# FACTORS ASSOCIATED WITH RISK OF PSYCHOLOGICAL PROBLEM AMONG CHILDREN OF MILITARY PERSONNEL

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# CHAPTER ONE:

# PRELIMINARIES

## DECLARATION

I hereby declare that the effort of this dissertation is of my personal except for citations and summaries that have been properly acknowledged.

30th May 2017

DR.HAMIZA BT HASSAN

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## LIST OF ABBREVIATIONS

ADHD : Attention Deficit Hyperactivity Disorder

ATM : Angkatan Tentera Malaysia

BDI : Beck Depression Inventory

BDI-II : Beck Depression Inventory-Second Edition

BSI : Brief Symptom Inventory

CES-D : Center for Epidemiological Studies Depression Scale

DASS : Depression Anxiety Stress Scale

DASS-12 : Depression Anxiety Stress Scale 12

GSI : General Severity Index

HSCL : Hopkins Symptom Checklist

HUSM : Hospital Universiti Sains Malaysia

IB : International Baccalaureate

MAF : Malaysian Armed Forces

MDD : Major Depressive Disorder

MLR : Multiple Logistic Regression

MMPI : Minnesota Multiphasic Personality Inventory

NHMS : National Health Morbidity Survey

| | |
|---|---|
| POMS | : Profile of Mood States |
| PTSD | : Post-traumatic Stress Disorder |
| RM | : Ringgit Malaysia |
| SCL-90 | : Symptom Checklist 90 |
| SDS | : Self-Rating Depression Scale |
| SPSS | : Statistically Package for the Social Science |
| STAI | : State-Trait Anxiety Inventory |
| TDM | : Tentera Darat Malaysia |
| TUDM | : Tentera Udara Di-Raja Malaysia |
| TLDM | : Tentera Laut Di-Raja Malaysia |
| UN | : United Nation |
| US | : United State |

## ABSTRAK

**FAKTOR-FAKTOR YANG BERKAITAN DENGAN RISIKO KEPADA MASALAH PSIKOLOGI DALAM KALANGAN ANAK-ANAK TENTERA**

***Latar Belakang***: Terdapat banyak kajian melaporkan impak psikologi operasi ketenteraan terhadap anak-anak tentera. Anak-anak tentera mepunyai risiko yang tinggi untuk mengalami tekanan psikologi semasa ibu bapa atau penjaga mereka ditugaskan ke operasi ketenteraan.

***Objektif***: Kajian ini bertujuan untuk menentukan masalah kemurungan, kerisauan dan stres serta faktor-faktor yang berkaitan dengannya dalam kalangan anak-anak tentera di Kem Desa Pahlawan, Kota Bharu,Kelantan.

***Metodologi***: Satu kajian keratan rentas di kalangan 117 anak-anak tentera telah dijalankan pada April 2017, menggunakan borang soal selidik DASS-12 versi Bahasa Melayu yang telah diterjemah dan divalidasikan untuk mengesan kemurungan, kerisauan dan stres. Data dianalisis dengan menggunakan multiple regresi linear.

***Keputusan:*** 117 telah dikumpulkan dan purata skor bagi kemurungan, kerisauan dan stress di kalangan peserta adalah 5.15(SD=2.52), 5.28(SD=2.54) dan 5.44(SD=2.64). Bagi kemurungan, terdapat kolerasi negative bagi faktor umur ($p<0.012$) tetapi korelasi positif bagi tempoh bapa ditugaskan ke operasi ketenteraan ($p<0.008$). Bagi kerisauan, terdapat korelasi positif bagi jumlah pendapatan bulanan

($p<0.010$) dan tempoh bapa ditugaskan ke operasi ketenteraan ($p<0.047$). Bagi stress, terdapat korelasi positif bagi jumlah pendapatan bulanan ($p<0.009$) dan tempoh bapa ditugaskan ke operasi ketenteraan. ($p<0.024$)

***Kesimpulan***: Keputusan kajian menunjukkan kemurungan adalah berkait dengan faktor umur, jantina, tempoh bapa ditugaskan ke operasi ketenteraan dan kebolehan untuk menghubungi bapa. Bagi kerisauan dan stres, ianya berkait dengan jumlah pendapatan bulanan dan tempoh bapa ditugaskan ke operasi ketenteraan.

*Kata kunci*: *Kemurungan, Kerisauan, Stres, Anak-Anak Tentera*

## ABSTRACT

**FACTORS ASSOCIATED WITH RISK OF PSYCHOLOGICAL PROBLEM AMONG CHILDREN OF MILITARY PERSONNEL**

**Background**: There are many studies that reported the psychological impact of military deployment toward children of military personnel. The children of military personnel are at increased risk to develop psychological distress during the parental deployment.

***Objectives*****:** The aim of this study is to determine Depression, Anxiety and Stress and its associated factors among children of military personnel in Kem Desa Pahlawan, Kota Bharu, Kelantan.

***Methods***: A cross sectional study among **117** children of military personnel were conducted in April 2017, using the Malay translated and validated DASS-12 to detect Depression, Anxiety and Stress. Data were analyzed using multiple linear regressions.

***Results:*** 117 data were collected with the mean score of depression, anxiety and stress in the participants were 5.15(SD=2.52), 5.28(SD=2.54) and 5.44(SD=2.64) respectively. For depression, there is negative correlations with age ($p<0.012$) but positive correlations with duration of deployment ($p<0.008$). For anxiety, there is positive correlations with total monthly income ($p<0.010$) and duration of deployment

(p<0.047). For stress, there is positive correlations with total monthly income (p<0.009) and duration of deployment (p<0.024).

***Conclusions***: The finding suggest that depression is associated with age, gender, duration of deployment and the ability to contact of father. For stress and anxiety, it is associated with total monthly income and duration of deployment**.**

*Keywords*: *Depression, Anxiety and Stress; children of military personnel*

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# CHAPTER TWO:

# THE TEXT

## SECTION A: INTRODUCTION

# CHAPTER TWO: THE TEXT

## SECTION A: INTRODUCTION

### Psychological Problem among Children and Adolescents

Children and adolescents are very important assets to the nation's development. Adolescents are the transitional phase of growth and development between childhood and adulthood. According to the World Health Organisation (WHO), adolescent is defined as any person between the age of 10 to 19 years old.

Adolescence is a stage where there are many changes; physical and emotional (Hofstra et al., 2002). As it is a period of gradual transition from childhood to adulthood, the process of growing up is complicated and challenging, and adolescents are faced with many expectations, responsibilities, influences and uncertainties during this phase (Healy., 2009)

Mental health disorders are the most common health issues faced by our nation’s school-aged children. Stress, anxiety and depression are the common mental health conditions. One in five children suffers from a mental health or learning disorder, and 80% of chronic mental disorders begin in childhood (Merikangas, 2010).

Mental disorders can cause ongoing, severe symptoms that affect the way a child feel, think, act, and handle his or her daily activities, such as going to school, sleeping, or eating. It is important to know the signs and seek help if needed. During a child's developmental years, they are constantly growing and changing. It is imperative to note that one must keep this in mind when diagnosing and treating emotional and behavioral disorders in children. According to the National Institute of

Mental Health (NIMH), emotional and behavioral disorders affect 10 to 15 percent of children globally. A study stated, ranging from mild to extremely severe, depressive symptoms were present in 18.5 percent of the population, anxiety in 24.4 percent, and stress in 20 percent. Clinical depression was present in 12.1 percent and generalized anxiety disorder in 19.0 percent (Sahoo, 2010).

In Malaysia, the number of children with poor mental health is rising in trend. The National Health Morbidity Survey (NHMS) conducted in 2011, 20 percent of children found to be suffering from stress, anxiety and depression (New Straits Times, 2014). According to Deputy Director-General of Health (Public Health) Datuk Dr Lokman Hakim Sulaiman, he told the New Straits Times the NHMS revealed that there is some increment in the figure of mental health problem which is from 13 percent in 1996 to 19.4 percent in 2006 and reached 20 percent in 2011 (New Straits Times, 2014).

Datuk Dr. Lokman also mention that the Healthy Mind Programme survey conducted in 2013 revealed seven percent of 19,919 Form Four students from 157 schools showed signs of severe and extremely severe stress, anxiety and depression based on Depression, Anxiety and Stress Scale (New Straits Times, 2014). To achieve maximum potential, children have to develop self-identity, good self-esteem and be ready to accept life challenges in preparation for adulthood. Mental health problems cause major changes in a person's thinking, emotional state and behaviour, and disrupt the person's ability to work and carry on with personal relationships. Students with poor mental health will have low self-esteem, suffer from sadness or restlessness, show poor performance in school and have relationship problems, said Datuk Dr. Lokman to the New Straits Times in 2014 (New Straits

Times, 2014). These will also lead to mental and behavioural problems, like truancy, bullying, vandalism, substance abuse, tendency to self-harm and suicidal behaviour later in life (New Straits Times, 2014).

Furthermore, most of the literatures have used prevalence and predictors of depression, anxiety and stress associated with sociodemographic in children and adolescents as psychological distress measurement which will be explained in the subtopics that follows:

**Depression**

Depression is a significant contributor to the global burden of disease and affects people in all communities across the world. World Health Organization defines depression as a common mental disorder that is presented with depressed mood, loss of interest or pleasure, decreased energy, feelings of guilt or low self-worth, disturbed sleep or appetite, and poor concentration. These problems can reoccur or become chronic and lead to substantial impairments in an individual. Thus, it will affect one's ability to take care of their daily life responsibilities.

In severe cases, depression can worsen and lead to suicide. Depression in adolescents have been shown to be associated with increased risk of suicidal behavior, homicidal ideation, tobacco use and other substance abuse into adulthood (John, 2001). Today, depression is estimated to affect 350 million people. Almost 1 million lives are lost yearly due to suicide, which translates to 3000 suicide deaths every day. For every person who completes a suicide, 20 or more may attempt to end his or her life (World Health Organization, 2012).

The World Mental Health Survey conducted in 17 countries found that on average about one in 20 people reported having an episode of depression in the previous year. Depressive disorders often start at a young age; they reduce people's functioning and often are recurring. For these reasons, depression is the leading cause of disability worldwide in terms of total years of lost due to disability (Aazami *et al.*, 2015).

The demand for curbing depression and other mental health conditions is on the rise globally (World Health Organization, 2012). Even in Malaysia, Prof Dr Nor Zuraida Zainal who is the Malaysian Psychiatric Association President, said that depression will be a major mental health illness Malaysians will suffer from by year 2020 (The Malay Mail Online, 2016). This was because more people are expected to experience increased stress due to work and family pressure. Research done by the association on the prevalence of depression among Malaysians showed a 50 percent increase in depressed patients from 2011 to 2015 (The Malay Mail Online, 2016).

Medical professional in psychiatry field uses this phrase as a mental illness and it should fulfil certain criteria either using International Criteria Diagnosis (ICD) or Diagnostic and Statistical Manual of Mental Disorder (DSM). Most of the psychiatrists follow the DSM criteria for the diagnosis of depression (American Psychiatric Association, 2013). According to the latest Diagnostic and Statistical Manual of Mental Disorder Fifth Edition (DSM-V), to diagnose one having a depression, it should fulfil certain criteria which one should at least have 5 or more of the symptoms which presents during the same 2-week period (and at least 1 of the symptoms must be diminished interest/pleasure or depressed mood). The symptoms

are depressed mood or specifically for children and adolescent, it can also present as irritable mood, diminished interest in almost all activites, significant weigth loss or appetite disturbance (children may also present with failure to achieve weight gain), insomnia or hypersomnia, psychomotor agitation or retardation, fatigue, worthlessness feeling, diminished ability to concentrate and recurrent suicidal thought. The symptoms must cause clinically significant distress or impairment in social, occupational or other important areas of functioning, not attributable to the physiological effects of a substance (e.g. a drug abuse, a medication) or other medical condition, do not meet criteria for a mixed episode and also not better accounted for by bereavement and symptoms persist for longer than 2 months or are characterized by marked functional impairment, morbid preoccupation with worthlessness, suicidal ideation, psychotic symptoms or psychomotor retardation.

**Anxiety**

Anxiety as described by the American Psychological Association is a change of emotion characterized by feeling of tension, worried thought and physical changes like increased blood pressure. People with this disorder commonly have recurring intrusive thought and may avoid certain situations out of worry. they may also have other physical symptoms such as sweating, trembling, dizziness, or increased heartbeat.

According to the Diagnostic and Statistical Manual of Mental Disorder Fifth Edition (DSM-V), the essential feature of generalized anxiety disorder is excessive anxiety and worry about number of events or activities. The intensity, duration, or

frequency of the anxiety worry is out of proportion to the actual likelihood or impact of the anticipated event.

According to a survey conducted by the National Health and Morbidity Survey in 2015, 29% of Malaysian suffer from depression and anxiety disorder compared to 12% in 2011 (NHMS, 2015). National Institute of Mental Health states that anxiety disorder is the most common mental illness in the United States, affecting 25% of the population from age 13 to 18 years old, and 18% of those older. In European union (EU), anxiety makes up (14.0%), insomnia (7.0%), major depression (6.9%), somatoform (6.3%), alcohol and drug dependence (>4%), ADHD (5%) in young and old age population (Wittchen *et al*., 2011; Kessler *et al*., 2010).

Despite being the most common psychiatric disorder in United States, only 36.9% of those with the disorder are receiving treatment, demonstrating substantial under recognition and undertreatment. There is no evidence that the prevalence rates of anxiety disorders have changed in the past years (Bandelow & Michaelis, 2015).

**Stress**

Stress is conceptualized as occurring "when there are demands on a person which tax or exceed his adjustive resources" (Lazarus, 1966). Stress is a descriptive term used in both the behavioral and biological sciences to cover conditions of a physical, biological, or psychological nature that typically cannot be controlled by organisms and that strain organisms are often beyond their power to adapt (Gaillard, 1993).

In a study among high school student in Los Angeles found that as a whole, the mean of 2.3 indicated the reported level of stress to be moderate to low. One

quarter to one-third of the sample who reported experiencing high levels of stress on a daily to weekly basis constitute a significant number of adolescents in need of some form of intervention (Anda, 2000). Students in the International Baccalaureate (IB) program, a curriculum designed for highly motivated, high-achieving high school students, perceived more stress than students in the general education curriculum (Suldo, 2008).

The prevalence of distressed secondary school students was 26.1% and it is relatively higher compared to the normal population which is less than 10% as mentioned by Firth (Firth, 1986). In a local study, the prevalence of stress in high school student in Malaysia is about 26.1 per cent. (Yusoff, 2010). It shows relatively similar finding of the stress prevalence in medical student from the other study (Yusoff, 2010) with the difference of 0.2 per cent.

**Factors associated with psychological problem**

Factors associated with psychological problems among adolescents are varies and multifactorial. Generally, it can be divided into few categories based on the type of psychological problem respectively.

For depression, the factors can be categorised into biomedical, psychosocial, and cognitive. Biomedical risk factor includes a genetic predisposition to depression. Parental depression or having family history of depression increase the risk for the adolescent to develop similar condition. (Bhatia & Bhatia, 2007).

Adolescent with chronic illnesses such as diabetes, hypertension, or heart disease are also at risk for depression. In addition, the hormonal changes during puberty can bring about episodes of depression, particularly girls whom are twice as likely to experience depression as boys. A commonly used drug during adolescent

phase such as birth control pill and certain acne medicine has proven to be a cause of adolescent depression (Bhatia & Bhatia, 2007).

Childhood neglect or abuse is one of the psychosocial factor. Adolescent who experience physical, emotional, or sexual abuse are at higher risk for developing depression (Bhatia & Bhatia, 2007). Another study by Buzi, Wienman, and Smith reveals that sexual abuse is a significant factor in predicting depression. (Busi, Weinman, & Smith, 2007).

Other factors that put adolescent at risk of developing depression are peer pressure, low academic performance, and poverty. losing the loved one or having a difficult parental or romantic relationship might put them at a greater risk for depression (Bhatia & Bhatia, 2007). furthermore, adolescents with parents who abused alcohol or controlled substances are at a higher risk for developing depression (Feldman, 2008) . Cognitive factors might also influence adolescent depression. Negative thinking and low self-esteem can contribute to depression in adolescents. (Charoensuk, 2007).

Being one of the most common psychological problem worldwide, there is a complex interplay of a few factors for the aetiology of anxiety disorders. Girls are more susceptible than boys for anxiety. Female sex consistently emerges as a risk factor for the development of anxiety disorder and females are about twice as likely as males to develop anxiety (Costello, 2003). The significantly higher incidence in female anxiety emerges early in life, and retrospective data indicate that at age 6, females are already twice as likely to have experienced anxiety as are male (Lewinsohn, 1998).

Parents play an important factor in the psychological development of their children. infants who were anxiously attached in infancy develop more anxiety disorder during childhood and adolescence than infants who were securely attached (Warren, 1997).

Parents affected by anxiety usually unable to manage anxiety in their children as they do not possess the ability themselves. These children develop anxiety more often, sometimes as early as toddlerhood, the culture-specific expression of anxiety is one of the risk factor. for example, Asian cultures typically show the lowest rate, whereas Russian and US samples show the highest rate of social anxiety disorder. The prevalence and expression of social anxiety depends on the particular culture. It is assumed to be related to cultural norms across countries. individuals with environmental illness suffer a larger number of psychological symptoms. Anxiety disorder were significantly frequent in those with environmental illness (Bornschein et al, 2003). Lead exposure particularly can result in anxiety and depression (Morrow, 2001).

Experience of traumatic events may influence the development of anxiety disorders. traumatic experience in developmental age leads to neurobiochemical changes in brain, typical for panic disorder or PTSD. Childhood maltreatment has been linked to a variety of changes in brain structure and function and stress-responsive neurobiological systems. Deprivation of developmentally appropriate experience may reduce neuronal activity, resulting in a generalized decrease in neurotrophin production, synaptic connectivity, and neuronal survival, resulting in profound abnormalities in brain organization and structure (Perry et al, 2002). thus, abuse and exposure to domestic violence can lead to numerous differences in the

structure and physiology of the brain that would affect multiple human functions and behaviours (Teicher et al 2002).

Genetic factors play an important role in the aetiology of anxiety disorder. for example, inherited risk factor for social phobia is estimated 47 percent (Skre et al 2000). increased risk for anxiety disorder in children occurs if at least one parent has anxiety disorder (Wittchen 2000), or if both parents are affected (Johnson, 2008). Common genetic risk factors for major depression and anxiety disorder have been described as “bidirectional”; both parental major depression increased the risk of anxiety disorder in child, and parental anxiety disorder increased risk of depression in child (Weissman et al, 2006, Johnson 2008).

**Overview of Military Forces in Malaysia**

The military, consisting of the Army, Navy, Marine and Air Force, also known as the Armed Forces, are forces authorized to use lethal and / or deadly force, and weapons, to support the interests of the state and some or all of its citizens. Subordinated military personnel, generally known as soldiers, sailors, marines, or airmen, are capable of executing the many specialised operational missions and tasks required for the military to execute policy directives.

The primary reason for the existence of the military is to engage in combat. This represents an organisational goal of any military, and the primary focus for military thought through military history. During peacetime, when military personnel are mostly employed in garrisons or permanent military facilities, they mostly conduct administrative tasks, training and education activities, and technology maintenance. Another role of military personnel is to ensure a continuous replacement of departing

servicemen and women through military recruitment, and the maintenance of a military reserve.

In Malaysia, the military force is known as Malaysian Armed Forces (MAF) or "Angkatan Tentera Malaysia (ATM)". It consists of three main branches, namely the Malaysian Army, the Royal Malaysian Navy and the Royal Malaysian Air Force. Malaysia's armed forces originated from the formation of local military forces in the first half of the 20th century, during British colonial rule of Malaya and Singapore prior to Malaya's independence in 1957. Its role is to defend the sovereignty and strategic interests of Malaysia from all forms of threat.

Like other military forces in other country, military personnel in MAF also need to join the deployment that are appointed. Unlike other country which involve in war, deployment among MAF is more toward peaceful mission and routine training. The division that involved mostly in deployment is the Malaysian Army. The deployment for peaceful mission usually engaged with United Nation (UN) and they are usually sent to other country like Somalia. Meanwhile, the routine training in the Malaysian Army is to improved skill in combat either in tactical or administration. It usually involved local training, oversea training, unilateral training and multilateral training. Unilateral training involved cooperation of the Malaysian Army and another country such as US, Canada, Indonesia, Singapore and a few more countries. While, multilateral training involved combination of military forces from few countries with the mission of exchanging technology and skill to improve their own defence system.

In Malaysia, the duration of deployment are varies from 2 months and up to the maximum of 12 months. According to the book The Military Academy Malaysia Compared with West Point, Malaysia's current approach to defence takes a comprehensive 'multi-dimensional, multi-layered and multifocal' perspective, aiming

to meet both military and non-military threats. Emphasis is given to develop capacities to counter a whole spectrum of possible threats from low to high intensity conflicts (McNally & Morrison, 2002, p.109).

**Malaysian Army Deployment in UN Peacekeeping Operations**

In October 1960, Malaysia deployed its first contingent of 3,500 Malay Special Forces of the then Malayan Armed Forces to the United Nations Operation in Congo (ONUC). Since then, Malaysia has participated in over 30 peacekeeping operations with the deployment of 29,000 peacekeepers from the Malaysian Armed Forces and the Royal Malaysian Police. The deployment of Malaysia's military and police personnel in various UN Peacekeeping Operations is a manifestation of Malaysia's strong commitment to shared responsibilities towards the early and peaceful resolution of conflicts.

In addition to UNPKOs, Malaysia has participated in other UN-mandated missions namely the 3 UN-mandated NATO-led PKOs; which are, the Implementation Force (IFOR) and Stabilisation Force (SFOR) in Bosnia-Herzegovina; the International Force East Timor (INTERFET) and International Security Assistance Force in Afghanistan (ISAF); and the International Monitoring Team (IMT) in Mindanao, the Philippines.

Currently, Malaysia is involved in UN Peacekeeping Operations in the Democratic Republic of Congo (MONUSCO), UN Interim Force in Lebanon (UNIFIL), UN Mission in Liberia (UNMIL), UN Mission in the Republic of South Sudan (UNMISS), UN-African Union Hybrid Mission in Darfur (UNAMID), UN Interim Security Force for Abyei (UNISFA) and Western Sahara (United Nations Mission for the Referendum in Western Sahara - MINURSO). Malaysia has also sent a medical team as part of NATO's operations in Afghanistan.

## Psychological changes related to Parental Deployment

Military life presents both challenges and opportunities to grow for children and families (Hall, 2008). In general, military personnel in all over the world will have a period of deployment within their service period. The deployment commonly due to war, routine training or certain peaceful mission that need to be completed or involved. Deployment is categorized by 4 distinct phases which are pre-deployment (period from notification to departure), deployment (departure period), reunion (period of preparation just prior to return) and post-deployment or re-unification (period after return) (APA, 2007). On average, the military personnel in Malaysia will involve in deployment about 2 to 3 times per year from 2 months of duration to the longest duration of 1 year per deployment.

The children usually face various stressors during these stages of deployment (Fitzsimons and Krause-Parello, 2009). Studies reported some child adjustment problems during parental deployment included depression, negative behavioural adjustment-anger, poor academic performance-loss interest in normal activities, concern and anxiety about the deployed parent's wellbeing, increases in responsibility and maturity in caring for younger siblings, higher than normal risk for maltreatment and physical abuse, social isolation and other related problem (Gorman et al., 2010; Houston et al., 2013). School-aged children displayed emotional dysregulation and academic difficulties, and anger and defiance were pronounced in adolescents with a deployed parent (Lincoln, 2008). A recent report indicated higher anxiety in adolescents of deployed parents, with risk increasing as duration of deployment increases (Chandra, 2010). Ongoing risks include child maltreatment related to deployments, (Rentz, 2007; Gibbs, 2007; McCarroll, 2008)

as well as increased marital conflict and domestic violence in families with a deployed parent (McCarroll, 2010).

Although, the military deployment in Malaysia is not as high risk as other country who involved in war but it is still cause multiple psychological problems among the children who are left at home. In a study by Jessen and colleague find that parental deployment is related to increase of depressive symptoms in children. However, it is rarely caused the pathological level of psychological symptoms in these children (Jensen, Martin et al. 1996). In another study done in 2010, the increase of children depression and externalizing symptoms is predicted by parental distress and cumulative length of parental deployment independently. The study also stated that anxiety is significantly elevated in children who parents are involved in deployment within the study period and recently return from the deployment although behavioral adjustment and depression levels were comparable to community norms (Lester, Peterson et al. 2010).

Children and families of military personnel face recurrent separations, frequent and often sudden moves, difficult reunions, long and often unpredictable duty hours, and the threat of injury or death of the military service member during routine training and peaceful missions. The major challenge for children and families of military personnel especially in country which involved in war is a lengthy deployment of the uniformed family member to a combat zone. Children not only miss the deployed parent, but they also experience obvious uncertainty surrounding his or her safety, especially in single parent or dual-career families. The children especially adolescents with many siblings may be asked to take on greater responsibilities due to absence of the father following deployment, and daily routines may change (Pincus, House, Christenson, & Adler, 2001).

Other than that, families may move to be closer to other relatives during the deployment for certain reasons. The relocation of families may require them to move off base into the civilian community where they lose the existing military support system (MacDermid, 2006) and it may lead to increment of psychological problem in children. However, to the best researcher knowledge, there is limitation in local research or study done among military personnel children regarding on psychological changes which related to parental deployment in Malaysian army.

## OBJECTIVES

### General Objective

The aim of this study is to determine Depression, Anxiety and Stress and its associated factors among children of military personnel in Kem Desa Pahlawan, Kota Bharu, Kelantan.

### Specific Objectives

1. To study mean of psychological problems (depression, anxiety and stress) among children of military personnel during parental deployment.

2. To determine the association between sociodemographic factors and psychological problems among children of military personnel.

## METHODS

This is a cross-sectional study which was conducted for a period of 2-weeks duration, which was from 25th April to 5th May 2017. It was conducted in Desa Pahlawan Camp, in Kok Lanas, Kota Bharu, Kelantan, Malaysia. This military camp chosen because it is the nearest and largest military camp from Hospital Universiti Sains Malaysia (HUSM). Moreover, the camp has most of the military personnel involved in deployment.

The reference population of this study was children of military personnel aged from 13 to 17 years old. The source population were children of military personnel aged between 13 to 17 years old whom parents involved in deployment. The sampling frame and study sample were children of military personnel aged between 13 to 17 years old whom parents involved in deployment during the period of study who fulfil the inclusion and exclusion criteria.

The selection of sample for this study was based on the inclusion and the exclusion criteria. Inclusion criteria were:

1. Children of military personnel age from 13 to 17 years old who parents are involved in deployment.
2. Able to read and write in Malay language and understand the questionnaire.

The exclusion criteria were:

1. Children with learning disability, cognitive impairment and mentally retarded.
2. Has been diagnosed or receiving treatment for major psychiatric illness.

Due to time constrain, convenient sampling method was chosen. A total of **117** of the children of military personnel fulfilled the inclusion criteria within the study period were recruited.

The principle researcher with the help of trained research assistants approached all eligible children of military personnel who fulfilled the inclusion criteria. They are approached directly and the parents are informed regarding of their involvement in this study. The involvement in this research is on voluntary basis. Detailed explanation of the study was given to participants and the parents and written consent was obtained using the approved assent form released by the Ethics Committee of USM as the participants of this study are still underage. Once participants and their parents have given their written consent, research tools which consist of the assent form sociodemographic data sheet and Depression Anxiety Stress Scale 12 (DASS-12) Malay Version were given asked to complete it. Once participants had completed, the data sheets were collected and coded for data analysis.

**Sociodemographic Data Form**

Respondents were asked to identify their age, gender, race, religion, parents' educational level, number of family member, monthly family income, family member who serve in military, location of current deployment and duration of deployment. These variables were used as control variables in further analysis.

**The Depression, Anxiety and Stress Scale-12 Items (DASS-12)**

The questionnaire consisted of questions on socio-demographic information such as age and gender. The Depression, Anxiety and Stress Scale (DASS-12) were

used to determine anxiety in this study (Zubaidah et al., 2014). The DASS-12 was developed from the Malaysian Adapted Depression, Anxiety and Stress Scale-21 (DASS-21)(Ramli et al., 2007).

The DASS-12 removed items 5,8,9,11,12,13,15,16 and 20 from the DASS-21; but maintained items 3, 10, 17 and 21 for depression; items 2, 4, 7 and 19 for anxiety; and items 1,6,14 and 18 for stress. This new version of the 12-item DASS was developed for adolescents in Malaysia and has a stable factor structure, and is a useful instrument for distinguishing between depression, anxiety and stress among adolescents. The reliability of each subscale was adequate using Cronbach's alpha (Total = 76; Depression =0.68, Anxiety=0.53; Stress=0.52).

**Statistical Analysis**

All collected data was analyzed using SPSS for Microsoft Window 7, Version 22.0. Prior to analysis, data were checked, explored and cleaned, and normality of the data was tested. All data and scores collected were calculated and tabulated via SPSS (Statistically Package for the Social Science) 22.0.

Descriptive statistics were used to evaluate and describe socio-demographic data, mean of psychological problem (Depression, Anxiety and Stress) and sociodemographic factor of children of military personnel. Numerical variables presented with mean and standard deviation, while categorical variables presented by frequency (%).

The association between socio-demographic and Depression, Anxiety and Stress (DASS-12) were analysed using Multiple Linear Regression (MLR). Methods of variable selections are by manual selection, forward and also backward selection. Goodness of fit was measured by Hosmer-Lemeshow test, classification table and

area under ROC curve. Below were the research question and summary of statistical analysis for this study:

| RESEARCH QUESTIONS | INSTRUMENT | DATA ANALYSIS |
|---|---|---|
| What is the mean of Depression, Anxiety and Stress among children of military personnel during parental deployment? | Sociodemographic data form<br>DASS 12 | Descriptive analysis |
| Are there any associations between sociodemographic factors and psychological problems among children of military personnel? | Sociodemographic data form<br>DASS 12 | Multiple Linear Regression |

**Table for statistical analysis**

The study was undertaken as a partial requirement for the researcher's completion of Masters of Medicine (M.Med) Paediatrics at the University Sains Malaysia and it has been approved by the Human Research Ethics Committee (HREC) of University Sains Malaysia (Ethical Committee JEPeM Code: USM/JEPeM/17020076).

# SECTION B:

# STUDY PROTOCOL

# DOCUMENTS SUBMITTED FOR ETHICAL APPROVAL

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## DISSERTATION PROPOSAL

**Psychological problem among Children of Military Personnel and Their Socio-demographic Correlates**


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# 1. INTRODUCTION

Mental health conditions and disorders did not only affect adults. Children and teens can experience mental health problems too. According to National Institute of Mental Health (NIMH), mental health problems affect 10–20% of children and adolescents worldwide. Overall, 14.5% of the children and adolescents aged 7–17 fulfilled the criteria for at least one specific mental health problem associated with impairment, or had an overall mental health problem indicated by an abnormal SDQ score and present impairment (Ravens-Sieberer, 2008). In fact, research has now shown that most mental disorders follow a developmental course that typically starts early in life. NIMH also stated that not only of conditions such as autism and ADHD, which are well known for having onset in childhood, but also for mood, anxiety, and psychotic disorders. Symptoms of overall mental health problems were present in 8.6% of the children and 6.6% of the adolescents (Ravens-Sieberer, 2008).

Like adults, children and teens can sometimes experience intense emotions as they get older or go through stressful or traumatic events in their lives. For example, it is common for children to feel anxious about school or friendships, or for teens to have short periods of depression after a death in the family.

Mental disorders are different. They can cause ongoing, severe symptoms that affect how a child feels, thinks, acts, and handles daily activities, such as going to school, sleeping, or eating. It is important to know the signs and seek help if needed. During a child's developmental years, they are constantly growing and changing. It is imperative to note that one must keep this in mind when diagnosing and treating emotional and behavioral disorders in children. According

to the National Institute of Mental Health (NIMH), emotional and behavioral disorders affect 10-15 percent of children globally.

In smaller community, deployments among military members has shown effects on their children behavior. Many children from military families experienced absence of one or both parents during deployment having problems such as higher stress level, declining grades and maladaptive child behaviors (James and Countryman, 2012).

A psychological and behavioural assessment is used to identify the emotional functioning, adaptive and social skills levels as well as behavioural issues of an individual. Information gathered from the assessment can be helpful in developing treatment programs designed to improve social/emotional functioning or alleviate psychological or behavioural problems. In assessing the psychological and behavioural problem in children and adolescents, there are a few components that can be used including consultation appointment, direct assessment, indirect assessment, clinical report and feedback session.

For the screening of the psychological and behavioural problems in children and adolescents, direct and indirect assessment are commonly used. In direct assessment, it consists of observations that take place in school, community or home and are designed to better understand the child or adolescents and how their symptoms or experiences may impact their ability to meet their day to day needs and goals as well as allow them to grow and develop so they can meet their full potential. Meanwhile, for indirect assessment, it consists of record review, interview conducted with teachers, parents of children or adolescents, as well as questionnaires developed to identify a wide range of skill strengths and