take part in this study, or if I want to withdraw later?'

Participation in this study is voluntary. It is completely up to you whether or not you participate. If you decide not to participate, it will not affect anything. Whatever your decision, it will not affect your relationship with the staff caring for you. If you wish to withdraw from the study once it has started, you can do so at any time without having to give a reason. By informing the principal investigator and all your data collected will be discarded.

Thank you for taking the time to consider this study.

If you wish to take part in it, please sign the attached consent form.

This information sheet is for you to keep.

JABATAN PERUBATAN PSIKOLOGI

BORANG KETERANGAN PESERTA

KAJIAN CROSS SECTIONAL

TAJUK KAJIAN

Burnout and Psychological Distress Among Childminders In Residential Childrens' Home

Jemputan

Anda dijemput untuk menyertai kajian di atas. Borang keterangan ini mengandungi keterangan tentang kajian di atas. Principal Investigator (Doktor/penama yang mengetuai kajian) atau wakilnya juga akan menerangkan mengenai kajian ini dan menjawab segala pertanyaan anda. Sila baca keterangan di bawah dan anda digalakkan untuk bertanya sekiranya mempunyai sebarang kemusykilan sebelum mengambil keputusan untuk menyertai kajian ini atau tidak.

Kajian ini dijalankan oleh Dr Siti Halimatul Saadiah binti Hassan, Pegawai Perubatan Pasca Siswazah, Pusat Perubatan University Malaya sebagai "Principal Investigator" dan "co-investigators" iaitu Dr. Manveen Kaur A/P Harbajan Singh dan Dr Aminah Kassim.

1. 'Apakah tujuan kajian ini'?'

Kajian ini bertujuan untuk menyelidik sama ada penjaga kanak-kanak di rumah kanak-kanak mengalami symptom-simptom "burnout" dan adakah ini berkaitan dengan kondisi pekerjaan, factor demografik seperti umur, jantina, status perkahwinan, pengalaman bekerja sekaligus menyebabkan "distress" dan kaitannya dengan manifestasi kemurungan dan kegemuruhan.

2. 'Kenapa saya dijemput untuk menyertai kajian ini?'

Anda layak untuk menyertai kajian ini kerana anda salah seorang daripada penjaga di rumah kanak-kanak dan status emosi dan psikologi amat penting dalam kajian ini.

3. ‘Apakah yang anda perlu lakukan?’

Jika anda bersetuju untuk menyertai kajian ini, anda akan diminta untuk menandatangani Boring Keizinan Peserta. Anda juga perlu menjawab Borang Biodata, Maslach Burnout Inventory and DASS-21. Borang-borang ini adalah “self-rater”. Kajian ini akan dijalankan selama 4 bulan. Penyertaan anda dalam kajian ini hanya sekali dan tidak memerlukan temujanji berkala.

4. Berapakah jumlah peserta yang diperlukan?

Kami mensasarkan 150 orang penjaga kanak-kanak untuk menyertai kajian ini.

5. ‘Bagaimana kajian ini dibiayai?’

Kajian ini dibiayai sendiri

6. ‘Apakah faedah yang akan saya perolehi dari kajian ini?’

Kajian ini adalah untuk mengukur “prevalence of burnout” dan “distress” di kalangan penjaga kanak-kanak; untuk menilai impak kepada factor sosio demografik dan tempat kerja terhadap “burnout” serta kaitannya dengan kemurungan dan kegemuruhan di kalangan penjaga kanak-kanak. Dengan kajian ini, ia boleh meningkatkan pengetahuan perubatan dan memperbaiki mutu servis di rumah kanak-kanak pada masa akan datang.

7. Siapakah yang perlu dihubungi untuk sebarang kemusykilan?

Sila hubungi Penyelidik Utama, Dr. Siti Halimatul Saadiah di alamat email,

sitihalimatul@yahoo.com , phone no: 0123455504; untuk segala kemusykilan

berkaitan kajian ini.

8. Adakah saya perlu membayar untuk terlibat dalam kajian ini?

Penglibatan dalam kajian ini adalah secara percuma.

9. Adakah butir-butir maklumat peribadi saya akan dirahsiakan?

Hanya Penyelidik Utama yang akan mengetahui butir-butir maklumat peribadi anda. Informasi ini tidak akan didedahkan kepada pihak lain termasuk ahli-ahli kumpulan kajian ini serta semasa kajian ini digunakan untuk presentasi dan publikasi. Semua butir peribadi anda akan dikodkan.

Semua data yang dikumpulkan akan disimpan mengikut Polisi Pengurusan Kajian Data Universitiy.

10. 'Apa akan dibuat dengan hasil kajian?'

Hasil kajian akan diterbitkan dalam journal, dibentangkan di dalam persidangan atau forum professional yang lain.

11.'Apa yang saya perlu lakukan sekiranya saya ingin menarik diri dari kajian ini?'

Penglibatan kajian ini adalah sukarela. Anda boleh menarik diri pada bila-bila masa tanpa perlu memberi alasan. Sila maklumkan kepada Penyelidik Utama dan semua maklumat anda akan dilupuskan.

Terima kasih di atas segala kerjasama anda.

Sekiranya berminat sila tandatangan pada Borang Keizinan yang dilampirkan. Borang maklumat ini adalah untuk simpanan anda

APPENDIX B

English version: Consent form for child minder
Malay version: Borang keizinan penjaga kanak-kanak

CONSENT FORM

(ENGLISH)

To become a subject in the research, you are advised to sign this Consent Form.

I herewith confirm that I have met the requirement of age and am capable of acting on

behalf of myself as follows*:*

1. I understand the nature and scope of the research being undertaken.

2. All my questions relating to this research and my participation therein have been answered to my satisfaction.

3. I voluntarily agree to take part in this research, to follow the study procedures and to
provide all necessary information to the investigators as requested.

4. I may at any time choose to withdraw from this research without giving reasons.

5. I have received a copy of the Subjects Information Sheet and Consent Form.

6. I have read and understood all the terms and conditions of my participation in the research.

I have read the statements above, understand the same, and voluntarily sign this form.

Dated :_____ day _____ month _____ year

Name **IC Number**

Signature **Date (dd/mm/yy)**

Name & Researcher's Signature **Date (dd/mm/yy)**
(DR SITI HALIMATUL SAADIAH HASSAN)

Name of witness & Signature **Date (dd/mm/yy)**

BORANG KEBENARAN

(BAHASA MELAYU)

Untuk menjadi subjek dalam penyelidikan ini, anda dinasihati memberikan persetujuan melalui Borang Kebenaran ini.

Dengan menandatangani mukasurat ini, saya mengesahkan yang berikut:

1. Saya memahami skop penyelidikan yang dijalankan.
2. Saya berpuas hati dengan semua soalan dan penglibatan saya dalam penyelidikan ini.
3. Saya secara sukarela mengambil bahagian dalam penyelidikan ini, mengikuti segala prosedur dan memberikan maklumat yang bersesuaian seperti yang diminta oleh penyelidik.
4. Saya boleh memilih untuk menarik diri daripada penyelidikan ini tanpa memberikan sebarang alasan.
5. Saya telah menerima satu salinan Borang Maklumat Subjek dan Borang Kebenaran.
6. Saya telah membaca dan memahami semua terma dan syarat berkenaan penglibatan saya dalam penyelidikan ini.

Saya telah membaca pernyataan di atas, memahami, dan secara sukarela menandatangi borang ini.

Tarikh : _____ hari _____ bulan _____tahun

Nama **No. Kad Pengenalan :**

Tandatangan **Tarikh (dd/mm/yy) :**

Nama & Tandatangan Individu Yang Mengendalikan **Tarikh (dd/mm/yy)**

(DR SITI HALIMATUL SAADIAH HASSAN)

Nama & Tandatangan Saksi **Tarikh (dd/mm/yy)**

APPENDIX C

English Version: Socio-demographic form for child minder

Malay Version: Borang soal-selidik latar belakang penjaga kanak-kanak

CHILD MINDER'S PROFOMA **DATE:** _____

PROFOMA PENJAGA KANAK-KANAK *TARIKH:*

AGE: _____ years **GENDER**: MALE / FEMALE

UMUR: tahun JANTINA: LELAKI/ PEREMPUAN

MARITAL STATUS: [ ] SINGLE [ ] MARRIED [ ] DIVORCED

TARAF PERKAHWINAN: BUJANG BERKAHWIN DUDA/JANDA

[ ] WIDOW/WIDOWER

BALU

ETHNIC: [ ] MALAY [ ] CHINESE [ ] INDIAN [ ] OTHERS

BANGSA: MELAYU CINA INDIA LAIN-LAIN

CITIZENSHIP: [ ] Malaysian [ ] Others

WARGANEGARA: MALAYSIA LAIN-LAIN

NUMBER AND AGE OF CHILDREN (if any):

BILANGAN DAN UMUR ANAK (JIKA ADA):

1)

2)

3)

4)

5)

JOB POSITION: _____

JAWATAN:

THE COMBINED HOUSEHOLD INCOME (per-month):

Jumlah pendapatan seisi keluarga (bulanan):

How are you paid?
Bagaimana anda dibayar gaji?

[ ] weekly wage [ ] Salary

Mingguan bulanan

Stability of Job

[ ] temporary [ ] contract [ ] permenant

sementara *kontrak* *kekal*

EDUCATION BACKGROUND *(*Please indicate the highest level of education you have obtained)

LATAR BELAKANG PENDIDIKAN

[ ] SRP [ ] SPM [ ] STPM [ ] Diploma [ ] Degree [ ]Master Degree

[ ] Doctorate

If you have attended or completed a college degree, please list your major and minor fields of study:

Sekiranya anda memiliki ijazah sarjana muda, sila nyatakan major dan minor di dalam bidang anda

Major:

Minor:

ATTENDED ANY TRAINING ON EARLY CHILDHOOD BEFORE: YES / NO
Pernah menghadiri latihan di dalam pendidikan awal kanak-kanak: Ya / Tidak

Experience in the field (length of time):
Pengalaman di dalam bidang ini (bulan/tahun):

Experience at this facility/organization (length of time):
Pengalaman di dalam premise sekarang (bulan/tahun):

Children Home **Government** [ ] **NGO** [ ]

The number of working hours daily:
Jumlah Jam Bekerja:

Are you working in shift basis?
Adakah anda bekerja shif?

If YES,
Jika YA,

What shift do you work?

Shif

[ ] Morning

[ ] Evening

[ ] Nights

If you work a split shift, which shift is your predominate responsibility?
Jika anda bekerja shif yang bertukar, shif yang mana yang lebih utama

[ ] Morning

[ ] Evening

[ ] Nights

How many caretaker in your centre?
Berapakah bilangan penjaga kanak-kanak di rumah jagaan tersebut?

How many children in the children home?
Berapa orang kanak-kanak di rumah penjagaan tersebut?

The age of the children?
Umur kanak-kanak?

The type of children?
Jenis kanak-kanak

a) Normal

b) Special child/ Mentally challenged (Istimewa/Terencat akal)

c) Medically ill children (kanak-kanak yang mempunyai penyakit chronic)

What is the staff to children ratio on your shifts?
Apakah kadar penjaga dan bilangan kanak-kanak di dalam shif anda?

Do you feel this is adequate? YES [ ] NO [ ]
Adakah anda berasa ia mencukupi? Ya [ ] Tidak [ ]

APPENDIX D

English version: Maslach Burnout Inventory- General Survey
Malay version: Maslach Burnout Inventory-General Survey

MASLACH BURNOUT INVENTORY-General Survey

How often:

0 Never

1 A few times a year or less

2 Once a month or less

3 A few times a month

4 Once a week

5 A few times a week

6 Every day

How Often 0-6

Statements:

1. _____ I feel emotionally drained from my work.
2. _____ I feel used up at the end of the workday.
3. _____ I feel tired when I get up in the morning and have to face another day on the job.
4. _____ Working all day is really a strain for me.
5. _____ I can effectively solve the problems that arise in my work.
6. _____ I feel burned out from my work.
7. _____ I feel I am making an effective contribution to what this organization does.
8. _____ I've become less interested in my work since I started this job.
9. _____ I have become less enthusiastic about my work.
10. _____ In my opinion, I am good at my job.
11. _____ I feel exhilarated when I accomplish something at work.
12. _____ I have accomplished many worthwhile things in this job.
13. _____ I just want to do my job and not be bothered.
14. _____ I have become more cynical about whether my work contributes anything.
15. _____ I doubt the significance of my work.
16. _____ At my work, I feel confident that I am effective at getting things done.

(Administrative use only)

EX: _____ cat:_____ **CY:** _____ cat:_____ **PE:** _____ cat:_____

MASLACH BURNOUT INVENTORY- General Survey (MALAY VERSION)

MBI- GENERAL SURVEY

Berapa Kerap:	**0**	**1**	**2**	**3**	**4**	**5**	**6**
	Tidak Pernah	Beberapa Kali Dalam Setahun Atau Kurang	Sekali Dalam Sebulan Atau Kurang	Berberapa Kali Dalam Sebulan	Sekali Dalam Seminggu	Beberapa Kali Dalam Seminggu	Setiap Hari

	Berapa Kerap 0-6	**Kenyataan-kenyataan:**
1.	_____	Saya berasa ketandusan emosi dengan kerja saya.
2.	_____	Saya berasa teramat penat pada akhir hari waktu bekerja.
3.	_____	Saya berasa letih apabila bangun pada waktu pagi dan terpaksa berdepan dengan hari baru di tempat kerja.
4.	_____	Bekerja sepanjang hari benar-benar memberi satu tekanan kepada saya.
5.	_____	Saya mampu menyelesaikan masalah yang timbul dalam pekerjaan saya secara efektif.
6.	_____	Saya berasa sangat penat dan kehabisan tenaga dengan kerja saya
7.	_____	Saya berasa saya memberi sumbangan yang efektif kepada apa yang dilakukan oleh organisasi ini.
8.	_____	Saya menjadi kurang berminat dengan pekerjaan saya sejak saya memulakan pekerjaan ini.
9.	_____	Saya menjadi kurang bersemangat dengan kerja saya.
10.	_____	Pada pendapat saya, saya bagus dalam kerja saya.
11.	_____	Saya berasa sangat gembira apabila saya berjaya menyempurnakan sesuatu dalam kerja.
12.	_____	Saya telah mencapai banyak perkara yang berfaedah dalam kerja ini.
13.	_____	Saya hanya mahu melakukan kerja saya dan tidak kisah tentang hal lain.
14.	_____	Saya menjadi lebih sinis tentang sama ada kerja saya menyumbang sesuatu.
15.	_____	Saya meragui kepentingan kerja saya.
16.	_____	Di tempat kerja, saya berasa yakin bahawa saya dapat menyelesaikan sebarang perkara dengan efektif.

7

APPENDIX E

English version: Depression Anxiety Stress Scale

Malay version: Depression Anxiety Stress Scale

DASS 21

Name: *Date:*

Please read each statement and circle a number 0, 1, 2 or 3 which indicates how much the statement applied to you *over the past week*. There are no right or wrong answers. Do not spend too much time on any statement.

The rating scale is as follows:
0 Did not apply to me at all
1 Applied to me to some degree, or some of the time
2 Applied to me to a considerable degree, or a good part of time
3 Applied to me very much, or most of the time

1) I found it hard to wind down 0 1 2 3
2) I was aware of dryness of my mouth 0 1 2 3
3) I couldn't seem to experience any positive feeling at all 0 1 2 3
4) I experienced breathing difficulty (eg, excessively rapid breathing, breathlessness in the absence of physical exertion) 0 1 2 3
5) I found it difficult to work up the initiative to do things 0 1 2 3
6) I tended to over-react to situations 0 1 2 3
7) I experienced trembling (eg, in the hands) 0 1 2 3
8) I felt that I was using a lot of nervous energy 0 1 2 3
9) I was worried about situations in which I might panic and make a fool of myself 0 1 2 3
10) I felt that I had nothing to look forward to 0 1 2 3
11) I found myself getting agitated 0 1 2 3
12) I found it difficult to relax 0 1 2 3
13) I felt down-hearted and blue 0 1 2 3
14) I was intolerant of anything that kept me from getting on with what I was doing 0 1 2 3
15) I felt I was close to panic 0 1 2 3
16) I was unable to become enthusiastic about anything 0 1 2 3
17) I felt I wasn't worth much as a person 0 1 2 3
18) I felt that I was rather touchy 0 1 2 3
19) I was aware of the action of my heart in the absence of physical exertion (eg, sense of heart rate increase, heart missing a beat) 0 1 2 3
20) I felt scared without any good reason 0 1 2 3
21) I felt that life was meaningless 0 1 2 3

Apply template to sheet and sum scores for each scale.
For short (21-item) version, multiply sum by 2.

DASS 21

Nama: *Tarikh:*

Sila baca setiap kenyataan di bawah dan bulatkan pada nombor 0,1,2 atau 3 bagi menggambarkan keadaan anda
sepanjang minggu yang lalu. Tiada jawapan yang betul atau salah. Jangan mengambil masa yang terlalu lama
untuk menjawab mana-mana kenyataan.

Skala pemarkahan adalah seperti berikut:

0 **Tidak langsung** menggambarkan keadaan saya
1 **Sedikit atau jarang-jarang** menggambarkan keadaan saya.
2 **Banyak atau kerapkali** menggambarkan keadaan saya.
3 **Sangat banyak atau sangat kerap** menggambarkan keadaan saya

1 Saya dapati diri saya sukar ditenteramkan 0 1 2 3
2 Saya sedar mulut saya terasa kering 0 1 2 3
3 Saya tidak dapat mengalami perasaan positif sama sekali 0 1 2 3
4 Saya mengalami kesukaran bernafas (contohnya pernafasan yang laju, tercungapcungap walaupun tidak melakukan senaman fizikal) 0 1 2 3
5 Saya sukar untuk mendapatkan semangat bagi melakukan sesuatu perkara 0 1 2 3
6 Saya cenderung untuk bertindak keterlaluan dalam sesuatu keadaan 0 1 2 3
7 Saya rasa menggeletar (contohnya pada tangan) 0 1 2 3
8 Saya rasa saya menggunakan banyak tenaga dalam keadaan cemas 0 1 2 3
9 Saya bimbang keadaan di mana saya mungkin menjadi panik dan melakukan perkara yang membodohkan diri sendiri 0 1 2 3
10 Saya rasa saya tidak mempunyai apa-apa untuk diharapkan 0 1 2 3
11 Saya dapati diri saya semakin gelisah 0 1 2 3
12 Saya rasa sukar untuk relaks 0 1 2 3
13 Saya rasa sedih dan murung 0 1 2 3
14 Saya tidak dapat menahan sabar dengan perkara yang menghalang saya meneruskan apa yang saya lakukan 0 1 2 3
15 Saya rasa hampir-hampir menjadi panik/cemas 0 1 2 3
16 Saya tidak bersemangat dengan apa jua yang saya lakukan. 0 1 2 3
17 Saya tidak begitu berharga sebagai seorang individu 0 1 2 3
18 Saya rasa yang saya mudah tersentuh 0 1 2 3
19 Saya sedar tindakbalas jantung saya walaupun tidak melakukan aktiviti fizikal (contohnya kadar denyutan jantung bertambah, atau denyutan jantung berkurangan) 0 1 2 3
20 Saya berasa takut tanpa sebab yang munasabah 0 1 2 3
21 Saya rasa hidup ini tidak bermakna 0 1 2 3

DASS Scoring Template (Best printed on an overhead transparency sheet)

1) S
2) A
3) D
4) A
5) D
6) S
7) A
8) S
9) A
10) D
11) S
12) S
13) D
14) S
15) A
16) D
17) D
18) S
19) A
20) A
21) D

DASS Severity Ratings

The DASS is a **quantitative** measure of distress along the axes of depression, anxiety (symptoms of psychological arousal) and stress (the more cognitive, subjective symptoms of anxiety). It is **not** a categorical measure of clinical diagnoses. Emotional syndromes like depression and anxiety are intrinsically dimensional – they vary along a continuum of severity (independent of the specific diagnosis). Hence the selection of a single cut-off for a specific diagnosis can be correctly recognised as experiencing considerable symptoms and as being at high risk of further problems. However for clinical purposes it can be helpful to have 'labels' to characterise degree of severity relative to the population. Thus the following cut-off scores have been developed for defining mild/moderate/severe/extremely severe scores for each DASS scale.

Note: the severity labels are used to describe the full range of scores in the population, so 'mild' for example means that the person is above the population mean but probably still way below the typical severity of someone seeking help (ie it does not mean a mild level of disorder).

The individual DASS scores do not define appropriate interventions. They should be used in conjuction with all clinical information available to you in determining appropriate treatment for any individual. With the above information in mind, we offer the following guidelines based on full (42 item) scores (if using the DASS 21 item version, multiply the score obtained by 2).

DASS Severity Ratings
(if using the DASS 21 item version, multiply the score obtained by 2)

	Depression	**Anxiety**	**Stress**
Normal	0-9	0-7	0-14
Mild	10-13	8-9	15-18
Moderate	14-20	10-14	19-25
Severe	21-27	15-19	26-33
Extremely Severe	28+	20+	34+

Source: Psychology Department, UNSW - www.psy.unsw.edu.au/dass

APPENDIX F

Ethical approval

MEDICAL ETHICS COMMITTEE
UNIVERSITY MALAYA MEDICAL CENTER
ADDRESS : LEMBAH PANTAI, 59100 KUALA LUMPUR, MALAYSIA
TELEPHONE : 0379493209
FAXIMILE : 0379492030
NAME OF ETHICS COMMITTEE/IRB
Medical Ethics Committee, University Malaya Medical Center
MECID.NO: 201571466
ADDRESS : LEMBAH PANTAI, 59100 KUALA LUMPUR
PROTOCOL.NO(if applicable) :
TITLE:
Burnout and Distress of Child Minder of Childrens' Home
PRINCIPAL INVESTIGATOR : Dr SITI HALIMATUL SAADIAH BINTI HASSAN
SPONSOR
The
following item [ ] have been received and reviewed in connection with the above study to conducted by the above investigator.
[ ] Application to Conduct Research Project(form) Ver.No : Ver.Date : 01072015
[ ] Study Protocol Ver.No : Ver.Date :
[ ] Patient Information Sheet Ver.No : Ver.Date :
[ ] Consent Form Ver.No : Ver.Date :
[ ] Questionnaire Ver.No : Ver.Date :
[ ]
Investigator's CV / GCP (Dr SITI HALIMATUL SAADIAH BINTI HASSAN,, MANVEEN KAUR A/P HARBAJAN SINGH)
Ver.No : Ver.Date :
[ ] Insurance certificate Ver.No : Ver.Date :
[ ] Other Attachments
1) DASS MALAY Ver.No : Ver.
Date :
2) DASS ENGLISH Ver.No : Ver.
Date :
3) MBI MALAY Ver.No : Ver.
Date :
4) MBI MALAY 2 Ver.No : Ver.
Date :
5) MBI ENGLISH Ver.No : Ver.
Date :
6) DEMOGRAPHIC DATA (BM AND ENGLISH) Ver.No : Ver.
Date :
7) CONSENT BM Ver.No : Ver.
Date :
8) CONSENT BI Ver.No : Ver.
Date :
9) PATIENT INFORMATION SHEET Ver.No : Ver.
Date :
10) PATIENT INFORMATION SHEET BM Ver.No : Ver.

Date :
and the decision is [ ]
[√] Approved
[ ] Rejected(reasons specified below or in accompanying letter)
Comments:
Questionaires only.
Investigator are required to:
1) follow instructions, guidelines and requirements of the Medical Ethics Committee.
2) report any protocol deviations/violations to Medical Ethics Committee.
3) provide annual and closure report to the Medical Ethics Committee.
4) comply with International Conference on Harmonization – Guidelines for Good Clinical Practice (ICHGCP)
and Declaration of Helsinki.
5) obtain a permission from the Director of UMMC to start research that involves recruitment of UMMC patient.
6) ensure that if the research is sponsored, the usage of consumable items and laboratory tests from UMMC services are not charged in the patient's
hospital bills but are borne by research grant.
7) note that he/she can appeal to the Chairman of MEC for studies that are rejected.
8) note that Medical Ethics Committee may audit the approved study.
9) ensure that the study does not take precedence over the safety of subjects.
Date of approval : 10072015

This is a computer generated letter. No signature required.

APPENDIX F

Permission for MBI-Malay version

Permision for DASS-Malay version

On Friday, 4 December 2015, 11:02, SITI HALIMATUL SAADIAH <sitihalimatul@yahoo.com> wrote:

Assalamualaikum Prof Dr Ramli Musa, I'm Dr Siti Halimatul Saadiah,final year trainee in Psychiatry University Malaya. I would like to ask your permission to use Malay version of DASS for my Burnout and Distress of child minder of childrens' home study. Hope to hear from you soon. Thank you Prof. wassalam

siti halimatul saadiah hassan
HKL/PPUM

Re: Permission to use the BM version of DASS

Monday, 7 December, 2015, 6:49 AM

From:

"Ramli Musa" <ramlidr@yahoo.com>

To:

"SITI HALIMATUL SAADIAH" <sitihalimatul@yahoo.com>

الله وبركاته ورحمة عليكم السلام

Salam,
Thank you for showing interest in using DASS Malay version. You are granted the permission to use it. Below are 4 articles which you may use in your references. These 4 articles are the evidence that this questionnaire is validated among the Malaysian population.

Ramli M, Ariff MF, & Zaini Z. Translation, validation and psychometric properties of Bahasa Malaysia version of the Depression Anxiety and Stress Scales (DASS). ASEAN Journal of Psychiatry 2007;8 (2):82-89.
http://www.med.cmu.ac.th/dept/psychiatry/AJP_Contents-vo%20l%208-2.htm

Ramli M., Salmiah MA, Nurul Ain M. Validation and psychometric properties of Bahasa Malaysia version of the Depression Anxiety and Stress Scales (DASS) among diabetic patients. Malaysian Journal of Psychiatry, Nov 2009 Vol 18 No. 2, page 40-45.
http://ejournal.psychiatry-malaysia.org/article.php?aid=65

Ramli Musa, Roszaman Ramli, Kartini Abdullah, Rosnani Sarkarsi Concurrent Validity Of The Depression Anxiety and Stress Scales (DASS). ASEAN Journal of Psychiatry, Vol.12(1), Jan – June 2011:. http://www.aseanjournalofpsychiatry.org/online_12_1.htm

Ramli M, Rosnani S, Aidil Faszrul AR. Psychometric Profile of Malaysian version of the Depressive, Anxiety and Stress Scale 42-item (DASS-42). Malaysian Journal of Psychiatry, 2012 Vol 20, MJP Early Online 1-1-12.
http://www.psychiatry-malaysia.org/file_dir/6825599714f1398ee31bd6.pdf

You may download everything about the DASS from this webpage;
http://www2.psy.unsw.edu.au/groups/dass/translations.htm

Kind regards

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