

UNIVERSITI PUTRA MALAYSIA

RELATIONSHIPS BETWEEN PARENTAL INVOLVEMENT, HEALTH KNOWLEDGE, ATTITUDES, AND PRACTICES AND BIOPSYCHOSOCIAL WELL-BEING OF CHILDREN IN METROPOLITAN CITIES, PENINSULAR MALAYSIA

CHUA YEE WEUN

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By

CHUA YEE WEUN

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

March 2017

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Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfilment of the requirement for the degree of Master of Science

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The main purpose of this study was to determine the relationships between parental involvement, children's health knowledge, attitudes, and practices (KAP) and children's biopsychosocial well-being. In addition, the study assessed the mediating effect of health KAP on the relationships between parental involvement and biopsychosocial well-being among children. A total of 450 students aged between 10 and 12 years old from 15 schools in metropolitan cities in Peninsular Malaysia were selected as respondents using Probability Proportionate-to-Size (PPS) sampling technique. Self-administered questionnaire with standardized instruments was used for data collection. Parental involvement was measured with Perception of Parents Scale (POPS) (Grolnick et al., 1991); health knowledge, attitudes, and practices was measured with Nutrition Knowledge Questionnaire (Volpe & Huang, 2004), Activity Knowledge Scale (AKQ) (Melnyk & Small, 2003a), Healthy Living Attitudes Scale (Melnyk & Small, 2003b) and Healthy Lifestyle Behaviour Scale (Melnyk & Small, 2003c) respectively; while biopsychosocial well-being was measured with The PedsQL 4.0 (Pediatric Quality of Life Inventory) Genetic Core Scales (Varni et al., 2001).

Results from the hierarchical regression analysis showed that older children who experienced greater maternal and paternal involvement tend to report greater overall biopsychosocial well-being. Further analyses indicated that children's health knowledge, attitudes, and practices have both partial and full mediating effect on the relationship between parental involvement and biopsychosocial well-being. Specifically, the inclusion of activity knowledge, nutrition knowledge and healthy

living attitudes in the mediation model resulted in the decreased of direct influence of maternal involvement on biopsychosocial well-being among children.

Findings from the study implied that parental involvement promote better biopsychosocial well-being among children. Besides that, the test of the mediating models showed the significant mediating effect of children's activity knowledge and healthy living attitudes in the relationships between parental involvement and overall and specific biopsychosocial well-being, specifically in the domain of social functioning. Thus, it can be concluded that positive involvement from parents may improve their children's health knowledge and promote healthy living attitudes, which eventually contribute to better biopsychosocial well-being. Findings from the current study may have practical implications for individuals, parents, schools, practitioners and governmental agencies who are directly involved in children welfare and programs development. In specific, programmes that focus directly on developing and improving children's health knowledge, attitudes, and practices, together with the involvement of supportive parents, will enhance children's biopsychosocial well-being and may eventually lead to successful transition to adulthood. Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi keperluan untuk ijazah Master Sains

PERKAITAN ANTARA PENGLIBATAN IBU BAPA, PENGETAHUAN, SIKAP DAN AMALAN KESIHATAN DAN KESEJAHTERAAN BIOPSIKOSOSIAL DALAM KALANGAN KANAK-KANAK DI BANDAR METROPOLITAN DI SEMENANJUNG MALAYSIA

Oleh

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Tujuan utama kajian ini adalah untuk menentukan perkaitan antara penglibatan ibu bapa, pengetahuan, sikap dan amalan kesihatan kanak-kanak dan kesejahteraan biopsikososial dalam kalangan kanak-kanak. Di samping itu,, kajian ini juga meneliti kesan pengetahuan, sikap dan amalan kesihatan sebagai pengantara dalam perkaitan antara penglibatan ibu bapa dan kesejahteraan biopsikososial secara keseluruhan dan khusus dalam kalangan kanak-kanak. Seramai 450 pelajar berusia antara 10 hingga 12 tahun dari 15 buah Sekolah Kebangsaan di bandar-bandar Metropolitan di Semenanjung Malaysia telah dipilih sebagai responden dengan menggunakan teknik persampelan kebarangkalian berkadar dengan saiz (PPS). Borang soal selidik tadbir sendiri dengan instrumen piawai telah digunakan untuk pengumpulan data. Penglibatan ibu bapa diukur dengan menggunakan Perception of Parents Scale (POPS) (Grolnick et al., 1991); pengetahuan, sikap dan amalan kesihatan kanak-kanak diukur masing-masing dengan menggunakan Nutrition Knowledge Questionnaire (Volpe & Huang, 2004), Activity Knowledge Scale (AKQ) (Melnyk & Small, 2003a), Healthy Living Attitudes Scale (Melnyk & Small, 2003b) and Healthy Lifestyle Behaviour Scale (Melnyk & Small, 2003c); manakala kesejahteraan biopsikososial diukur dengan menggunakan The PedsQL 4.0 (Pediatric Quality of Life Inventory) Genetic Core Scales (Varni et al., 2001).

Keputusan daripada analisis regresi hierarki menunjukkan bahawa kanak-kanak yang lebih berusia dan mengalami tahap penglibatan ibu bapa yang lebih tinggi cenderung melaporkan kesejahteraan biopsikososial keseluruhan yang lebih baik. Analisis lanjut menunjukkan bahawa pengetahuan, sikap, dan amalan kesihatan kanak-kanak mempunyai kedua-dua kesan pengantara separa dan sepenuhnya ke atas hubungan antara penglibatan ibu bapa dan kesejahteraan biopsikososial. Khususnya, apabila faktor pengetahuan, sikap dan amalan kesihatan dimasukkan ke dalam model perantaraan, ia mengurangkan pengaruh langsung yang dibawa oleh penglibatan ibu bapa terhadap kesejahteraan biopsikososial dalam kalangan kanakkanak.

Dapatan kajian memberi implikasi bahawa penglibatan ibu dan bapa menggalakkan perkembangan biopsikososial yang lebih baik dalam kalangan kanak-kanak. Selain itu, analisis terhadap model pengantara juga menunjukkan bahawa pengetahuan dan sikap kesihatan kanak-kanak mempunyai kesan perantara yang signifikan terhadap hubungan antara penglibatan ibu bapa dan kesejahteraan biopsikososial (i.e. keseluruhan kesejahteraan biopsikososial, fungsi fizikal, fungsi sosial dan fungsi sekolah) khususnya dalam domain kefungsian sosial. Penglibatan positif daripada ibu bapa boleh meningkatkan pengetahuan kesihatan dan menggalakkan sikap terhadap kehidupan yang sihat bagi anak mereka, seterusnya membawa kepada tahap kesejahteraan biopsikososial yang lebih baik. Hasil daripada kajian ini mempunyai implikasi praktikal untuk individu, ibu bapa, sekolah, pengamal dan agensi-agensi kerajaan yang terlibat secara langsung dalam kebajikan kanak-kanak dan pembangunan program. Program-program yang memberikan tumpuan secara langsung kepada perkembangan dan peningkatan pengetahuan, sikap dan amalan kesihatan kanak-kanak dan juga penglibatan ibu bapa sebagai pemangkin untuk perkembangan biopsikososial kanak-kanak dan seterusnya membawa kepada peralihan mereka ke alam dewasa dengan jayanya.

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I certify that a Thesis Examination Committe has met on 6 March 2017 to conduct the final examination of Chua Yee Weun on her thesis entitled "Relationships between Parental Involvement, Health Knowledge, Attitudes and Practices and Biopsychosocial Well-Being of Children in Metropolitan Cities Peninsular 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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TABLE OF CONTENTS

ABSTRACT ABSTRAK ACKNOWLEDGEMENTS APPROVAL DECLARATION LIST OF TABLES LIST OF FIGURES LIST OF ABBREVIATIONS Page i iii v vi vi viii xiii

xvi

xviii

CHAPTER

1

2

INT	RODUCTION	1
1.1	Background of Study	1
1.2	Statement of Problem	4
1.3	Significant of Study	7
1.4	Objectives of Study	8
1.5	Research Hypothesis	9
1.6	Definition of Terminology	10
1.7	Theoretical Framework	13
1.8	Conceptual Framework	15
LIT	ERATURE REVIEW	18
2.1 <	Biopsychosocial Well-Being	18
	2.1.1 Physical Functioning	19
	2.1.2 Emotional Functioning	19
	2.1.3 Social Functioning	19
	2.1.4 School Functioning	20
2.2	Parental Involvement	20
	2.2.1 Maternal Involvement	21
	2.2.2 Paternal Involvement	22
2.3	Children's Health Knowledge, Attitudes, and	23
	Practices	
	2.3.1 Nutrition Knowledge	23
	2.3.2 Activity Knowledge	24
	2.3.3 Healthy Living Attitudes	26
	2.3.4 Healthy Lifestyle Practices	27
2.4	Relationships between Parental Involvement,	29
	Children' Health Knowledge, Attitudes, and	
	Practices and Biopsychosocial Well-being	
2.5	Background Characteristics as Antecedent	33

		Variables	
	2.6	2.5.1 Individual Background	33
	2.6	Summary	35
3	RES	EARCH METHODOLOGY	36
	3.1	Research Design	36
	3.2	Location of Study	36
	3.3	Sampling Procedure	38
	3.4	Sampling Frame	38
	3.5	Data Collection Procedure	41
	3.6	Ethical Issues	41
	3.7	Instrumentation	42
		3.7.1 Dependent Variable	43
		3.7.2 Independent Variable	44
		3.7.3 Mediator Variable	45
	2.0	3.7.4 Background Characteristics	47
	3.8	Data Analysis	48
	3.9	Pilot lest	49
	3.10	Reliability Analysis	49
4	RES	ULT AND DISCUSSION	51
	4.1	Introduction	51
	4.2	Descriptive Analysis of Respondents'	51
		Demographic Profile, Independent Variables,	
		Mediating Variables and Dependent Variables	
	4.3	Descriptive Analysis for Relationships between	53
		Main Variables of the Study	
		4.3.1 Relationships between Background	53
		Variables with Parental Involvement, Health	
		KAP, and Biopsychosocial Well-Being	
		4.3.2 Relationship between Parental	54
		Involvement and Biopsychosocial Well-Being	
		4.3.3 Relationship between Parental	56
		Involvement and Children's Health Knowledge,	
		Attitudes and Practices	
		4.3.4 Relationship between Children's Health	57
		Knowledge, Attitudes and Practices with	
		Biopsychosocial Well-Being	
	4.4	Regression Models of Children's Biopsychosocial	59
	4.5	Well-Being	60
	4.5	Mediation Effects of Children's Health	68
		Knowledge, Attitudes, and Practices (KAP) on the	
		relationships between Parental Involvement and	
		Biopsychosocial Well-Being	

		 4.5.1 The Mediating Effect of Activity Knowledge 4.5.2 The Mediating Effect of Nutrition Knowledge 4.5.3 The Mediating Effect of Healthy Living Attitudes 	69 75 79
	4.6	Summary of the Main Findings	86
5	SUN REC	IMARY, CONCLUSION, IMPLICATIONS AND COMMENDATIONS	90
	5.1	Summary of Study	90
	5.2	Review of Conceptual Framework	92
	5.3	Conclusion	94
	5.4	Implications of the Study	94
	5.5	Limitation of Study and Recommendations for Future Research	96

REFERENCES98APPENDICES117BIODATA OF STUDENT146PUBLICATIONS147

C

LIST OF TABLES

Т	able		Page
	1	Student's Population Size and Number of Schools in Kuala Lumpur Districts, Penang Island Districts and Johor Bahru Districts	37
	2	Metropolitan Cities with Cumulative Student Population Size	39
	3	The Dimensions of the Questionnaire	42
	4	Alpha Value for the Indicators of Parental Involvement, Children's Health Knowledge, Attitudes, and Practices and Biopsychosocial Well-being	50
	5	Descriptive Analysis of Child Characteristics	52
	6	Descriptive Analysis of Independent, Mediating and Dependent Variables	52
	7	Relationship between Background Variables with Parental Involvement, Health Knowledge, Attitudes and Practices, and Biopsychosocial Well-Being	53
	8	Correlation between Independent Variable and Dependent Variable	55
	9	Correlation between Independent Variable and Mediating Variable	56
	10	Correlation between Mediating Variable and Dependent Variable	57
	11	Regression Model of overall Biopsychosocial Well- Being	60
	12	Regression Model of Physical Functioning	62
	13	Regression Model of Emotional Functioning	64
	14	Regression Model of Social Functioning	66
	15	Regression Model of School Functioning	67
			xiii

16	Regression Model of the Mediating Effect of Children's Activity Knowledge on the Relationships between Maternal Involvement and Overall Biopsychosocial Well-Being	70
17	Regression Model of the Mediating Effect of Children's Activity Knowledge on the Relationships between Paternal Involvement and Overall Biopsychosocial Well-Being	71
18	Regression Model of the Mediating Effect of Children's Activity Knowledge on the Relationships between Maternal Involvement and Physical Functioning	72
19	Regression Model of the Mediating Effect of Children's Activity Knowledge on the Relationships between Maternal Involvement and Social Functioning	73
20	Regression Model of the Mediating Effect of Children's Activity Knowledge on the Relationships between Paternal Involvement and Social Functioning	74
21	Regression Model of the Mediating Effect of Children's Nutrition Knowledge on the Relationships between Maternal Involvement and Overall Biopsychosocial Well-Being	75
22	Regression Model of the Mediating Effect of Children's Nutrition Knowledge on the Relationships between Maternal Involvement and Social Functioning	76
23	Regression Model of the Mediating Effect of Children's Nutrition Knowledge on the Relationships between Maternal Involvement and Physical Functioning	77
24	Regression Model of the Mediating Effect of Children's Nutrition Knowledge on the Relationships between Maternal Involvement and School Functioning	79
25	Regression Model of the Mediating Effect of Children's Healthy Living Attitudes on the Relationships between Maternal Involvement and Overall Biopsychosocial Well-Being	80
26	Regression Model of the Mediating Effect of Children's Healthy Living Attitudes on the Relationships between	81

G

xiv

Paternal Involvement and Overall Biopsychosocial Well-Being

27	Regression Model of the Mediating Effect of Children's
	Healthy Living Attitudes on the Relationships between
	Maternal Involvement and Social Functioning

- 28 Regression Model of the Mediating Effect of Children's Healthy Living Attitudes on the Relationships between Paternal Involvement and Social Functioning
- 29 Regression Model of the Mediating Effect of Children's Healthy Living Attitudes on the Relationships between Maternal Involvement and Physical Functioning
- 30 Regression Model of the Mediating Effect of Children's Healthy Living Attitudes on the Relationships between Maternal Involvement and School Functioning
- 31 Summary of Results

87

82

83

84

85

LIST OF FIGURES

J	Figure		Page
	1	Theoretical Framework of the study "Relationships between Parental Involvement, Health Knowledge, Attitudes and Practices and Biopsychosocial well-being of Children in Metropolitan Cities, Peninsular Malaysia"	15
	2	Conceptual framework for the study of "Relationships between Parental Involvement, Health Knowledge, Attitudes and Practices and Biopsychosocial Well-being of Children in Metropolitan Cities, Peninsular Malaysia"	16
	3	Location of the Study	38
	4	Sampling Frame and Methodology of the Study	40
	5	Model of Mediation Role of Children's Activity Knowledge on the Relationship between Maternal Involvement and Overall Biopsychosocial well-being	69
	6	Model of Mediation Role of Children's Activity Knowledge on the Relationship between Paternal Involvement and Overall Biopsychosocial well-being	70
	7	Model of Mediation Role of Children's Activity Knowledge on the Relationship between Maternal Involvement and Physical Functioning	71
	8	Model of Mediation Role of Children's Activity Knowledge on the Relationship between Maternal Involvement and Social Functioning	73
	9	Model of Mediation Role of Children's Activity Knowledge on the Relationship between Paternal Involvement and Social Functioning	74
	10	Model of Mediation Role of Children's Nutrition Knowledge on the Relationship between Maternal Involvement and Overall Biopsychosocial Well-Being	75
	11	Model of Mediation Role of Children's Nutrition Knowledge on the Relationship between Maternal Involvement and Social Functioning	76

12	Model of Mediation Role of Children's Nutrition Knowledge on the Relationship between Maternal Involvement and Physical Functioning	77
13	Model of Mediation Role of Children's Nutrition Knowledge on the Relationship between Maternal Involvement and School Functioning	78
14	Model of Mediation Role of Children's Healthy Living Attitudes on the Relationship between Maternal Involvement and Overall Biopsychosocial Well-Being	79
15	Model of Mediation Role of Children's Healthy Living Attitudes on the Relationship between Paternal Involvement and Overall Biopsychosocial Well-Being	80
16	Model of Mediation Role of Children's Healthy Living Attitudes on the Relationship between Maternal Involvement and Social Functioning	81
17	Model of Mediation Role of Children's Healthy Living Attitudes on the Relationship between Paternal Involvement and Social Functioning	82
18	Model of Mediation Role of Children's Healthy Living Attitudes on the Relationship between Maternal Involvement and Physical Functioning	84
19	Model of Mediation Role of Children's Healthy Living Attitudes on the Relationship between Maternal Involvement and School Functioning	85

C

LIST OF ABBREVIATIONS

KAP	Knowledge, Attitudes and Practices
POPS	Perceptions of Parents Scales
PedsQL	Paediatric Quality of Life Inventory
WHO	World Health Organization
IV	Independent Variable
DV	Dependent Variable
MV	Mediating Variable
PPS	Probability Proportionate to Size
PhD	Doctor of Philosophy
SPSS	Statistical Package for the Social Sciences
SEM	Structure Equation Modelling
SD	Standard Deviation
Min	Minimum
Max	Maximum
SE	Standard Error

6

CHAPTER 1

INTRODUCTION

1.1 Background of Study

Well-being can be defined as "a state of successful performance of physical, socioemotional, and cognitive function throughout the life course" (UNESCO, 2001). Over the past 4 decades, the development of the health profile of children not only focuses on infectious diseases but also related to factors associated with their overall health, such as emotional, social, psychological, physical and learning difficulties (Rehman, Syed, Hussain, & Shaikh, 2013). The prevalence of negative biopsychosocial well-being among children is increasing rapidly and perceived as a major public health concern to many health authorities (Kramer & Garralda, 2000). Negative biopsychosocial well-being may refer to poor biological functioning, unhealthy physical functioning, poor social-emotional functioning and maladaptive school functioning (Kramer et al., 2000). Recently, not only children health have become a significant social and public problem (Duan & Yang, 2008), negative biopsychosocial well-being among young children has been documented as one of the most significant risk factor in developing countries for disease that could cause long-term detrimental consequences, such as impaired cognitive development, growth impairment, and poor academic performance (Muller & Krawinkel, 2005). According to the 2013 Federal Interagency Forum on Child and Family Statistics, there are approximately 5.1% of children aged 7 to 12 who have serious behavioural and emotional problems. Moreover, there are approximately 14 million children between 7 to 12 years old who reported poor school performance due to the maladjusted health status (Bloom, Cohen, & Freeman, 2010). In Malaysia, 32% of children are involved with social, emotional and school problems (Mohd. Taib & Noor Baiduri, 2011). For example, children are involved in discipline problem in school which include truancy and loafing in the recent year (Nik Ruzyanei, Wan Salwina, Tuti Iryani, Rozhan, Shamsul, & Zasmani, 2009).

Malaysia is one of the developing countries that undergone rapid social and economic changes due to urbanization and industrialization. The most recent Malaysia census data indicated that almost one-third of the population comprised children below the age of 15 (Department of Statistics, 2010). These figures suggest that issues related to the biopsychosocial well-being and health outcomes of this significant, pertinent population have vital impact on the country's human capital development. Moreover, children biopsychosocial well-being has always been the focus in research, practice and policy development and implementation. Therefore, the alarmingly high prevalence of unhealthy biopsychosocial well-being problems among today's children reinforce the public concern about the current health trends of children in the domains of biological and psychosocial factors. According to Santrock (2007), biopsychosocial well-being is a concept that was derived from Engel's biopsychosocial model (1977, 1980). This model posits that one's biopsychosocial factors which include thinking, emotions, and behaviors are important in establishing human functioning in the context of illness or disease. While the biological component of the children biopsychosocial well-being is useful for seeking the cause of the illness which stems from body physical functioning of the children; its psychological component can be useful in seeking the possible psychological causes for health issues such as depression, lack of self-control, negative thinking and emotions (Santrock, 2007). In addition, the social component of the children biopsychosocial well-being identifies the potential social causes such as socioeconomic status, poverty, belief, religion, and technology in influencing children's well-being (Santrock, 2007).

Past literature has noted that biopsychosocial well-being is a vital development component for young children. According to Rees (2010), children with a healthy biopsychosocial well-being are able to maintain close relationship with others, achieve healthy identity, grow up with positive feelings, and perform well in school. In contrast, children who failed to develop a healthy social functioning, perform in school, and demonstrate healthy physical functioning are more likely to report poor and unhealthy biopsychosocial well-being (Brown, Kinkukawa, Michelsen, Moore, Moore, & Sugland, 1999). At the same time, as many studies showed (e.g., Gutman, Brown, Akerman, & Obolenskaya, 2009; Gutman & Feinstein, 2008), school functioning and health are inseparable. To perform well in school, children need to be healthy and eventually have the capability to learn. In other words, children tend to demonstrate better concentration in the learning process as if they are in a healthy environment. Specifically, children health status may affect their school functioning and test scores. Moreover, children illness may cause a long absence from school, poor academic performance and eventually dropping out (Whitman, Aldinger, Levinger, & Birdthistle, 2001).

Literature provides supportive evidence on the importance of children's health knowledge, attitudes and practices on their biopsychosocial well-being (Bray & Champagne, 2005; Lin et al., 2007). According to the Knowledge-Attitude-Practices (KAP) model, knowledge plays a pertinent role in deciding one's health-related behaviours. When there is an improvement in knowledge regarding health behaviour, changes in attitude can be expected. As changes in attitude domain accumulate, changes in behaviour can be initiated (Wardle, Parmenter & Waller, 2000).

A failure to adopt healthy lifestyle may lead to detrimental effects on children physiological and nutritional outcomes. Over or under-nutrition is highlighted as one of the main problems for the unhealthy children (Duan & Yang, 2008). It was found that about 15% and 6% of children at various developmental stages are undernutrition and over-nutrition in Malaysia (International Food Policy Research Institute, 2014). However, about 28.7% of male and 26.0% of female between 7 to 18 years old were found to be over-nutrition in Malaysia (Fleming et al., 2014). Children who are over-nutritioned are presumed to either taking the wrong types of calories (for example, highly processed sugar and food or drink with high saturated fats) or taking too much calories. Over nutrition may increases risk of getting vascular diseases, high level of cholesterol, obesity and other type of diseases. In comparison, those who are under-nutritioned suffer from having inadequate food, may lead to poor and diminishing health.

Lifestyle-related practices that may include both eating behaviour and practices of physical activity are strongly linked to health outcomes among children. For example, eating behaviour that includes frequent junk food consumption, frequent outside food consumption, high consumption of sweetened beverages or low nutrient process foods and irregular exercise lifestyle were found to be significantly related to childhood negative well-being (Adair & Popkin, 2005). Past study revealed that not only children failed to meet the recommendations for healthy diet (Hackett, Gibbon, Sratton, & Hamill, 2002), but there is also an increase in taking unhealthy food such as snacks, fast foods, and soft drinks among children. Besides, there is increasing evidence supporting the notion that negative health consequences in childhood can also increase the risk of obesity, diabetes, and cardiovascular diseases in adulthood (Hackett et al., 2002).

Knowledge is also considered as an important aspect in developing and maintaining children's biopsychosoical well-being. Empirical evidence shows that knowing the way to live healthy is important in promoting one's health if a person is ready to make a behavioural change (Axelson et al., 1998). Children with sufficient health knowledge tend to consume nutrient food and practice regular exercises because they are aware of the importance of healthy lifestyle practices in promoting one's well-being (Chung, Lee, & Kwon, 2004). Besides that, health attitude also plays a vital role in promoting children's biopsychosocial well-being. According to Wood, Froh, and Geraghty (2010), weight control, positive body image, increasing energy, lowering cholesterol intake, feeling good and improving health were all considered to be important health attitudes. Individuals who developed and maintained a positive health attitude were more likely to be stronger and healthier than those who have a negative attitude (Natsiopoulou, Tzolia, & Laloumi-Vidali, 2005). This is because those with healthy lifestyle attitudes tend to have a wise healthy lifestyle practices in order to improve their health (Melnyk et al., 2006). Therefore, it can be suggested that a sufficient knowledge, the right attitude and a necessary set of skills to assume health-enhancing behaviour have potential for promoting the children to adopt and maintain healthy lifestyle for developing better health well-being (Lin et al., 2007).

Over the years, a substantial body of literature provides supportive evidence on the importance of parental involvement for children's well-being (Desforges & Abouchaar, 2003; Rosen, Cheever, & Carriers, 2008). Specifically, the involvement of parents in promoting children's health knowledge, attitudes and practices has many implications for long-term well-being of the children. Empirical evidence

revealed that parents' behaviour affects what the children learn, how the children react to the new environment, and how the children behave (Shonkoff & Phillips, 2000). Currently, studies on how the involved parents influence children's health have received much attention in research (Cripps & Zyromski, 2009). Specifically, parents may act as a medium in transmitting health knowledge across generations. Moreover, parents not only serve as the main source of reinforcement in most part of children's lives, but also as gatekeepers to both opportunities and obstacles for their children's developmental tasks (Cripps & Zyromski, 2009). Involvement of the parents in enforcing and maintaining health behaviours in children is crucial (Cripps & Zyromski, 2009). Thus, it can be assumed that parents serve as a crucial agent in promoting children's biopsychosocial well-being.

Based on the aforementioned notions, the present study attempts to assess children's biopsychosocial well-being and how it is being affected by parental involvement, and children's health knowledge, attitudes, and practices. The findings from the current research are very important for understanding the factors and outcomes of children's biopsychosocial well-being. This is because an unhealthy biopsychosocial well-being may lead to long-lasting detrimental impacts on the children's later life.

1.2 Statement of Problem

This research purports to determine if there is any relationship between children's health knowledge, attitudes, and practices (KAP), parental involvement and children's biopsychosocial well-being. As noted earlier, the prevalence of negative well-being among children is increasing rapidly and perceived as a major public health concern to many health authorities (Kramer & Garralda, 2000). Recognizing that healthy biopsychosocial development is a crucial protective factor for negative well-being, this study was designed to unveil factors that could possibly contribute to biopsychosocial well-being. Specifically, the present study takes into consideration two vital factors which are children health-related factors (i.e., health knowledge, attitudes and practices) and environment attributes (i.e., parental involvement).

This research is a theoretical-based investigation. Ecological system theory developed by Urie Bronfenbrenner (1917-2005) is applied among many of the developmental theories. The core ideas of this theory defines that the complex "layers" of environment (such as individual factors, personal factors and family), each have an effect on a child's development. Applying the ecological system theory, children's health knowledge, attitudes and practices is predicted to interact with parental involvement in its influence on biopsychosocial well-being. A clearer discussion of the theoretical concept is followed in Section 1.7: Theoretical framework.

The development of healthy biopsychosocial well-being is one of the main aspects in children development; thus, this variable became the focus of the present study. Based on the literature, children biopsychosocial well-being may be influenced by both children health-related factors and parental involvement. Recently, health knowledge, attitudes and practices is one of the prevailing variables that had been extensively used in social research to represent individual factors in one's health promotion (Tamir, Weinstein, Dayan, Haviv, & Kalusky, 2001; Gautam, Bhatta, & Aryal, 2015). A lack of knowledge on healthy nutrition and limited awareness on the importance of physical functioning may eventually lead to the development of negative biopsychosocial well-being amongst young children. While, healthy eating practices are essential for children's growth and development as what they eat may influence their health, level of energy and attention span. In the long term, it plays an important role in prevention and control of illnesses among children. At the same time, parents remain the most influential figure in the developmental process; thus, parental involvement is constantly given attention because its impact on children development. Specifically, overly involved and poorly involved parents will contribute to unhealthy biopsychosocial well-being among their children (Perry et al., 1998).

In a cause-and effect presentation, parental involvement is the cause factor (i.e., independent variable), biopsychosocial well-being is the effect factor (i.e., dependent variable) of this study, and health knowledge, attitudes and practices serves as the mediating variable that stands between the cause and outcome variables. Direct linkages between parental involvement and well-being has been consistently demonstrated in past research (e.g., Duch, 2005; Cheung & Pomerantz, 2011; Yeung & Hill, 2007), but prediction of well-being should not be limited to direct linkage. In search of a more complicated mechanism among parental involvement and well-being factors, particularly the children's health-related factors are included in the investigation. According to Park (2004), health knowledge, attitudes and practices might be linked to well-being through one type of the indirect effect, including mediating models. He further elaborated the mediational process in which a child's health knowledge, attitudes and practices influence parental involvement, which in turn, plays a dominant role in producing psychological, social and behaviour problems. The present study focused primarily on the population of middle childhood children. Many researchers tend to focus on the association between stress and well-being among adolescents and adults (Lee & Graham, 2001; Shan, Hasan, Malik & Sreeramareddy, 2010). There is a shift to the linkage between health knowledge, attitudes, and practices and well-being in recent year (Rehman, Syed, Hussain, & Shaikh, 2013). A gap exists where most of the researches tend to focus on sample of adolescents and adults, but children in middle childhood has received the least attention. Literature showed that developmental changes that happen at this time may give great impact to the children's health outcomes (Chen et al., 2005). Research over the past year has demonstrated that middle childhood is a period where dietary and other lifestyle patterns are initiated. Children's health KAP has an immediate influence on their health well-being and can also set a pattern that carries over into adulthood, resulting in long-term wellbeing (Chen et al., 2005). Middle childhood is a period where children gradually exposed to other environment such as school and developed nonfamily social

relationship. Therefore, parent involvements are vital and qualify by monitoring and supervising children's health KAP or other social environment such as school, and follow up on children's peer relationship. These practices can foster development of healthy well-being in children (Laaksonen et al., 2008).

A number of studies had focused on the mediational role of health knowledge, attitudes and practices between parental factors and biopsychosocial well-being among children. However, a gaps exists where categorization of physical, emotional, social and school functioning has evolved into biopsychosocial wellbeing, but the mediational studies remain in the infancy stage. At the same time, the mediational role of health knowledge, attitudes and practices is being examined separately as an individual factors in most of the previous studies. For instance, health practices (i.e., one of the individual health dimensions) was found to be a mediator between parental monitoring and physical well-being (Arredondo et al., 2006). In addition, the mediation effect of physical-activity knowledge was also evidenced in the relationship between parental involvement and physical functioning (Bauman, Sallis, Dzewaltowski, Owen & 2002). These studies offer insight into the complicated mechanism involved among health knowledge, attitudes and practices, parental involvement and well-being. Nonetheless, studies have been inconclusive, since more aspects of biopsychosocial well-being are understudied; hence, the need for a comprehensive examination.

In order to advance our knowledge on the influence of health knowledge, attitudes, and practices among the relationship between parental involvement and biopsychosocial well-being, the present survey was designed to generalize findings from a large sample to the population in a Malaysian context. In order to achieve a large sample under a time constraint, a cross-sectional design was applied, with data collected at one time point. The use of a multi-stage cluster sample selection procedure further strengthened the generalizability of this study.

In summary, the present study was designed to examine the relationships between parental involvement and biopsychosocial well-being, as well as the mediation role of children's health knowledge, attitudes and practices on these relationships among middle childhood children in Malaysia (N = 450, aged 9 to 12 years old). Specifically, construct of parental involvement comprised maternal involvement and paternal involvement, and biopsychosocial well-being were divided into overall biopsychosocial well-being, physical functioning, emotional functioning, social functioning and school functioning. Additionally, the samples were identified using a probability multistage cluster technique and data were based on children's selfreport responses. Data of the study were analysed using SPSS to examine the direct effect of the independent variable (i.e., parental involvement) on the dependent variable (i.e., biopsychosocial well-being), as well as the mediating effect of health knowledge, attitudes and practices. Based on the literature gap, this research aims to address the following research questions:

- 1) To what extent do children's health (KAP) and parental involvement have combined and unique influence on children's biopsychosocial well-being?
- 2) How does the children's health (KAP) mediate the relationship between parental involvement with children's biopsychosocial well-being?

1.3 Significant of Study

Firstly, the findings of this study aim to provide detailed information about the relationship between parental involvement, children's health knowledge, attitudes and practices (KAP) and children's biopsychosocial well-being. Furthermore, findings from this study also explore how the individual, parental and family background characteristics influence biopsychosocial well-being of the children.

Secondly, information from this study is vital to evaluate the wellness of the children's biopsychosocial functioning. It provides a better understanding on how children health knowledge, attitudes and practices may be related to their biopsychosocial well-being. An in-depth understanding of the dynamics and mechanism linked to one's biopsychosocial will facilitate the introduction of remedial measures to modify eating behavior for improving the overall well-being among children. For example, children's biopsychosocial well-being can be improved through the development and implementation of appropriate wellness programs that focuses on the enhancement on various aspects of biological, psychological and social emotional development in order to promote more effective human capital functioning.

Thirdly, the findings from the study also identify the specific role of parents in general and health-related practices for promoting healthy well-being among children. A deeper understanding on how parents interact with their children in daily living will provide insights to parents in instilling children's healthy biopsychosocial well-being. Furthermore, findings from this study will be useful for parents to identify negative factors that may hinder children from developing a healthy biopsychosocial well-being and eventually, construct more effective ways for parent-child interaction. In specific, parents serve as role models in shaping their children's healthy lifestyle practices and they may use this information as guidelines to establish better parental involvement, appropriate parental limit-setting and monitoring of children behaviour. Parents may benefit from the results of this study by creating awareness among parents on the importance of role-modelling of healthy lifestyle in order to promote better biopsychosocial well-being among their young children. Moreover, results from this study also provide specific guidance for teachers, government, and society members in assisting children to develop a positive and efficient eating behaviour and physical activity practices.

Fourthly, children's well-being has always been an agenda in research, practice and policy development and implementation. The results from this study are expected to identify empirical evidence and best practice to inform policy development. For example, The Ministry of Education may benefit from this study by obtaining some insights on the significance of developing health knowledge, attitude and practices among primary school children as a way to promote a healthy biopsychosocial well-being. A better understanding on learning about healthy lifestyle could eventually lead to positive biopsychosocial well-being among school-doing children. More importantly, finding obtained from this study can provide guideline to the Ministry of Health in planning for more effective treatment and preventive strategies for unhealthy well-being among school-going children.

Finally, children may also benefit from the results of this study. Findings from this study are expected to identify the factors that are harmful and those which are beneficial to children's well-being. Therefore, children are able to adopt healthy lifestyle practices based on the information provided which eventually lead to better health well-being. With a healthy well-being, children may perform more effectively and efficiently in their academic based on government programs and parent's positive role modelling. They may also have a stronger body image and increased physical, emotional and psychological functioning. In future, better children biopsychosocial well-being may contribute to the country's human capital development and promote a better quality of life among the young children population. This always is a paramount among the national goals for the field of children development.

1.4 Objective of Study

General Objective

The general objective of this study was to determine the relationships between parental involvement, health knowledge, attitudes, and practices (KAP) and biopsychosocial well-being of children in Metropolitan Cities, Peninsular Malaysia.

Specific Objective

- 1. To describe the children's background characteristics and the key variables of the present study (maternal involvement, paternal involvement, activity knowledge, nutrition knowledge, healthy living attitudes, healthy lifestyle practices, overall biopsychosocial well-being, physical functioning, emotional functioning, social functioning and school functioning).
- 2. To describe the relationships between parental involvement, health KAP and biopsychosocial well-being of children.
- 3. To determine unique predictors of children's biopsychosocial well-being.

4. To examine the mediating effect of children's health KAP on the association of parental involvement and biopsychosocial well-being.

1.5 Research Hypothesis

The following hypotheses were formulated and tested in this study.

Ha 1: Background characteristics, parental involvement, and health knowledge, attitudes, and practices (KAP) are significant contributors of:

Ha 1a: overall biopsychosocial well-being.

- Ha 1b: physical functioning.
- Ha 1c: emotional functioning.
- Ha 1d: social functioning.
- Ha 1e: school functioning.

Ha 2: Activity knowledge mediates the relationship between:

- Ha 2a: maternal involvement and overall biopsychosocial well-being.
- Ha 2b: paternal involvement and overall biopsychosocial well-being.
- Ha 2c: maternal involvement and physical functioning.
- Ha 2d: paternal involvement and physical functioning.
- Ha 2e: maternal involvement and emotional functioning.
- Ha 2f: paternal involvement and emotional functioning.
- Ha 2g: maternal involvement and social functioning.
- Ha 2h: paternal involvement and social functioning.
- Ha 2i: maternal involvement and school functioning.
- Ha 2j: paternal involvement and school functioning.

Ha 3: Nutrition knowledge mediates the relationship between:

- Ha 3a: maternal involvement and overall biopsychosocial well-being.
- Ha 3b: paternal involvement and overall biopsychosocial well-being.
- Ha 3c: maternal involvement and physical functioning.
- Ha 3d: paternal involvement and physical functioning.
- Ha 3e: maternal involvement and emotional functioning.
- Ha 3f: paternal involvement and emotional functioning.
- Ha 3g: maternal involvement and social functioning.
- Ha 3h: paternal involvement and social functioning.
- Ha 3i: maternal involvement and school functioning.
- Ha 3j: paternal involvement and school functioning.

Ha 4: Healthy living attitudes mediates the relationship between:

Ha 4a: maternal involvement and overall biopsychosocial well-being.

Ha 4b: paternal involvement and overall biopsychosocial well-being.

Ha 4c: maternal involvement and physical functioning.

Ha 4d: paternal involvement and physical functioning. Ha 4e: maternal involvement and emotional functioning. Ha 4f: paternal involvement and emotional functioning. Ha 4g: maternal involvement and social functioning. Ha 4h: paternal involvement and social functioning. Ha 4i: maternal involvement and school functioning. Ha 4j: paternal involvement and school functioning.

Ha 5: Healthy lifestyle practices mediates the relationship between:

Ha 5a: maternal involvement and overall biopsychosocial well-being.

Ha 5b: paternal involvement and overall biopsychosocial well-being.

Ha 5c: maternal involvement and physical functioning.

Ha 5d: paternal involvement and physical functioning. Ha 5e: maternal involvement and emotional functioning.

Ha 5f: paternal involvement and emotional functioning.

Ha 5g: maternal involvement and social functioning.

Ha 5h: paternal involvement and social functioning.

Ha 5i: maternal involvement and school functioning.

Ha 5j: paternal involvement and school functioning.

1.6 Definition of Terminology

Some important key terms, including subjects of the interest and key variables of the study, used in the present study are defined conceptually and operationally.

Children

Conceptual:

A young person (between the ages of about 9 to 12), who is in the beginning process of growing independence from the family, developing skills for building healthy social relationship and learn roles that will lay ground work for a lifetime. Also, physical changes of puberty might be showing by now, especially for girl (Halfon, 2009).

Operational:

Refers to an individual aged 10 to 12 years attending daily primary government school.

Parent

Conceptual:

A person's father and mother (Hornby, 2010), who gives birth to or nurtures and raises a child (Baharudin & Luster, 1998).

Operational:

Respondent's father or mother.

Metropolitan Cities

Conceptual:

Refers to a region consisting of a densely populated urban core and its lesspopulated surrounding territories, sharing industry, infrastructure, and housing (Squires, 2002).

Operational:

Comprises Kuala Lumpur as the largest urban area in Malaysia, followed by the second largest city, Penang Island and the third largest urban area, Johor Bahru.

Health Knowledge, Attitudes and Practices

Conceptual:

Health knowledge, attitudes and practices refers to a person's understanding, perception and the execution of the individual's health practices (Pelto & Pelto, 1997).

Operational:

Comprises nutrition knowledge, activity knowledge, healthy living attitudes and healthy lifestyle practices which are treated as related but separable dimensions.

Nutrition Knowledge

Conceptual:

Refers to the knowledge about the nutrient content of food (Grunert, Wills, & Fernandez-Celemin, 2010).

Operational:

Children's nutrition knowledge refers to total score obtained by children on a scale in Nutrition Knowledge Questionnaire that measure the level of nutrition knowledge (Volpe & Huang, 2004). Higher scores in this scales indicate higher level of nutrition knowledge.

Activity Knowledge

Conceptual:

Refers to physical activity knowledge about the bodily movement that enhances health (Department of Health and Human Services, 2008).

Operational:

Children's activity knowledge refers to total score obtained by children in the Activity Knowledge Scale (Melnyk & Small, 2003a). Higher scores in this scale indicate higher level of activity knowledge.

Healthy Living Attitudes

Conceptual:

The term health attitude means an individual's general feelings about a health problem, object, or individual well-being (Petty & Cacioppo, 1981).

Operational:

Children's health attitudes refer to children's total score in the Healthy Living Attitude Scale (Melnyk & Small, 2003b). Higher scores indicate better attitude towards living a healthy lifestyle.

Healthy Lifestyle Practices

Conceptual:

Health practices refer to those activities which consist of health promotion values/goals/ethics, theories/beliefs, and evidence (Pelto & Pelto, 1997).

Operational:

Children's health practices refer to total score obtained by children in the Healthy Lifestyle Behaviour Scale (Melnyk & Small, 2003c). Higher scores indicate stronger intentions of engaging in healthy lifestyle behaviours.

Parental Involvement

Conceptual:

Parental involvement refers to how parent participate in children life (Desforges & Abouchaar, 2003). There are several ways in which parents get involved, this include school and home activities involvement (e.g., Grolnick & Slowiaczek, 1994), behavioural involvement which comprised spending time with children, and emotional involvement which focuses on feeling close to children (e.g., Wenk et al., 1994).

Operational:

Parental involvement refers to total score obtained by children in the Perception of Parent Scales (POPS) which measured the degree of the parents' involvement in the children's lives (Grolnick, Deci, & Ryan, 1997). Higher scores indicate higher maternal and paternal involvement in children's life.

Biopsychosocial Well-Being Conceptual: Biopsychosocial well-being refers to illness and health that are result of an interaction between biological, psychological and social factors (Sarafino, 2002).

Operational:

Biopsychosocial well-being refers to total score obtained by respondents in the PedsQL 4.0 (Pediatric Quality of Life Inventory) Genetic Core Scales (Varni, Seid &Kurtin, 2001). This scale encompasses four subscales which are emotional functioning, school functioning, social functioning, and physical functioning. Higher scores indicate higher health-related quality of life and greater level of the respective sub-dimensions.

1.7 Theoretical Framework

Bronfenbrenner's Ecological System Theory (1979, 1986, & 1992) was used as the guiding framework for the current research. As shown in Figure 1, this theory provides an appropriate framework for examining the role of parental involvement in shaping children's health knowledge, attitudes and practices and, understanding how does all these factors relate to biopsychosocial well-being among young children.

An ecological system theory developed by Urie Bronfenbrenner (1917-2005) explained how everything in children's living environment affects the children's growth and developmental process. This theory defines that the complex "layers" of environment (such as individual factors, parental factors and family), each have an effect on a child's development. Changes or conflict in any one of the layers will influent the dynamics of other layers. Besides children's immediate environment, interaction of the larger environment is also critical to children's development (Bronfenbrenner, 1992). In relation to the current study, this overall concept attempts to explain how the children's biopsychosocial well-being is being influenced by the children's primary or inner layer of environment (that include biological and hereditary characteristics). Secondly, the concept of the theory can be used to examine how the next layer, namely children or individual factors (such as health knowledge, attitudes and practices) may influence their biopsychosocial well-being. In addition, the theory provides explanation on how the outer layer (i.e. parental factors, such as monitoring, limit setting, and interaction) influent children's biopsychosocial well-being. Finally, the theory is also valuable to explain how children's health knowledge, attitudes and practices mediate the relationship between parental involvement and biopsychosocial well-being.

Children's biopsychosocial well-being is the outcome variable in this study. In general, biopsychosocial well-being refers to the individual illness and health that are resulted from the connection between biological, psychological and social elements (Sarafino, 2002). The ecology system theory is rooted in certain core principles concerning the development of a child within the context of the system

of relationships that form their own environment (Paquette & Ryan, 2001). The theory suggests that the well-being of a child is a primary environment that contributes to his or her development (Paquette & Ryan, 2001). In specific, a child's health is a result of his or her biological and psychosocial functioning as well as interaction with environmental factors. In other words, a child is able to achieve healthy biopsychosocial well-being if all aspects of the child (that include biological and psychosocial context) are functioning well.

Based on the proposition and concept in the Ecology System Theory (1979), this study proposes that children's biopsychosocial well-being is influenced by both parental and child factors. In the current study, factors related to children that were considered include children's health knowledge, attitudes and practices, while factors related to parents are parental involvement such as monitoring, limit setting and parent-child interaction.

Bronfenbrenner (1979, 1986, & 1992) suggests that human health is influenced by interrelations between two or more persons in which the developing person becomes an active participant. Parent is perceived as the closest and most influential figure to a child. Therefore, parent plays a major role in every aspects of the child's development. Parents who are involved more effectively in their children's life can serve as the most influential person in the development of children's biopsychosocial well-being. Furstenberg, Morgan, and Allison (1987) revealed a strong relationship between parental involvement and children's well-being among children. Thus, based on the theory, this study attempts to assess the relationship between parental involvement and children's biopsychosocial well-being.

In relation to child factor, Bronfenbrenner (2005) suggests that personal attributes such as genetic heritage, behavioural pattern and psychological dispositions are also one of the principles in ecological system theory that may influence human health. Children's knowledge, attitudes and practices in nutrition and activity are essential for creating awareness and maintaining healthy biopsychosocial well-being. Thus, in order to achieve better biopsychosocial well-being, children need to acquire and apply health knowledge; maintain positive attitudes towards eating and activity and; practice healthy eating and healthy exercise all the time. Thus, children need to attain the right attitude towards healthy lifestyle and develop the necessary skills in order to foster health enhancing behaviour (Zalilah, Sabariah, Norlijah, Normah, Maznah, Zubaidah, Sham, Laily, Bahaman & Zabidi, 2008). Therefore, guided by the Bronfenbrenner's theory, this research attempts to determine the relationship between children's health knowledge, attitudes and practices and, biopsychosocial well-being.

Lastly, Ecological system theory suggested that human development take place within a complex interaction between individual and his or her immediate external environment. Children need to develop a strong, mutual emotional attachment to the people who are responsible for their well-being development (Bronfenbrenner, 2005).

These propositions suggest that children need parents to be involved in their development. In such regard, parents with adequate involvement can involve more effectively in the development of children's health KAP as well as their biopsychosocial well-being. Previous research supports the effect of parental involvement on children's health KAP (Perry, Luepker, Murray, Kurth, Mullis, Crockett & Jacobs, 1998). Therefore, the present study attempts to determine how children health KAP mediates the relationship between parental involvement and biopsychosocial well-being.



Figure 1: Theoretical Framework of the Study "Relationships between Parental Involvement, Health Knowledge, Attitudes and Practices and Biopsychosocial well-being of Children in Metropolitan Cities, Peninsular Malaysia"

1.8 Conceptual Framework

Drawing upon the research objectives and theoretical framework, Figure 2 presents the conceptual framework of the present study. This research looks at how the independent (i.e. parental involvement) and mediator variables (i.e. children's health knowledge, attitudes, and practices) relate to the dependent variable (i.e. children's biopsychosocial well-being). This framework hypothesizes a three-variable system in which two are influential paths leading to the dependent variable: the direct impact of the independent variable (path a), and the impact of the mediator (path c). There is also a path from the independent variable to mediating variable (path b) and independent variable to dependent variable (path c).



Figure 2: Conceptual framework for the Study of "Relationships between Parental Involvement, Health Knowledge, Attitudes, and Practices and Biopsychosocial Well-being of Children in Metropolitan Cities, Peninsular Malaysia"

Based on the conceptual framework, it is hypothesized that parental involvement is related to children's biopsychosocial well-being. Firstly, the current study proposed that parental involvement, namely maternal involvement and paternal involvement has a direct influence on children's biopsychosocial well-being that comprised of overall biopsychosocial well-being, physical functioning, emotional functioning, social functioning and school functioning.

Secondly, it is assumed that the extent to which parental involvement have an effect on children's biopsychosocial well-being can be influenced by the children's health KAP. According to Baron and Kenny (1986), the independent variable may act upon dependent variable through the mediating variable. Hence, this research attempts to determine whether there is a significant mediating effect of children's health KAP toward the relationship between parental involvement and biopsychosocial wellbeing. The independent variable (i.e. parental involvement) may either indirectly influence the dependent variable (i.e. biopsychosocial well-being) through the mediating variable (i.e. children's health knowledge, attitudes, and practices), or it may also directly influence the dependent variable (Luster and Okagaki, 1993). If there is a significant decreased in the magnitude of the relationship between the independent and dependent variable (in path a), a variable will function as a mediator (Baron & Kenny, 1986). This means that mediator is the stronger influential variable in affecting dependent variable as compared to independent variables. This research suggests that there is an intervening of children's health KAP on the effect of parental involvement on children's biopsychosocial wellbeing. Thus, children's health knowledge, attitudes, and practices will function as mediator if there is a significant decreased in the relationship between parental involvement and children's biopsychosocial well-being.

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