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**PARENTING STRESS IN FAMILIES OF CHILDREN WITH
ATTENTION DEFICIT AND HYPERACTIVITY DISORDER:
HOW DEMOGRAPHICS AND SOCIAL SUPPORT INFLUENCE
PARENTING STRESS:
A STUDY FROM VIETNAM**

A thesis presented in partial fulfilment of the
requirements for the degree of
Master of Arts in Psychology
at Massey University, Albany, New Zealand

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2015

ABSTRACT

Parenting stress is a typical part of any parenthood; however, having continuing high levels of stress could negatively impact parents' health and the parent-child relationship. It has been agreed by researchers and clinicians that parents whose children have ADHD are among the top groups having parenting stress.

This study was conducted in Vietnam, a South East Asian country, and will focus onto three aspects of the phenomenon. First, to examine how Vietnamese parents with children diagnosed with ADHD experience parenting stress and how parenting stress varies according to demographics. Second, to examine the level of support those parents receive. Finally, this study aims to investigate the contribution of demographical and social support factors to the variance of parenting stress. Participants were a convenient sample of 130 individuals living within Vietnam that had at least one child with ADHD. They were asked to complete an anonymous self-report survey assessing their demographic status, parenting stress, and social support.

Consistent with previous studies both in the West and in Asia, parents in this study reported high levels of stress with the parenting stress found higher in mothers. Significantly, it was found that parents who lived with extended family; parents living in small cities; parents whose child had been diagnosed for more than 3 years; parents who had their child medicated or attended psychotherapy experienced higher stress than their counterparts. When entering the regression model, parent gender, family living arrangement and family geographical location significantly arose as predictors for parenting stress. Demographics as a group accounted for 22.3% of parenting stress experience and 22.5% of parenting stress degree.

It was also found that the helpfulness of support sources reported by parents was generally small across different support groups and Professionals but not Family were perceived as the most helpful to parents in taking care of their child. Nevertheless, the more professional support parents perceived the more stress they experienced.

ACKNOWLEDGEMENTS

There are many people that I would like to thank. First and foremost, I want to express my deepest gratitude to my supervisor Prof. Paul Merrick, not only for his abundant support and invaluable guidance but also for his encouragement.

I would like to acknowledge Dr. Steven K. Reader and James H. Johnson for their permission to use the Disruptive Behavior Stress Inventory and thanks to all the anonymous participants for the time and effort to complete the questionnaires. I also want to thank New Zealand ASEAN Scholar Awards for financially supporting me during my Master degree. Without them, I could not have got to this point of my life.

I am thankful for having an ideal family and wonderful friends who provide me with emotional support and encouragement and keep my life balanced. Particular thanks goes to the Storey family for providing me a home away from home; my beloved fiancé for his unconditional love and for always being there for me through all the ups and downs, despite the long-distance barrier.

Last but not least, I want to dedicate this work to my aunty, Hoang Cam Tu for introducing me to the world of psychology and my beloved friend and sister, Nguyen Thuy Hien and her son, Tôm. Their love and belief in me keep my passion going.

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GLOSSARY

ADHD: Attention Deficit and Hyperactivity Disorder

APA: American Psychiatric Association

CBT: Cognitive Behavioral Therapy

CD: Conduct Disorder

CNS: Cerebral nerves system

DBSI: Disruptive Behavior Stress Inventory

DSM: Diagnostic and Statistical Manual of Mental Disorders

HIV: Human immunodeficiency virus

FSS: Family Support Scale

ODD: Oppositional Defiant Disorder

PSI: Parenting Stress Index

PCA: Principal Components Analysis

SES: Stress Experience Subscale

SDS: Stress Degree Subscale

CHAPTER ONE: INTRODUCTION

Rationale of study

ADHD is one of the leading diagnosed disorders in school age children around the world. It is estimated that out of one hundred students, there are five to eight present symptoms of ADHD (Barkley, 2013; Barkley & Murphy, 2006; DuPaul & Stoner, 2004; G. Weiss & Hechtman, 1993). As being classified as externalizing disorder, ADHD does not only impact the life quality of the child but also affects other family members' well-being. It was reported consistently throughout the literature that parents whose children were diagnosed with ADHD experienced a high level of psychological distress, marital problems, and a significantly high level of parenting stress (Harrison & Sofronoff, 2002; Morgan, Robinson, & Aldridge, 2002; Schroeder & Gordon, 2002). From 1983 to 2007, there were 44 studies published on parenting stress in families with ADHD children (Theule, Wiener, Tannock, & Jenkins, 2013). Most of them consistently showed that the stress that parents of those children had to bear was higher than that of families with typical children, as well as families of children with special needs, such as asthma, HIV infection, intra-ventricular hemorrhage at birth, neural tube defect etc. (Baker & McCal, 1995; Spratt, Saylor, & Macias, 2007) .

Although parenting stress is not an etiology for the development of ADHD, it significantly contributed to the expression and development of the disorder (Baker & McCal, 1995). A high level of parenting stress was associated with a maladaptive parenting pattern and problematic parent-child interactions (Danforth, Anderson, Barkley, & Stokes, 1991; Healey, Flory, Miller, & Halperin, 2011; Mash & Johnston, 1983; Oh & Kendall, 2009; Yousefia, Far, & Abdolahian, 2011). What is more, parents who experienced high levels of stress related to the parenting role were likely to drop out from psychological treatment programs more frequently than other healthy parents (Friars & Mellor, 2007; Kazdin & Mazurick, 1994). Because of the above reasons, it is important that parenting stress in families of children with ADHD should be further investigated.

A variety of factors could contribute to parenting stress in those families, of those, the child psychopathology; parent psychopathology and social support were the three most salient predictors. First and foremost, it was reported to be the child's behavior problem. Children with ADHD are characterized as "moody", "demanding" and "less adaptable" characteristics that do not reinforce parents in their parenting role (Graziano, McNamara, Geffken, & Reid, 2011; Gupta, 2007; Hinojosa, Hinojosa, Fernandez-Baca, Knapp, & Thompson, 2012; Mash & Johnston, 1983; Shin & Kim, 2010; Theule, Wiener, Rogers, & Marton, 2011). The effect such behaviors had on their caregivers' burnout could account for 37% of the total effect (Anastopoulos, Guevremont, Shelton, & DuPaul, 1992). Second, a significant amount of studies also clarified the role of parental mental health on parenting stress. The level of psychopathology reported by the mother came second to the child's behavior in explaining their role distress (Anastopoulos et al., 1992; Harrison & Sofronoff, 2002; Harvey, Danforth, McKee, Ulaszek, & Friedman, 2003). Third, in recent years, researchers started to allocate the critical role that social support plays in this scenario. Several studies in Western culture suggested that social support was definitely one important precursor of parenting stress (Bussing, Zima, et al., 2003; Lovell, Moss, & Wetherell, 2012; Podolski & Nigg, 2001; Theule et al., 2011). Recent research in collectivism cultural societies like South Korea, Taiwan or Hong Kong also strongly supported that idea and further clarified that in collectivism culture, social support may play an even more definitive role in influencing parental distress (Ho, Chien, & Wang, 2011; Oh & Kendall, 2009; Shur-Fen Gau, 2007; Tzang, Chang, & Liu). Mothers from those studies found themselves being "angry", "helpless", "sad", "lonely" and "desperately seeking help, often unsuccessfully, from other family members and community" (Kendall & Shelton, 2003).

Though available studies have been clearly described the presentation of parenting stress in families with ADHD and how it is influenced by other factors, there are some gaps of research that need to be filled. First, there was a lack of study on parenting stress as well as social support in Asia and Vietnam in particular. Second, while most studies on the topic of parenting stress mainly focused on the contribution of children and parental health, not adequate attention was paid to discover how

social support and background characteristics of the family might impact parenting well-being.

Given that paucity of empirical research, this study has three aims. Firstly, to examine the parenting stress in parents of children with ADHD in Vietnam and how it varies according to parents' demographic status. Secondly, to assess the helpfulness of support sources that parents perceived. Third, to determine the contribution of demographic variables and social supports to parenting stress. These aims were realized by conducting a survey among a convenient sample of 130 Vietnamese parents whose children with ADHD were recruited through a research advertisement. The survey was carried out by an anonymous self-report questionnaire.

Study structure

In order to provide a solid background for later discussion, the next chapter presents current knowledge of ADHD, its prevalence, etiology, development course and outcomes. The prevalence of ADHD in young children and adolescents in Vietnam will also be presented.

Chapters 3 and 4 are devoted to clarifying the concept of parenting stress, factors predicting parenting stress and evidence supporting the relationship between parenting stress and social support.

Chapter 5 is spent to introduce some features of the study context and the significance of this study. Also in this chapter, research questions are specified.

Chapter 6 describes the methodology, procedure and measures selected for this study.

Chapter 7 presents all data analysis and results of this study; Chapter 8 provides some discussions of the results and Chapter 9 will present an executive summary to conclude for this study.

CHAPTER 2: ATTENTION DEFICIT AND HYPERACTIVITY DISORDER

Definition

Attention deficit and hyperactivity disorder is not a new phenomenon. Since early 1900s, children exhibiting symptoms such as “inattention” and “overactivity”, “impulse control”, were described by clinicians in medical reports (Barkley, 2006). However, that presentation was believed to be associate with brain damage, used to be referred to as Brain-Injured Child Syndrome, Minimal Brain Damage Syndrome or Minimal Brain Dysfunction or Hyperkinetic reaction of Childhood during the 1960s and 1970s (Clements & Peters, 1962; Ebaugh, 1923; Still, 1902; Strauss & Kephart, 1955). Not until 1980, in the third edition of the Diagnostic and Statistical Manual of Mental Disorders, the name Attention Deficit disorder with Hyperactivity was introduced, now widely known as Attention Deficit and Hyperactivity Disorders (American Psychiatric Association, 1980). According to DSM-V, the newest edition of Diagnostic and Statistical Manual of Mental Disorders, Attention Deficit/ Hyperactivity Disorder (ADHD) is defined as a neurodevelopmental disorder that is featured with persistent patterns of inattention, hyperactivity and/or impulsiveness that are excessive for age or developmental level. Inattention covers the inability to stay on task, non-listening, day dreaming; hyperactivity-impulsivity involves the inability to be still, and includes, fidgeting, tapping and actions without forethought, that have high potential for harm to the individual (American Psychiatric Association, 2013).

Diagnostic criteria

As discussed above, ADHD phenomenon is not new to clinical literature, it is, however, a relatively new diagnoses label. Not until 1980, did researchers and practitioners agree that a more comprehensive and detailed criteria for the diagnosis of the disorder should be developed (Anastopoulos & Shelton, 2001). That consensus was reflected in the existence of section 314.01, guideline for ADDH in the DSM-III (American Psychiatric Association, 1980).

The most up to date diagnosis criteria for ADHD was presented by DSM-V (American Psychiatric Association, 2013)(details of diagnosis criteria were introduced in Table 1). According to the DSM-V, to be diagnosed, some symptoms of inattention

and/or hyperactivity-impulsive must exist by the age of 12; be consistently present in at least two of the child's environments (such as school and home) and must interfere with the child's academic or social function. What is more, those symptoms cannot occur exclusively during the course of other disorders (American Psychiatric Association, 2013). Different from previous editions, the age onset of ADHD in DSM-V is 12 rather than 7. This broadening of onset age is believed to benefit practitioners in obtaining more accurate information, convey the importance of the confirmation of ongoing symptoms during childhood and to help establish more precise childhood reflection than the earlier age on set (American Psychiatric Association, 2013).

Table 1: Diagnostic criteria for ADHD (American Psychiatric Association, 2013, pp. 59-61)

Inattention

Six (or more) of the following symptoms have persisted for at least 6 months to a degree that is inconsistent with developmental level and that negatively impacts directly on social and academic/occupational activities:

- a. Often fails to give close attention to details or makes careless mistakes in schoolwork, at work, or during other activities
 - b. Often has difficulty sustaining attention in tasks or play activities
 - c. Often does not seem to listen when spoken to directly
 - d. Often does not follow through on instructions and fails to finish schoolwork, chores, or duties in the workplace
 - e. Often has difficulty organizing tasks and activities
 - f. Often avoids, dislikes, or is reluctant to engage in tasks that require sustained mental effort
 - g. Often loses things necessary for tasks or activities
 - h. Is often easily distracted by extraneous stimuli
-

-
- i. Is often forgetful in daily activities

Hyperactivity and impulsivity:

Six (or more) of the following symptoms have persisted for at least 6 months to a degree that is inconsistent with developmental level and that negatively impacts directly on social and academic/occupational activities

- a. Often fidgets with or taps hands or feet or squirms in seat.
- b. Often leaves seat in situations when remaining seated is expected
- c. Often runs about or climbs in situations where it is inappropriate.
- d. Often unable to play or engage in leisure activities quietly.
- e. Is often “on the go,” acting as if “driven by a motor”
- f. Often talks excessively.
- g. Often blurts out an answer before a question has been completed
- h. Often has difficulty waiting his or her turn
- i. Often interrupts or intrudes on others

Subtypes

Over the past 40 years, research has indicated that ADHD is a clinically heterogeneous disorder. Depending on the profile of psychiatric symptoms/disorders, family backgrounds, developmental courses, and responses to treatments, the presentation of this disorder can be complicated. The only shared characteristic among ADHD populations is the inappropriate development levels of inattention and hyperactivity–impulsivity (Deault, 2010; Musser, Galloway-Long, Frick, & Nigg, 2013; Sonuga-Barke, 2005). One of the widely accepted approaches to the subtyping of ADHD is that of the DSM which is mostly based on the presence or absence of the Hyperactivity/Impulsive symptoms (Barkley, 2006).

The DSM-V indicated that there are three subgroups of ADHD of which an individual can be classified into: Combine presentation, predominantly inattentive and predominantly Hyperactivity-impulsive presentation (American Psychiatric Association, 2013). This classification is based on the predominant symptoms in each category presented by the child. One can be diagnosed with *ADHD combine presentation* if he/she met the criteria for both Inattention and Hyperactivity and Impulsive category (six or more symptoms each category). If six or more Inattention symptoms are found but not either, *Predominantly Inattention presentation* is the best diagnosis. If he/she exhibits six or more symptoms of Hyperactivity-impulsive but less than 6 inattention symptoms, that person can be qualified for *ADHD Predominantly hyperactivity/impulsive presentation* (American Psychiatric Association, 2013).

Etiology

Considerable research has accumulated on the various etiologies for ADHD and found that the cause of ADHD is not limited to any hypothesis. Despite the ongoing controversial arguments about the cause of ADHD, neurological and genetic factors have been accepted to be the major causes of ADHD.

A unifying line of evidence from neurotransmitters revealed that neurochemical abnormalities may serve as the underlying cause of ADHD. It was found that the neurotransmitter function in the brain of a person who suffered from ADHD was not balance enough to respond appropriately to dopamine and norepinephrine reuptake inhibitors and agonists (Barkley & Murphy, 2006; Connor, 2002; Dupaul, Barkley, & McMurray, 1994; Meeusen & Piacentini, 2003). This hypothesis has been further demonstrated by other studies of brain electrical activity of neuroimaging studies as they consistently found alterations in the structure and function of dopamine-rich regions of the cerebral nerves system (CNS), such as the prefrontal cortex, striatum, basal ganglia, and cerebellum in children and adults meeting clinical criteria for ADHD (Barkley & Murphy, 2006; Baving, Laucht, & Schmidt, 1999; Gerber et al., 2012; Jensen et al., 2001) .

Family studies have also made it abundantly clear that a major variation of the behavioral trait constituting ADHD is the result of genetic factors. Studies on biological

siblings found that a child who had brother(s)/sister(s) diagnosed with ADHD was two to 3 times more likely to also exhibit symptoms of that disorder (Faraone et al., 1993; Levy, Hay, McSTEPHEN, Wood, & Waldman, 1997; Milberger, Biederman, Faraone, Guite, & Tsuang, 1997). What is more, the percentage of having family members with this disorder in families of adoptive ADHD children was significantly lower than that of biological families (Alberts-Corush, Firestone, & Goodman, 1986; Sprich, Biederman, Crawford, Mundy, & Faraone, 2000).

Developmental course and outcomes of ADHD

Developmental course

The precursors of this disorder could be found quite early in infancy (Barkley, 2006). Though not all infants who have temperature problems are later diagnosed with ADHD, those with temperature problem are at higher risk for ADHD than children who are not (Auerbach, Atzaba-Poria, Berger, & Landau, 2004; Milberger, Biederman, Faraone, Guite, et al., 1997; Thunström, 2002). When children reach the age of 4, their presentation becomes more consistent. Studies have pointed out that preschool children with ADHD were more disruptive, lacked of self-control, were more likely to cause unintentional injuries, were disliked by their friends and developed academic underachievement related to reading and mathematics. (DuPaul, McGoey, Eckert, & VanBrakle, 2001; Lahey et al., 1994; McGoey, Eckert, & Dupaul, 2002; Soma, Nakamura, Oyama, Tsuchiya, & Yamamoto, 2009).

Basically, most of those symptoms tend to remain stable as the child enters formal schooling. However, the most noticeable characteristics of ADHD children demonstrated at school were the lack of appropriate social skills (Barkley, 2006; Groth-Marnat, 2009; Lahey, Pelham, Loney, Lee, & Willcutt, 2005; Smith, 2013). Such behavior problems, lead children with ADHD (especially the combination type) into high risk of social avoidance and rejection, which could be exaggerated when the child entered their puberty period (Barkley, 2013; de Boo & Prins, 2007; DuPaul & Stoner, 2004).

By adolescence, the presentation of ADHD was more individualized and impacted by many different factors (Barkley, 1998). Children who did not have a history of

significant aggressive behavior, comorbid mood disorders and family adversity had a higher chance to lessen their ADHD symptoms by adolescence (Barkley, Anastopoulos, Guevremont, & Fletcher, 1991; Kamphaus & Frick, 2005). However, most of them were more likely to develop deficient and oppositional behaviors (Barkley et al., 1991; Kamphaus & Frick, 2005). They were also reported by parents and teachers to present with significant level of internalizing disorders such as depression, obsessive-compulsive disorder (OCD) or anxiety though the children did not often agree with that reportage (DuPaul & Stoner, 2004).

Until 2006, there were some longitudinal studies that followed ADHD children till adulthood (Barkley, 2006). Results from those studies suggested that some ADHD core symptoms continued to persist in 30%-40% of the sample when they reached early adulthood (20-ish). However, this rate dropped significantly below 10% eight years later. Unlike the previous stages, adults with ADHD did not have many academic problems; although they were found to have significant impairment in their social functioning (Mannuzza & Klein, 2000; G. Weiss & Hechtman, 1993).

Outcomes

Because of their behaviors and academic problems at school, children and adolescents with ADHD were frequently referred to by teachers and school professionals as “underachievers” (Bussing, Zima, et al., 2003; Hoang & Nguyen, 2012; Loe & Feldman, 2007; Tomporowski, Davis, Miller, & Naglieri, 2008). It was estimated that around 30% of adolescents with ADHD dropped off from high school and a greater percentage could not complete college (Schroeder & Gordon, 2002). In addition to academic problems, it was noticeable that a number of adolescent with ADHD got involved in socially undesirable behaviors such as theft, substance-abuse, and early initiation of cigarette smoking (Milberger, Biederman, Faraone, Chen, & Jones, 1997; van Egmond-Frohlich, Weghuber, & de Zwaan, 2012). When they entered adulthood, 18%-27% were diagnosed with antisocial personality disorder, 16%-24% presented with alcohol abuse behaviors; a further 75% have significant interpersonal problems (Barkley & Murphy, 2006). What is more, criminal arrests were also found to be significantly higher in young adults with ADHD, especially those with comorbid conduct disorder (Schroeder & Gordon, 2002). Families also realized that their child’s problems

were getting harder to manage. Problems such as non-compliance, aggression, lack of persistence and adaptations, tantrum throwing etc., happened more frequently, leading to increased parental stress, marital discord and depression in those parents over time (Barkley, 2013; Cunningham, Bennes, & Siegel, 1988; Danforth et al., 1991).

Treatment

Pharmacotherapy

Believing that neurochemical imbalance is one of the major etiologies of ADHD, since early 1930s, clinicians started to explore the use medication in the treatment for ADHD (Barkley, 2006). Through more than sixty years of clinical use and research, it has been found that stimulants (Ritalin, Dexedrine, Cylert) and Antidepressants (Tricyclic, Bupropion) are two types of medication that have a positive effect in reducing ADHD symptomatology (Anastopoulos & Shelton, 2001; Barkley, 2006). Studies have demonstrated that stimulant medications are highly effective in managing ADHD symptoms. Up to 95% children treated with stimulants showed some significant improvements in the core symptoms of ADHD, academic performance, and social functioning, better self-control and less disruptive and aggressive behaviors (Barkley, Connor, & Kwasnik, 2000; Barkley, Murphy, O'Connell, & Connor, 2005). While the effectiveness of stimulants is undeniable, in some cases the clinical presentation is more complicated and interferes with other emotional problems. Here a tricyclic antidepressant (e.g. imipramine) is a more appropriate choice. Tricyclic antidepressants were observed to have superior positive response in treatment for ADHD with comorbid disorders such as depression, anxiety or tic disorders comparing to stimulants. These also have a long lasting action which can last to approximately 112 hours (Barkley & Murphy, 2006). Despite their advantages; the possible side effects of stimulants and antidepressant still concerned clinicians and families when medicating a child with ADHD. Insomnia, decreased appetite, headache or irritability can be observed in a number of cases (Barkley, 2006; Barkley et al., 2000).

Psychotherapy

The psychotherapy approach to the treatment of ADHD is highly diverse depending on how clinicians' conceptualize the clinical presentation of the disorder

and its maintaining process (Barkley & Murphy, 2006). Over the last 30 years, Cognitive Behavioral Therapy (CBT) has been considered the most popular approach among clinicians (Braswell & Bloomquist, 1991). CBT techniques such as self-monitoring, self-reinforcement or self-instruction has proven to bring about significant effects in reducing disruptive behaviors, increase on-task behaviors as well as peer relationships in some children with ADHD (Shapiro & Cole, 1999). Nevertheless, due to the executive function deficits that limit the child's ability to reflect from learning experiences and the fact that ADHD is a highly contextual disorder; current clinicians proposed that other external agents such as family or school should be included in intervention programs for children with ADHD. Family training and school-based intervention normally includes psycho-education and contingency management training for parents and teachers (Abramowitz & O'Leary, 1991; DuPaul & Stoner, 2004). Research showed that contingent use of positive reinforcement in classroom can help to improve student's behavior, productivity, and accuracy, which could lead to long-term improvement in the child behaviors and his academic performance (Azrin, Vinas, & Ehle, 2007; Pfiffner, Rosen, & O'Leary, 1985). Meanwhile, for families who benefitted from parents training program, not only did the child present less child's behavioral problems but parenting stress, marital discord or parent-child conflict is also seen to be reduced significantly post-treatment (Anastopoulos, Shelton, DuPaul, & Guevremont, 1993; Braswell & Bloomquist, 1991; Neophytou & Webber, 2005; Weinberg, 1999).

All pharmacotherapy, CBT, parents training and classroom intervention have their own value in the treatment of ADHD. However, each approach individually cannot cover the broad presentation of ADHD. A comprehensive treatment which combines different tactics to ADHD has become a new trend in treatment of ADHD nowadays (Anastopoulos & Shelton, 2001; Barkley & Murphy, 2006) .

Prevalence

ADHD is reported consistently in many studies to be presented in 3% to 5% of school age children (Barkley, 2013; Barkley & Murphy, 2006; DuPaul & Stoner, 2004; Polanczyk, de Lima, Horta, Biederman, & Rohde, 2007). In 2007, Polanczyk et al. conducted a meta-regression study on the prevalence of ADHD and proposed that the

worldwide prevalence of ADHD was 5.29%. However, that prevalence is quite heterogeneous, it could vary from as low as 1% to as high as 20% according to the geographic and culture characteristics of the studied population (Anderson, 1996; Bird, 2002). When all studies were combined and calculated for geographic comparison, South America took the highest rates of about 12% followed by Africa (8.5%); Asia, North America, Europe, Oceania (5%) while Middle East had the lowest rate of 2.5%. (Polanczyk et al., 2007).

Prevalence of ADHD in Asia and Vietnam

Though the research profile of ADHD is quite well-established in many countries around the world, this is not the case in Asia. More than sixty studies on ADHD were published in America and Europe up to 2007, while that number in Asia was around fifteen (Polanczyk et al., 2007). The review of ADHD prevalence in Asia indicated that the rates of this area varied between 3.5%-4% (Polanczyk et al., 2007). However, in some countries like China, Taiwan, Japan and Korea, that prevalence is substantially higher, ranging from 7%–10% (Satake, Yamashita, & Yoshida, 2004; Soma et al., 2009; Tseng, Kawabata, & Gau, 2011).

In Vietnam, yet there has been no national wide study of the prevalence of ADHD, some researchers have reported a number of cases in small communities. First to be acknowledged is the study of Ngo (2007). Using the Strengths and Difficulties Questionnaire (Goodman, 1997) as the main measurement for assessing mental wellbeing of student in Hanoi, the researchers found that 14.10% students in Hanoi had hyperactivity problems and this was the most frequent problem to be found. This was one of the very first community-based studies in Vietnam that examined the mental health problems in school age student. It could be said that this study has contributed greatly in introducing the concept of mental health in general, and ADHD in particular into the community and schools in Hanoi.

In recent years, Vietnam has witnessed the growth of study on the topic of ADHD. T. V. T. Nguyen (2010) conducted a study on 1594 students in two primary schools in Hanoi and found that 3.01% students met the criteria for ADHD. Also in an attempt to discover the rate of ADHD among children, two years later, T. T. H. Nguyen

(2012) in the fulfillment of her master degree found that the prevalence of ADHD in a district of Hanoi was 6.3%. Within the same year, there were two other studies published on the topic of ADHD in school age children. One found that the number of children who presented symptoms of ADHD in Ho Chi Minh city was 5% (Le, 2012). The other was conducted in Hue city with the population of 984 school age children and found the prevalence of ADHD was 4.9% (Hoang & Nguyen, 2012).

Summary

This chapter captures the main points of ADHD. ADHD is a childhood disorder that occurs in 5.6% children worldwide and this prevalence in Vietnam fluctuates around 5%. The most frequently used diagnostic criteria for ADHD is DSM-V of which, rather than having to show the symptoms before the age of 7 (previous editions of DSM), the onset age for the presentation of disorder is 12. Concerning the etiology of disorder, despite the ongoing argument about which factor contributes the most to the root of the problem, there is a consensus that ADHD is a neuropsychological-related disorder and that it could be genetically based. Though a child with ADHD can have a functional life and learn to develop appropriately when growing up, most children with ADHD struggle a lot with their academic and social life and are in higher risk of being involved in anti-social behaviors in adulthood. ADHD also creates a lot of chaos and stress for families, especially parents.

CHAPTER 3: PARENTING STRESS

Definition

According to the general model of stress proposed by Folkman, Lazarus, Dunkel-Schetter, DeLongis, and Gruen (1986), stress emerges from the interaction between an individual and his/her own environment when environmental stressors overwhelm his/her resources. In the last 30 years, a much effort has been made to discover the extent to which stress relates to parenting experience both in typical families and families of children with disability (Podolski & Nigg, 2001; Abidin, 1997). Most studies on this topic have resulted in a consensus that the core feature of parenting stress is the mismatch between the actual demands of the parenting role and the accessibility of resources for meeting those demands (instrumental and emotional support from others) (Deater-Deckard, 2004; Goldstein, 1995) .

In its simplest description, parenting stress is *“a set of processes that lead to aversive psychological and physiological reactions arising from attempts to adapt to the demands of parenthood”* (Deater-Deckard, 2004). This demand does not only comprise of parents meeting children’s needs for survival but also adapting to the child’s unique attributes, and perceiving of parents’ own competency related to their parental role (Deater-Deckard, 2004). Though having some parenting stress is considered normal, a high level of parenting stress may threat parents’ well-being, family relationships, parent-child interaction quality and the child’s development (Abidin, 1990). Because of those specific confines and impact, it is important to further investigate about the effect of parenting stress aside from global psychological distress, and stress from other domains.

Parenting stress in family of children with ADHD

ADHD-related characteristics of the child uniquely produce stressors that adjust parents’ behaviors and family function (Anastopoulos et al., 1992; Baker, 1994). Parents with ADHD children typically have to face more challenges than parents of normal children to deal with non-compliance situations, school, peer and siblings difficulties, perceive themselves as lacking parental competence and less parenting knowledge (Mash & Johnston, 1990). They are also reported to receive fewer supports

instrumentally and emotionally in raising their children than parents of normal children (Barkley, 2013; Cunningham & Barkley, 1979; Murphy & Barkley, 1996). Since early 1980s, it is estimated that there were at least 42 published projects on the stress of parenting in families of children with ADHD (Theule et al., 2013). Most of them were recruited from samples from the clinic referral population and used the Parenting Stress Index (PSI)(Abidin, 1990) as the main criteria. Generally, there was an agreement that parents of ADHD children were experiencing a significantly high level of parental distress.

One of the earliest studies addressing this issue was conducted by Mash and Johnston in 1983. By comparing parents of 40 children who had ADHD and other 51 families of non-ADHD children, Mash and Johnston found that mothers of young hyperactive children report remarkably higher levels of stress than parents of non-ADHD children. This stress was associated with both child behavior disruption and parents' own feelings of competency (Mash & Johnston, 1983). Following the idea of Mash & Johnston, Anastopoulos et al. (1992) examined parenting stress in 104 parents of children with ADHD and their results were similar to the Mash & Johnston study. The total overall mean of PSI scores fell above 90th percentile of the standardized norm (M=267.1; SD=47.2). Subsequently to Anastopoulos's study, many other researchers also reported the same outcome. For example, the total mean score of PSI of ADHD group in Harrison and Sofronoff (2002) study was 300.28 (SD=45.63). More recently, Yousefia et al. (2011) reported the PSI mean score of ADHD group in their sample was 227.98 (SD= 43.1) which was significantly higher than that of the control group (M= 220, SD= 29.39; $t(128)=9.02, p<.01$).

While most of studies in this area adopted PSI as the main measure, this measure has been criticized by some authors to overlap with diagnostic criteria of ADHD. In 2002, in order to fix this problem, a measure called the Disruptive Behavior Stress Inventory (DBSI) was developed (Johnson & Reader, 2002). Using this measure as the main criteria for their studies, these authors reported that parents of ADHD children scored significantly higher than parents of normal children across subscale of DBSI. In the primary study, the Stress Experience Score of parents in ADHD group was 19.05 (SD= 9.09) and their Stress Degree Subscale was M=35.98 (SD= 24.43) while that of the

normal group was 8.42 (SD= 5.38) and M=12.18 (SD= 12.68) consequently. Seven years later, when trying to replicate and extend their study, a similar finding was found: parents of the ADHD group experienced significantly more stressors related to their children' behaviors compared to parents of the control group (M= 20.45, SD= 8.34; M= 7.47, SD= 7.17). Their Stress Degree was also found to be higher than that of the control group (M= 40.45, SD= 22.92; M= 11.39, SD= 14.50).

Not only had parents of this special population experienced higher level of stress than normal population, when being compared to other illness conditions, ADHD groups still took the lead. In 1994, Baker and his fellows proposed that mothers of children with ADHD had to endure a significant higher level of stress than mother of children who had learning disability Baker (1994); More recently, inspection of literature found two studies addressing parenting stress of children with ADHD among other types with special needs. The first study conducted by Gupta (2007) compared the parenting stress between four cohorts of children with different health difficulties. Results disclosed that parents of children with ADHD along with parents of children who had developmental disability reported the highest level of stress, which surpassed those of parents of HIV-infected and asthmatic children. The second study was conducted within the same year and explored the parenting stress of 226 parents of children who had a variety of physical, developmental and neurological problems. Results also presented that parenting stress was highest among parents of children who had hyperactivity disorder or combined hyperactivity and cognitive deficits (Spratt et al., 2007).

Predictors of parenting stress

Theoretical and empirical studies of parenting stress have suggested that the determinants of parenting stress is a complex phenomenon that can only be understood by dynamic multivariate models that acknowledge the interaction between various variables (Abidin, 1990; Anastopoulos et al., 1992; Deater-Deckard, 2004). In the past 20 years, many studies have been conducted to discover factors contributing to parenting stress of parents whose children were diagnosed with ADHD. Major variables found to significantly predict parenting stress in families of children with ADHD, were child psychopathology, and parent psychopathology. Additionally,

social support and then demographic characteristic of the family, parent and the child, may also play contribute to the presentation of parenting stress. This section will review studies of child psychopathology, parent psychopathology and demographic factors in relation to parenting stress. The relationship between parenting stress and social support will be addressed in the next chapter.

Child psychopathology

Child ADHD

Theory of parenting stress has consistently emphasized the child temperament and behaviors as precursors to parenting stress. Study of Anastopoulos et al. (1992) was one of the first studies addressing the contribution of child behaviors to parenting stress. Data collected from 104 clinic-referred families of children with ADHD showed that the model of three child factors: child ADHD score, aggressive score and child health status accounted for 43% of variance in parenting stress, of which, ADHD severity significantly contribute 7% to the variance of parenting stress above and beyond aggressive score. In 1995, Baldwin, Brown, & Milan assessed stress in 30 caregivers of children with ADHD using both self-reported survey and face-to-face interviews and found that the behavior symptomatology accounted up to 18% of the overall stress in caregivers. This great contribution of child behavior symptom on parenting stress was subsequently supported by many other studies (Faraone et al., 1993; Harrison & Sofronoff, 2002; Lahey et al., 1988; Narkunam, Hashim, Sachdev, Pillai, & Ng, 2012).

Noticeably, when breaking the factor down further, it was found that hyperactivity or the combined subtype presented having larger effect on parenting stress than the inattention subtype. That effect also emerged as a significant predictor for parenting stress (Graziano et al., 2011; Tzang et al., 2009). It is worth mentioning that the impact of ADHD subtypes on perception of stress in mothers and fathers are not the same. While fathers reported that hyperactivity was one of the most striking features of the children that bothered them, it is the inattention symptom of the child that was more likely to influence mothers' role-related satisfaction (Podolski & Nigg, 2001).

Co-occurrence of ADHD and other Disruptive Disorders

Though ADHD has been proven to make significant contribution to parenting stress, literature has indicated that parenting stress appears to be exacerbated if ADHD comorbid with other disorders. So far, studies on the impact of comorbid disorders on the course of parenting stress have focused on Conduct Disorder (CD) or Oppositional Defiant Disorder (ODD).

In 2001, Podolski & Nigg tried to replicate Anastopoulos's result with a sample of 66 mothers and 57 fathers whose children had ADHD, not only did the authors find that ODD related to higher level of parenting distress, this effect remained significant when ADHD symptom severity was controlled for (Graziano et al., 2011). Another study that deserves attention is that published in 2012 by Hinojosa and colleagues. This was one of the few studies on this topic which had a considerably larger sample size. Information from 5473 family with ADHD children around America disclosed that 11% of the variance in parental strain could be explained by the comorbid conditions; of which conduct disorder took the greatest effect of all. This effect was greater than that of physical as well as psychopathological problems and was found to be consistent with previous literature (Deault, 2010; Hinojosa et al., 2012).

In brief, ADHD severity and ADHD subtype make a significant contribution to parenting stress. However, examination of the wider literature leads to the inference that the stress related to parenting in families of children with ADHD was more likely to be exacerbated by the existence of comorbid ODD or CD.

Parent psychopathology

Popular wisdom has dictated that parenting stress predominantly stems from the child's difficulties. However, the presence of maternal psychopathology in a bulk of the research of ADHD and clinical work has proposed that caregivers' mental health predispositions may also play an equal role in affecting their perception of stress. In the last three decades, many empirical works have linked parental stress with different parental mental problems, of which depressive symptoms and ADHD were most highlighted.

Parental depressive symptomatology

As early as 1981, Forehand and McMahon suggested that depression in parents of children with behavior problems could amplify their perceptions of child maladaptive behaviors, increase the negative parenting style and thus, perpetuate the child negative behaviors, impair response to treatment and maintain parenting stress. Two decades later, Chronis et al. (2007) examined the effect of maternal depressive symptoms on parenting stress of children from 4 to 7 years old with ADHD and also reported the same finding. This study highlighted that maternal depression not only emerged as a significant predictor for the child conduct problem in the subsequent two to eight years, it also inversely correlated with their responsiveness to the parenting role. Remarkably, in a meta-analysis, Theule et al. (2013) confirmed that not only did parental depressive significantly predict parental distress, it was indeed the strongest predictor of parent domain.

Though literature has shown important correlations between parenting stress and parent mental illness especially maternal depressive symptom, the underlying process between those two variables has not been clearly delineated. In an effort to find the answer, Gerdes et al. (2007) assessed the parenting practice and parent depressive symptoms of 96 families and proposed that maternal stress, locus of control and self-esteem were factors mediating the relationship between parenting stress and parental depressive symptoms.

Parental ADHD symptomatology

Having lent support from the high co-occurrence of depression and ADHD and the genetic features running in families of individuals with ADHD, in the last several years, researchers have been directing their focus on the link between parental ADHD symptom and parenting stress. Some interesting correlations have been found.

In 2003, W.J.Harvey et al. interviewed 72 parents (46 mothers and 26 fathers) of ADHD children who participated in a parenting training program. Parents' self-reports of inattention and impulsivity strongly associated with lax parenting both for mothers and fathers. Parents who reported high scores of impulsivity engaged in more argument situation with their children while inattentive mothers were more likely to

adopt negative parent-child interaction. Subsequently, Murray Murray and Johnston (2006) explored the parenting behaviors of mothers with ADHD. Sixty mothers with and without ADHD were requested to complete self-reported questionnaires evaluating their monitoring of child behavior, consistency of parenting and problem solving abilities. As was expected, mothers with ADHD showed poorer child-behavior monitoring skill and less commitment to their discipline compared to the control group.

Later, study conducted by Theule et al. (2011) further supported this idea. Data derived from a sample of 95 families of children with ADHD showed that when entered into a regression model with child variables and social support, parent's ADHD symptomatology was the strongest predictor for parental role related distress. Its effect magnitude was greater than that of child ADHD or oppositional symptoms. Recently, van Steijn, Oerlemans, van Aken, Buitelaar, and Rommelse (2014) published his study of 174 families whose children has ADHD or Autism spectrum disorder (ASD) and found that maternal ADHD directly related to parenting stress. What is more, researchers also reported that parental ADHD symptoms were associated with depressive symptoms in both mothers and fathers.

Demographic risk factors of parenting stress

Theoretical and empirical studies of parenting stress have suggested that the determinants of parenting stress is a complex phenomenon that can only be understood by a dynamic multivariate models (Abidin, 1990; Anastopoulos et al., 1992). In the past 20 years, many studies have been conducted on this topic and found evidence to indicate that there are effects of demographic characteristics on the perceiving of role-related distress in parents. Among those are: child gender, child age, parent gender and parent marital status.

Child gender and parenting stress

To the extent that behavior disorder occurs more often in boys than girls, researchers speculated that gender of the child plays a part in their parents' experience of stress. Studies have been reported that mothers of boys are more likely to report high level of parenting stress (Bussing, Gary, et al., 2003; Podolski & Nigg,

2001). Not only does child gender effect parenting stress, a meta-analysis carried out in 2013 found that it is the sole significant factor mediating the relationship between the child' ADHD symptoms and parenting stress (Theule et al., 2013). In Asia, Shur-Fen Gau (2007) reported that boys with ADHD were involved in more conflict situations with their mothers and those mothers expressed more negative emotion and less affection toward their children than mothers of female counterparts.

Child age and parenting stress

There has been evidence suggesting that the experience of parental distress partly relate to the child age. In early 1982, Mash & Johnston suggested that the interaction between mothers and child in young children with ADHD was more negative than that with older children with hyperactivity. One year later, those authors confirmed their findings by reporting that in their study, parents of young children with ADHD (mean age: 5 years) had to endure more obvious stress than parents of older children (mean age: 8 years)(Mash & Johnston, 1983). Barkley, Karlsson, and Pollard (1985) observed the interactions of 60 boys and their mothers in free play also found that though the older boys continue to display a developmental delay in social behaviors; their quality of interactions with their moms appeared to be better than the younger group and their moms also reported to be more relaxed than mothers of the younger children. However, a recent study in Asia reported a contrary finding that parents whose children had ADHD aged 12 years and older were 6.5 times more likely to experience stress than parents whose children were under 12 years old (Narkunam et al., 2012).

Parent gender and parenting stress

Above and beyond the impact of child characteristics, parent characteristics also presumably affect the amount of stress encountered by parents of ADHD children. The inclusion of fathers into studies concerning parenting stress and ADHD acknowledged the effect of parent gender on parenting stress (Theule et al., 2013). There has been an agreement between studies across different cultures that mothers whose children had ADHD were more vulnerable to role related distress than do fathers (Baker, 1994; Mychailyszyn, Dosreis, & Myers, 2008; Narkunam et al., 2012; Reader, Stewart, & Johnson, 2009). Remarkably, the stress experience between fathers and mothers was

different. For mothers, child inattention and conduct problems were variables that significantly contributed to parenting role distress while that of fathers was associated uniquely with child oppositional or aggressive behaviors but not with ADHD (Podolski & Nigg, 2001).

Marital status and parenting stress

As parents of children with ADHD regularly reported less marital satisfaction and more conflict with their spouse than parents of normal children (Baker, 1994; Harvey et al., 2003; Theule et al., 2011), marital quality might play a role in exacerbating parental distress. Harvey et al. (2003) examined the parenting similarity between mothers and fathers of children with ADHD. The compare and contrast of parenting behaviors between mothers and fathers showed that the less discord reported by couples, the less parenting stress they experience. In Asia, study of Malaysian parents and their children with ADHD shown that parenting stress in households with married couples was significantly higher than that of divorced or widowed ones (Narkunam et al, 2014). This finding was previously proposed by Cunningham et al. (1988) and Neophytou and Webber (2005).

Apart from some demographic characteristics as mentioned above, the effect of other factors like birth ordinal position, duration of treatment, medical utilization and therapy attendance have also been mentioned in the literature however, the findings were inconsistent. Most studies found no relationship between parenting stress and those factors. Others if found, reported that the effect was small (Harrison & Sofronoff, 2002; Mash & Johnston, 1990; Narkunam et al., 2012).

Studies of parenting stress in Asia

In the last ten years, there have been some studies addressing parenting stress and factors relating to parenting stress in Asian population. Similar to studies from other parts of the world, parents of children with ADHD in Asia were found to be distressed by the caregiving role. This stress can be predicted by both parents and child variables.

One of the initial studies of this topic in Asia was published in 2007 in Taiwan. One hundred and eighty two children with ADHD aged 6 to 12 in Taiwan and their

primary caretakers were recruited to participate into a cross-sectional study. Participants were categorized into two groups: ADHD-inattentive subtype (n = 58) and ADHD-combined subtype (n = 124). Measure parenting stress by the PSI, result showed that parents of ADHD across two groups found themselves struggling to fulfill their parenting role and being stressed by the situation. This was indicated by high scores on PSI of both child domain and parent domain. The mean total stress score of combined subtype groups moreover were found to be statistically higher than the inattentive group (Yang, Jong, Hsu, & Tsai, 2007). This finding was supported by a study published within the same year in Taiwan, of which, parents of the ADHD group were also reported as experiencing a high level of global distress as well as stress related to their parenting role. These authors went further and indicated that parents in their study were less affectionate, more controlling and perceived little support from their family compared to mothers of the control group (Shur-Fen Gau, 2007).

Two years later, a group of researchers in Taiwan also published their findings on this topic. In this study, 109 correspondents and their ADHD children (7-12 years old) who were at that time attending the out-patient psychiatric service at Mackay Memorial Hospital in Taipei, Taiwan, were invited to participate. Consistent with previous reports, parents in this cohort scored considerably high on the measure of parenting stress and the combined subtype group was more likely than the inattentive subtype to associate with parental distress. Additionally, it was reported that mothers of this group were significantly younger, had a poorer understanding of ADHD, significantly higher levels of marital discord, and more life stress than the inattentive subtype (Tzang et al., 2009). In 2010 and 2012, two other studies, one was conducted in Korea and the other conducted in India also reported the same finding. (Sethi, Gandhi, & Anand, 2012; Shin & Kim, 2010).

The most recent study on parenting stress in Asia came from Malaysia. In this study, researchers approached parents of children who attended a Psychiatry Adolescent and Child Unit in Petaling Jaya, Malaysia during July to October 2010. Among 95 parents who agreed to provide information, 69 parents (73%) were reported to experience stress during the study time. Their parenting role-specific distress fell between the 80th to 95th percentile of the PSI subscales, which was higher

than those in Asia and those from the West. In this study, parenting stress was related to the degree of ADHD and the child's age. Additionally, this study also addressed that marital status of parent might play a role predicting parenting stress in their cohort, which is consistent with other Western studies (Narkunam et al., 2012).

Summary

This chapter has provided an initial overall view of the study of parenting stress associated with rearing a child with ADHD. Despite the type of measure being used, it appears that having a child with ADHD relates to significantly high levels of parenting stress. This stress was not only greater than those with normal children but also those who had children with developmental, physical or neuropsychological disabilities. The review also acknowledges that parenting stress may stem from multiple sources; of which, the child ADHD and its comorbidity of CD or ODD are the crucial determinants. Above and beyond the child psychopathology, parent's depressive symptoms and ADHD are also potent contributors to the escalation of parenting stress.

Among different demographic factors, child gender and age, parent gender and their marital status are risk factors that are found to influence the perception of parenting stress in families of children with ADHD the most. Other factors such as history of treatment, order of birth or duration of treatment might also have an impact on parenting stress but the relationship is not yet clearly established.

While there has been a rich profile of parenting stress and its presentation in the West, not much has been discovered about the experience of parenting stress in Asia. Nevertheless, most of available studies in Asia also indicate that Asian parents also had to endure a significant amount of stress resulting from having a child with ADHD. Their stress levels were as high as those reported in Caucasian populations. That emotional burden also has a close association with variables such as child behavior, child age, marital status.

Despite the progress which has been made in the last three decades, our understanding of factors contributing to parenting stress in families of children with ADHD remains incomplete; more studies, especially those from Asia, should be conducted to have a better understanding of how different factors escalate parenting

stress. In the next chapter, one other major determinant of parenting stress found in families of children with ADHD is going to be reviewed. The discussion of this factor in relation to parenting stress is important for this current study to provide theory and empirical background of the main research questions.

CHAPTER 4: SOCIAL SUPPORT IN FAMILIES OF CHILDREN WITH ADHD

Definition

The term social support has been around for quite some time in the literature and dozens of conceptual definitions have been offered. For example, Cobb (1976) defined social support as “information leading people to the belief that they are cared for and loved, giving them esteem and value, and the feeling of belonging”. House (1981) on the other hand views social support as “interpersonal transaction involving one or more of the following: (1) emotional concern (2) instrumental aid (3) information and (4) appraisal.

Though having some diversity, there were some commonalities among available definitions of social support. First, it was agreed that social support is a multidimensional construct. This perspective is reflected in the way most measures of social support were developed. Categories of support frequently assessed included: instrumental support, appraisal support, network support, belonging support, emotional support etc., (Dubow, Tisak, Causey, Hryshko, & Reid, 1991; Sarason, Sarason, Potter III, & Antoni, 1985). Second, social support functioned to mitigate the negative effect of stressors on an individual’s health once there was congruence between the demanding situation and the accessibility to the support.

For many years, investigators have tried to understand the underlying mechanism between social support and health. Available evidence suggested that social support lay at the center of any coping process. However, it was not the support itself but rather the subjective perception of social support that influenced one’s appraisal of the stressfulness and altered their way of coping with the situation. That is, it has a buffering effect (S. Cohen & McKay, 1984). This assumption was believed to be strongly influenced by the cognitive theory and the work of Lazarus (Lazarus & Launier, 1978).

In line of previous research, this study is more interested in the role of perceived social support on parent’s well-being rather than the objective social support. Drawing from available definitions, social support in this study was seen as “*person experience*

of the availability and quality of sources upon which he/she could draw for aid in time of need or emergency“(S. E. Cohen & Syme, 1985; Leavy, 1983).

Social support and its relation to parenting stress in family of children with ADHD

Social support has been well-known as a protective factor for caregivers' physical and psychological health. For example, Koeske and Koeske (1990) explored maternal stress in a family of children from 9 to 14 years old and found that social support had a significant effect on parenting stress. The more support parents believed they received, the less stress they experienced. This finding was later supported by other studies such as that of Deater-Deckard (2004), Al-Gamal and Long (2013), Aunos, Feldman, and Goupil (2008); Pearson and Chan (1993) which also indicated that emotional support from others can help to reduce stress for mothers of young children or play a role in mitigating the effects of stress in families of children with physical or developmental impairment such as cerebral palsy, intellectual disability or learning disability.

As mentioned in the previous chapter, ADHD is one of the childhood disorders that can bring about the greatest amount of stress for caregivers and families. Yet surprisingly few studies were conducted to understand the protective role of social support in families of children with ADHD.

Studies in Western countries

The concern that more effort from the society should be made to reach out to families of children with ADHD was first initiated by Mash and Johnston (1983) when they recognized that parents whose children had ADHD expressed they were socially isolated. Later, in 1988, Cunningham and colleagues, while comparing family function of 26 families with an ADHD child and 26 families of normal children, confirmed that both mothers and fathers of ADHD children, in their cohort, reported to have fewer visits from their extended family members than the control group. The quality of support from extended family reported by mothers of the ADHD group was also poorer than those reported by mothers of control group.

Taking the idea from findings of 1900s studies, Bussing, Zima, et al. (2003) decided to collect information regarding the social network of 252 parents of children

at risk of ADHD in America to see if that network had something to do with the stress parents were experiencing or not. The results showed that among different sources of support, family members were rated as the most common source to which families went for help (23%), followed by grandparents (18%) and health care providers (16%). The spouses in this study were seen as less supportive than other sources in terms of affective affirmation. However, they still served as the major source of instrumental support. Also in this study, researchers found that the social network perceived by parents varied according to their ethnicity and culture. Noticeably, data analysis revealed that caregivers' role-related distress was significantly predicted by their support network. The closer the family was to their relatives, friends or professional providers, the lower stress they reported.

In 2010, another researcher in America recruited 145 fathers whose child had ADHD to participate in her study to investigate their well-being and its relation to social support. Though the perception of support in parents of the ADHD group did not differ significantly from fathers of the control group, the author pointed out that fathers perception in the ADHD group was positively associated with their emotional well-being.

In order to further clarify the role of social support in the model of parenting stress, Theule et al. (2011) included social support in a regression model of which other child and parental factors were also to be counted. Data analysis indicated that social support along with parent ADHD symptomatology consistently emerged as significant predictors for parenting stress in both the parent-reported model and teacher-reported model. The more social support parents perceived, and the less symptoms of ADHD they presented, the less stress they experienced. The effects were shown to be moderate (Theule et al., 2011).

One year later, Lovell and colleagues published a study on 45 parents of whom 33 had children diagnosed with Autism and 12 had children diagnosed with ADHD. Results supported previous studies disclosing that if there was more social support available, the less parental stress parents reported. What is more, perception of greater social support could also help to reduce complaints of physical illness and steeper cortisol response in those parents (Lovell et al., 2012). Also in 2012, there was another study which emphasized the significant role of social support on parenting

stress. Information regarding children behaviors, parental mental health and social context were collected from 5473 families of children with ADHD and other comorbid disorders around the United States. Data of this study showed that the reduction of role-related distress in their sample could be significantly predicted by greater social support and more availability of community amenities (Hinojosa et al., 2012).

It could be seen that most studies on this topic support a negative relationship between social support and parenting stress. However, while investigating the relationship between parenting distress and child disruptive behaviors, Podolski and Nigg (2001) found that the more parents in their cohort reached out for community support, the more stress they perceived. This positive correlation between parenting stress and social support was in fact mentioned earlier by Koeske and Koeske (1990) in the review of social support effects on parenting stress. According to Koeske, in chronic situations such as having a child with disability or mental difficulty, social support might not be seen as a protective factor, rather, it could be seen as a sign of incompetency which could even lead to greater stress.

Studies in Asia

ADHD and its family outcomes are new concepts in Asian literature. Despite that, in the last decade, some effort has been made to enrich the profile of those topics in this part of the world. There have been three studies in Asia (one from Taiwan, one from Hong Kong and one from Korea) addressing the experience of social support in relation with parenting stress in families of children with ADHD. All of them were qualitative.

In the first study of Lin, Huang & Hung (2009), twelve caregivers (ten of them are biological mothers, one is stepmother and one is grandmother of the child) of school-age children with ADHD in Taiwan were invited to participate in an in-depth, face-to-face interview during July 2006-June 2007. Several themes emerged from correspondents' information. First, caregivers of those children experienced a great deal of difficulty stemming from the difficulties of setting up daily routines and controlling the disruptive behaviors of their children. Those facts lead them to feelings of "frustration", "helplessness", "anger" and "worry". Another theme found among those participants was that they received little or no support from their spouse and

relatives. Their husbands were described as being too busy, while their relatives were not pleased to help them take care of their children due to the child's disruptive behaviors. Moreover, they frequently found themselves in conflict with other family members to establish an appropriate discipline for their children. All of those factors add up to a stage of emotional burden which made them vulnerable to depression (Lin, Huang, & Hung, 2009).

The second in-depth study addressing the burden of parenting stress of a child with ADHD in Asia, comes from Korea. A Q-methodology study was conducted in Korea in 2009 based on a semi-structure interview with 45 mothers of ADHD children in Korea. Consistent with Lin's study, parents in this study cohort reported a significant amount of stress which resulted from the lack of social and professional support for their children; the lack of knowledge about the disorder etiology and their concern about the child's future life and health were also counted. When it came to the family relationship, mothers indicated that they experienced difficulties to balance their traditional values to adapt to the requirements of modern life. Those difficulties in turn, prevented them from achieving an effective way of dealing with their children's problem (Oh & Kendall, 2009).

More recently, Ho et al. (2011) conducted exploratory research to investigate the perception of 12 parents in Hong Kong about taking care of their ADHD child. Consistent with the above two studies, Ho reported that parents of their cohort were experiencing concentrated negative feeling while trying to meet their child's demands. They also perceived discrimination, lack of support and understanding from relatives, communities and professional agencies, and had limited access to information regarding the etiology and development course of ADHD. Most of them reported receiving assistance from their close friends or parents of children from the same school rather than medical staff when it came to dealing with their child behavior. As a consequence, parents found themselves to be extremely "confused", "frustrated", "angry", "hostile" parenting their child and "ambivalent" to continue with psychiatric medications for their children (Ho et al., 2011).

Overall, data from the qualitative research in Asia revealed that having a child with ADHD in this context might bring about a great amount of burden for parents,

especially mothers. That burden was described as “frustrated” “angry” or “confused” rather than depressed. Nevertheless, they emphasized that besides being stressed trying to help their children adapt to normal functioning. Parents also found themselves socially isolated from the community and perceived little support from both professionals and family members.

Summary

In summary, the inspection of the literature on families of children with ADHD both in Western culture and Asia has indicated that parents perceive themselves as being social isolated, lack support from family members as well as community and professional agents to help deal with their child’s problems. Their perceived support had a close relationship with parenting stress and might help to predict parenting stress. In most cases, high levels of perceived social support could mitigate parental stress. However, there is also evidence that specified a high level of social support could increase parenting stress. Regardless of the explanation, giving the inadequate number of studies available, further research, especially from Asia, should be conducted to further support or reject current hypotheses.

CHAPTER 5: VIETNAM

The country

Vietnam is a country located in the Southeast of Asia, bordered by China to the North, by Laos and Cambodia to the West, and by the South China Sea (*Bien Dong*) to the South and the East (Karnow, 1994). The country has 63 provinces with a population of over 91 million and is the 13th most populous country in the world. The most crowded city of Vietnam is Ho Chi Minh (the former Saigon), with nearly 8 million, followed by Hanoi with 7 million habitants in 2013 (WHO, 2014).

Vietnamese culture originally stemmed from the Bronze Age Dong Son culture, one of the oldest cultures in Southeast Asia. However, because of a more than 1000 years history of being colonized by China, France and then America, Vietnamese culture has undergone vast change, influenced by Chinese and Western culture. While the North of Vietnam (Hanoi) was dramatically influenced by the Confucians from China, which is “patrilineal”, “patriarchal”, and “patrilocal” in characteristic, the South of Vietnam characterized by a more bilateral kinship system which is believed to have been formed during the presence of western culture, brought by America pre-1975 (V. B. Pham, 2013; P. P. Tran, 2007; Q. V. Tran, 2006).

Vietnam has a long and gloomy history of suffering and devastation through war which did not end until 1975. After 1975, the Vietnamese government tried to reconstruct the country based on a centrally controlled economy. However, realizing that this model was inefficient, in 1986, the government decided to transfer its economy model to a more market-based one. This fundamental structural transition was called *DoiMoi* (Renovation)(Stern, 1998). Since the launch of *DoiMoi*, a rapid economic growth was witnessed over the country. Agriculture based economy has been transferred to a modern, industrialized economy with the proportion of poverty declining dramatically and the GDP per employee doubling between 1990 and 2000 (Bodewig & Badiani-Magnusson, 2014). In 2011, the GDP percapital in Vietnam was 3,300 and considered one of the fastest developed economies in Asia. Nevertheless, it is still a poor country with a significant number of residents struggle to live under the poverty line (Mestechkina, Son, & Shin, 2014).

Mental health in Vietnam

As a coin has two sides, having brought about a big shift for the country, *DoiMoi* also put a significant pressure on Vietnamese society and family. More parents, especially mothers entered the work force, and worked away from home; urbanization and a new culture invasion were among factors threatening the traditional practice of raising young people (Ruiz-Casares & Heymann, 2009). These factors increased the risk of mental health problems developing among the younger population, especially those living in urbanized areas. Anh, Minh, and Phuong (2007) conducted an assessment of social and behavioural problems among high school students in Ho Chi Minh City and found that 16% of students were experiencing significant affective problems, 19% had social relationship problems, and 24% had behaviour problems. Meanwhile, Hoang-Minh (2009) also reported that about 25% of children in Hanoi were above the clinical cut-off on one or more of the Child Behaviour Checklist scales.

Despite that fact, the mental health resources in Vietnam have not been developed comparably to meet the residents' needs. The infrastructure for health and particular mental health in Vietnam has been limited. They lack both qualified practitioners and researchers (Gabriele 2006; Stern, 1998). The proportion of professionals working in the mental health sectors was significantly low compared to other countries in the region. The number of psychiatrists per 100.000 population was 0.35 (while that of Philippines: 0.42; Thailand: 0.66) and that of psychologists were 0.06 (that of the Philippines: 0.14 and Thailand: 0.26) (Vuong, Van Ginneken, Morris, Ha, & Busse, 2011). Meanwhile, most available training programs were out of date or too conservative to provide learners with adequate knowledge and skills to practice effectively (B. Weiss et al., 2011). This deficiency also leads to the lack of validated theoretical-based research for mental health in Vietnam (B. Weiss et al., 2012).

Fortunately enough, in recent years, policy makers have come to recognize the need for shifting the attention and resource to this domain. Several postgraduate psychology training programs have been developed with international supports; psychology departments were initially established in some paediatric hospitals or private practices and several campaigns were run to enhance awareness of mental health issues in the community (Anh Tuan Nguyen, Tomson, Allebeck, Nguyen, & Le, 2009; T. T. H. Nguyen, 2012; B. Weiss et al., 2011; B. Weiss et al., 2014).

Significance of the Study

Having a child with mental illness in Vietnam is not easy at all to deal with, as childhood problems are also seen as a cultural shame and attributed to the poor behaviours of the family ancestors (van der Ham, Wright, Van, Doan, & Broerse, 2011). That cultural stigma prevents families from reaching out for help and leads them to hide their children or problems, out of shame and guilt (Park, Glidden, & Shin, 2010; van der Ham et al., 2011). Further, the fact that government fails to provide families the information and support they need, further creates more stress for the parents (Park et al., 2010). The situation might be worse in rural areas where mental health resources are not well equipped to provide families with services and knowledge they need to effectively deal with their family member's problem (van der Ham et al., 2011) (A. T. Nguyen et al., 2010). Based on findings from previous research on the parenting stress in Asia and considering the socio-cultural feature of Vietnam, it is suggested that Vietnamese parents whose children diagnosed with ADHD might also experience the same kind of stress. However, given that ADHD is a relatively new topic of research in Vietnam, most available published and unpublished studies mainly focus on reporting the prevalence of the disorder and the outcome of disorder in the individual. Few studies were found regarding family aspects and the stress parents of children with ADHD experienced in Vietnam.

From the review of literature in this chapter and previous chapters, it can be seen that an abundance of research has been undertaken exploring parent's experiences of having a child with ADHD, a rich descriptive profile of this topic has already been established. However, there are still some shortfalls that need to be addressed. First, while the number of published studies on this topic is considerable, most of them were conducted in the Western culture; little research has taken place in Asia, particularly among the Vietnamese population. Second, while theories of parenting stress emphasize the potential role of social support in mitigating parenting stress, most of the available studies main focus was on the impact of child variables as well as parent variables but not adequate attention was paid to social support both in Western countries and Asia. The current study was planned to give researchers and practitioners in Vietnam further clues to the development of more comprehensive

approach to treatment and intervention for children with ADHD in Vietnam, a country where there is an urgent need for theoretically driven and well validated research findings.

Consideration

Given the time limitations of a Master's project and the deficiency of personal health information in Vietnam this thesis will focus on the relationship between social support, demographic variables and parenting stress. While recognized as important, the role of child and parents psychopathology in the model of parenting stress falls outside the scope of the current research focus.

Research questions and hypotheses

Preliminary study

Is the internal consistency and factor structure of parenting stress and social support of the Vietnamese version of the research measures used in this research comparable to previous studies?

Principal study

1. a. *How parents of children with ADHD in Vietnam experience parenting stress?*

It is expected that

➤ Parents of children with ADHD in Vietnam are experiencing high level of stress.

1. b. *Does parenting stress in parents of children with ADHD in Vietnam differ in terms of demographic characteristics?*

It is expected that

Parenting stress in this cohort will differ in terms of *parent gender, parent marital status, living arrangement, living location, child gender, child age, time since initial diagnosis, medical utilization and psychotherapy attendance.*

➤ Parenting stress is significantly higher in the older child than the younger child.

➤ The longer the child had been diagnosed with ADHD, the more stress they experience

- Parents whose children are medicated for ADHD experience more stress than parents whose children are not.
- Parents whose children attend psychotherapy experience less stress than parents whose children do not.
- Parenting stress will be significantly higher in mothers than fathers
- Parenting stress in married parents is significantly higher than single/divorced/separated parents.
- Parenting stress will be significantly higher when parents live with their parents/ spouse parents comparing to parents who live with their immediate family or other cousins.
- Parenting stress will be significantly higher in parents from small provinces compare to parents from Hanoi and Ho Chi Minh and considering the cultural difference between Hanoi and Ho Chi Minh, parenting stress in parents from Ho Chi Minh will be significantly higher than that of Hanoi.

2. *How parents of children with ADHD in Vietnam perceive social supports?*

It is expected that

- The most helpful support will be characterized by professionals, then family members. Community was the least helpful group in taking care of the ADHD child.

3. *Do demographics and social supports significantly predict parenting stress in this cohort?*

It is expected that

- Demographics as a group will significantly predict parenting stress.
- Social support as a group will significantly predict parenting stress; over and beyond demographics effect.

CHAPTER 6: METHODOLOGY

Initial consideration

Given the time limitation, a quantitative, cross-sectional self-reported survey was chosen for this study with a convenience sample of parents who had children with ADHD in Vietnam. This research design is believed to fit this study since it offers the researcher opportunity to assess the relations between variables. Considering that Vietnamese people are not familiar with doing surveys, questionnaires needed to be simple and brief to encourage participants to complete.

Participants

A convenience sample of 147 Vietnamese mothers/fathers who had a child between the age of 4 and 12 years old professionally diagnosed with ADHD were invited to participate in this study through an online advertisement during 15/3/2014-30/6/2014. 132 people completed questionnaires (89.8% response rate). However, there were two people who failed to complete more than 50% of the questionnaire and were discarded from data analysis. Finally, 130 returned questionnaires qualified for this study. Most of participants were living in Hanoi (40%); 28.5% came from Ho Chi Minh city (28.5%) and the other 31.5% of participants came from other smaller cities around Vietnam.

Measures

Demographic Questionnaire

Demographic information was collected to determine the representativeness of the participant cohort and to discover their relationship with parenting stress. Included were parent age, gender, occupation, marital status, living arrangement and Geographical location, plus number of children. Child characteristics included were: child gender, age, and birth order. Additionally, some information of the history of treatment for the child, including time since initial diagnosis; medical utilization and therapy attendance was also collected.

Disruptive Behavior Stress Inventory

Scale selection

The Disruptive Behavior Stress Inventory (Johnson & Reader, 2002) was developed by James H. Johnson and Steve K. Reader. The scale has 40 items; with each item, respondents were asked to indicate whether or not they experienced a specific stressful event related to their child in the last 6 months by circling Yes or No. If the answer was Yes, then they were asked to rate the degree of stress on a continuum with 0 meaning *not at all stressful* and 3 *very stressful*. When scored, the DBSI yielded two indices: The Stress Experience Score (SES) which ranges from 0 to 40 and the Stress Degree Score ranges from 0 to 120 (Johnson & Reader, 2002).

Validity

Two studies on the psychometric properties of DBSI showed that this scale had good discriminant validity. The mean scores on both the Stress Experience and Stress Degree scales of caregivers of children with ADHD were significantly higher than those of caregivers of typical children. What is more, this scale can also discriminate stress experienced in different subgroups of ADHD (Johnson & Reader, 2002; Reader et al., 2009). The mean scores of both the Stress Experience and Stress Degree scales were significantly higher in parents of children with the ADHD Combined Type as compared to parents of children with an ADHD Inattentive Type (Johnson & Reader, 2002; Reader et al., 2009).

Reliability

The preliminary study of DBSI reported alpha coefficients of SES and SDS were .93 and .96, respectively. The mean item-total correlations of .48 for SES and .58 for SDS, indicated an adequate item-total correlation. The test-retest reliability for the SES is .76 and SDS is .65 (Johnson & Reader, 2002). The replication of study in 2009 showed Cronbach's coefficient alpha for the SES to be .90 (n = 69) and for the SDS was .93 (n = 68). The item-total correlation for the SES was .41 while that of the SDS was .49 (Reader et al., 2009).

Family Support Scale

Scale selection

Family Support Scale (FSS)(C. Dunst, Jenkins, & Trivette, 1984) is one of the most valid and reliable measures to assess the source of support in families regarding rearing a young child. It is usually used for intervention purposes by strongly indicating the extent to which certain members/groups of the network are or are not a source of support for the reporter. Family social support has 20 items (2 items are respondent-initiated) rated on a five-point Likert scale. If the source of support is not available for participants then they could select NA (not available).

Validity

According to authors of the scale, substantial number of studies had investigated the relationship between this scale score, its subscale scores and a number of parenting, family and parent-child interaction variables. Results have consistently shown a significant correlation between FSS score and parents well-being, the integrity of a family unit, parent perception of child behavior as well as and opportunities to engage in parent-child play. These findings demonstrate a good criterion validity of the scale (C. J. Dunst, Trivette, & Deal, 1988).

Reliability

In the last two decades, several studies have been conducted to test the reliability of FSS in different population. Those studies indicated the reliability FSS to be moderate. Coefficient alpha ranged from .77 to .85; the split half correlation fluctuated around .75. The test-retest reliability of FSS was also found to be small or moderate depended on the gap between two assessment sessions. More information of reliability of FSS can be found in Table 2.

Table 2: Psychometric properties and Factor analysis Summary of FSS (Littlewood, Swanke, Strozier, & Kondrat, 2011, p. 63)

Study	Target population	N	Factors	Explained variance	Cronbach's alpha	Split-half Reliability	Test-retest reliability
C. Dunst et al. (1984)	Family with disability children	139	Informal kinship	62%	.77	.75	.91 (1 month)
			Social organization				.47 (18 months)
			Formal kinship				
			Nuclear family				
C. J. Dunst et al. (1988)	Family with disability children	224	Specialized professional services				
			Generalized professional services				
			Kinship	55%	.79	.77	.5 (12-24 months)
			Spouse/partner				
			Social organizations				
			Informal support				
Taylor (1993)	Normal caregivers	990	Professional services				
			Family	61%	.8	-	.59 (12 months)
			Spouse				
			Social				
			Professional				

Hanley, Tassé, Aman, and Pace (1998)	Low-income family	244	Community	61%	.85	.72	.73 (unknown)
			Spouse&in-laws				
			Friends				
			Specialized professionals				
			Own parents & relatives				
Littlewood et al. (2011)	Kinship caregivers	255	Spouse/Partner's Family and Peer support	50.4%	.79	-	-
			Formal Professional support				
			Informal Community Support				
			Familial and Peer Support				

Procedure

Translation of questionnaires

Vietnam is a non-English speaking country; therefore, for this study to be successfully conducted, all measures needed to be translated into Vietnamese. The main researcher of this study is a Vietnamese and was the one who took the responsibility for the translation of measures. After translating all documents into Vietnamese, the researcher sent the package to 3 senior lecturers of Psychology and one language specialist who work in universities in Vietnam to be cross-checked. All comments and suggestions were taken into consideration to refine the scales. The final drafts of the questionnaire were then sent to 5 parents in Vietnam for feedback on the legibility of the questionnaire. All feedback indicated consensus on the Vietnamese versions of all questionnaires.

Recruitment of participants

An advertisement briefly stating the purpose of study, the involvement of the participants and their benefits was posted on some Vietnamese online forums devoted to carers of children with ADHD and on the Facebook page of the researcher. People who met the recruitment criteria and decided to participate in the study were asked to leave the researcher a message via her phone number or send the researcher an email to volunteer their participation. The researcher then contacted the participants to arrange an appropriate data collection method. As it may not have been convenient for some participants to return the questionnaires using postal service (In Vietnam there is no mail box on the street, people have to go to the post office to post their letters), the researcher allowed participants to choose if they wanted to receive questionnaires by mail/email or make an appointment with the researcher so that they could fill out the forms and return them to the researcher straightaway.

Ethical Issues

Ethical Approval

Ethical approval was obtained from the Massey University's Human Ethics Committee, number 14/006.

Informed and Voluntary Consent

To ensure that parents of this project were voluntary participants and sufficiently understood what their participation involved, a copy of the Information sheet was sent to them. This Information Sheet clearly stated the purpose of this study, the benefits, how their responses would be used and their rights including withdrawal, maintaining of confidentiality, and their receiving a copy of the study results. A consent form which was signed and returned along with the questionnaire indicated that participants are completely voluntary for this study (see Appendix C. 4)

Confidentiality

The privacy and confidentiality of participants' information were taken into consideration. It states that the data would be used only for the purposes of this project and no individual will be identified. All questionnaires were identified by study identification numbers. Consent form and participants residential/email address and phone number were recorded in a separate file and were kept in a locked filing cabinet at School of Psychology, Albany campus. Only the investigators of the study had access to that information. The list of participants and their study identification number will be disposed of after the study is completed. Any raw data on which the results of the project depend on will be retained in secure storage for 5 years, after which it will be destroyed.

CHAPTER 7: RESULT

Data management

Data collected was coded and analyzed using the Statistical Package for the Social Sciences (SPSS) version 20.0. A statistically significant level alpha of 0.05 was chosen for all analysis.

Missing data

Inspection for missing data showed that of 132 questionnaires returned, there were two questionnaires with data missing for more than 50% of one in two main measures. These questionnaires were discarded, leaving 130 validated questionnaires for data analysis. Further inspection of missing data for every single item of those 130 questionnaires showed that, most missing data occurred randomly, with the number of missing cases per variable not exceeding 3%, which is beyond the 5% criteria for missing data suggested by Tabchnick and Fidel (2007). The only variable having 10 missing value (7.5%) was Question 3 of Demographic page asking participants' occupation. Adopting procedure by Tabachnick and Fidel (2007), two preliminary analyses of data were carried out, first with missing data deleted and second with missing data replaced by the mean value. As there was no difference between results of the two approaches, the mean value was selected to retain the sample size. It is worth mentioning that in the "Not Applicable" (NA) answer in FSS scale, were also treated as missing data for principal component analysis.

Normality

Data was subjected to inspection for outliers, normality, linearity and homoscedasticity. Total score for SES and SDS of DBSI showed to be reasonable normally distributed with skewed and kurtosis falls within the acceptable range of -1 and 1. The inspection of DBSI scores indicates no outliers. This was also supported by an inspection of normality through histogram and probability plots (See Appendix E).

As the assumption of normality was met, parametric tests were adopted to test all hypotheses of this study.

Result

ANALYSIS I - PRELIMINARY STUDY

Disruptive Behavior Stress Inventory (DBSI)

Reliability

Cronbach's alpha coefficient was employed to assess the internal consistency of DBSI Vietnamese version. Correct-Item Total correlation and Alpha If item Deleted were also obtained to see if each item measured the same structure or not. In cases where Cronbach's alpha is low, this information will be helpful to decide which items should be removed to improve the total reliability of the scale (Pallant, 2010).

Correlated-Item Correlation

The mean correlated-Item correlation for the Stress Experience Scale was .416 (range=.207-.612) and that of Stress Degree Scale was .50 (range=.167-.735). Eight out of 40 items of the Stress Experience Scale fell well under the threshold of .30 (3,5,9,10,13,17,33,37). For the Stress Degree Scale, 3 items 10,25,30 also showed the correlated-item correlation smaller than .30. Nevertheless, none of them significantly influenced the Cronbach's level.

Cronbach's alpha

The reliability analysis run separately for each of DBSI subscales showed that DBSI had sound psychometric properties. The calculation of Stress Experience Scale base on 109 cases showed a Cronbach's alpha of .90 while that of Stress Degree scale was .94 (N=118). These outcomes were consistent with those reported in previous studies (Johnson & Reader, 2002; Reader et al., 2009).

Table 3: Psychometric properties of DBSI and its subscales

Scale	No.item	N	M	SD	Coefficient alpha
Stress Experience Scale	40	109	23.66	8.41	.90
Stress Degree Scale	40	118	40.81	21.5	.94

Family Support Scale (FSS)

Factor analysis

The 18 items of the Family Support Scale (FSS) were subjected to a factor analysis using Principal Components Analysis (PCA) with a Varimax rotation. As suggested by Dunst (1988), factors with eigenvalues exceeding 1.0 were retained for rotation and factors loading of .40 or greater were used to determine factor membership.

Prior to performing PCA, the suitability of data for factor analysis was assessed. Examination of correlation matrix exhibited the presence of many coefficients of .3 and above. The Kaiser-Meyer-Okin value was .89, exceeding the recommended value of .6 (Kaiser, 1970, 1974); the Bartlett's Test of Sphericity (Bartlett, 1954) also reach statistical significance (χ^2 (153)=378.16, $p < .01$) supporting the factorability of the correlation matrix.

The PCA revealed that there were four factors with their eigenvalues exceeding 1, explained for 23.9%, 21.4%, 17.5% and 10.0% respectively, and totally explained 72.8% of variance. Using Cattell's scree test, it was decided that all four factors were kept for Varimax rotation. The rotated solution presented in Table 4 indicated that variables loaded strongly across four factors and most of them loaded substantially once. These four factors are: Factor 1: Social/community (co-worker, own friend, spouse/partner's friends, other parents, parent group, social group, church member/monks), Factor 2: Professionals (early childhood Intervention, Professional support, Professional agencies, Family/child physician, School/daycare), Factor 3: Extended family (Spouse/partner relatives/kin, spouse/partner's parents, own relative, own parents) and factor 4: Nuclear family (Spouse/Partner, my own children)

Table 4: Varimax Rotation of four factor solution for FSS item

Item	(1) Community	(2) Professionals	(3) Extended family	(4) Nuclear family
My parent	.199	.267	.607	.378
My spouse or partner's parents	.186	.173	.833	.155
my relatives/kin	.138	.063	.856	.136
My spouse or partner relative/kin	.265	.103	.862	.122
Spouse or partner	.046	.183	.284	.699
My friends	.682	.013	.224	.511
My spouse/ partner's friends	.682	.008	.349	.472
My own children	.308	.438	.197	.531
Other parents	.804	.207	.119	.192
Co-workers	.720	.131	.121	.378
Parents group	.829	.241	.139	-.086
Social groups/clubs	.753	.353	.184	-.186
Church members/ monks	.686	.336	.286	.111
My family or child's physician	.292	.732	.335	-.074
Early childhood intervention program	.194	.828	.090	.126
School/day care	.253	.721	.157	.240
Professional support	.187	.856	.077	.183
Professional agencies	.047	.825	.030	.044
% of variance explained	23.9%	21.4%	17.5%	10.0%

Reliability

The Corrected Item total correlation showed that all 18 items loaded strongly over .30 with a mean of 0.54 (range= .41-.74) and Cronbach's alpha for the total scale was .89. Cronbach's alpha was also conducted for four subscales found in step 1 (Factor analysis). The subscale alphas were: Extended family $\alpha=.83$; Nuclear family $\alpha=.62$; Community $\alpha=.91$; Professionals support $\alpha=.87$.

Table 5: Psychometric properties of FSS and its subscales

Scale	No. item	Mean	Standard deviation	Coefficient alpha	N
Family support scale (full-scale)	18	30.6	16.66	.89	125
Extended family	4	6.85	5.03	.84	128
Nuclear family	2	5.1	2.87	.63	129
Community	7	7.27	7.21	.91	129
Professionals	5	11.46	7.93	.88	128

ANALYSIS II- PRINCIPLE STUDY

Demographic Statistic

The demographic data for this cohort are presented on Table 6. A majority of parents in this study were female, who accounted for 78.6% of the sample; most of them were between 20-35 years old (50.4%) and were married (89.3%). More than half of participants (61.8%) were living with their immediate family and 54.6 % reported to have two children at the time of study. Most of them were employed in professional field (50.8%) and living in Hanoi (40%) or Ho Chi Minh city (25%).

The majority of children with ADHD in this cohort were male (87.8%) and most of them were between of 4 and 6 years of age (50.4%) and were the first child of the family (70.2%) correspondents reported their children with ADHD were the first child of the family. With respect to treatment history, 36.6% children were diagnosed more than 3 years and 34.4% were diagnosed within 1 to 3 years; 9.9% were diagnosed in the last 6 to 12 months and 18.3% were diagnosed in less than 6 months. 62.3 % children in this study were reported to have benefitted from current medical treatment and 53.1% did attend at least one psychotherapy session since initial diagnosis.

Table 6: Demographic characteristics and history of treatment of the sample

Category	Frequency	Percentage (%)
Parent gender		
Male	27	20.8
Female	102	78.5
Missing	1	0.8
Parent age		
20-35	65	50.0
36-45	56	43.1
>45	9	6.9
Occupation		
Professional	66	50.8
Non-professional	31	23.8
Home duties	23	17.7
Missing	10	7.7
Marital status		
Married	116	89.2
Separate/ Divorce	5	3.8
Single mother/father	9	6.9
Living arrangement		
In their own place	81	62.3
With parent(s)/ spouse's parent(s)	43	33.1
Other relatives	6	4.6
Geographical locations		
Hanoi	52	40.0
Ho Chi Minh	37	28.5
Other cities	41	31.5
Number of children		
1	45	34.6
2	71	54.6

	3	8	6.2
	4	2	1.5
	Missing	4	3.1
Child gender			
	Male	114	87.7
	Female	15	11.5
	Missing	1	0.8
Child age			
	4-6	59	45.4
	7-9	43	33.1
	10-12	28	21.5
Birth order			
	1	91	70.0
	2	35	26.9
	4	2	1.5
	Missing	2	1.5
Time since initial diagnosis			
	1-6 months	24	18.5
	6-12 months	13	10.0
	1-3 years	44	33.8
	more than 3 years	48	36.9
	Missing	1	.8
Current medical utilization			
	Yes	48	36.9
	No	81	62.3
	Missing	1	.8
Psychological attendance			
	Yes	69	53.1
	No	61	46.9

Research question 1:

a. Parents of children with ADHD in Vietnam are experiencing high levels of stress.

Raw scores of two DBSI subscales were calculated separately to derive two indices: Stress Experience Score (SES) and Stress Degree Score (SDS). High score on SES indicated that parents experienced a large number of stressful situations or factors related to parenting a child with ADHD while a high score in SDS revealed the degree of tension they felt about parenting their children (Johnson & Reader, 2002). Descriptive information presented in Table 7 showed that Mean SES for this group was 23.66 (SD=8.41) and Mean SDS was 41.79 (SD= 21.4). This result was close but higher than those reported by Johnson and Reader (2002) and Reader et al. (2009).

Table 7: DBSI mean subscale scores

DBSI	Current study (N=130)		Reader et al. (2009) (N=71)		Johnson and Reader (2002) (N=55)	
	M	SD	M	SD	M	SD
Stress Experience Scale	23.66	8.41	20.45	8.34	19.05	9.09
Stress Degree Scale	40.81	21.5	40.45	22.92	35.98	24.43

b. Parenting stress in parents of children with ADHD in Vietnam differ in terms of demographic characteristics

Consistent with the hypothesis, statistically significant effects were found for parent gender, living arrangement and geographical location time since initial diagnosis, current medical utilization and psychotherapy attendance. However, no effect was found for child gender or child age and marital status. A summary of child demographic comparisons is given in Appendix F.

Parent gender

There was significant effect for gender on parenting stress. The score of mother was significantly higher than that of father on SES ($t(127) = -2.26, p < .05; \eta^2 = .039$). As well as SDS ($t(127) = -2.363, p < .05; \eta^2 = 0.042$).

Living arrangement

Correspondents who lived with their immediate family reported higher SDS and SES scores than those who live with their parents/spouse's parents or parents who lived with relatives. These differences showed a trend toward significance with $p < .1$ ($p_{SDS} = .072; p_{SES} = .052$).

Geographical location

Analysis of variance showed a main effect for Family Geographical Location on SDS ($F(2,127) = 8.25, p < 0.001$). Post-hoc comparison using Tuckey's HSD test specified that parents who lived in small cities ($M = 35.67, SD = 19.46$) experienced a significantly higher level of parenting stress than did parents from Ho Chi Minh ($M = 36.18, SD = 19.73, \text{Mean dif.} = 3.31, SE = 1.87, 95\% \text{ CI} [4.36, 26.28]$) or parents from Hanoi ($M = 36.18, SD = 19.73; \text{Mean dif.} = 15.83, 95\% \text{ CI} [5.74, 25.93]$). Parents who lived in Ho Chi Minh also reported higher stress than those from Hanoi, however, this difference failed to reach significance. The effect size calculated was large $\eta^2 = .115$.

No effect was found for Family Geographical Location on SES.

Time since initial diagnosis

There was significant difference of SES on the duration of being diagnosed ($F(3,125) = 4.48, p < .01$); Post-hoc test with Tuckey's HSD revealed that the stress experience of parents whose children were diagnosed with ADHD more than 3 years was significantly higher than those with children diagnosed within 1 to 6 months ($M \text{ dif.} = 6.13, SE = 2.00; 95\% \text{ CI} [.892, 11.35]$) and 6 to 12 months ($\text{Mean dif.} = 6.57, SE = 2.51; 95\% \text{ CI} [.023, 13.11]$). The magnitude of difference was medium $\eta^2 = 0.097$.

No effect was found for Time since initial diagnosis on SDS

Current medical utilization

Parents whose children consumed anti-ADHD medicine in the last 6 months had significantly more distress than those who did not. Two-tailed t-tests of independent means showed that parents whose children currently took anti-ADHD medicine scored significantly higher on SES ($t(128)=3.26$; $p<0.001$;) and SDS ($t(128)=2.96$, $p<0.005$;) than those whose children had not been using any kind of medicine. The effect sizes showed to be medium $\eta^2_{SES} = 0.080$; $\eta^2_{SDS} = 0.064$.

Psychotherapy attendance

Parents whose children attended psychotherapy reported significant higher SES scores than parents whose children did not attend psychotherapy. ($t(128)=2.91$, $p<0.005$). The magnitude of difference in the mean showed to be medium ($\eta^2 = 0.062$).

No effect was found for Psychotherapy attendance on SDS.

Research question 2: Perceived social support in Vietnamese parents of children with ADHD

The inspection of Family support scale showed Early childhood intervention program ($M=2.74$, $SD=1.42$); School/day care ($M=2.53$, $SD=1.27$) and Spouse/Partner ($M=2.50$, $SD=1.35$) were the top highest rates. The inspection of Family support scale showed the most helpful supports among 18 items rated by parents were Early childhood intervention program ($M=2.74$, $SD=1.42$) and School/day care ($M=2.53$, $SD=1.27$) and Spouse/Partner ($M=2.50$, $SD=1.35$). Low level of helpfulness characterized the involvement of Spouse/Partner's friend ($M=.70$, $SD=.97$) having had the lowest score, followed by Other parents ($M=.76$, $SD=.96$), Co-worker ($M=.81$, $SD=.95$) and Spouse/Partner relative/kin. Details are presented in Table 8 below.

Table 8: Family Support Scale Scores

Family Support Scale	Mean	SD
Extended family	4.88	3.99
My parent	2.07	1.32
My spouse or partner's parents	1.57	1.39
My relatives/kin	1.09	1.17
My spouse or partner's relative/kin	0.97	1.14
Nuclear family	3.73	2.41
My own children	1.81	1.41
Spouse or partner	2.50	1.35
Social/community	3.79	2.68
My friends	1.01	1.15
My spouse/ partner's friends	0.70	0.97
Other parents	0.76	0.96
Co-workers	0.81	0.95
Parents group	1.30	1.34
Social groups/clubs	1.27	1.33
Church members/ Buddhist community	1.18	1.37
Professional support	8.66	6.54
My family or child's physician	2.15	1.42
Early childhood intervention program	2.74	1.42
School/day care	2.53	1.27
Professional support	2.49	1.44
Professional agencies	2.32	1.51

Research question 3: Social support significantly predicts parenting stress in families of children with ADHD over and beyond demographic characteristics.

Prior to testing the hypothesis, the relevant assumptions of multivariate regression were verified. The assumption of singularity was met as no independent variable (IV) was a combination of other independent variables. An examination of correlations revealed that no IVs were highly correlated, the assumption of multicollinearity was also believed have to been met (Coakes, 2005). The inspection of data with Mahalanobis distance score indicates no outliers. Residual scatter plots and Normal probability plots illustrated the assumption of normality, linearity and homoscedasticity were satisfied (Pallant, 2010.) Summary of correlation between variables is provide in Appendix F.

Two models were tested, one with the SES DBSI as the dependent variable and the other with the SDS as dependent variable. Demographic variables that showed to have significant effect on subscales of DBSI found in research question 1.b will be entered into the regression models with social support. The final total number of predictors was 10, categorized into 2 groups: (1) Six demographic variables (2) Four family social support indices.

Adopted Tabachnick & Fidell's formula for adequate sample size in regression analysis ($104 + \text{number of predictors}$), this study sample size exceeded that limit number with 130 validated questionnaires.

Model 1- SES as dependent variable

A hierarchical multivariate regression analysis was carried out first with the SES subscale of DBSI as the dependent variable.

A summary of Model 1 is presented in Table 9. At step 1, demographic variable as a group was a significant predictor for SES ($R^2 = .223$, $F(6,123) =$, $p < .001$) and accounted for 22.3% of the variance. Among six factors, parent gender ($t = 2.401$, $p < .05$) and living arrangement ($t = -2.522$, $t < .05$) were best predictors for SES. Current medical utilization did not reach significance as a predictor of SES but showed a significant trend ($t = -1.87$, $p = .063$). At step 2, social support variables accounted for an additional 6.1% of the variance and significantly predicted SES scores as a group ($R^2_{\text{change}} = .061$, F

(4,119)=2.518, $p<.05$). Professional support emerged as a significant and best predictor for SES score ($t=2.373$, $p<.05$) among all, followed by parent gender ($t=2.143$, $p<.05$) and living arrangement ($t=-2.164$, $p<.05$). The inspection of Pearson's correlation also showed a moderate and positive correlation between Professional support and Parenting stress ($r=.411$, $p<.01$).

Table 9: Summary of Hierarchical Regression analysis variables predicting Stress Experience

	R ²	R ² Δ	Unstandardize		Standardized	
			d coefficient		coefficient	
			B	SE	β	p
Step 1	.223	.223***				
Parent Gender			4.007	1.669	.194	.018*
Living arrangement			-2.914	1.155	-.202	.013*
Geographical location			1.281	.847	.129	.133
Time since initial diagnosis			1.169	.709	.153	.101
Current Medical utilization			-2.959	1.579	-.170	.063+
Psychotherapy attendance			-2.170	1.632	-.129	.186
Step 2	.284	.061*				
Parent Gender			3.526	1.646	.171	.034*
Living arrangement			-2.556	1.181	-.177	.032*
Geographical location			1.340	.901	.135	.140
Time since initial diagnosis			1.150	.711	.150	.108
Current medical utilization			-1.875	1.608	-.108	.246
Psychotherapy attendance			-.237	1.717	-.014	.891
Nuclear family support			.893	1.189	.063	.454
Extended family support			.075	.183	.044	.684
Community support			.072	.136	.061	.597
Professional support			.250	.105	.236	.019*

^a Parent gender was coded “1” for male and “2” for female

^b Family living arrangement was coded: “1” for living with immediate family, “2” for living with parents/spouse parents and “3” for living with other extended family member

^c Family Living arrangement was coded “1” for Hanoi, “2” for Ho Chi Minh and “3” for other cities

*p<.05 level; **p<.01; ***p<.001 (2-tailed).

+ significant trend at p<1

Model 2- SDS as dependent variable

The same procedure was conducted with SDS as dependent variable. At step 1, Demographic variables as a group significantly predicted SDS scores and accounted for 22.5% of the variance of SDS ($R^2 = .225$, $F(6,123)=5.937, p<.001$). Geographical location was the strongest predictor among all ($t=3.00$, $p<.005$); parent gender ($t=2.392$, $p<.05$) and living arrangement ($t=-2.590$, $p<.05$) were also significant predictors while Current medical utilization showed a significant trend predicting SDS ($t=-1.844$, $p=.068$). At step 2, social support scores accounted for an additional 4% of SDS scores variance but did not significantly predict for SDS as a group ($R^2_{\text{change}}=.040$, $F(4,119)=1.613$, $p=.175$). Parent gender ($t=2.115$, $p<.05$), living arrangement ($t=-2.055$, $p<.05$) and Geographical location ($t= 2.622$, $p<.05$) continued to significantly predict SDS and Professional support ($t=2.026$, $p<.05$) out of four social support score reached significance as a predictor for SDS. Among all, Geographical location is the best predictor for SDS scores. Regression statistics are presented in Table 10.

Table 10: Summary of Hierarchical Regression analysis variables predicting Stress Degree

	R ²	R ² Δ	Unstandardize		Standardized	
			d coefficient		coefficient	
			B	SE	β	p
Step 1	.225	.225***				
Parent Gender			10.195	4.262	.193	.018*
Living arrangement			-7.642	2.950	-.207	.011*
Geographical location			6.493	2.164	.255	.003*
Time since initial diagnosis			2.076	1.810	.106	.254
Current medical utilization			-7.437	4.034	-.168	.068+
Psychotherapy attendance			-1.491	4.169	-.035	.721
Step 2	.264	.040				
Parent Gender			9.019	4.264	.171	.036*
Living arrangement			-6.287	3.060	-.170	.042*
Geographical location			6.121	2.334	.241	.010*
Time since initial diagnosis			1.620	1.841	.083	.381
Current medical utilization			-5.909	4.167	-.133	.159
Psychotherapy attendance			2.359	4.449	.055	.597
Nuclear family support			.403	3.080	.011	.896
Extended family support			-.264	.475	-.061	.579
Community support			.256	.352	.086	.468
Professional support			.553	.273	.204	.045*

^a Parent gender was coded “1” for male and “2” for female

^b Family living arrangement was coded: “1” for living with immediate family, “2” for living with parents/spouse parents and “3” for living with other extended family member

^c Family Living arrangement was coded “1” for Hanoi, “2” for Ho Chi Minh and “3” for other cities

*p<.05 level; **p<.01; ***p<.001 (2-tailed).

+ significant trend at p<1

CHAPTER 8: DISCUSSION

The major aim of this study is to enhance the understanding of parenting stress in families of children with ADHD in Vietnam. This aim was comprised of three main areas of investigation. The first was the assessment of parenting stress and its variance according to demographics. The second area of focus was the assessment of social support perceived by parents. The third investigation examined the contribution of social supports and demographics to parenting stress. Additionally, in order to strengthen the confidence in the study result, a preliminary study was conducted to investigate the psychometric properties of the measures of parenting stress and social support. Due to the small sample size, results were interpreted with care.

Preliminary study

Psychometric properties of DBSI-Vietnamese version

Most studies investigating parenting stress in families of children with ADHD have used the Parenting Stress Index (PSI) (Abidin, 1990) as the main instrument. This is a well-validated measure designed to assess different sources of strain related to the parenting role. Nevertheless, PSI appears not to be an optimal measure for the assessment of specific stressors related to ADHD as it does not indicate which specific types of stressor regarding the extent to which having a child with ADHD negatively impacted the caregivers (Johnson & Reader, 2002). What is more, many items of this measure overlapped with ADHD symptoms or are likely to reflect stress-outcomes rather than the stressors themselves (Anastopoulos et al., 1992; Reader et al., 2009). Disruptive Behavior Stress Inventory (Johnson & Reader, 2002) was developed in an effort to fix those problems.

Overall, it could be said that DBSI has reasonably strong psychometric properties. The mean total correlated-item correlations of both the Stress Experience and Stress Degree indices of the DBSI Vietnamese version were found to be acceptable and well above the criteria for an adequate item-total correlation suggested by Nunnally (1978). These results were close to those reported by Reader et al. (2009) and slightly smaller than those reported by these authors in 2002 (Johnson & Reader, 2002). For the Stress Experience Scale, 8 out of 40 items fell under the threshold of .30 and for the Stress

Degree Scale, 3 items achieved a smaller than .30 correlated item-total correlations. The exception was item ten “Dealing with your child’s academic difficulties” which received a low correlation in both Stress Experience Scale and Stress Degree Scale. This may be due to the fact that a proportion of children in this current study were younger than 6 years old had not attend formal schooling by the time of survey. Their parents therefore did not encounter difficulties related to academic performance. Nevertheless, this did not affect the reliability as measured by Cronbach’s alpha index score. This study provided evidence indicating that the DBSI-Vietnamese version had strong internal consistency and can be used effectively in the future as an alternative for PSI.

Psychometric properties of Family Support Scale

FSS was initially developed by C. Dunst et al. (1984) to examine the social support in families of children with a developmental disability then developed its scope and became a popular used measure for other populations including families of children with ADHD.

The factor analysis of FSS in this study yields 4 factors that together explained 72.8% of the variance. This total variance is higher than those reported by previous factor analysis studies of FSS (C. J. Dunst et al., 1988; Hanley et al., 1998; Littlewood et al., 2011; Taylor, 1993) and is above the rule of thumb 70% suggested by Mertler and Vannatta (2002). The four-factor solution derived from this analysis was shown to be suitable in the Vietnamese context. First, four items referring to support received from one’s parents, spouses’ parents, and kin or spouse kinship were grouped together as *Extended family*. Secondly, loaded in the same factor, spouse and one’s children were grouped and named as *Nuclear family*. The third group comprised of *Community* support such as one’s friends, spouse’s friends, support groups, church/Buddhist, co-workers and other parents. *Professionals* was the last group to be found which includes physicians, early intervention programs, schools as well as other professional helpers and agencies.

This study was similar to the previous factor analysis of FSS which clearly identified family support from community support and professional support (C. Dunst et al., 1984; C. J. Dunst et al., 1988; Hanley et al., 1998; Littlewood et al., 2011; Taylor,

1993). This is thought to be the first factor analysis study of FSS in Asia. The Cronbach's alpha found in this current study was shown to be higher than previous studies of FSS with the total scale alpha = .89, (Table 5). Most subscales of FSS also loaded strongly above .80, except from the Nuclear family with $\alpha = (.63)$. This might be due to the small number of items in this subscale.

Principal study

Parenting stress

Parenting stress of Vietnamese parents whose children have ADHD

Literature has consistently shown that parents whose children diagnosed with ADHD were experiencing a high level of distress related to their parenting role. By comparing and contrasting the mean scores of DBSI obtained from this current study and those reported by previous studies using the same measure, it was found that parenting stress in this cohort was considerably high. This high level of stress in families of children with ADHD was similar to available evidence in Asia. Studies like those conducted in Taiwan, Korea, India or Hong Kong also reported that parents in their cohort faced a huge demands of raising a child with ADHD and significantly high levels of distress related to their parenting role (Ho et al., 2011; Oh & Kendall, 2009; Sethi et al., 2012; Shur-Fen Gau, 2007; Tzang et al., 2009). Furthermore, the stress expressed by parents in this current project was close but higher than those reported by the measure developers in Western population (See Table 7). Narkunam (2013) in the study with Malaysian populations also indicated a similar finding of which not only did parents in their cohort experience high levels of parenting stress; but also their stress level was higher than those reported on other Western studies.

Asian parents including Vietnamese parents often hold high expectations for their child's behaviors (Burr, 2014). They believed that academic success and obeying the rules are the most important goals that any child needs to achieve. Dang (2012) found that among different development issues, behavioral problems concerned Vietnamese parents the most. Parents' rating of the child behavior depended on whether the child obeys their rules or not. Furthermore, professionals and community in Vietnam similar to other countries in Asia, are not well educated in mental health in

general and ADHD in particular (Narkunam et al., 2012; Shur-Fen Gau, 2007; B. Weiss et al., 2011). That lack of information might have the potential to further intensify parents' experience in this area and play a role in explaining why parenting stress in this study was higher than that in Western studies.

Parenting stress and demographic variables

Parenting stress and parent gender

Parenting stress in this cohort was higher in mothers compared to fathers, supporting previous studies in Western and Asian cultures, which is consistent with the expectation and what was reported in prior research (Mychailyszyn et al., 2008; Narkunam et al., 2012; Oh & Kendall, 2009; Podolski & Nigg, 2001; Reader et al., 2009; Shur-Fen Gau, 2007).

In Vietnamese families, the family structure and role are highly defined (Hunt, 2005). Fathers commonly play the central figure of authority in the family and is the one who take the principal responsibility for disciplining their child (Hunt, 2005). However, it is the mothers rather than fathers who is expected to involve in the direct care of their children (Locke, Hoa, & Tam, 2012). In modern life, more and more females have entered the workforce, working outside home and the traditional family roles, so parental responsibility has become much more balanced between mothers and fathers (Bodewig & Badiani-Magnusson, 2014). However, it is still the mothers who are involve more frequently in child care (Bodewig & Badiani-Magnusson, 2014). Since they spend more time taking care of their children than their spouse, they may be more sensitive to the child's behavior problems than fathers. Additionally, as they were the primary caretaker for the child, they were more likely to be blamed for the child's failure than their spouse. The Vietnamese quote : "Con hu tai me, chau hu tai ba" (the child is spoiled because of his mother) reflects this fact. A similar phenomenon has been highlighted by other studies in Asia as mothers also expressed feeling more stress and being more socially isolated than their spouse as a result of having a child with ADHD (Oh & Kendall, 2009; Shur-Fen Gau, 2007). Nevertheless, as the number of mothers in the current study is much higher than that of fathers, the interpretation should be taken with care.

Parenting stress and family living arrangement

Though parenting stress in families with ADHD children has been around for quite a time, there has been little evidence as to how living arrangement can impact parenting stress. There was only one prior study in Malaysia that reported the role of co-living caretakers and parenting stress. According to Narkunam et al. (2012), the presence of extended family members (frequently grandparents) might be associated with less parenting stress. Similar to that finding, in this study, there was found to be a significant tendency towards the relationship between living arrangement and parenting stress, indicating that parents in this cohort who lived with their extended family members (especially their parents/spouse parent) experienced less stress than parents who did not.

In collectivist cultures like Malaysia or Vietnam, though the nuclear family has become more common, extended family still plays an important part in an individual life (Hunt, 2005). The type of household in which three generations: grandparents, parents and children (and sometime other relatives) living under the same roof is still the norm (Hunt, 2005). This co-living mode benefits parents by utilizing the available support from the grandparents in taking care of their children. According to Locke et al. (2012), grandparents in Vietnamese families play an important role in raising children. They are the major source of material and instrumental support for young parents. Their help might be invaluable when the child has a chronic health condition.

In 2008, Mychailyszyn and colleagues also suggested the same idea when studying parenting stress in Africa-America parents, whose culture also emphasizes the role of extended family and community. Parenting stress decreased when the support of extended family members was perceived to be high (Mychailyszyn et al., 2008). However, as only 35.6% parents co-lived with their parents/spouse parents or relatives in this study and the difference found between co-living and not co-living families did not reach the required level of significance, further assessment needs to be carried out before any conclusion can be made.

Parenting stress and Family geographical location

In this study, it was found that there was no significant difference in Stress Experience between parents living in small provinces and those living in Ha Noi and Ho Chi Minh city. Nevertheless, the stress degree the former reported was significantly higher than the latter.

Mental health is in the very early stages of development in Vietnam. Only recently have there been some movements in health policies towards the need to enhance mental health resources. Given the limitation of resources in this initial stage of development, changes have mostly taken place in Hanoi and Ho Chi Minh; most of the well-validated professional intervention programs are located in Hanoi and Ho Chi Minh (Gabriele 2006). To explain for this, Bussing, Zima, et al. (2003) suggested that parenting stress might be lessened if families live nearer to the support sources. Parents living in Hanoi and Ho Chi Minh who had easier accessibility to the services and information they need in this way might feel less stress than do parents from other smaller cities. Moreover, studies of help seeking behavior from less developed provinces in Vietnam showed that these populations were characterized by a lack of knowledge of mental health and had a tendency to hide their family member's problems (van der Ham et al., 2011) to avoid social bias toward the family. This in turn might exaggerate family stress. (H. Nguyen, 2014; van der Ham et al., 2011).

Based on the cultural difference and economic pace between Hanoi and Ho Chi Minh, it was also expected that the way parents from those two cities perceived of parenting stress is not similar. Results of the study indicated that the stress scores of parents from Ho Chi Minh were smaller than those from Hanoi but no significant difference was found. This finding suggested that the cultural difference might not be major enough to differentiate the experience of parents between those two centers.

Parenting stress and time since initial diagnosis

There have been few studies addressing the duration of time since diagnosis or treatment and parenting stress. Prior to this study, Narkunam et al. (2012) reported that the contact period of the child had a significant effect on parenting stress in Malaysian parents' cohort. Parents who had children with more than two years of

contact with the treatment unit were more stressed than parents whose children had contact with the treatment unit for less than two years. This study found a similar result. Parents who had a child diagnosed more than three years scored higher than parents whose children were diagnosed for less than one year on the Stress Experience Scale. One may expect that the longer parents knew about the child's disorder, the more accepting and adapting to the situation they were and the less stress they experienced. However, because the development of ADHD is complicated and keeps on changing over time, parents are continuously thrown into new challenges which could stress them out (Barkley & Murphy, 2006). It is also possible that the lack of adequate treatment is another reason that aggravates this situation. Currently in Vietnam, ADHD has not received enough attention and understanding from schools/educators (L. T. Nguyen, 2012) and the number of practitioners who were trained properly to work with children, especially those diagnosed with an externalizing disorder like ADHD is very limited. The longer ADHD had been presented without comprehensive support and intervention, the more complicated the child's behaviors could become and the more stressors parents would have to deal with (Barkley & Murphy, 2006).

Parenting stress and medical utilization

Whether or not medical intervention helps to reduce parenting stress in families of children with ADHD has been an ongoing argument among practitioners and researchers for many years. Prior to this study, several researches have been proposing a negative relationship between medical status and parenting stress (Barkley, Karlsson, Strzelecki, & Murphy, 1984; Johnson & Reader, 2002). In line with those studies, the parenting stress level in this cohort was higher in those having children medicated and lower in those whose children who were not medicated.

Although stimulants have been shown to be safe and effective in managing clinical presentations of ADHD, it was reported that 10 % to 20% of individuals who take such medication did not show significant improvements in their core symptomatology or have severe side effects (Greenhill, Halperin, & Abikoff, 1999). Meanwhile, the cost for the stimulants is high; if the stimulants did not work effectively to obtain the desirable effects, parents who had their children medicated

might become more stressed and disappointed than parents whose children did not have this experience. (Barkley & Murphy, 2006; Braswell & Bloomquist, 1991; DuPaul & Stoner, 2004).

Independent of that issue, in some cultures, medication is not preferred by parents in treating mental health problems; among them, Vietnamese is one (A. V. Pham, 2013). Asian parents whose child had ADHD were reported to be less likely than other Caucasian parents to start and comply with the medication regimen (Dosreis et al., 2003). They were likely to discontinue the medication if they did not see immediate effects in their child's behavior (L. Nguyen et al., 2004). Even when desirable effects were obtained, many parents may not understand that their children need to continually take medication in order to manage their chronic disorder (A. V. Pham, 2013). Once medication was discontinued, its effects could dissipate over time and the ADHD symptomatology would come to the surface again, driving parents into more stress.

Parenting stress and psychotherapy attendance

Though there have been significant studies investigating parenting stress and its relation to many demographic and treatment factors, whether or not attending psychotherapy helped to reduce parenting stress is as yet an unknown phenomenon. However, the long proven effectiveness of psychotherapy approaches toward treatment of ADHD suggested that psychotherapy attendance might help to mitigate parental distress. Different from expectations, the parenting stress in this cohort was higher if the child attended psychotherapy and lower in families of children who had not attended any psychotherapy at the time of this study. It is worth mentioning that more than 50% children of this cohort attended a psychotherapy prior to the day of reporting. This proportion was much higher than that reported by Narkunam et al. (2012) in Malaysia (14%).

One may expect psychotherapy could help to control ADHD symptoms and reduce the stress parents' experienced due to their child's disruptive behaviors. Nevertheless, psychotherapy if not implemented carefully and comprehensively, might result in more vulnerability and distrust by clients (Braswell & Bloomquist, 1991;

Prochaska & Norcross, 2013). This might be true for this study context where mental health and psychotherapy approaches to treatment of mental health issues have only recently been implemented in the health care system. On the one hand, most practitioners and current staff working in the field were not well-trained for clinical assessment and intervention (Goren, 2007; Vuong et al., 2011; B. Weiss et al., 2011). Furthermore, current psychological approaches to treatment of childhood disorder in Vietnam were mostly adopted from the West, which might contain cultural conflict that could minimize the effectiveness of therapy (Tsui & Schultz, 1985). For example, the goals of most psychotherapy treatment for ADHD is to provide parents behavior management skills which might require parents to learn how to reinforce their children in a timely way (DuPaul & Stoner, 2004). These goals conflict with the traditional Asia values where the parents have the responsibility not to praise their child's desired behaviors, but to criticize their misbehaviors (Crisante & Ng, 2003). As the treatment process might confront with parents' own value systems, they were more likely to leave treatment early, which might explain why high numbers of Asian parents dropped out of intervention programs (Kazdin & Mazurick, 1994).

Parenting stress and Child gender

In this study, it was expected that having a male child with ADHD would be associated with more stress for parents than a female child. This hypothesis was chosen based for two reasons. First, there has been some evidence in the literature that indicated that child gender had an effect on parenting stress. Second, traditional Vietnamese culture considers a man's position in the family to be more important than the woman's as they will carry on the family line and the family name (Mestechkina et al., 2014). Therefore, being a boy with ADHD in a family was predicted to be associated with more parenting stress. However, unlike the study's expectation, no significant difference was found between the group of male and female children on their levels of parenting stress. This finding is similar to that previously reported by Breen and Barkley (1988) when comparing parenting stress in families of girls with ADHD and boys with ADHD. Those authors also reported that no significant difference was found between the two groups. It should be noted that both this current study and that of Breen and Barkley took into account the community sample while other studies were

based on clinic-referred sample only. Nevertheless, as the sample size of both studies was relatively small, future projects with larger sample sizes and diverse populations that comprise both clinic and non-clinic samples will help to better describe the phenomenon.

Parenting stress and Child age

Some studies have reported that parenting stress varied according to the child's age (Barkley et al., 1985; Mash & Johnston, 1983; Narkunam et al., 2012). However, how a child's age affects parent well-being is still controversial. In this current study, no effect was found for child age on parenting stress. This finding was supported by some prior studies like those of (Breen & Barkley, 1988); Mash and Johnston (1983) which also reported a non-significant relationship between parenting stress and child age. It should be noted that this study only focused on children under the age of 12 with three groups: 4-6 years of age, 7-9 years of age and 10-12 years of age. Though having some differences, the developmental characteristics of ADHD among those three groups are pretty similar, which might help to explain why their parents' stresses were not significantly different. Studies with broader age range like that of Narkunam et al. (2012) might provide a different finding.

Parenting stress and Marital status

Contrary to expectations, no significant relationship was found between the marital status and parenting stress in this current study. Despite evidence indicated that marital status might have impact on parenting stress and that single mothers are at greater risk for psychological problems and ineffective parenting than those who are married (Simons, Beaman, Conger, & Chao, 1993), some studies have pointed out that no difference was found in the parent-child interaction and parenting stress in families of single parents and 2 parents. Weinraub and Wolf (1983) investigated mother-child interaction in 14 single mothers and 14 matched married women and their children. It was found that though single parents were more likely to be socially isolated and had less emotional and less parental support than married parents, no significant difference was found with respect to mother-child interaction. This finding was once again confirmed by the work of Theule and colleagues in 2013. The meta-analysis of 44 studies on parenting stress proposed that though marital status may have showed an

effect on some samples, it might not be a strong factor for parenting stress in general (Theule et al., 2013).

Social support

Consistent with study hypothesis, data from Family Support Scale indicated that the support parents in this cohort received was low. All of the resources were rated fewer than 3, suggesting a less helpful support network of parents of children with ADHD in this study. Most support resources in this study were rated as lower than those reported by caregivers in the study of Littlewood et al. (2011) which examined social support among 255 kinship caregivers using the same measure. In that study, the mean of FSS across items was near to 3 with some items were higher than 3, indicated an acceptably useful network.

Findings from this study reflected the common theme previously highlighted by qualitative studies in Asia, that parents of children with ADHD in this part of the world were desperate for help both from both professionals and family. The health care system in most Asian countries is in the initial stage of development. Features such as lack of knowledge and lack of an efficient skill-base working with ADHD are frequently witnessed among professionals (Lin et al., 2009; Oh & Kendall, 2009; Shur-Fen Gau, 2007). Parents, when taking their children to see mental health agents do not often receive adequate explanation for their child's disorders and do not receive the information they need to cope with their children behaviours (Lin et al., 2009). Meanwhile, at home, parents do not at the same time receive emotional and instrumental care from their family members in how to deal with their children's disorder (Lin et al., 2009). Some even found themselves in conflict with their parents in decision-making with respect to the discipline of their children (Oh & Kendall, 2009).

Parents in this cohort rated external assistance such as professionals' programs or professional agencies as more helpful than family or community support in helping them in raising their children (Bussing, Zima, et al., 2003; Neophytou & Webber, 2005). Parents and correspondent partner/spouse were also reported to be somewhat helpful in providing them with the help they needed. Little support was reported from the community.

Predictors of Parenting Stress

To determine if demographics and social support can significantly predict parenting stress or not, two analyses were carried out with two subscales of DBSI (SES and SDS) as dependent variable. Variables examined as potential predictors of parenting stress included: (1) Demographics: parent gender, living arrangement, Geographical location, time since initial diagnosis, medical utilization, psychotherapy attendance; (2) Social support: Extended family support, Nuclear family support, Community support and Professionals support.

Demographics

The contribution of demographic variables across two aspects of parenting stress was moderate and significant. This finding was comparable with studies that proposed a systematic relationship between parenting stress and demographic factors for families of children with ADHD in particular and families of children with developmental delay in general (Anastopoulos et al., 1992; Park et al., 2010; Theule et al., 2013) . Parent gender, family living arrangement and family geographic location were three factors that reached the significant level to predict parenting stress in this cohort.

The effect of parent gender in the prediction of parenting stress was previously reported in the literature (Baker, 1994; Cunningham & Barkley, 1979; Hinojosa et al., 2012); yet, this is the first study to report the role of family living arrangement and family geographical location in determining parenting stress. As previously explained, thought family members might not be helpful in providing the help and acceptance parents needed to deal with their child's disorder still provided some concrete support. They could provide parents with free babysitting, child care or even financial help to meet the child raising demands and therefore, mitigate the experience of stress in parents (Bussing, Zima, et al., 2003; C. J. Dunst et al., 1988; Pearson & Chan, 1993; Shur-Fen Gau, 2007).

Family geographical location did not emerge as a significant predictor for parents' stress experience, however, it was the strongest predictor for their Stress Degree. This finding reflects the fact that although the expression of ADHD might be

consistent across different places, nevertheless, how people see it is different according to their context (Bird, 2002). Living in more developing cities means that family could have a higher chance to access the support they needed for their children and therefore, their stress might be reduced. This finding was supported by study on families of people with a disability; that the closer the family was to the health care services, the less stress family experience (Bussing, Zima, et al., 2003). What is more, it is considered that higher community awareness of mental health and less social stigma are other characteristics of urban areas that could be considered as a factor in reduce parenting stress (Park et al., 2010; van der Ham et al., 2011). To the author's knowledge, this is the first study to report the effect of geographic location on parenting stress.

Social support

As expected, a small but significant contribution was found for social supports as a group on parenting stress experience, which was above and beyond the effect of demographic variables. For the parenting stress degree, social supports as a group did not reach significance. However, when examined individually, Professionals support was the only factor that arose as a significant and positive predictor for parenting stress for both stress experience and stress degree. The more helpful Professionals support perceived by parents, the more parenting stress they experienced.

Researchers investigating help-seeking behaviors suggested that cultural values might play a role in influencing parental attitudes toward the help they seek for their children (Eiraldi, Mazzuca, Clarke, & Power, 2006). Similar to other Asian parents, Vietnamese parents had a tendency to have high expectations in treatment that can bring about immediate results in their child's behavior (Lau & Takeuchi, 2001). However, the treatment for ADHD either with medication or psychotherapy may take several weeks to several months to show the desired effect (A. V. Pham, 2013). Thus, rather than having their stress reduced, parents who have higher support from Professionals in this study might experience more stress as the actual improvement in their child's behaviors was incompatible with the level of help they perceived. Studies of social support effect also provide another explanation for this finding by suggesting that under chronic stress circumstances such as ongoing illness or a child with

disability, a support effort might not be viewed as positive as it should be but rather a sign of incompetency and can even drive people to experience more stress. (Pearlin, Menaghan, Lieberman, & Mullan, 1981; Pearlin & Schooler, 1978; Quittner, Glueckauf, & Jackson, 1990).

It is also worth mentioning that medical staffs in Vietnam are deficient in clinical training in regards to children's mental health. Despite that, many counseling and clinics had been established with owners and practitioners with little or no mental health training (B. Weiss et al., 2011). Those professionals might start with good intentions of helping the ADHD children and their parents, however due to the deficiency of clinical training and information, there was no guarantee that clients were provided with valid treatments that could help to reduce the child's symptoms. Consequently, in the long-term, these supports might not help to reduce parents stress but rather disappoint them, lower their sense of competency and increase their stress (B. Weiss et al., 2012).

This is not the first study to report this positive relationship between social support and parenting stress. Podolski and Nigg (2001), while examining parent role distress and coping in relation to childhood ADHD of 66 children age 7 to 11 in 2001, discovered that the community resource and social support did not help to reduce parenting stress. Conversely, the more support parents perceived they had the more stress they reported.

Implications

This current study makes some significant contributions to the literature. First, this study provides further evidence to indicate that parents of children with ADHD regardless of their culture and geographical location, bear considerable stressors related to their child's disruptive behaviors, and mothers rather than fathers are more vulnerable to this stress. This has implication for treatment for children with ADHD. As the relationship between parenting stress and ADHD is reciprocal, interventions aimed at parents (especially mothers) should be included in treatment procedure for ADHD.

As far as the literature has been investigated, this is the first study reporting the difference of stress between urban and rural areas. This study has demonstrated that

family Geographical location was the most important determinant for parenting stress degree among contextual factors. Parents living in more urbanized areas like Hanoi and Ho Chi Minh expressed having less stress than parents from other rural areas. Aligned with previous studies of mental health in Vietnam, this study suggests that a lack of investment and social stigma associated with mental health are features among rural areas in Vietnam (Locke et al., 2012; A. T. Nguyen et al., 2010; van der Ham et al., 2011) , and hopefully it might contribute to raising the awareness for practitioners and policy makers in Vietnam of the need to direct more attention to rural areas in later stages of infrastructure development.

Next, family living arrangement was another factor that was shown to contribute to the variance of parenting stress in this current study. This factor has been frequently overlooked by previous Western studies. The significant finding of this current study therefore recommends researchers, when examining the experience of stress in family of children with ADHD, in a family oriented culture like Vietnam, to take into account the structure of the household. Though the relationship was small, this finding still suggests that maybe in a Vietnamese context or Asia in general, living with one or more extended family member(s) could help to protect parents from the stress.

A further noteworthy finding of this study suggests that families of children with ADHD in Vietnam did not receive adequate support from family, professionals or communities in raising their children. The most helpful support among all according to those parents were professionals. This was as a significant predictor for parenting stress. Nevertheless, unlike the proposal that social support acts as a protective factor for parenting stress, in the current study, the more professional support parents in our cohort perceived the more stress they experienced. Theoretically, this finding along with those of Podolski and Nigg (2001), Pearlin et al. (1981), Quittner et al. (1990), has added another nuanced interpretation to the relationship between parenting stress and social support. In situations where the child's illness seems prolonged, parents are more sensitive to external help as it could be associated with a sign of incompetency and failure in parenthood. Practically, this finding alerts professional agencies (including physicians, psychologists, teachers, social workers...) who currently worked with ADHD children in Vietnam to carefully revise and adjust their approaches to

parents in order to mitigate the negative impact and deliver more effective outcomes for not only the child but also their family.

In this study, it was also found that time since the initial diagnosis, medical utilization and psychotherapy attendance had effects on parenting stress. While these three factors were not significant predictors for parenting stress in the regression analysis, stress scores of parents whose children had been diagnosed more than 3 years and children who utilized medical or psychotherapy treatment were significantly higher than other groups. This finding, along with the fact that parents in Asia lack knowledge of ADHD, suggested that when doing intervention for children with ADHD, practitioners should not ignore parents' worries and their expectations toward treatment. Information regarding the development of the disorder and the role of parents in intervention programs should also be considered carefully. Nevertheless, further studies to assess the underlying mechanism between parenting stress and these two factors should be conducted to verify the utilization of this recommendation. To the extent that there are children with ADHD for whom stimulant medication therapy (or the use of other medications) is not a viable treatment option, alternative treatments must be used.

Finally, this study was instrumental in introducing and adapting the DBSI and FSS into Vietnam. The psychometric analysis of the DBSI and FSS Vietnamese version was shown to have strong internal consistency demonstrating that the measure could be used to examine the experience of parenting stress and social support in Vietnam. This implication is considered important as Vietnamese practitioners and researchers are currently lacking well-validated measures to practice.

Limitations

Despite its contributions to the literature, there are some shortcomings that limit the generalizability of study results. Those are centred on sample characteristic, the study design and measures used.

First, the sample cohort of this study is small and might not be representative as parents volunteered to participate through an advertisement posted on some social networks and forums for children with ADHD in Vietnam. Parents who came from poor

areas where internet was inaccessible or those who were not active online therefore might not have participated in this study. The comparison between demographic characteristic of participants somehow reflects this bias as nearly 70% participants came from the big centres of Vietnam. Only 31.5% came from other areas. What is more, given a significant amount of professionals working in the mental area in Vietnam currently lack clinical training in assessment and working with children and adolescents (B. Weiss et al., 2011), the validity of ADHD diagnosis should be taken into consideration when interpreting the study result.

Second, this is a cross sectional study where the phenomenon was observed in a certain duration in time without a comparison group. This research design though believed to suit the restrained timeframe of the project is subjected to several external threats to validity, such as history and social context. It is important to mention that during the data collecting (5/2014), there was a serious political event which occurred between Vietnam and China when China placed their oil rig on the disputed water off Vietnam on May 2 (Press, 2014). The tension between the two countries escalated to near acts of war when a Chinese coast guard vessel apparently rammed a Vietnamese coast guard vessel several days later (Press, 2014). Protests and riots occurred throughout the countries and these events strongly impacted Vietnamese life (Ives, 2014). These events might have influenced parents' perception of the phenomena under investigation and produced different responses to the questionnaire. The event therefore must be taken into consideration when interpreting study result.

Finally, although care was taken to check the translation of the DBSI and FSS and expert advice was gained, a pilot study to check on the face validity of the measure was not undertaken due to project time restrictions. More studies on the validity of the Vietnamese version of the measures will help to further adapt these measures to this culture and may improve the study result. Despite that, Vietnamese versions of the measure showed to have good internal consistencies which were higher than previous studies.

Future studies

Research on parenting stress and its relationship with social support in families of children with ADHD are relatively neglected. Therefore, there are numerous possibilities for future study.

First, one of the main purposes of this study was to assess the relationship between parenting stress, demographics and social support. However, the literature suggested that there were also other factors that importantly influence parenting stress such as, parent's psychopathology and child psychopathology and parenting style. Few studies have examined those factors in the same model with social support, and demographics especially in Asia. Future studies could determine the extent to which those factors contributed to parenting stress and moderated the relationship between parenting stress and social support.

Second, this study and others that have investigated social awareness of mental health in Vietnam suggested that in this part of the world, social stigma, parent awareness of ADHD, and professional awareness of ADHD may also play an important role in moderating the experience of parents. However, little evidence was found regarding these factors and ADHD. Studies of those factors and their relationships to ADHD presentation as well as parenting stress might help to better clarify the phenomenon and help practitioners and policy makers to make better decisions with respect to providing help for these youngsters.

Third, this is the first study to examine social support in relation to ADHD in Vietnam and one of the very few studies to investigate the social support in children with mental problems in Vietnam. The measure of social support in this current study however, focused solely on describing the helpfulness of different resources but did not pay much attention on the type of support they received. An important set of studies would help to further describe parents experience by investigating the type of support parents received from each of their sources and its utility.

Fourth, though DBSI would appear to be an effective measure in investigating parenting stress, there have been only three studies to report the reliability analysis of DBSI, and two of them were conducted in Caucasian populations. Future studies from

more diverse populations and cultures should be conducted to provide evidence confirm on the psychometric value of this measure.

Finally, the present study result was derived from a small sample of families with ADHD. Extending this work to cover more families who come from more diverse geographical areas over the country would give more precise evidence of the relationship between parenting stress and social support and its differences in each geographical area.

CHAPTER 9: EXECUTIVE SUMMARY

In general, parents whose child has ADHD in Vietnam have high levels of self-reported parenting stress. That stress is higher in mothers, parents living in small cities, parents whose child was diagnosed more than 3 years, and parents who had their children medicated or attending psychotherapy. Parents who did not co-live with family members also showed a tendency to be more stressed than parents who did. It also appears that Vietnamese parents relied mostly on professional support rather than family or community to help raise their children. Nevertheless, supports from those professionals were also shown to be a somewhat helpful to parents.

Among all demographics, parent's gender and living arrangements are predictors for parents' stress experience, while parents' gender, living arrangement along with geographical location contribute to their stress degree. Most importantly, the study found that Professionals support positively predicts parenting stress. The more professional support parents received, the more stressed they became.

This is the first study to examine parenting stress in Vietnam and the first study to investigate the relationship between parenting stress and social support using quantitative methods in Asia. This is also possibly the first study to adapt and assess the psychometric properties of the Disruptive Behavior Stress Inventory and Family Support Scale in Asia. The findings from this study provide preliminary support for the understanding of ADHD and its outcomes on family in Vietnam. It is hoped that this study will encourage new ideas for future studies concerning this topic in Vietnam and contribute to the development of a more empirical-based profile of the phenomenon of families with children with ADHD in Vietnam and Asia.

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APPENDICES
APPENDIX A: QUESTIONNAIRES

APPENDIX A. 1: DBSI - English

DISRUPTIVE BEHAVIOR STRESS INVENTORY

DBSI

Listed below are a range of potential stressors that are sometimes experienced as a result of having a child who displays behavioral difficulties. Read each of the following items carefully and indicate those situations you have experienced *as a result of your child's behavior* during the past six months. Circle "Yes" if you have experienced what is described in the item. Circle "No" if you have not. For each item where you circled "Yes", indicate on the following 4 point scale the extent to which it was/is stressful to you: **0 (Not at all Stressful); 1 (Somewhat Stressful); 2 (Moderately Stressful); 3 (Very Stressful)**. Please be sure to respond to each item

	Experienced events		Not at all stressful	Somewhat stressful	Moderately stressful	Very stressful
1. Not being able to leave your child with a baby-sitter.	Yes	No	0	1	2	3
2. Not being able to go out to eat because of your child's behavior.	Yes	No	0	1	2	3
3. Being interrupted by your child when trying to take care of other children	Yes	No	0	1	2	3
4. Having to miss or leave church because of your child's behavior.	Yes	No	0	1	2	3
5. Dealing with teachers' complaints about your child.	Yes	No	0	1	2	3
6. Difficulties finding professional services for your child.	Yes	No	0	1	2	3
7. Having to miss work because of your child's problems.	Yes	No	0	1	2	3
8. Not being able to take your child shopping because of his/her behavior.	Yes	No	0	1	2	3
9. Not able to spend enough time with your other children.	Yes	No	0	1	2	3
10. Dealing with your child's academic difficulties.	Yes	No	0	1	2	3
11. Difficulties dealing with your child's doctors.	Yes	No	0	1	2	3
12. Difficulties getting your child to appointments with various professionals.	Yes	No	0	1	2	3
13. Spending an excessive amount of time helping your child with homework.	Yes	No	0	1	2	3
14. Not having enough time for yourself because of your child's behavior.	Yes	No	0	1	2	3
15. Having to explain your child's behavior to others.	Yes	No	0	1	2	3
16. Difficulties getting school-based services for your child.	Yes	No	0	1	2	3
17. Not knowing how to deal with your child's behavior.	Yes	No	0	1	2	3
18. Disagreements with spouse about managing your child's behavior.	Yes	No	0	1	2	3
19. Problems paying for services your child	Yes	No	0	1	2	3

needs.

20. Dealing with your child's conflicts with other children.	Yes	No	0	1	2	3
21. Calls from school regarding your child's behavior problems.	Yes	No	0	1	2	3
22. Having to watch your child so he/she doesn't get into trouble.	Yes	No	0	1	2	3
23. Dealing with complaints from other parents about your child's behavior.	Yes	No	0	1	2	3
24. Having to miss important social events because of your child's behavior.	Yes	No	0	1	2	3
25. Not being able to get to bed at a decent hour because of child's behavior.	Yes	No	0	1	2	3
26. Dealing with complaints from neighbors about your child's behavior.	Yes	No	0	1	2	3
27. Being concerned about your child being injured.	Yes	No	0	1	2	3
28. Not getting work done at home because of your child's behavior.	Yes	No	0	1	2	3
29. Other people telling you how to parent your child.	Yes	No	0	1	2	3
30. Problems related to medication side effects (ie drowsiness, headaches, etc).	Yes	No	0	1	2	3
31. Not knowing how to explain your child's behavior to others.	Yes	No	0	1	2	3
32. Not being able to work outside home because of your child's behavior.	Yes	No	0	1	2	3
33. Conflicts with your child over homework.	Yes	No	0	1	2	3
34. Calls from school regarding your child's academic problems.	Yes	No	0	1	2	3
35. Getting complaints from school bus driver.	Yes	No	0	1	2	3
36. Having less time with partner because of your child's behavior.	Yes	No	0	1	2	3
37. Not getting support from others in dealing with your child's problems.	Yes	No	0	1	2	3
38. Being unable to take your child to public places.	Yes	No	0	1	2	3
39. Difficulties finding adequate after school placement for your child.	Yes	No	0	1	2	3
40. Having your child embarrass you in front of others.	Yes	No	0	1	2	3
Please feel free to add stressful situations not listed above and rate them.	Yes	No	0	1	2	3
41.	Yes	No	0	1	2	3
42.	Yes	No	0	1	2	3
43.	Yes	No	0	1	2	3
44.	Yes	No	0	1	2	3
45.	Yes	No	0	1	2	3

APPENDIX A. 2: DBSI - Vietnamese

TRẮC NGHIỆM VỀ MỨC ĐỘ CĂNG THẲNG LIÊN QUAN ĐIỂN HÀNH VI GÂY RỐI CỦA TRẺ

Dưới đây là danh sách các yếu tố có tiềm năng gây ra trạng thái căng thẳng bởi con của mình. Xin anh/chị đọc kỹ các câu dưới đây và chỉ ra các tình huống mà con anh/chị đã khiến anh/chị căng thẳng trong vòng 6 tháng qua. Khoanh tròn vào ô “Có” nếu như anh/chị đã từng trải qua tình huống được mô tả trong từng câu dưới đây. Khoanh tròn vào ô “ Không” nếu như anh/chị chưa từng trải qua tình huống như vậy. Đối với các câu mà anh chị khoanh vào “Có”, xin hãy chỉ ra mức độ căng thẳng của anh chị trên thang 4 mức độ: 0 (Không hề căng thẳng); 1(Có đôi chút căng thẳng); 2(Tương đối căng thẳng); 3(Rất căng thẳng)

		Có trải qua hay không?	Không hề căng thẳng	Có đôi chút căng thẳng	Tương đối căng thẳng	Rất căng thẳng	
1	Không thể để con cho người trông trẻ	Có	Không	0	1	2	3
2	Không thể đi ăn ở ngoài vì những hành vi của con	Có	Không	0	1	2	3
3	Bị con làm gián đoạn khi đang chăm sóc những đứa con khác	Có	Không	0	1	2	3
4	Bỏ lỡ lễ nhà thờ hoặc phải rời khỏi nhà thờ vì hành vi của con	Có	Không	0	1	2	3
5	Phải giải quyết các phàn nàn của giáo viên về con	Có	Không	0	1	2	3
6	Gặp khó khăn trong việc tìm kiếm các dịch vụ hỗ trợ có chuyên môn cho con	Có	Không	0	1	2	3
7	Phải bỏ lỡ công việc vì các vấn đề của con	Có	Không	0	1	2	3
8	Không thể đưa con đi mua sắm cùng vì các hành vi của con	Có	Không	0	1	2	3
9	Không thể dành nhiều thời gian cho những đứa	Có	Không	0	1	2	3

	con khác						
10	Phải giải quyết các khó khăn trong học tập của con	Có	Không	0	1	2	3
11	Gặp khó khăn khi giải quyết các vấn đề liên quan đến bác sĩ của con	Có	Không	0	1	2	3
12	Gặp khó khăn trong việc đưa con đến các cuộc hẹn với các nhà chuyên môn	Có	Không	0	1	2	3
13	Phải dành quá nhiều thời gian để giúp con làm bài tập về nhà	Có	Không	0	1	2	3
14	Không có đủ thời gian dành cho bản thân vì các hành vi của con	Có	Không	0	1	2	3
15	Phải giải thích với mọi người về các hành vi của con	Có	Không	0	1	2	3
16	Gặp khó khăn trong việc tiếp cận các dịch vụ cơ bản ở trường cho con	Có	Không	0	1	2	3
17	Không biết phải làm thế nào để giải quyết các hành vi của con	Có	Không	0	1	2	3
18	Bất đồng với vợ/chồng về việc quản lý hành vi của con	Có	Không	0	1	2	3
19	Gặp vấn đề trong việc chi trả cho các dịch vụ phục vụ nhu cầu của con	Có	Không	0	1	2	3
20	Xử lý các mâu thuẫn giữa con và các trẻ khác	Có	Không	0	1	2	3
21	Nhận cuộc gọi từ nhà trường về vấn đề hành vi của con	Có	Không	0	1	2	3
22	Phải canh chừng con để cháu không vướng vào rắc rối	Có	Không	0	1	2	3
23	Giải quyết phần nản từ các bậc phụ huynh khác về các hành vi của con.	Có	Không	0	1	2	3
24	Phải bỏ lỡ các sự kiện xã hội quan trọng vì	Có	Không	0	1	2	3

	hành vi của con						
25	Không thể đi ngủ đúng giờ bởi vì hành vi của con	Có	Không	0	1	2	3
26	Giải quyết phàn nàn của hàng xóm về hành vi của con	Có	Không	0	1	2	3
27	Luôn lo lắng về việc con có thể bị thương	Có	Không	0	1	2	3
28	Không hoàn thành được công việc ở nhà chỉ vì các hành vi của con	Có	Không	0	1	2	3
29	Người khác chỉ bảo anh/chị phải dạy dỗ con như thế nào	Có	Không	0	1	2	3
30	Các vấn đề liên quan đến phản ứng phụ của thuốc (ví dụ như chóng mặt, đau đầu...)	Có	Không	0	1	2	3
31	Không biết phải giải thích với mọi người như thế nào về các hành vi của con	Có	Không	0	1	2	3
32	Không thể làm việc ở bên ngoài vì hành vi của con	Có	Không	0	1	2	3
33	Mâu thuẫn với con về bài tập về nhà	Có	Không	0	1	2	3
34	Nhận cuộc gọi từ nhà trường về vấn đề học tập của con	Có	Không	0	1	2	3
35	Nhận được phàn nàn từ bác tài xế xe bus	Có	Không	0	1	2	3
36	Có ít thời gian dành cho vợ/chồng hơn vì hành vi của con	Có	Không	0	1	2	3
37	Không nhận được hỗ trợ từ người khác trong việc xử lý các vấn đề của con	Có	Không	0	1	2	3
38	Không thể đưa con đến các nơi công cộng	Có	Không	0	1	2	3
39	Gặp khó khăn trong việc tìm một địa điểm phù hợp cho con sau giờ học	Có	Không	0	1	2	3
40	Con bạn làm bạn xấu hổ trước mặt người khác	Có	Không	0	1	2	3

Xin anh/chị vui lòng thêm các tình huống căng thẳng mà không được liệt kê ở trên và đánh giá mức độ của chúng.

-----	Có	Không	0	1	2	3
-----	Có	Không	0	1	2	3
-----	Có	Không	0	1	2	3
-----	Có	Không	0	1	2	3

Bản quyền thuộc về © 2001 James H. Johnson & Steven K. Reader

APPENDIX A. 3: Family support scale - English
FAMILY SUPPORT SCALE

Listed below are people and groups that oftentimes are helpful to members of a family raising a young child. This questionnaire asks you to indicate how helpful each source is to your family.

Please circle the response that best describes how helpful the sources have been to your family during the past 3 to 6 months. If a source of help has not been available to your family during this period of time, circle the NA (not available) response

How helpful each of the following been to you in term of raising your child(ren)		Not applicable	Not helpful at all	Sometimes helpful	Generally helpful	Very helpful	Extremely helpful
1.	My parent.....	NA	1	2	3	4	5
2.	My spouse or partner parents.....	NA	1	2	3	4	5
3.	My relatives/kin.....	NA	1	2	3	4	5
4.	My spouse or partner relative/kin.....	NA	1	2	3	4	5
5.	Spouse or partner.....	NA	1	2	3	4	5
6.	My friends.....	NA	1	2	3	4	5
7.	My spouse/ partner's friends.....	NA	1	2	3	4	5
8.	My own children.....	NA	1	2	3	4	5
9.	Other parents.....	NA	1	2	3	4	5
10.	Co-workers.....	NA	1	2	3	4	5
11.	Parents group.....	NA	1	2	3	4	5
12.	Social groups/clubs.....	NA	1	2	3	4	5
13.	Church members/ monks.....	NA	1	2	3	4	5
14.	My family or child's physician.....	NA	1	2	3	4	5
15.	Early childhood intervention program.	NA	1	2	3	4	5
16.	School/day care.....	NA	1	2	3	4	5
17.	Professional helpers (social worker, psychologist, teacher.....)	NA	1	2	3	4	5

18.	Professional agencies	NA	1	2	3	4	5
	(public health , social services, mental health).....						

Others:

19	.....	NA	1	2	3	4	5
20	.....	NA	1	2	3	4	5

APPENDIX A. 4: Family Support Scale - Vietnamese

THANG ĐO CÁC NGUỒN HỖ TRỢ ĐỐI VỚI GIA ĐÌNH

Dưới đây là danh sách các cá nhân và tổ chức thường tham gia hỗ trợ đối với gia đình trong việc nuôi dạy con nhỏ. Bảng hỏi này đề nghị anh/chị hãy chỉ ra mức độ có ích của mỗi một tổ chức hoặc cá nhân đó đối với việc nuôi dạy con.

Xin vui lòng khoanh tròn những lựa chọn hoặc phương án phù hợp nhất mô tả mức độ có ích của các cá nhân hoặc tổ chức dưới đây đối với anh/chị trong việc nuôi dạy con trong vòng 3-6 tháng qua. Nếu nguồn hỗ trợ nào dưới đây không tồn tại đối với gia đình anh/chị trong vòng 3-6 tháng qua thì khoanh tròn vào ô KB (Không biết)

Hãy cho biết mức độ có ích của các cá nhân, tổ chức dưới đây đối với anh/chị trong việc nuôi dạy (các) con:		Không biết	Hoàn toàn không có ích	Đôi khi có ích	Có ích	Rất có ích	Vô cùng có ích
1.	Bố mẹ tôi.....	KB	1	2	3	4	5
2.	Bố mẹ chồng/bố mẹ vợ tôi.....	KB	1	2	3	4	5
3.	Họ hàng của tôi.....	KB	1	2	3	4	5
4.	Họ hàng của chồng (vợ) tôi.....	KB	1	2	3	4	5
5.	Chồng/ vợ tôi.....	KB	1	2	3	4	5
6.	Bạn bè của tôi.....	KB	1	2	3	4	5
7.	Bạn bè của vợ/ chồng tôi.....	KB	1	2	3	4	5
8.	Chính các con của tôi.....	KB	1	2	3	4	5
9.	Bố mẹ của các trẻ khác.....	KB	1	2	3	4	5
10.	Đồng nghiệp.....	KB	1	2	3	4	5
11.	Các nhóm cha mẹ.....	KB	1	2	3	4	5
12.	Các nhóm/ câu lạc bộ xã hội.....	KB	1	2	3	4	5
13.	Các thành viên nhà thờ/ nhà chùa.....	KB	1	2	3	4	5
14.	Bác sĩ của con tôi hay bác sĩ gia đình..	KB	1	2	3	4	5
15.	Chương trình can thiệp sớm cho trẻ...	KB	1	2	3	4	5

16.	Trường học/ Nhà trẻ.....	KB	1	2	3	4	5
17.	Các nhà trợ giúp có chuyên môn (nhà công tác xã hội, nhà trị liệu, giáo viên.....)	KB	1	2	3	4	5
18.	Các cơ quan chuyên môn (y tế công cộng, các dịch vụ xã hội, hệ thống chăm sóc sức khỏe tâm thần...)	KB	1	2	3	4	5
Các tổ chức/ cá nhân khác:							
19	.....	KB	1	2	3	4	5
20	.....	KB	1	2	3	4	5

APPENDIX B: EMAIL CORESSPONDENCE REGARDING THE USE OF THE DISRUPTIVE BEHAVIOUR STRESS INVENTORY

Thu, Mar 6, 2014 at 8:55 AM

April, Hoang <namphuong.psy@gmail.com>

To: James Johnson <jhj@ufl.edu>

Dear Dr. Johnson,

My name is Nam Phuong, Hoang, I am a student under the New Zealand Asian Scholarship from Vietnam and I am now doing a Master's Degree in Psychology at Massey University in New Zealand under the supervision of Dr. Paul Merrick (email: P.L.Merrick@massey.ac.nz), who is the Associate Professor at school of Psychology, Albany Campus.

I have read your publications on the DBSI and think that your work is really gorgeous and I really want to use the DBSI as the main measure for my thesis of which, the topic is "Family social support and Parenting Stress in families of Children with Attention Deficit and Hyperactivity Disorder: A Vietnamese context",

As my study will be conducted in Vietnam, I would like to ask you and Dr. Reader for the permission to translate and adapt your scale into Vietnamese and use it.

I will be very appreciate if you two can allow me to use your scale in my study as this scale is the most appropriate for the ADHD population.

Attached here is my Research proposal. If you need any further information regard this request, please do not feel hesitate to contact me or my supervisor.

Thank you and hope to hear from you soon.

Yours sincerely,

Nam Phuong

Nam Phuong, Hoang (April, Hoang)
School of Psychology, Massey University,
Albany Campus, New Zealand,

Mobile: [\(+64\) 22 389 3234](tel:+64223893234)

Study proposal. Nam

 **Phuong.docx**

39K

Johnson,James H <jhj@ufl.edu>

Thu, Mar 6, 2014 at 1:30 PM

To: "April, Hoang" <namphuong.psy@gmail.com>

This looks like an interesting study and you have my permission to translate the DBSI into Vietnamese and use it for this specific research study.

I would ask that you send me a copy of the translated version as well as a copy of your research finding from your study when it is completed.

Best of luck in your studies and in conducting your study.

James H. Johnson, Ph.D., ABPP

[Quoted text hidden]

April, Hoang <namphuong.psy@gmail.com>

Thu, Mar 6, 2014 at 2:17 PM

To: "Johnson,James H" <jhj@ufl.edu>

Thank you so much Dr. James,

For sure that I will send you the copy of my research finding when it is finish. I will send you the copy of my translation in the next couples of days after I finish translating it and sent it to my colleagues back home for cross-checking on the language.

Thank you so much for you approval.

Yours sincerely,

Nam Phuong

APPENDIX C: STUDY SURVEY DOCUMENTS

APPENDIX C. 1: Research advertisement - English



MASSEY UNIVERSITY
COLLEGE OF HUMANITIES
AND SOCIAL SCIENCES
TE KURA PŪRENGA TANGATA

DOES YOUR CHILD HAVE ATTENTION DEFICIT AND HYPERACTIVITY DISORDER?

We are looking for parents who have a child between 4 to 12 years old that was professionally diagnosed with Attention Deficit and Hyperactivity Disorder (ADHD) to take part in our questionnaire survey investigating parents' experience of caring for a child with ADHD

What is the benefit of participating in this research?

You will receive a brief report summarizing the main findings of the project when it is completed.

You will contribute to the understanding of ADHD and its presentation in Vietnam and thereby provide valuable information to **assist health care professionals in improving their services to better benefits children with ADHD in Vietnam and their families.**

How long does it take to complete the survey? It is approximately 20 minutes

How will data be used? The data will be used only for the purposes of this project and your personal information will be kept secure and strictly confidential.

If you are interested in taking part, please, leave the investigator a message or email her at

Hoang Thi Nam Phuong

Phone: 0903 404 202

Email: namphuong.psy@gmail.com.

We will contact you to explain more about the study and discuss with you about the data collection method.

This research is being conducted as a part of Master of Art in Psychology program at Massey University, New Zealand by the principal investigator, Hoang Thi Nam Phuong, and supervised by Dr. Paul Merrick (p.j.merrick@massey.ac.nz)

Approved by the Massey University Human Ethics Committee: Northern, Application 14/006

APPENDIX C. 1: Research advertisement - Vietnamese



MASSEY UNIVERSITY
COLLEGE OF HUMANITIES
AND SOCIAL SCIENCES
TE KURA PŪKĒNGA TANGATA

CON BẠN CÓ

RỐI LOẠN TĂNG ĐỘNG GIẢM CHÚ Ý?

Chúng tôi đang tìm kiếm các phụ huynh có con trong độ tuổi từ 4 đến 12 được chẩn đoán với Rối loạn tăng động giảm chú ý (RLTĐGCY) để thực hiện bảng hỏi liên quan đến việc chăm sóc trẻ có RLTĐGCY.

Lợi ích của việc tham gia vào nghiên cứu này là gì?

Anh/chị sẽ có quyền nhận được báo cáo tóm tắt về kết quả khi nghiên cứu hoàn thành.

Anh/chị sẽ góp phần nâng cao hiểu biết về việc chăm sóc trẻ có RLTĐGCY ở Việt Nam và cung cấp các thông tin giá trị **hỗ trợ cho các nhà chuyên môn trong việc nâng cao chất lượng các chương trình trợ giúp cho các em và gia đình.**

Thời gian thực hiện bảng hỏi là bao lâu? Khoảng 20 phút

Thông tin anh/chị cung cấp sẽ được sử dụng như thế nào? Các thông tin cá nhân của anh/chị sẽ được bảo mật và chỉ sử dụng vào mục đích nghiên cứu.

Nếu như anh/chị muốn tham gia nghiên cứu cùng chúng tôi, xin anh/chị vui lòng nhắn tin hoặc gửi thư cho chúng tôi theo số điện thoại hoặc email của nhà nghiên cứu bên dưới.

Hoàng Thị Nam Phương

SĐT: 0934 404 202

Email: namphuong.psy@gmail.com

Khi nhận được tin nhắn/thư của anh/chị, chúng tôi sẽ liên lạc lại sớm nhất để trình bày cụ thể hơn về nghiên cứu và cách thức thực hiện bảng hỏi.

Nghiên cứu này được thực hiện trong khuôn khổ chương trình đào tạo thạc sĩ Tâm lý học tại trường Đại học Massey, New Zealand; được thực hiện bởi nghiên cứu viên chính Hoàng Thị Nam Phương, giám sát bởi Giáo sư Paul Merrick (p.l.merrick@massey.ac.nz)

Nghiên cứu đã được xét duyệt và thông qua bởi Hội Đồng Đạo Đức Nghiên Cứu của trường Đại học Massey, (Massey University Human Ethics Committee), New Zealand: Phía Bắc, Số hiệu 14/006.

Te Kūnenga
ki Pūrehuroa

School of Psychology – Te Kura Hinengaro Tangata
Private Bag 102904, North Shore Mail Centre, Auckland 0745, New Zealand T +64 9 414 0800 extn 41244 F +64 9 414 0831
www.massey.ac.nz

APPENDIX C. 3: Information Sheet - English



MASSEY UNIVERSITY
COLLEGE OF HUMANITIES
AND SOCIAL SCIENCES
TE KURA PŪKĒNGA TANGATA

FAMILY SOCIAL SUPPORT AND PARENTING STRESS IN FAMILIES OF CHILDREN WITH ATTENTION DEFICIT AND HYPERACTIVITY DISORDER: A VIETNAMESE CONTEXT

INFORMATION SHEET

You are invited to take part in a research project investigating parents' views of the support they receive when they have a child with Attention deficit and Hyperactivity Disorder (ADHD) and how caring for this child affects them. The research is being conducted as a part of Master of Art in Psychology at Massey University, New Zealand by the principal investigator, Hoang Thi Nam Phuong. Her contact details and those of her supervisor are listed below:

Principal Investigator:

Hoang Thi Nam Phuong

*School of Psychology
Massey University, Albany
Auckland, New Zealand*

*Tel: (+84) XXXXXX (Vietnam)
(+64) 22 389 3234 (New Zealand)*

Email: namphuong.psy@gmail.com

Research Supervisor:

A/Prof. Dr. Paul Merrick

*School of Psychology
Massey University, Albany
Auckland, New Zealand*

Tel: (+64) 9 4140800 Extn 41231

Email: p.l.merrick@massey.ac.nz

Why this research is important?

This study if successfully completed will contribute to the understanding of ADHD and its presentation in Vietnam; thereby provide valuable information to assist health care professionals in improving their services to better benefits those children and their families in Vietnam.

Who can participate in this research?

We are looking for parents, of whom, their child is between 4 and 12 years old and was professionally diagnosed with ADHD.

How will the study be processed?

You will be given questionnaires asking about your experience of family support and the difficulties you have to face in managing your child's behaviors. This procedure will take approximately 20 minutes. Your name and personal details will remain anonymous and your responses will be confidential to the researcher and her supervisor.

What is the risks and benefits of participating in this study?

You will have the right to receive a brief report summarizing the main findings of the project when it is completed via mail or email if you wish. We anticipate this will be in January, 2015.

However, the principal benefit of taking part in this study is that you will contribute to the understanding of ADHD care in Vietnamese families and thereby provide valuable information to assist health care professionals in the planning and more effective management of this disorder.

How will the data be used and protected?

The data will be used only for the purposes of this project and no individual will be identified. Only the investigators of the study will have access to personal information and this will be kept secure and strictly confidential. Participants will be identified only by a study identification number. Results of this project may be published or presented at conferences or seminars. No individual will be able to be identified. At the end of this study the list of participants and their study identification number will be disposed of. Any raw data on which the results of the project depend will be retained in secure storage for 5 years, after which it will be destroyed.

Participant's Rights

You are under no obligation to accept this invitation. If you decide to participate, you have the right to:

- decline to answer any particular question;
- withdraw from the study up to submission of the completed questionnaires. .
- ask any questions about the study at any time during participation;
- provide information on the understanding that your name will not be used,
- be given access to a summary of the project findings when it is concluded.

Research project Contacts

If you have any further questions or concerns about the project, either now or in the future, please contact either Ms. Hoang Thi Nam Phuong or Research supervisor. Dr. Paul Merrick (details on page 1).

Committee Approval Statement

This project has been reviewed and approved by the Massey University Human Ethics Committee: Northern, Application 14/006. If you have any concerns about the conduct of this research, please contact Dr Andrew Chrystall, Chair, Massey University Human Ethics Committee: Northern, telephone 09 414 0800 x 43317 email: humanethicsnorth@massey.ac.nz.

APPENDIX C. 4: Information Sheet - Vietnamese



MASSEY UNIVERSITY
COLLEGE OF HUMANITIES
AND SOCIAL SCIENCES
TE KURA PŪKĒNGA TANGATA

KHẢO SÁT VỀ CÁC NGUỒN HỖ TRỢ XÃ HỘI ĐỐI VỚI VIỆC CHĂM SÓC TRẺ CÓ RỐI LOẠN TĂNG ĐỘNG GIẢM CHÚ Ý VÀ ẢNH HƯỞNG CỦA NÓ ĐẾN HOẠT ĐỘNG LÀM CHA MẸ: NGHIÊN CỨU TRONG BỐI CẢNH VIỆT NAM

THÔNG TIN ĐỀ TÀI

Nghiên cứu này được thực hiện trong khuôn khổ chương trình đào tạo thạc sĩ Tâm lý học tại Đại học Massey, New Zealand, được thực hiện bởi nghiên cứu viên chính Hoàng Thị Nam Phương. Thông tin của nghiên cứu viên và giám sát nghiên cứu như sau:

Nghiên cứu viên chính:
Hoàng Thị Nam Phương
Khoa Tâm lý học
Đại học Massey- Massey University,
Albany, Auckland, New Zealand
SDT: (+84 1264669541 (Việt Nam)
(+64) 22 389 3234 (New Zealand)
Email: namphuong.psy@gmail.com

Giám sát nghiên cứu
Phó Giáo sư Paul Merrick
Khoa Tâm lý học
Đại học Massey- Massey University,
Albany, Auckland, New Zealand
SDT: (+64) 9 4140800 Extn 41231
Email: p.l.merrick@massey.ac.nz

Vì sao nghiên cứu này cần được thực hiện?

Nghiên cứu này nếu thực hiện một cách thành công sẽ góp phần nâng cao hiểu biết về việc chăm sóc trẻ có RLTĐGCY ở Việt Nam và cung cấp các thông tin giá trị hỗ trợ cho các nhà chuyên môn trong việc nâng cao chất lượng các chương trình trợ giúp cho các em và gia đình.

Ai có thể tham gia vào nghiên cứu của chúng tôi?

Chúng tôi đang tìm kiếm 85 phụ huynh có con em trong độ tuổi từ 4 đến 12 và có rối loạn tăng động giảm chú ý.

Quy trình thực hiện nghiên cứu như thế nào?

Người tham gia nghiên cứu sẽ trả lời bảng hỏi khảo sát về các nguồn hỗ trợ xã hội đối với gia đình và những khó khăn khi nuôi dạy con. Tổng thời gian để hoàn thành bảng hỏi là 20 phút. Các thông tin cá nhân và các câu trả lời của người tham gia nghiên cứu sẽ được bảo mật bởi nhà nghiên cứu và giám sát nghiên cứu

Các thông tin mà người tham gia nghiên cứu cung cấp sẽ được sử dụng như thế nào?

Dữ liệu thu thập được trong nghiên cứu này chỉ được sử dụng với mục đích khoa học và danh tính của người tham gia không được xác định trong đề tài. Tất cả các thông tin cá nhân của người tham gia nghiên cứu sẽ được bảo mật một cách tuyệt đối và chỉ có các nhà nghiên cứu thuộc đề tài này được quyền tiếp cận. Mỗi một phiếu trả lời trong nghiên cứu sẽ được xác định trong bảng một con số. Kết quả của nghiên cứu có thể được công bố hoặc trình bày tại các hội thảo hoặc các buổi thuyết trình khoa học, tuy nhiên, tất cả các thông tin của người tham gia nghiên cứu sẽ không được tiết lộ.

Khi nghiên cứu này hoàn thành, tất cả các thông tin về người tham gia trả lời phiếu hỏi và các con số xác định phiếu trả lời sẽ được xóa bỏ. Các số liệu thô của nghiên cứu sẽ được cất giữ một cách bảo mật trong vòng 5 năm, sau đó cũng sẽ được tiêu hủy.

Quyền lợi của người tham gia nghiên cứu

Việc tham gia vào nghiên cứu này hoàn toàn mang tính chất tự nguyện. Nếu phụ huynh đồng ý tham gia cùng với chúng tôi, họ có những quyền lợi sau:

- Từ chối trả lời một câu hỏi bất kỳ trong phiếu hỏi mà họ không muốn trả lời.
- Rút khỏi nghiên cứu bất cứ lúc nào trước khi bảng hỏi được gửi về cho nhà nghiên cứu
- Hỏi bất cứ câu hỏi nào có liên quan đến nghiên cứu trong quá trình thực hiện bảng hỏi
- Được bảo mật về thông tin cá nhân
- Được quyền nhận tóm tắt kết quả nghiên cứu khi nghiên cứu hoàn tất.

Tuyên bố phê duyệt đề tài

Đề tài này đã được xét duyệt và thông qua bởi Hội Đồng Đạo Đức Nghiên Cứu của trường Đại học Massey, New Zealand (Massey University Human Ethics Committee),: Phía Bắc, Số hiệu 14/006. Nếu như Người tham gia nghiên cứu có bất cứ thắc mắc nào liên quan đến quá trình thực hiện nghiên cứu này, xin liên hệ Ngài *Andrew Chrystall*, Chủ tịch Hội Đồng Đạo Đức Nghiên Cứu của trường Đại học Massey: Phía Bắc, Số điện thoại (+64) 9 414 0800 nhánh 43317 hoặc email: humanethicsnorth@massey.ac.nz

APPENDIX C. 5: Consent form - English



MASSEY UNIVERSITY
COLLEGE OF HUMANITIES
AND SOCIAL SCIENCES
TE KURA PŪKENGĀ TANGATA

FAMILY SOCIAL SUPPORT AND PARENTING STRESS IN FAMILIES OF CHILDREN WITH ATTENTION DEFICIT AND HYPERACTIVITY DISORDER: A VIETNAMESE CONTEXT

PARTICIPANT CONSENT FORM - INDIVIDUAL

I have read the Information Sheet and have had the details of the study explained to me. My questions have been answered to my satisfaction, and I understand that I may ask further questions at any time.

I agree to participate in this study under the conditions set out in the Advertisement.

Signature:

Date:

Full Name - printed

Te Kōwhiri
ki Pārehuroa

School of Psychology – Te Kura Hinengaro Tangata
Private Bag 102904, North Shore Mail Centre, Auckland 0745, New Zealand T +64 9 414 0800 extn 41244 F +64 9 414 0831
www.massey.ac.nz

APPENDIX C. 6: Consent form - Vietnamese



MASSEY UNIVERSITY
COLLEGE OF HUMANITIES
AND SOCIAL SCIENCES
TE KURA PŪKĒNGA TANGATA

ĐỀ TÀI NGHIÊN CỨU:

**KHẢO SÁT VỀ CÁC NGUỒN HỖ TRỢ XÃ HỘI ĐỐI VỚI VIỆC CHĂM
SÓC TRẺ CÓ RỐI LOẠN TĂNG ĐỘNG GIẢM CHÚ Ý VÀ ẢNH HƯỞNG
CỦA NÓ ĐẾN HOẠT ĐỘNG LÀM CHA MẸ:
NGHIÊN CỨU TRONG BỐI CẢNH VIỆT NAM**

THỎA THUẬN THAM GIA NGHIÊN CỨU- MẪU CÁ NHÂN

Tôi đã đọc kỹ các thông tin về nghiên cứu và đã được giải thích đầy đủ về nghiên cứu. Các thắc mắc của tôi đã được giải đáp thỏa đáng và tôi hiểu rằng mình có thể đặt thêm câu hỏi nếu cần.

Tôi đồng ý tham gia vào nghiên cứu này với những điều kiện được nêu trong phần thông tin về nghiên cứu

Chữ ký

Ngày

Họ và tên

Te Kunenga
ki Pūrehuroa

School of Psychology – Te Kura Hinengaro Tangata
Private Bag 102904, North Shore Mail Centre, Auckland 0745, New Zealand T +64 9 414 0800 extn 41244 F +64 9 414 0831
www.massey.ac.nz

APPENDIX D: ETHICAL APPROVAL

APPENDIX D. 1: Human Ethics Approval Application



MASSEY UNIVERSITY
ALBANY

11 March 2014

Hoang Thi Nam Phuong
c/- Associate-Professor P Merrick
School of Psychology
Massey University
Albany

Dear Nam Phuong

HUMAN ETHICS APPROVAL APPLICATION – MUHECN 14/006

Family Social Support and Parenting Stress in Family of Children with Attention Deficit & Hyper Activity Disorder: A Vietnamese Context

Thank you for your application. It has been fully considered, and approved by the Massey University Human Ethics Committee: Northern.

Approval is for three years. If this project has not been completed within three years from the date of this letter, a reapproval must be requested.

If the nature, content, location, procedures or personnel of your approved application change, please advise the Secretary of the Committee.

Yours sincerely

Dr Andrew Chrystall
Acting Chair
Human Ethics Committee: Northern

cc Associate-Professor P Merrick

Te Kunenga
ki Pārehuroa

Research Ethics Office
Private Bag 102 904, Auckland, 0745, New Zealand Telephone +64 9 414 0800 ex 43279 humanethicsnorth@massey.ac.nz

APPENDIX D. 2: Email correspondence regarding the change of project title

Tue, Oct 28, 2014 at 12:25 AM

April, Hoang <namphuong.psy@gmail.com>

To: "Turner, Merle" <M.L.Turner@massey.ac.nz>

Dear Merle,

I am April, student in Psychology major under the supervision of Professor Paul Merrick.

A couple of months ago, I got the Ethic approval for the thesis name "Family social support and parenting stress in family of children with ADHD: A Vietnamese context"

Today I write you as I have one question that need your advice. Hope that you can help me.

As I went with my thesis, I came to realize that my thesis tittle is quite long and general, I want to adjust it a little (just the title, not the content of study) so that it could better express my thesis.

I have not come up with the final decision yet, but the change will not be major, it may be just like changing from family social support and parenting stress to: "Parenting stress and social support. and rather than "a vietnamese context", I want to make it shorter by: " family of children with ADHD in Vietnam"

With this change, I am wondering if I need to seek for the approval from Ethic committee and if so, what should I do?

I am sorry for the problem.

Hope to hear from you and wishing you a good day,

Yours sincerely,

April

Nam Phuong, Hoang (April, Hoang)
School of Psychology, Massey University,
Albany Campus, New Zealand,

Mobile: [\(+64\) 22 389 3234](tel:+64223893234)

Turner, Merle <M.L.Turner@massey.ac.nz>

Tue, Oct 28, 2014 at 10:25 AM

To: "April, Hoang" <namphuong.psy@gmail.com>

Cc: "Merrick, Paul" <P.L.Merrick@massey.ac.nz>

Hi April

If the content of your application has not changed in any way other than the project title, you just need to send me an email confirming this and giving me the new Title. This will be put on your file.

Kind regards

Merle

Merle Turner

Administrator

Massey University Human Ethics Committee Northern

P O Box 102 904 NSMC AUCKLAND

Courier Address: Room 3.001B, Quadrangle A Building,

Massey University at Albany

Gate 1 State Highway 17 Albany AUCKLAND 0745

T (09) 414 0800, extn 43279

F (09) 414 0814, internal 9414

email M.L.Turner@massey.ac.nz

<http://humanethics.massey.ac.nz/>

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From: April, Hoang [mailto:namphuong.psy@gmail.com]
Sent: Tuesday, 28 October 2014 12:25 a.m.
To: Turner, Merle
Subject: 14/006- About changing the project official name

[Quoted text hidden]

April, Hoang <namphuong.psy@gmail.com>

Tue, Oct 28, 2014 at 12:03 PM

To: "Turner, Merle" <M.L.Turner@massey.ac.nz>

Thank you Merle,

The content will not be changed in any way, definitely. I will email you as soon as I and my supervisor come up with the final decision of the thesis title.

Thank you so much once again.

Yours sincerely,

April

Nam Phuong, Hoang (April, Hoang)
School of Psychology, Massey University,
Albany Campus, New Zealand,

Mobile: [\(+64\) 22 389 3234](tel:+64223893234)

April, Hoang <namphuong.psy@gmail.com>

Thu, Jan 29, 2015 at 1:02 PM

To: J.M.J.Anderson@massey.ac.nz

Cc: Paul Merrick <P.L.Merrick@massey.ac.nz>

Dear Anderson,

My name is Thi Nam Phuong, Hoang, a student from School of Psychology and my application number is 14/006.

Two months ago I wrote Merle about changing my project title and she told me to send her the new title once I come up with one so she can update it.

But I've just come to realize that Merle is not working at the position any more so hope that you can help me.

I did discuss with my supervisor and come up with this one:

"PARENTING STRESS IN FAMILIES OF CHILDREN WITH ATTENTION DEFICIT AND HYPERACTIVITY DISORDER: HOW DEMOGRAPHICS AND SOCIAL SUPPORT INFLUENCE PARENTING STRESS: A STUDY FROM VIETNAM"

Could you please help me to update it in my file?

The content of my application has not changed, but this title is more specific and better describe what I was doing. Please do not feel hesitate to contact me if you have any question regarding this change.

Thank you so much and hope to hear from you!

Yours sincerely,

Nam Phuong

Nam Phuong, Hoang (April, Hoang)
School of Psychology, Massey University,
Albany Campus, New Zealand,

Mobile: [\(+64\) 22 389 3234](tel:+64223893234)

Anderson, Jeanette <J.M.J.Anderson@massey.ac.nz>

Thu, Jan 29, 2015 at 1:04
PM

To: "April, Hoang" <namphuong.psy@gmail.com>

Hi April

I will add the correspondence to your file as per Merle's advice in the email on 28/10/14

Kind Regards

Jeanette

Jeanette Anderson

Administrator

Massey University Human Ethics Committee Northern

P O Box 102 904 NSMC AUCKLAND

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Massey University at Albany

Gate 1 State Highway 17 Albany AUCKLAND 0745

T (09) 414 0800, extn 43278

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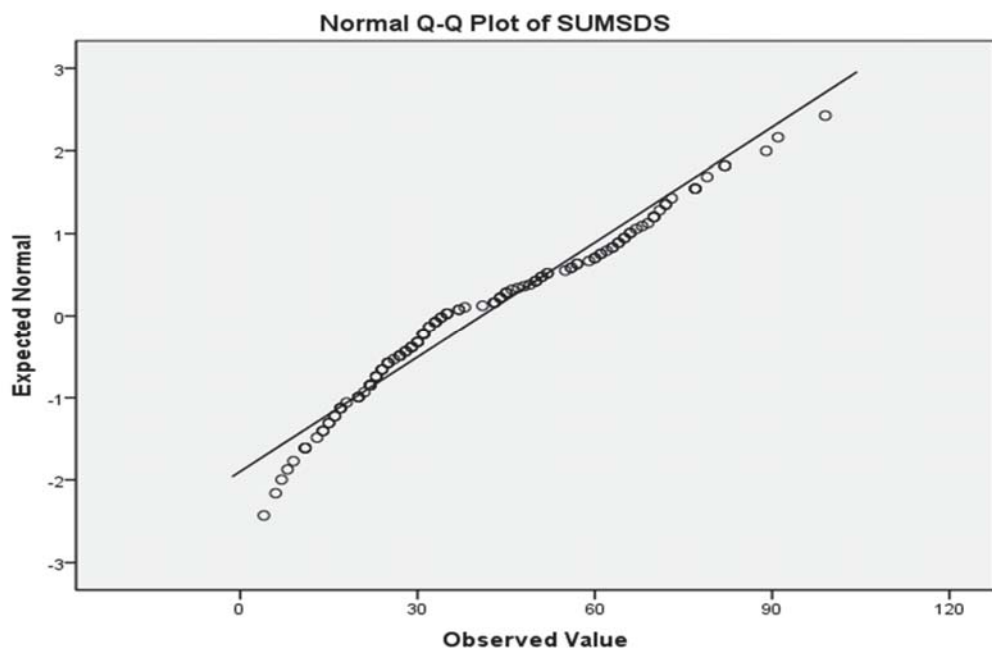
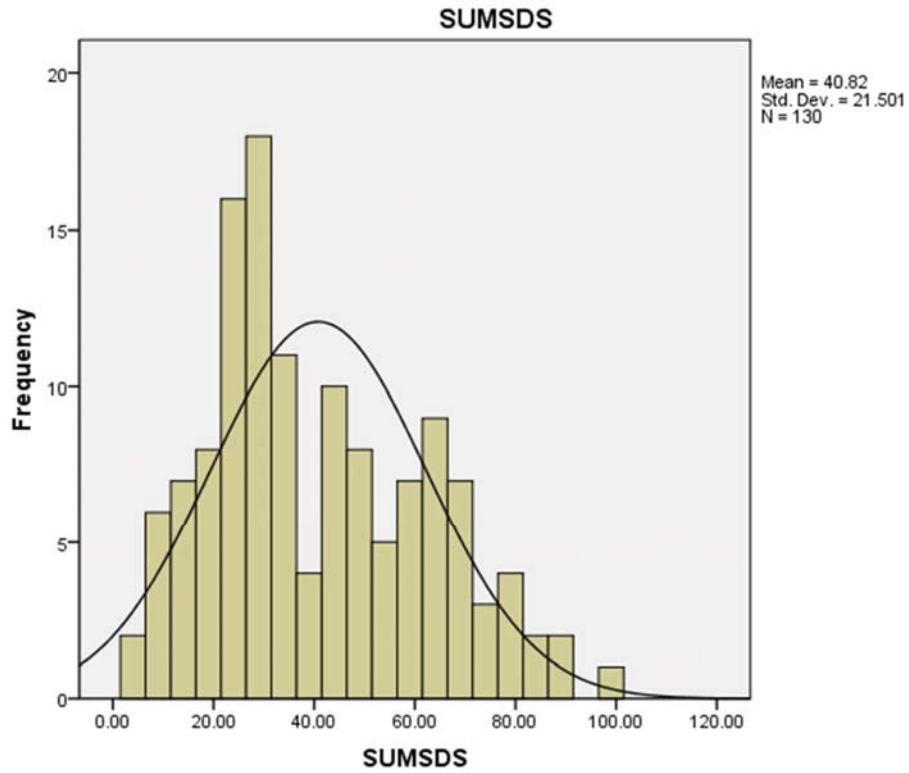
email j.m.j.anderson@massey.ac.nz

<http://humanethics.massey.ac.nz/>

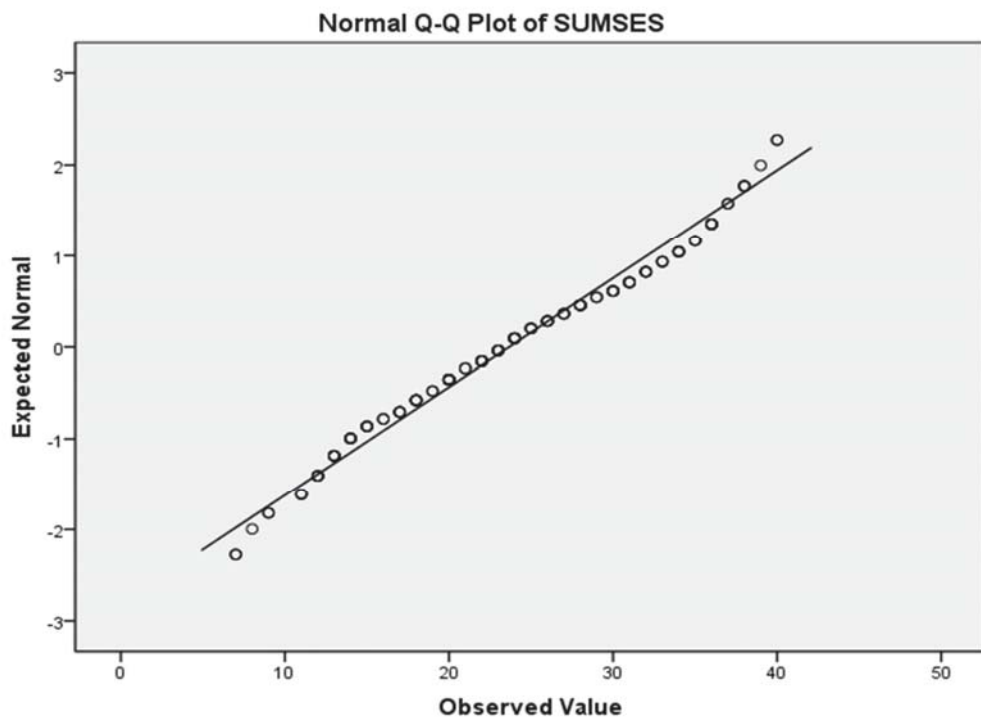
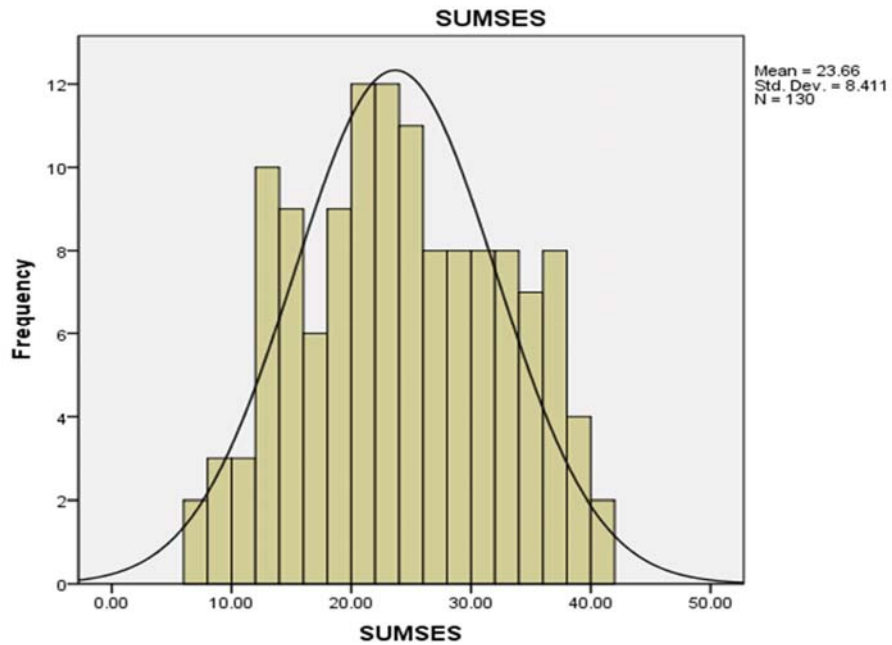
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APPENDIX E: DISTRIBUTION OF DBSI

APPENDIX E. 1: Distribution histogram and Normal Q-Q Plot of Stress Degree Subscale



APPENDIX E. 1: Distribution histogram and Normal Q-Q Plot of Stress Experience Subscale



**APPENDIX F: SUPPLEMENTARY PARENT STRESS DIFFERENCES IN TERM
OF DEMOGRAPHICS**

		SES				SDS			
		Mean	SD	t/F	p	Mean	SD	t/F	p
Gender	Male	20.48	9.00	.4121	.025	32.30	19.59	.224	.020
	Female	24.55	8.11			43.14	21.59		
Age	20-35	22.66	7.85	1.075	.344	39.95	22.19	.302	.740
	36-45	24.42	8.76			41.00	20.51		
	>45	26.11	10.01			45.89	24.14		
Occupation	Professional	23.51	8.53	1.559	.203	38.81	19.48	.839	.475
	Non-professional	22.38	7.68			40.90	22.84		
	Home duties	23.52	7.83			42.43	23.53		
Marital status	Married	24.18	8.41	2.230	.112	41.70	21.27	.975	.380
	Separate/Divorce	18.20	8.34			31.00	21.38		
	Single mother/father	19.88	7.00			34.77	24.66		
Living arrangement	In their own place	24.96	8.67	2.691	.072	44.37	22.57	3.034	.052
	With parent(s)/spouse's parent(s)	21.65	7.74			34.83	18.92		
	Other relatives	20.50	6.53			35.66	14.85		
Geographical location	Hanoi	22.88	8.37	2.938	.057	35.67	19.46	8.252	.000

	Ho Chi Minh	21.94	7.85			36.18	19.73		
	Other cities	26.19	8.53			51.51	22.03		
Number of children	1	23.55	7.84	3.537	.132	43.02	21.28	2.029	.136
	2	22.66	8.34			37.80	21.17		
	> 2	30.00	8.29			50.70	22.14		
Child Gender	Male	23.43	8.47	-.874	.384	40.42	21.57	-.659	.511
	Female	25.46	8.22			44.33	22.01		
Age	4-6	22.20	7.98	1.860	.160	38.47	21.78	1.100	.336
	7-9	24.34	8.93			40.79	21.51		
	10-12	25.67	8.20			45.78	20.76		
Birth order	1	23.58	7.87	.416	.660	41.04	21.39	.840	.434
	2	23.51	9.64			39.34	22.17		
	4	29.00	.00			59.50	3.53		
Time since initial diagnosis	1-6 months	19.75	7.56	4.484	.005	33.91	18.79	1.815	.148
	6-12 months	19.30	8.29			34.61	24.11		
	1-3 years	24.36	7.35			41.50	20.47		
	more than 3 years	25.87	8.76			44.93	22.44		
Medical utilization	Yes	26.75	8.60	3.326	.001	47.89	21.85	.201	.004
	No	21.85	7.79			36.6707	20.29		
Psychotherapy attendance	Yes	25.62	8.57	2.91	.004	42.98	22.06	1.22	.222
	No	21.44	7.69			38.36	20.76		

APPENDIX G: SUPPLEMENTARY MULTIVARIATE REGRESSION

APPENDIX G. 1: Intercorrelation between SES, SDS scores, demographic variables and social supports

	1	2	3	4	5	6	7	8	9	10	11	12
1 SUMSES	1											
2 SUMSDS	.854**	1										
3 Parent gender	.197*	.205*	1									
4 Living arrangement	-.197*	-.197*	.076	1								
5 Geographical location	.157	.301**	.106	-.005	1							
6 Time since initial diagnosis	.296**	.200*	.065	-.054	-.008	1						
7 Current medical utilization	-.282**	-.253**	.038	-.019	-.191*	-.333**	1					
8 Psychotherapy attendance	-.249**	-.108	-.009	.032	.186*	-.478**	.368**	1				
9 Nuclear family support	.133	.037	.051	-.084	-.111	-.015	-.044	-.082	1			
10 Extended family support	.031	-.103	-.068	.196*	-.251**	-.088	-.132	-.170	.301**	1		
11 Community support	.155	.025	.013	-.016	-.359**	.047	-.067	-.313**	.362**	.616**	1	
12 Professional support	.411**	.344**	.079	-.119	.115	.353**	-.384**	-.464**	.087	.028	.289**	1

*p<.05; **p<.01 (two - tailed)

APPENDIX G. 2: Regression model summary with SES as dependent variable

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.472 ^a	.223	.185	7.59174	.223	5.888	6	123	.000
2	.533 ^b	.284	.224	7.41100	.061	2.518	4	119	.045

a. Predictors: (Constant), time since initial diagnosis, Geographical location, living arrangement, gender, medical utilization, psychotherapy attendance.

b. Predictors: (Constant), time since initial diagnosis, geographical location, living status, gender, medical utilization, Psychotherapy attendance, nuclear, extend, professional, community.

APPENDIX G. 3: Regression model summary with SDS as dependent variable

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.474 ^a	.225	.187	19.38923	.225	5.937	6	123	.000
2	.514 ^b	.264	.203	19.19868	.040	1.613	4	119	.175

a. Predictors: (Constant), time since initial diagnosis, Geographical location, living arrangement, gender, medical utilization, psychotherapy attendance.

b. Predictors: (Constant), time since initial diagnosis, geographical location, living status, gender, medical utilization, psychotherapy attendance, nuclear, extend, professional, community.