



UNIVERSITI PUTRA MALAYSIA

***FACTORS ASSOCIATED WITH KNOWLEDGE, ATTITUDE AND
PRACTICE OF CAREGIVERS ON PREVENTION OF INJURIES AMONG
CHILDREN IN DAYCARE CENTRES IN CENTRAL MALAYSIA***

NABIHA GUL HASSAN

FPSK(M) 2017 52



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PRACTICE OF CAREGIVERS ON PREVENTION OF INJURIES AMONG
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By

NABIHA GUL HASSAN

**Thesis Submitted to the School of Graduate Studies, Universiti Putra Malaysia,
in Fulfillment of the Requirements for the Degree of Master of Science**

April 2017

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DEDICATION

Dedicated to my father

Prof. Dr. Shahid Hassan

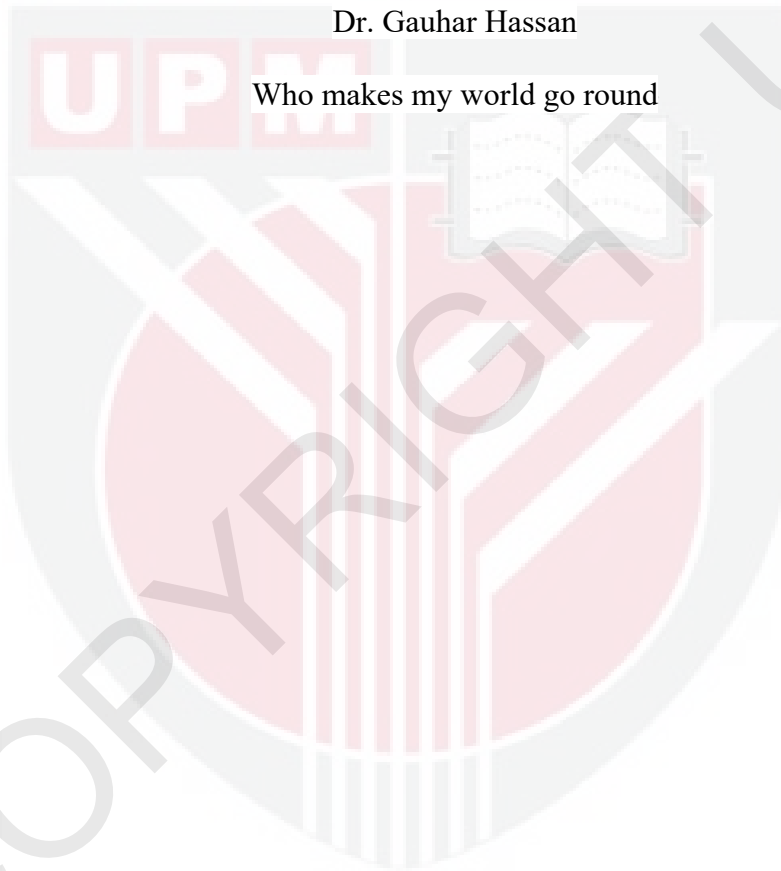
My inspiration, my strength...my hero.

&

My mother

Dr. Gauhar Hassan

Who makes my world go round



Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfillment of the requirement for the Degree of Master of Science

FACTORS ASSOCIATED WITH KNOWLEDGE, ATTITUDE AND PRACTICE OF CAREGIVERS ON PREVENTION OF INJURIES AMONG CHILDREN IN DAYCARE CENTRES IN CENTRAL MALAYSIA

By

NABIHA GUL HASSAN

April 2017

Chairman : Hayati Kadir @ Shahar MD, M.Comm.Health, PhD
Faculty : Medicine and Health Science

Background

Childhood injuries have become one of the leading causes of morbidity and mortality among infants and pre-school children. With the increase in working mothers in the labour force, the demand for child care in the form of day-care centres has risen substantially in recent years. Young children cannot understand the risk of injury and thus do not know how to be safe. It is therefore essential that child-care settings provide a safe environment with qualified caregivers who are able to provide appropriate supervision.

Objectives

To identify factors that affect the knowledge and attitudes on injury prevention of caregivers working in day-care centres in Putrajaya and Selangor.

Methodology

A cross-sectional study was carried out among 399 participants in day-care centres in a total of 12 districts across Putrajaya and Selangor. Only licensed day-care centres were selected and approached for the study. Proportional to size random sampling method was used to collect information on socio-demographic, socio-economic factors of caregiver's through the use of self-constructed, self-administered questionnaires. Data was analyzed using, descriptive, bivariate and multivariate data analysis by SPSS™ (version 21). The test used were Chi-square test, Logistic regression and Multiple Logistic Regression.

Results

The study response rate was 89.47%. Only 38.6% of caregivers possessed good knowledge and 13.3% had good attitude on injury prevention. The majority of respondents were females (98.2%), Malays (35.6%), Muslims (48.6%) and between the age of 18-56 years. Majority of the participants were unmarried (51.4%), and did not have any children (70.9%). Majority of participants had at least a secondary education (51.6%) and earned at least minimum wage (56.4%). Most participants had completed the pre-requisite mandatory child care course (53.9%). Predictors of poor knowledge were participants who were below 25 years of age (AOR= 8.928, 95% CI 4.68 – 17.02, $p = 0.001$), single and unmarried (AOR= 2.077, 95% CI 1.13 – 3.83, $p = 0.019$), had secondary level education (AOR= 2.840, 95% CI 1.70 – 4.76, $p = 0.001$) and worked less than 60 hours per week (AOR= 1.967, 95% CI 1.15 – 3.33, $p = 0.001$). Predictors of poor attitude on injury prevention were participants who were below 25 years of age (AOR= 2.212, 95% CI 1.07 – 4.57, $p = 0.032$), earned minimum income (AOR= 2.331, 95% CI 1.11 – 4.91, $p = 0.026$) and had a secondary level education (AOR= 2.408, 95% CI 0.78 – 7.02, $p = 0.013$).

Conclusion

In conclusion, results found that certain socio-demographic and socio-economic factors were associated with knowledge and attitude on injury prevention of caregivers. Results indicate that majority of caregivers working in Putrajaya and Selangor had poor knowledge and poor attitude on injury prevention. It should therefore be our utmost priority to ensure hiring qualified caregivers in order to reduce and eliminate the risk of future injuries among children in day-care centres.

Keywords: Knowledge, attitude, children, injuries, day-care centres

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi keperluan untuk Ijazah Master Sains

**PENGETAHUAN DAN SIKAP PENGASUH TENTANG AMALAN
KESELAMATAN BAGI PENCEGAHAN KECEDERAAN DALAM
KALANGAN KANAK-KANAK DI PUSAT ASUHAN HARIAN, CENTRAL
MALAYSIA**

Oleh

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Latar Belakang

Kecederaan sewaktu zaman kanak-kanak menjadi salah satu penyebab utama morbiditi dan kematian dalam kalangan bayi dan kanak-kanak pra-sekolah. Peningkatan jumlah ibu bekerja sebagai sebahagian tenaga kerja meyebabkan permintaan untuk mendapatkan perkhidmatan jagaan anak berupa pusat jagaan harian meningkat secara mendadak beberapa tahun kebelakangan ini. Anak kecil tidak dapat memahami akan risiko kecederaan lalu tidak tahu cara untuk kekal selamat. Maka adalah penting suasana pusat jagaan anak menyediakan persekitaran yang selamat beserta petugas berkeelayakan yang mampu menyediakan khidmat pengawasan yang sesuai.

Objektif

Mengenal pasti pengetahuan dan sikap pengasuh yang memberi kesan ke atas pencegahan kecederaan di pusat-pusat jagaan harian berlesen di Putrajaya dan Selangor.

Kaedah

Satu kajian reka bentuk keratan rentas telah dijalankan ke atas 399 peserta kajian dalam kalangan pusat-pusat jagaan merangkumi sejumlah 12 daerah di sekitar Putrajaya dan Selangor. Hanya pusat jagaan berlesen dipilih untuk kajian ini. Kaedah persampelan rawak dua peringkat berstrata diaplikasi bagi mengumpul maklumat faktor sosio demografik dan sosio ekonomik melalui penggunaan borang soal selidik

yang diakui sah dibina sendiri oleh penyelidik, dan dijawab sendiri oleh peserta kajian. Hanya pengasuh yang berhubungan langsung dengan anak-anak jagaan layak menyertai kajian ini. Data analisis deskriptif, bivariat dan multivariat dijalankan menggunakan SPSS™ (versi 21). Ujian yang dijalankan adalah ujian Chi-square, Regresi Logistik dan Regresi Logistik Berbilang.

Keputusan

Kadar respon kajian ini ialah 89.47%. Hanya 38.6% daripada pengasuh mempunyai pengetahuan yang bagus mengenai pencegahan kecederaan dalam kalangan anak-anak jagaan mereka, 13.3% mempunyai sikap yang baik, dan hanya 4.8% yang benar-benar mengamalkan pencegahan kecederaan kanak-kanak. Majoriti responden adalah wanita (98.2%), Melayu (35.6%), beragama Islam (48.6%), yang berumur di antara 18-56 tahun. Majoriti peserta kajian tidak berkahwin (51.4%), dan tidak mempunyai anak (70.9%). Majoriti peserta kajian memiliki sekurang-kurangnya pendidikan sekolah menengah (51.6%) dan memperoleh gaji minimum (56.4%). Kebanyakan peserta kajian telah menyempurnakan kursus prasyarat wajib (53.9%). Peramal pengetahuan yang lemah dikesan pada pengasuh yang umur di bawah 25 tahun (AOR= 8.928, 95% CI 4.68 – 17.02, $p = 0.001$) dan status perkahwinan bujang AOR= 2.077, 95% CI 1.13 – 3.83, $p = 0.019$), peringkat pendidikan SPM (AOR= 2.840, 95% CI 1.70 – 4.76, $p = 0.001$) dan jumlah tahun pengalaman dalam bidang kerja semasa (AOR=3.397, 95% CI 2.09-5.52). Peramal sikap yang kurang baik adalah umur pengasuh di bawah 25 tahun (AOR= 2.212, 95% CI 1.07 – 4.57, $p = 0.032$), peringkat pendidikan SPM (AOR= 2.408, 95% CI 0.78 – 7.02, $p = 0.013$) dan memperoleh gaji minimum (AOR= 2.331, 95% CI 1.11 – 4.91, $p = 0.026$).

Kesimpulan

Secara kesimpulannya, keputusan menunjukkan faktor sosio demografik dan sosio ekonomik dikaitkan dengan pengetahuan dan sikap pengasuh. Dapatan kajian menunjukkan majoriti pengasuh yang bekerja di Putrajaya dan Selangor kurang berpengetahuan dan sikap yang kurang baik. Maka, keutamaan harus diberikan kepada usaha memastikan pusat jagaan menggaji pengasuh yang bertauliah bagi mengurangkan dan menghapuskan risiko kecederaan akan datang ke atas kanak-kanak di pusat jagaan harian.

Keywords: Pengetahuan, sikap, kanak-kanak, kecederaan, pusat harian asuhan

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I would also like to extend my thanks to Universiti Putra Malaysia for giving me this incredible opportunity to experience this amazing journey.

I certify that a Thesis Examination Committee has met on 26 April 2017 to conduct the final examination of Nabiha Gul Hassan on her thesis entitled "Factors Associated with Knowledge, Attitude and Practice of Caregivers on Prevention of Injuries among Children in Daycare Centres in Central Malaysia" in accordance with the Universities and University Colleges Act 1971 and the Constitution of the Universiti Putra Malaysia [P.U.(A) 106] 15 March 1998. The Committee recommends that the student be awarded the Master of Science.

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Signature: _____

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LIST OF ABBREVIATIONS

AOR	Adjusted Odds Ratio
BM	Bahasa Melayu
CDC	Centre for Disease Control
CI	Confidence Interval
CPSC	Consumer Product Safety Commission
DEFF	Design effect
DF	Degrees of Freedom
DV	Dependent Variable
HIC	High-income countries
HREC	Human Research and Ethical Committee
IBM	International Business Machine
i.e	That is
IV	Independent Variable
KAP	Knowledge, Attitude and Practice
LMIC	Low-income middle-income countries
L-R	Likelihood Ratio test
M	Mean
MLR	Multiple Logistic Regression
OR	Odds Ratio
p	Significance value
RM	Malaysian Ringgit
SD	Standard Deviation
SE	Standard Error
SLR	Simple Logistic Regression

SPSS	Statistical Package for Social Sciences
SS	Sample Size
UPM	Universiti Putra Malaysia
USA	United States of America
t	T-test statistic
WHO	World Health Organization
<	Less than
>	Greater than
≤	Less than or equal to
≥	Greater than or equal to
α	Alpha
χ^2	Chi-square statistic
%	Percentage
<i>B</i>	Beta
<i>n</i>	Number

CHAPTER 1

INTRODUCTION

This chapter provides a brief explanation of the background of the study, the objectives, problem statement, research question, significance of study as well as highlighting the research hypotheses.

1.1 Background

The landmark Convention on the Rights of the Child (as cited in Peden & Oyegbite, 2008) states that every child in the world deserves the right to a safe environment; protected from injury and violence. It is the responsibility of any facility or institution caring for a child to provide the necessary protection and care required, regardless of the level of difficulty in achieving this task (Peden & Oyegbite, 2008). In spite of this, world-wide, approximately 2400 children die daily due to injury and violence (Peden & Oyegbite, 2008). Additionally, in 2008, the World Health Organization (WHO) (as cited in Peden & Oyegbite, 2008) reported that 50% of children suffering from unintended injuries ended up with some form of disability. Consequently injury ranks as one of the leading causes of morbidity and mortality among children globally (Lang, 2009; Peden & Oyegbite, 2008). Although in general, there has been a decrease in child mortality due to injuries, childhood injuries still remain the leading cause of death among children over 1 year of age, while approximately 20 million others report having suffered due to them (Davis, Godfrey, & Rankin, 2013).

Children's day-care centres are available world-wide and provide parents and families with a wide variety of services including social and health care as well as early education for their pre-school children (Watson et al., 2014). With the large increase of working mothers within the labour force, the demand for child-care in the form of day-care centres for pre-school children has also increased substantially over the past few years (Chiam, 2008). Within most industrialized countries, infants, under the age of 1 and toddlers between the ages of 1 and 3 years, as well as pre-school children of ages 3 to 6 years attend out of home care, usually in the form of day-care centres (Kotch et al., 1997). Three-fourth of children within the United States attend day-care centres (Copeland, Sherman, Kendeigh, Kalkwarf, & Saelens, 2012).

Due to the additional increase in the use of day-care centres, child safety is becoming an increasingly bigger concern for parents (Chiam, 2008). Moving from a parental and home-environment care setting can have significant effects on a child's well-being as they become dependent on staff members and caregivers for their safety (Chiam, 2008). These young children cannot understand the risk of injury themselves and therefore do not know how to be safe, thus an appropriate child-care setting together with educated and qualified caregivers providing supervision for these young children is essential (Waibel & Misra, 2003). Ensuring the presence of well-trained caregivers is of utmost importance as it may be difficult to find a balance to prevent any measures

from being implemented in extremes, whereby either injury prevention procedures are followed loosely or followed to an extreme and thereby hindering the physical activity and development of children (Copeland et al., 2012).

Correct caregiver supervision has been identified as the most effective method of injury prevention (Morrongiello, Corbett, McCourt, & Johnston, 2006). However, to appropriately supervise, caregivers must be able, ready, and willing to perform (Guilfoyle, Karazsia, Langkamp, & Wildman, 2012). This ability, willingness and readiness is dependent upon the knowledge, attitude and practice of caregivers (Guilfoyle et al., 2012). If a caregiver is unwilling and unable to prevent injuries, then the safety of young, dependent children is compromised, and could lead to severe consequences (Landen, Bauer, & Kohn, 2003). Therefore caregiver cognitions including knowledge, beliefs, attitudes, and perceptions have been a recent focus of examination within the injury literature (Guilfoyle et al., 2012). Cognitions guide behaviors by providing an underlying framework for how caregivers view, perceive and ultimately care for children (Morrongiello et al., 2006).

Although injuries do occur, it should be an understood fact that injuries involving children under supervision are predictable and avoidable (Eberl et al., 2009). Increased levels of safety should be imposed to ensure a safe environment for children attending day-care centres and addressing and reducing the number of injuries in day-care centres should be a country's health care priority (Eberl et al., 2009).

1.2 Problem statement

Injuries present a serious threat to health and safety of children as they are the leading cause of death and hospitalization for children aged 0 to 12 years (Waibel & Misra, 2003). According to Morrongiello and Corbett (2006) children in the United States are more likely to die of injury than of the next nine leading causes of death combined. Even when not fatal, injuries can have severe consequences. According to a research, unintentional injuries prevailed mostly in the form of brain and spinal cord injuries, burns and limb injuries and caused approximately 150 000 children and adolescents permanent disability, requiring lifetime follow-up care (Miller, Romano, & Spicer, 2014).

For toddlers, most of these injuries have been reported to occur when their safety was the responsibility of a parent or another caregiver and supervision was missing (Morrongiello & Corbett, 2006). Statistics revealed that 800 000 injuries to children were reported in USA of which most occurred in child care programs (Waibel & Misra, 2003). An analysis of 347 injuries in day-care centres in Austria revealed majority of the children were injured when playing alone (62%) and approximately one third when playing with someone else (38%) (Eberl et al., 2009). Furthermore, a study conducted in Alaska concluded that inadequate supervision was the most common preventable contributor that accounted for 43% of injury deaths among children from 0 to 6 years (Landen et al., 2003). Data therefore suggests that adequate

supervision provided by caregivers is a significant contributing factor to preventing and understanding childhood injuries in day-care centres (Davis et al., 2013).

A research by Morrongiello & House (2004) revealed that caregivers who demonstrated higher vigilance in supervision not only had children with a history of decreased injuries but they also possessed more confidence in their ability to keep children safe and scored higher on attributes such as worrying about their child's safety and being protective. This bolsters the claims of the study by Lewis, DiLillo, & Peterson (2004) who state caregivers' attitudes towards children's injuries may have important implications for the children's physical health and caregivers' degree of vigilance in attending to the risks faced by the children may vary according to those beliefs. A study by Bánfai, Deutsch, Pék, & Radnai (2015) reiterates this point and states that parents and caregivers have a great responsibility in preventing and managing injuries by attaining appropriate knowledge about common accidents. These findings can also be extended to caregivers in a children's day-care centre since it's a vital field for injury prevention and day-care staff can play an important role in increasing preventive efforts (Sellström & Bremberg, 2000). In fact, a study examining the level of knowledge in injury risks of childcare providers found several safety hazards in day-care centres perpetuated by their staff's lack of knowledge (O'Connor et al. 1992 as cited in Sellström & Bremberg, 2000). Thus, successful strategies aimed at preventing child injuries do require a better and up to date understanding of injury epidemiology (Zamani, 2007) and the need for these strategies are becoming more important as day-care centres are growing (Chiam, 2008).

In the year 2015, within Malaysia, female participation in the labour force increased to 54.1% from 53.7% in the year 2014 (Labour Force Survey Report, 2015). Female employment is continuing to increase and The Ninth Malaysia Plan acknowledges that child care services are needed to enable women to participate in the labour force (Chiam, 2008). This means that an increasing number of children will be spending some part of the day in childcare settings making day-care safety an important concern for decision-makers, parents, day-care staff and researchers alike. Currently, there have been many studies globally that test caregivers knowledge and attitudes on injury risks and prevention (Bánfai et al., 2015) and child safety training programs aimed at increasing caregivers knowledge and improving their attitudes towards injury prevention amongst other things has been shown to be the strongest predictor in decreasing safety threats in day-care centres (Eberl et al., 2009). Although efforts are being made to increase awareness of injuries (Ismail, 2014), no such up to date programs exist in Malaysia (Chiam, 2008). In fact, more than 30 years have passed since the government passed the Child Care Act of 1984 which saw minimal standards being set for childcare services (Chiam, 2008). According to Chiam (2008), neither the parents, nor the child care providers or the government seems to be concerned about the quality of early child care. This is reflected in the fact that aside from the mandated Basic Child Care Course which was introduced in 1984, caregivers working in day-care centres in Malaysia are not required to have high academic or professional qualifications nor are do they strive to attain this (Chiam, 2008). Additionally, although a standardized checklist has been designed by the Department of Social Welfare in Malaysia to help maintain and evaluate the safety standards and requirements of day-care centres, many centres are often reluctant to assess themselves

and therefore the implementation of this checklist is currently not as effective as it should be (Chiam, 2008).

Therefore, based on the serious impact injuries can have on children and the important role caregivers have in preventing these injuries, this study attempts to investigate the factors that affect caregivers' knowledge and attitude on prevention of injuries in day-care centres. This information can help to standardize and maintain day-care centres and provide a safe environment for children. Additionally, having access to this information can help with implementing educational intervention in the future, a technique that has been proven to be effective in reducing injury and in improving injury prevention practice.

1.3 Significance of study

By understanding and identifying the factors that affect injury prevention in day-care centres we can have a better understanding of the issue and work effectively to prevent future injuries and eliminate risks that lead to injuries.

Additionally, reduced risk of injuries will in turn reduce the suffering of children, as well as reduce rates of morbidity and mortality and loss of productivity by parents or guardians who also suffer when their child is injured. Safer day-care centres will therefore be beneficial to members of the Malaysian community who can avoid unnecessary suffering, burden, stress and financial costs.

Information from this study can help contribute to the body of knowledge by adding data to the body of knowledge. This will help to further identify associated factors that lead to injuries, as well as help to continually improve day-care centre environments.

1.4 Research question

- i) What is the level of knowledge and attitude regarding injury prevention of caregivers working in day-care centres in Putrajaya and Selangor?
- ii) What factors are associated with knowledge and attitude regarding injury prevention of caregivers working in day-care centres in Putrajaya and Selangor?
- iii) What are the predicting factors of knowledge and attitude regarding injury prevention of caregivers working in day-care centres in Putrajaya and Selangor?

1.5 Study objectives

1.5.1 General objectives

The general objective is to determine knowledge and attitude regarding injury prevention of caregivers in day-care centres, in Putrajaya and Selangor.

1.5.2 Specific objectives

The specific objectives are:

- i) To determine the level of knowledge and attitude regarding injury prevention of caregivers working in day-care centres in Putrajaya and Selangor.
- ii) To determine socio-demographic factors (gender, age, ethnicity and religion, marital status, number of children) of caregivers working in day-care centres in Putrajaya and Selangor.
- iii) To determine socio-economic (income, education level, mandatory and optional courses completed, years of experience working with children, job position, job status and daily hours worked) factors of caregivers working in day-care centres in Putrajaya and Selangor.
- iv) To determine the association of knowledge and attitude regarding injury prevention of caregivers working in Putrajaya and Selangor and their;
 - a) Socio-demographic factors
 - b) Socio-economic factors
- v) To determine the predictors of knowledge and attitude regarding injury prevention among caregivers working in day-care centres.

1.6 Hypotheses

The alternative hypotheses of the study are as follows:

H₁: There is association between knowledge and attitude regarding injury prevention and socio-demographic factors of caregivers working in day-care centres in Putrajaya and Selangor, Malaysia.

H₂: There is association between knowledge and attitude regarding injury prevention and socio-economic factors of caregivers working in day-care centres in Putrajaya and Selangor, Malaysia.

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