

A CASE STUDY OF CHILDREN'S ATTENTION DEFICIT IN LEARNING  
FROM MOTHERS' PERSPECTIVES

HEW LI PEI

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## **DEDICATION**

This thesis is dedicated to my father, who taught me that the best kind of knowledge to have is that which is learned for its own sake. It is also dedicated to my mother, who taught me that even the largest task can be accomplished if it is done one step at a time.

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## ABSTRACT

The purpose of this study is to identify the factors that affect children attention deficit in learning from mothers' perspectives. This study explored mother's perspective on attention deficits, investigated the knowledge or understanding of mothers on attention deficit and explored the factors that affects children's attention deficit as perceived by mothers. Qualitative research is usually based on the experience, meaning and opinions and beliefs of participants (Hammarberg, et.al.,2016). This study used qualitative method to understanding of the mother's perspective on attention deficit. The data collection method in this qualitative research is semi-structured interviews. The mothers of the two selected students will be interviewed for this research. Researcher seeks participants' views on the study through interviews, or seeks background information or institutional views with key insiders. The researcher carried out one on-one interview with a mother of the study at a time. The interview question will translate into Chinese. As a response to COVID-19 pandemic, the interviews were carried out by using video call and were audio-recorded and transcribed. The time of interviews is within 30-40minutes. Finding of the study shows that longer screening time of electronic devices increase children's behavioral problems, including attention deficit disorder. Home environment has a great influence on students' academic performance; children cannot concentrate in chaotic and noisy environment. Good parent-children interaction can help preschooler have good control, motivation and attention. Sleep can enhance creativity and cognitive function such as people's mental ability to learn, think, reason, remember, solve problems, make decisions, and concentrate. Sleep can reactive memory, the connections between brain cells are strengthened, and short-term memory is transformed into long-term memory. On the contrary, if a person does not have enough quality sleep, they will slowly become forgetful (Pacheco, D. ,2020). Premature birth is very likely to cause children to have attention deficit problems. The problem will become more and more obvious as the child gets older. The study of Stevens, (2020) mentioned that children with attention disorder take too much high-sugar foods, and their inability to concentrate is more obvious and more serious. The artificial colors, additives, and preservatives mix in candies, caffeine-containing beverages or foods can stimulate children's mood and affect concentration. Several implications are drawn from the findings and some recommendations for this research and further research on attention deficit are provided in the final chapter of this study.

## ABSTRAK

Tujuan kajian ini adalah untuk mengenal pasti faktor-faktor yang mempengaruhi defisit perhatian murid dalam pembelajaran dari perspektif ibu. Kajian ini akan meneroka perspektif ibu mengenai kekurangan perhatian, menyiasat pengetahuan atau pemahaman ibu mengenai defisit perhatian dan meneroka faktor-faktor yang mempengaruhi defisit perhatian anak seperti yang dirasakan oleh ibu. Penyelidikan kualitatif biasanya berdasarkan pengalaman, makna dan pendapat serta kepercayaan peserta (Hammarberg, et.al., 2016). Kajian ini menggunakan kaedah kualitatif untuk memahami perspektif ibu mengenai kekurangan perhatian. Kaedah pengumpulan data dalam penyelidikan kualitatif ini adalah temu bual separa berstruktur. Ibu dua pelajar terpilih akan ditemu ramah untuk penyelidikan ini. Penyelidik meminta pandangan peserta mengenai kajian ini melalui temu bual, atau mencari maklumat latar belakang atau pandangan institusi dengan orang dalam utama. Penyelidik melakukan satu-satu temu bual dengan ibu kajian pada satu masa. Soalan temu ramah akan diterjemahkan ke dalam bahasa Cina. Sebagai tindak balas terhadap pandemi COVID-19, wawancara dilakukan dengan menggunakan panggilan video dan dirakam audio dan ditranskrip. Masa temu duga adalah dalam 30-40 minit. Hasil kajian menunjukkan bahawa masa saringan alat elektronik yang lebih lama meningkatkan masalah tingkah laku kanak-kanak, termasuk gangguan defisit perhatian. Persekitaran rumah mempunyai pengaruh yang besar terhadap prestasi akademik pelajar; kanak-kanak tidak dapat bertumpu di persekitaran yang huru-hara dan bising. Interaksi ibu bapa-anak yang baik dapat membantu kanak-kanak prasekolah mempunyai kawalan, motivasi dan perhatian yang baik. Tidur dapat meningkatkan kreativiti dan fungsi kognitif seperti kemampuan mental orang untuk belajar, berfikir, akal, ingat, menyelesaikan masalah, membuat keputusan, dan menumpukan perhatian. Tidur boleh ingatan reaktif, hubungan antara sel otak diperkuat, dan ingatan jangka pendek diubah menjadi memori jangka panjang. Sebaliknya, jika seseorang tidak cukup tidur berkualiti, mereka perlahan-lahan akan menjadi pelupa (Pacheco, D., 2020). Kelahiran pramatang sangat mungkin menyebabkan kanak-kanak mengalami masalah kekurangan perhatian. Masalahnya akan menjadi semakin jelas apabila anak semakin tua. Kajian Stevens, (2020) menyebutkan bahawa kanak-kanak dengan gangguan perhatian mengambil terlalu banyak makanan tinggi gula, dan ketidakupayaan mereka untuk berkonsentrasi lebih jelas dan lebih serius. Warna, aditif, dan pengawet tiruan yang dicampurkan dalam gula-gula, minuman atau makanan yang mengandungi kafein dapat merangsang mood kanak-kanak dan mempengaruhi tumpuan. Beberapa implikasi diambil dari penemuan dan beberapa cadangan untuk penyelidikan ini dan penyelidikan lebih lanjut mengenai defisit perhatian diberikan dalam bab terakhir kajian ini.

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## **LIST OF ABBREVIATIONS**

ADD	-	Attention Deficit Disorder
ADHD	-	Attention Deficit Hyperactivity Disorder
TV	-	Television
LBW	-	Low Birth Weight
VLBW	-	Very Low Birth Weight
ELBW	-	Extremely Low Birth Weight
VitD	-	Vitamin D
MCO	-	Movement Control Order
CHILD	-	Canadian Healthy Infant Longitudinal Development
SPM	-	Sijil Pelajaran Malaysia

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# CHAPTER 1

## INTRODUCTION

### 1.1 Introduction

Most people are confused with attention deficit disorder (ADD) and attention deficit hyperactivity disorder (ADHD). ADD and ADHD are two different conditions (Russo , 2019). ADD is usually used to describe the symptoms of a person's inability to concentrate, distracted attention and poor working memory. ADD can be categorized into two types: ADD involves hyperactivity and ADD without hyperactivity (Logsdon, 2020). In addition, students with ADD may have learning problems and have disciplinary problems in the school (Logsdon, 2020). On the other hand, ADHD is used to describe a person's hyperactivity and impulsivity and it is diagnosed as Predominantly Hyperactive Type ADHD. People with ADD are usually forgetful, lose things easily, and cannot follow instruction or rules mainly because they have not been diagnosed clinically. They often daydream when they are in class or at work (Bhandari, 2019). Contrary, in most cases, people with ADHD have been clinically diagnosed. They are more fidgeting, impulsive, energetic and impatient to wait. People with this type of ADHD tend to exhibit behavioral problems in daily life (Bhandari, 2019).

Learning is the process of memorizing, integrating and applying new information and concepts. If people want to remember information eventually, they must pay attention to the information. After the memorization of information, they need to integrate the information and apply the new information and concept in their daily life (Rose, 2015).

Attention is the process of prioritizing and applying information and concepts. We cannot understand, learn or remember that which we do not first

attend to (Thorne and Thomas, 2019). Educators used the term “attention” all the time, but what processes or abilities does that concept really refer to? The definition of attention in psychology is the concentration of awareness on some phenomenon to the exclusion of other stimuli. Attention is to understand the present and the present through focus and perception. Edward Bradford Titchener (1867-1927), the early psychologists said: “Attention is to consciously understand the content, thereby affecting the quality of conscious experience.” In the following years, people seldom emphasize to the subjective elements of consciousness, but more to the behavior patterns. Although people experience depends on the way people direct their attention, it’s clear that they cannot fully control this direction. For example, it is difficult for an individual to focus on a task, a conversation, or a series of events. Sometimes, an unexpected event “attracts” one’s attention, rather than actively pointing to it.

Attention is related to personal direct experience; this is the current state of consciousness. Of course, there are always countless events happening in the world, and every time it affects a person’s senses. Some internal events that affect attention also occur inside the body, such as the representation of past time stored in past memories, but they can also be achieved under appropriate circumstances (McCallum,2015).

Although the current consciousness can be expected to be the sum of all these events at any given moment, it is clearly not the case. In this huge potential field of experience, a limited subset of personal focus constitutes the subjective field of consciousness. The reason for this restriction can be determined. The brain can be defined as the “manager” that controlled and regulated inputs and stored the experiences. These experience helped individuals organized appropriate response patterns when facing problems. The impressive processing power of the brain was limited. At any time, it was impossible to consciously experience all available events and information. Likewise, multiple different actions were impossible to initiate at the same time. How to choose the appropriate input, intermediate process and output



subset to attract attention and attract available resources has become one of the problems (McCallum,2015).

If there is an attention insufficient, the brain will not be able to prioritize information and the student will not be able to use the concepts learned in school (Turton, 2014). In other words, when students are unable to concentrate on class or activities, or when their attention is shifted to external stimuli, learning will not happen.

In a study published in 2001, Sandberg and Hofferth analyzed two surveys with data that showed that American children aged 3-12 years old spend more time with their mother than their fathers. Mother and child develop a strong maternal bond during pregnancy. By comparing with fathers, mothers spend more time with their children. This mean that mothers have a lot of time to learn more about their children, from their different emotions and reactions to their strong likes and dislikes. (Lafuente, 2014).

## **1.2 Problem of Background**

Nowadays, many students cannot keep their attention throughout the class. In an average public school classroom, there are a large number of students, which can be distracting, and it is easy for such a young student to find their thoughts wandering (Briggs, 2014) . Learning depends to attention, and mind wandering is always happening in the classroom. (Szpunar, Moulton and Schacter, 2013). Bloom (1913-1999) believed if the students are given more time and their attention is focused on learning tasks and activities, students' learning may be better, and their performance will be better.

Lack of attention in young children is one of the most common and common behaviors among young children. Researchers, educators and parents began to pay attention to this phenomenon. Asimi (2008) said :“This has negative impacts on children’s learning and cognitive level.” It has aroused great interest among psychologists because it solves abnormal behaviors through learning (Ali, 2009). As we all know, students’ attention to the teacher means that they can release all external stimuli through the classroom, whether it is caused by classmates or other noise or interference, and they can concentrate on following the teacher’s instructions to complete the specified tasks (Botros, 2009). As we know, these external stimuli will hinder young children from completing school tasks especially for those children with attention deficit (Assaid, 2003).

With the development of technology, the attention span of students in the 21<sup>st</sup> century is different from that of students 10 or 20 years ago. Children with attention-deficit suffer from learning problems, which are obvious in their learning stage (Epstein, et.al., 1991). They have a short time of concentration, or they may have hyperactivity disorder. When they are doing the tasks assigned by the teacher or listening to the teacher, it is difficult for them to stay focused throughout the while learning process (Al-Asimy, 2008). Therefore Botros (2009) showed that the symptoms of lack of attention will appear in students under different circumstances, indicating maladjustment, whether it is a normal student lacking attention or a student receiving special education. Children with attention deficit are difficult to go into details, make many mistakes that shouldn’t be made in school homework or other activities, and forget much of the content. Besides that, they were easily distracted by disturbing stimulation and difficult to focus for long periods of time on the activities or task they perform or participate in. When teacher talked to them directly, they seem like suffer from a difficulty in listening, they did not hear the teacher. Perhaps their minds were wandering in their world. It was hard to arrange or order task and activities for this group of children because they avoided participating in activities especially that require mental effort. Whether they were at school or home, they also do not follow the instructions to complete the work.

Nowadays children spend their time on different electronic devices, such as TV, radios, phones, Xbox, iPod, games and stereo systems. Children use electronic devices for different purposes, such as listening to songs, chatting with friends, watching videos, playing games, and surfing information from various websites. They spend most of their day using these electronic products. In this era, electronic devices and digital media have certainly improved our lives in many ways. These electronic products have become indispensable devices in our lives. To be honest, we have no way to keep ourselves or our children away or stop using these devices. The only way we can do is to guide children how to use these devices correctly to reduce the impact of these devices on children. It is amazing that a 2 years old baby can and knows how to use gadgets, just like a child knows how to use a bottle. The study of Sundus (2017) stated that 1 out of 3 children can even use a tablet or phone before they are speaking. Sundus (2017) also stated that 29% of the young children can easily use the gadgets and remaining 70% are mastered them at elementary school age. According to Staff (2020), a child spends an average of 8 hours a day using smartphones, tablets, computer, television and so on. As children grow up, the demand for using gadgets will also increase.

An article entitled “*Screen Time Can Be DANGEROUS For Kids (Mental & Physical Health)*” by Beurkens (2021) had shown that many problems can result from overexposure to electronic devices. Children’s minds are full of gadgets. By allowing children to use electronic devices, parents and caregiver can spend a few hours at ease and attentively to complete housework or important tasks at work. The vast majority of families are double-income families. Parents returned home with exhausted body and mind after work, and had no extra energy to accompany their children. Most parents will choose to let their children expose to electronic products so that they do not have to worry about their children, because these gadgets will not harm their children. Using electronic devices to play games or watching videos can keep children busy for several hours. For convenience, parents choose to ignore the negative effects of electronic devices and allow their children to use these electronic devices uncontrollably.

Around school age, time spent watching movies seem to continue to be related to reduced concentration and behavioral problem. A study of second and third grade students showed that uncontrolled watching TV time and watching without choosing content will subtly affect children's social problems, criminal behavior and aggressive behavior. According to study by Ozmert et al. (2002), for children who were older, male watched television for more than 2 hours will increase the risk associate decreased social skills and increased attention problems.

Lowa State University (2010, July 7) had published a research of the impact of television and video games on attention problems. 1323 children between 6-12 years old were followed for 13 months. The usage of television and video gaming by this group of children were recorded. This study found that the average screen time (TV and video games) of this group of children was 4.26 hours. The teacher reported that this group of students has attention problems. The results showed that exposure to the attention problems of middle-aged children were related to exposure to TV and videogames. Swing et al. (2010) found that the association existed in TV and video game. In the study by Landhuis et al. (2007) also concluded that children watching TV programs may cause the development of attention problems, and pointed out that this effect may last a long time.

In recent years, there has been increasing interest in the cognitive processing of television in young children (Lin, 2015). Lin's research found that children's cognitive, language, and motor development can be delayed due to excessive watching TV. The longer children spent on television, the more obvious their cognitive, language, and motor delays. Apart from facing the four walls at home, Smartphone or other technological toys are their only entertainment. With the development of technology, our attention span is getting shorter and shorter. According to Karrie Godwin, a professor at Kent State University, "If adults aren't good at maintaining attention, and we're talking about mature cognition, it's definitely difficult for kids".

Development cognitive refers to the process of an individual's cognitive of things and the way of thinking, ability performance when facing problem. A person's cognitive would change with age. Information processing, intelligence, language development and memory are the areas of cognitive development. Attention and memory have strong relationship with each other (Chun, 2007). Attention helps us to improve memory encoding. There are few causes of specific attention deficit. The damage brain during pregnancy, during birth may cause children suffer attention deficit. Due to the advances in medicine, the survival rate of children born prematurely (gestational age < 37 weeks) and / or low birth weight (LBW<2500g) has increased (Stoelhorst et al., 2005). However, especially those premature babies with very low birth weight (VLBW < 1500g) or extremely low birth weight (ELBW < 1000g) are at risk for developmental problems (Anderson & Doyle, 2003; Aylward, 2002, 2005; Bhutta, Cleves, Casey, Craddock, & Anand, 2002; Salt & Redshaw, 2006). Although severe disability (such as mental retardation sensory impairment, and cerebral palsy) is often found in infancy and its incidence has not changed, when the child grows up (that is, at school age) low and evere dysfunction (such as learning disabilities and hyperactivity) becomes more pronounces (Aylward, 2005; Luciana, 2003), and their incidence has increased (Aylward, 2002). In addition, even premature babies with no apparent disability and normal ability of intelligence can receive special education services at a high proportion (Aylward, 2002; Walther, den Ouden, & Verloove-Venhorick, 2000).

The underlying mechanism that can explain the developmental problems and increased risk of within-group variability in preterm infants is attention. The studies of Posner and Petersen (1990) and Posner and Raichle (1994) indicated that attention refers to children's attention to external events, objects, tasks and problems, which depends on the function of the attention network in the brain. Faced with a complex environment full of external stimuli, young children need to selectively pay attention to the things they care about and respond to important events in order for them to function normally. In addition, they must learn to show the ability to persist in completing tasks, despite encountering obstacles and interference, but at the same time unable to divert attention from activities (Ruff & Rothbart, 1996). After that, many researchers studied the development of attention from different angles. These

studies emphasize the cognitive products of visual attention and the process of attention itself (Colombo, 2004).

As we all know, children's sleep, attention, and emotional problems increase the risk of variety of adverse consequences throughout their life span, including poor educational achievement and interpersonal skills (Breslau et al., 2008; Lawrence et al. 2015), as well as increased physical and mental health problems (Betts et al., 2016). As we all know, there is high correlation between children's sleep, attention and emotional problems. For example, sleep problems are usually related to mood and attention disorders (Chorney et al., 2008; Gruber, 2014, 2016). 174 children aged 6 to 11 years old participated in a cross sectional study from Ipoh, Perak, Malaysia and the result showed that 105 out of 174 children (60.3%) slept less than 9 hours which was suffering insufficient sleep. As a conclusion, children spent more time on electronic gadgets leads to health problems and insufficient sleep (Unplagan, 2018).

Food intake is closely related to maintaining good performance. Although the foods sold in school are favorite foods of children, in fact these popular foods hinder children's learning ability. Many menu items rich in sugar, caffeine, chemicals and sodium make children feel tired, inattentive, palpitation and sickness, which not only affect students' grades and performance, but also affect their behavior and mood. Grace Chen (2020) stated that according to the latest research from the Society of Neuroscience, a diet high in saturated fat can actually impair learning and memory. Unfortunately, saturated fat foods are usually the cheapest and most widely available foods in schools. French fries, sugary desserts, cheeseburgers, chicken nuggets, and other cafeteria staples that children like to eat are actually foods that will reduce the children's brain power before they go back to class.

Glucose comes from carbohydrates and is one of the essential energy for the human body. Ingesting proper glucose will release insulin to process the newly acquired food, which will make a person feel energetic. However, excessive intake

will lead to a decline in the body's energy level and mental function, which affects the individual's ability to pay attention.

Due to the high intake of glucose, this group of children and adults on a high-sugar diet will experience a post-food "collapse", and cause the body to start shutting down while processing all food. Popular foods in cafeterias usually include white bread, fried food, sugary candies and soda. All these foods can cause an amazing drop in energy, attention and successful mental performance. In addition, a regular high-sugar diet may damage the kidneys, eyes, blood vessels and nerves. Although these side effects are serious, high blood sugar can also affect our daily life such as feeling irritable, lethargy and inattention. According to statistics, one in three children in the United States is diagnosed as being overweight. Surprisingly, children who are overweight or underweight can be considered malnourished, Malnutrition does not just mean lack of adequate food; insufficient nutrients are also a form of malnutrition.

Therefore, those overweight children may only consume a lot of calories, and they may not consume any necessary vitamins, nutrients and minerals. According to Grace Chen (2020) mentioned that Mary Gavin of the Nemours Foundation stated that the lack of vitamins and minerals leads to harmful side effects. It was reported that children with insufficient diet have more problems in health, learning and mental behavior.

Vitamin D (VitD) is one of the important nutrients for children's growth and development. It is an essential fat-soluble vitamin in our body. Compared with calcium, VitD is more important for maintaining bone health (Hossien-nezhad and Holick, 2013; Yu et al., 2013). Hu et al., (2017) stated that the general prevalence of VitD deficiency in Chinese children is 52.5%. Although VitD is an indispensable vitamin for human body, excessive or long-term supplementation of VitD may lead to excessive or poisoning of VitD (Rajakumar et al., 2013). One of the most common

health problems in the world is children's emotional and behavioral problems, which cause mortality, morbidity, and disability in adulthood. In the research of Wang et al., (2012) showed that up to 19.6% of China children aged 4-18 have emotional problems in their daily lives, such as anxiety and depression, and behavioral problems with attention deficits. A national survey conducted in Germany found that serum 25(OH)D concentration were negatively correlated with Strengths and Difficulties Questionnaire (SDQ) scores, indicating that insufficient of VitD intake in children may increase children's risk of emotional and behavioral problems (Husmann et al., 2017).

### **1.3 Problem Statement**

At times lower level students may have difficulty paying attention, following directions, and waiting or taking their turn. What is attention in psychology? Attention is a state of mental alertness to information and a state of focused activity (Posner & Peterson, 1990). A person can more easily achieve a fit with the target characteristics when he/she draws attention to specific stimuli. Prakash, 2015 stated that high attention make our mind does not participate in unnecessary details, so that it becomes easier to select and learn important information. Therefore, attention is emphasized as the main key to initiating learning process (Ainley & Luntley, 2007; Chen & Huang, 2014). When the individual is focused on specific stimuli, the minds will not participate in unnecessary details, which make it easier to choose and learn information. Young children especially preschooler and lower level students are easily affected by external stimuli, especially during conscious learning which causes difficulties in school life. The speed of presentation and the way in which each teacher presents stimuli is different, which forces students to be cautious about what they should consider (Smith & Kosslyn, 2014). In addition, there are different necessary stimuli are placed in the classroom, but they are not important in cognitive teaching. These distracting stimuli can easily cause students to divert attention. Nevertheless, students are required to maintain excellent attention in the class



(Szpunar, Moulton & Schacter, 2013). The main concept highlighted in these studies is to focus attention on the right place.

Students' attention control ability will gradually strengthen as individual grow up. At the same time, the duration of their attention has increased and they have cultivated selective attention when performing learning tasks (John & Flavell, 1985, as cited in Yaycı, 2007, p.50). However, there is no data on how long they remained focused (Bradbury, 2016).

The role of parents in children's education is very important. Every mother has established a meaningful connection with the fetus in her womb during pregnancy. Mothers play an important role in the mental health of their children because they provide basic necessities (i.e. food, water, shelter and sleep) and form a safe and strong attachment to their young children. The emotional bond formed between the baby and the caregiver is called attachment. Children who maintain a healthy attachment to their caregivers are more likely to establish stable relationships later in life. Therefore, parents can be supported to participate in the education of their children.

What causes the lack of attention of preschooler in learning? Through this research, researcher hopes to explore the possibility factor that causes children attention deficit in learning from the mother's perspective.

This study might be helpful to teachers, curriculum designers, students and possibly parents. It will allow them to change their strategies which they use to draw students' attention while they are learning.

The purpose of this study is to identify the factors that affect children's attention deficit in learning from mothers' perspectives.

After identify the factors, teacher can design more effective teaching activities in order to attract the attention of students. When students can concentrate on the class, students can remember the teaching content. This lesson is considered to achieve the teaching goal.

#### **1.4 Objectives of the study**

This study aimed to investigate the factors that might affect the attention of preschooler as perceived by preschooler's mother in one of the primary school in the district of Layang, Johor

- (a) To explore mother's perspective on attention deficit.
- (b) To investigate the knowledge or understanding of mothers on attention deficit.
- (c) To explore the factors that affects children's attention deficit as perceived by mothers.

#### **1.5 Research Question**

1. What is the mother's perspective on attention deficit?
2. How the mothers understand about attention deficit?

3. What are the factors that affects children's attention deficit as perceived by the mothers?

## **1.6 Provisional conceptual framework**

In the study of Posner et al. (2014) stated that the developing attention for a person develop since they are born. Individual's attention network is different. Infant's differences of early temperamental is closely related with self-regulation. The major influence of an individual's attention is the interaction with the guardian and environmental influences. Ecological system theory emphasizes the mutual dependence between the behavior of the child and the environment in which the behavior occurs. According to Bronfenbrenner's theory (1979-2005), there are five components will affect a child's development: the microsystem, mesosystem, exosystem, macrosystem, and chronosystem. The child's immediate environment is known as the microsystem, it is small, immediate environment which are the closer and have direct contact with the children. For example, parents, siblings, or caregiver, teachers and school peers. The relationship in microsystem is bi-direction, which a child's belief and behavior can be affected by their parents and a child's belief and behavior also can affect others, it will affect how the children grow. More nurturing and more supportive interactions and relationships will understandably foster they children's improved development. The personality traits for each child, such as temperament are influenced by their special genetic and biologically, it end up affecting how others treat them.

The mesosystem consists of interactions among the elements of the microsystem, and healthy development depends on how effectively the elements work together (Lee, 2010; Lerner, Lewin-Bizan & Warren 2011). If the parents keep in touch with teacher and care about their children learning condition at school and this interaction mat influence children's development. Based on the ecological

system theory, a good interaction between parents and teachers will have positive effect on the child's development.

The exosystem includes societal influences, such as parents' jobs, parent's friends, neighborhood, mass media, school systems, and workplace conditions, such as health care, that influence both the microsystem and mesosystem. These are social influences that children do not participate in, and are outside of their experience, but will affect them anyway. For example, most of the parents work from home during Movement Control Order (MCO). They may bring their short temper to the children, it resulting negative effect on the children development.

The macrosystem is an integral part of the Bronfenbrenner's ecological systems theory which focuses on culture elements (socioeconomic status, wealth, poverty, and race) that affect the developing child, as well as the microsystems and mesosystems embedded in those cultures. A person's beliefs and views on what happens in life are closely related to one's own culture. For example, a child living in a third world country would experience a different development than a child living in a wealthier country.

Chronosystem is the fifth and the last level of Bronfenbrenner's ecological systems. In this level consists all the environmental changes over the lifetime of a person and influence the development of the particular person. For example, negative effect will occur on children in the first year after parents' divorce, but the following years family members gradually forget the pain and the relationship between family members is less chaotic and more stable.

From the moment the mother pregnant, there is a unique bond between mother and child. Mothers play an important role in their children's lives. Mother show caring, loving and teaching their children to nurture the growth and

development of the children. The interaction of mother with the children consider as foundation for children behavior, personality, traits and values in their lives.

An article entitled “A Mother's role in early childhood development” by Adminmegan (2020) stated that mother’s relationship with their children is crucial because children learn from their surrounding and people around them. The mother’s words, behavior and interaction with the child will significantly affect the child’s development in social emotional, physical, cognitive and independence. This is in full compliance with the microsystem in Bronfenbrenner’s theory. The role of every mother is to understand her children; they are the ones who know the children best in the family. The father is the money contributor of the family; they spend most of the time spent at work, so that the family can lead a worry-free life.

Cognitive development is thinking and memory processes, it includes learning, perception, memory, problem solving, and decision-making. According to the study of Gauvain & Richert (2016), biological, environmental, experiential, social, and motivational are the factor influence a children cognitive development. Cognitive impairment, also known as intellectual disability happen when a person has trouble in communication, memory, attention, self-help and social skills. A child who is suffering cognitive impairment will face slow learning and slow development problem compare with a typical child. Cognitive impairment can be cause by fetal development, at birth, shortly after birth, genetic condition or at any point in life (injury and disease).

It is essential to improve our ability to live effectively by understanding attention and its types. It is necessary to learn to strengthen and influence external or internal factors to fully grasp the attention mechanism. So what is attention? Attention is the ability to generate, select, manage, and maintain enough stimuli to process any type of information in a specific period of time. There are different types of attention and each types of attention occurred at the cognitive level. Attention is the

best function to help us achieve in our lives. In fact, attention and interest are related. When we are interested in something, we will pay attention to it. This study's theoretical framework is (1) sustained attention and (2) selective attention

### **1.6.1 Sustained Attention**

Sustained attention is the ability to focus on only one task by consciously focusing on one task for only a long time enough and avoiding all other forms of interference or deviations. This kind of attention requires a concentration as well as determination for being able to focus on a given task by avoiding all the distractions. For those tasks that take a long time or require a high degree of attention, we often use sustained attention. Oken et al. (2006) pointed out that sustained attention or vigilance is to maintain of attention over time. It is usually based on paradigms that require individuals to detect changes in stimuli over longer periods of time, such as continuous performance tests Roebuck et al. (Roebuck et al., 2016) used a continuous performance test to measure sustained attention. They recommended at least four different attention functions. These four functions included: focus-execute (i.e., target selection and response—similar to selective attention), sustain (i.e., vigilance, persistence), shift (i.e., flexibility of attentional focus), and encode (i.e., registration, mental manipulation, and recall of information). Similar factors were observed in adults and in children. The authors pointed out that adults and children have similar factors and suggested that each factor was located in a different part of the brain, and these areas work together as an organized system. The midbrain and brainstem will determine a person's "sustained" attention.

### **1.6.2 Selective attention**

Selective attention is the ability to select from many factors or stimuli and to focus on only the one that you want while filtering out other distractions. This attention mainly depends on the attention ability of the observer. Selective attention allows us to call out unimportant details from our daily lives and focus on important things. This is different from attention deficit blindness, which is when you focus on one thing and without noticing the unexpected accident. Revlin (2013) in his text *Cognition: Theory and Practice* explained that we must filter out other unimportant events to keep our attention to one event.

Since children focus most of their attention on related tasks or stimuli, this filtering mechanism becomes more effective in the early development process (Lane and Pearson 1982). Donald Broadbent's filter model was one of the earliest theories and used an information-processing metaphor to describe human attention. We can process the information according to the perception established earlier. This limits our ability to process information in the future.

Selective or focused attention is when two or more concurrent stimuli occur at the same time, and one must pay attention to and ignore the other in order to be measured (Cooley and Morris, 1990). Example, students performed a picture matching task. Students need to recall central and non-central (incident) details, while visual search or cancellation tasks mainly required individuals on search for predetermined targets on the visual display.

### **1.7 Significance of study**

This study will explore mother's perspective on attention deficit. This study also will investigate the knowledge or understanding of mothers on attention deficit.

This study also will explore the factors that affects children's attention deficit as perceived by mothers.

### **1.7.1 To teacher**

Through this research, teachers can understand the condition of children and accept the defects of their cognitive characteristics. Teachers can change the teaching method, such as shortening the time of teaching and increasing the time of activities. Attract their attention by carrying out activities to achieve the purpose of teaching. When the teacher knows that the child has a lack of attention, the teacher can change the environment during class, such as putting away external stimuli (toys, flip charts, etc.). The teacher can also move the child to the front row, so that the child can be more attentive in class.

Teachers can also communicate with parents and cooperate to help children who are unable to concentrate on their learning problems. Through the cooperation of both sides, the problem that the child cannot concentrate on will be improved.

### **1.7.2 To school**

This research will allow the school to better understand what parents think about the issue of lack of attention. In order to help parents and teachers get the correct lack of attention knowledge, the school can invite pediatricians to the school to hold lectures on lack of attention.



The school analyzes the performance of students to find out the reasons for inattention, and then finds ways to help this group of children and enhance their interest in learning.

### **1.8 Scope of the study**

This study is to identify explore attention deficit from mother's perspective. Furthermore, this study is to investigate the knowledge and understanding of mothers on attention deficit and explore the factors affects children's attention deficit from mother's perspective.

This study is conducted in one of the primary school in the district of Layang, Johor. Through the teacher's observation based on the behaviour of the children in the class, such as daze and cannot cope with the syllabus and cannot complete task at time and the teacher will make a list of students with attention problems in the classroom. According to the list, the researcher seeks the consent of the mother of the student on the list to participate in this research and accepted the interview.

After getting permission from the parents, the researcher started one-on-one interviews and recorded them. The researcher converted the interview into a manuscript based on the recording. Analyze and discuss according to the manuscript.

### **1.9 Delimitations of the study**

The current research has some limitations. Most of the times, exploratory research involves only one person/ event/ group, so it is impossible to accurately

interpret the results for the general population. If the data was collected through secondary research, then the data is likely to be old and not updated.

The problem of adequate validity or reliability is a major criticism. Because of the subjective nature of qualitative data and its origin in single contexts, it is difficult to apply conventional standards of reliability and validity. The mothers participating in this study were all educated in Chinese, so the entire interview process was conducted in Chinese. After the interview, the researcher translates the content of the interview into English. In the process of translation, there may be errors.

A study requires a long time to collect data, analyze and explain. There are many obstacles or difficulty in the analysis of qualitative data. Researchers must have expertise in a certain field to try to interpret qualitative data. Researchers have to be very careful when analyzing qualitative data.

## **1.10 Definition of terms**

For better understanding of this research, the following terms are defined in the context of this research

### **1.10.1 Attention**

Attention is a state of mental alertness and a focusing activity (Posner & Peterson, 1990). An article entitled “*Attention*” by McCallum stated that people do not have the ability control their attention and fully pay attention on a task, a

conversation, or a set of events. People are easily distracted or attracted by other stimulus, especially children.

In this study, attention refers to the children attention because attention is the most important condition in order to improve or memory and it may help children improve children achievement in their academic achievement.

### **1.10.2 Attention deficit disorder**

Based on the article of *ADD vs ADHD* (2016, December 2) from WebMD, attention deficit disorder (ADD) is a type of attention deficit hyperactivity disorder (ADHD). ADD is usually used to describe the symptoms of a person's inability to concentrate, distracted attention and poor working memory (Russo , 2019)

In this study, attention deficit disorder refers to the children that have attention deficit from their mother's perspective.

### **1.10.3 Learning development**

The process of memorize, integrate and apply in our daily life is the process of learning of a person (Rose, 2015).This is the learning development of a person.

In this study, learning development refers to the problem that children facing in their learning development from mother's perspective.

#### **1.10.4 Learning problem**

Learning problem also known as learning disability. It refers to as a developmental disorder, which are children have information-processing problem that prevents the children from learning a skill and using it effectively (Gillberg & Soderstrom, 2003). This problem normally affects people of average or above average intelligence.

In this study, learning problem refers to the attention deficit order affects or bring the problem in the children learning

#### **1.10.5 Cognitive processing**

In general, cognitive process is the ability of individuals to absorb and process information received from different sources such as perception, experience, beliefs, etc, and converts them into knowledge. Cognition includes different cognitive processes such as learning, attention, memory, language, reasoning, decision-making and so on. After rearrangement and storage, it forms an important part of our intellectual development (Krch, 2011).

### **1.11 Conclusion**

This chapter introduces the topic of the difference between attention deficit disorder and attention deficit hyperactivity disorder. The objective of the study and the research questions are also mentioned in this chapter. The backgrounds of the study, provisional conceptual framework, significance, as well as the limitations of

the study are also discussed in this chapter. The chapter ends with the definition of terms used throughout this study.

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