Gender Differences in Parental Involvement in Dual-earner Family

Tan Jie Lin

A Research Project
Submitted In
Partial Fulfilment of the Requirements For
The Bachelor of Early Childhood Education (Hons)
Faculty of Creative Industries
Universiti Tunku Abdul Rahman

Jan 2024

Acknowledgement

Upon completing this thesis, I owe a debt of appreciation to many people who have supported me unwaveringly along the way.

First, I am incredibly grateful for my supervisor, Mr. Lim Yeong Yeong of University Tunku Abdul Rahman (UTAR) for solidifying my research's direction and consistently providing me with generous guidance, valuable advices and helpful feedbacks throughout the entire thesis writing process.

A special thanks goes to my beloved family for their unconditional love. Their belief in me has been a constant source of strength that empowers me to come this far on this journey. I would also like to extend my heartfelt appreciation to my friends for their kind help throughout the process. Their assistance has made the journey more manageable.

To everyone mentioned, you have helped me grow and become a better person. Once again, my sincerest appreciation to all for your contributions.

TAN JIE LIN

Approval Form

This research paper attached hereto, entitled “Gender Differences in Parental Involvement in Dual-earner Family” prepared and submitted by Tan Jie Lin in partial fulfilment of the requirements for the Bachelor of Early Childhood Education (Hons) is hereby accepted.

_____ Date: _____

Supervisor

Mr. Lim Yeong Yeong

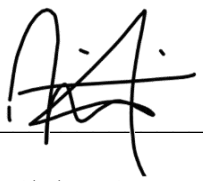
Declaration

I declare that the material contained in this paper is the end result of my own work and that due acknowledgement has been given in the bibliography and references to ALL sources be they printed, electronic or personal.

Name: TAN JIE LIN

Student ID: 21UJB01576

Signed:



Date: 6/5/2024

GENDER DIFFERENCES IN PARENTAL INVOLVEMENT

Abstract

It has long been noted that active parental involvement in children's early education has a significant impact on their academic success. However, with the increasing participation of both fathers and mothers in the workforce, parental involvement may face challenges. Despite the rise of dual-earner families, existing research often overlooks the role of fathers and the impact of maternal employment on parental involvement. To bridge the knowledge gap, this study investigated gender differences in parental involvement between dual-earner parents across six domains: parenting, communicating, volunteering, learning at home, decision-making and collaborating with community. This study applied Albert Bandura's social learning theory of gender role development and Urie Bronfenbrenner's ecological system theory. Employing a quantitative cross-sectional approach and purposive sampling, data were gathered from 64 paired of dual-earner parent (64 fathers and 64 mothers) in Selangor through Parent and School Surveys (PASS) by Ringenberg (2005). Analysis using the Wilcoxon Signed-Rank Test revealed significant differences between fathers and mothers ($p < 0.001$), with mothers displaying notably greater involvement across all six domains. Large effect sizes were observed in all areas except parenting, which showed a moderate effect size. These findings emphasized the need for dual-earner parents to balance work and family responsibilities to enhance their parental involvement. Also, this implied to the preschool operators and educators to reassess their strategies to engage fathers, enhance their knowledge and skills in involving fathers and build community connections to foster parental involvement. The study's limitations included its reliance on quantitative research methods and its limited representativeness due to the small sample size and purposive sampling. Future research should consider employing mixed-method approaches, enlarging sample sizes, and adopting cluster sampling techniques to gain a deeper understanding of parental involvement in dual-earner families.

Keywords: Parental involvement, parent's gender, dual-earner families, young children

Table of Contents

List of Table

List of Figure

List of Abbreviation

DV	Dependent variable
IV	Independent variable
PASS	Parent and School Survey
SPSS	Statistical Package for the Social Science

CHAPTER I

INTRODUCTION

Introduction

This research examined gender differences in parental involvement between fathers and mothers, specifically within dual-earner families. This chapter included the study's background, problem statement, research objectives, questions, hypotheses, significance of study and the definition of terms.

Background of Study

Parents are the first teachers of children, who play a unique and irreplaceable role in the early years. It has long been noted that active parental involvement in children's early education has a significant impact on their academic success (Đurišić & Bunijevac, 2017; Ma et al., 2016; Ramasamy et al., 2023; Roy & Giraldo-García, 2018; Utami, 2022). When parents actively engage in their children's education, the positive outcomes extend to higher academic accomplishment, improved school attendance, consistent completion of homework, heightened enthusiasm and satisfaction with the school experience and a decrease in discipline issues (Patel, 2014; Sapungan & Sapungan, 2014). Additionally, active parental involvement fosters children's self-confidence, motivation to learn and engagement in the learning process, which leads to improved educational outcomes (Goodall & Montgomery, 2014). These positive outcomes may even influence children for a lifetime spanning from early childhood to adulthood (OECD, 2023). For these reasons, parental involvement is not only important but should be actively promoted to assist children in achieving academic success.

Parents' gender is one of the influential factors that affect parental involvement (Gracia, 2015). Most of the research found that mothers have greater involvement than fathers (Herawati et al, 2020; Hossain, 2014; Zimmermann et al., 2022). One possible explanation is

the traditional gender roles assigned to males (fathers) and females (mothers) (Gaunt, 2022; Pinho & Gaunt, 2020). Historically, fathers are perceived as breadwinners and responsible for materials and financial fulfilment; on the other hand, mothers are assumed as caregivers and focus on nurturing and caring responsibilities (Rakotomanana et al., 2021). In families that adopt this traditional gender role, mothers predominantly handle all household tasks, including domestic chores, daily care routines (e.g., feeding), socio-emotional care (e.g., comforting), and higher-level responsibilities for children (e.g., dealing with school) (Gaunt et al., 2022). Thus, it contributes to lower levels or even absence of father involvement in children's early years (Bornstein & Putnick, 2016).

However, the rise of dual-earner families is affecting traditional gender roles as more women enter the labour market (Zaman & Shahid, 2023). This changing trend further prompts the need to reconsider how income-earning responsibilities and child-rearing duties are distributed between fathers and mothers (Zaman & Shahid, 2023). While dual-earner parents may share economic responsibilities, research suggested that they often do not equally share child-rearing duties (Chou et al., 2016), with mothers frequently bearing the primary caregiver responsibility (Lari & Al-Emadi, 2021). However, a more recent study found a positive shift: dual-earner fathers nowadays become progressively taking on caregiving responsibilities alongside their traditional roles as economic providers (Schoppe-Sullivan et al., 2021). Hence, it can be said that gender roles are evolving as more dual-earner families arise, which reshape the fathers' and mothers' roles within their family and work responsibilities.

On the other hand, the growing participation of both fathers and mothers in the workforce can impact parental involvement, as parents' employment may constrain their availability, time flexibility, and energy for their children (Kim, 2020). In the Malaysian context, urban parents were found to devote less parenting time to their children compared to rural parents (Hossain, 2014). This may be due to the fact that urban parents who are mainly

dual-earning may spend more time and effort working in order to earn for living, meanwhile, their childcare and parenting time may be reduced (Ishak et al., 2020).

Problem Statement

For the most part, research on parental involvement tends to focus largely on mothers, with comparatively less attention given to fathers (Cabrera, Volling, & Barr, 2018; Panter-Brick et al., 2014). Some studies analysed parental involvement in mixed-gender contexts (Norman & Davies, 2023) and some even discussed parental involvement but only included mothers as respondents (Baikovich & Yemini, 2023). However, Kim and Hill (2015) revealed a noteworthy finding: the positive association between father involvement and children's academic success is not only significant but also comparable in strength to mother involvement. In addition, abundant research has proven that both fathers and mothers significantly contribute to their children's holistic development. Studies indicated that paternal involvement enhances children's emotional regulation, prosocial behaviours (Torres et al., 2014), cognitive development, academic accomplishment (Bidakowska et al., 2020; Cano et al., 2018), language ability (Duursma, 2014) and moral intelligence (Septiani & Nasution, 2018). Mothers, on the other hand, play an important role in children's brain development and cognitive functioning (Chiu & Lau, 2018; Erickson, 2014), mathematics achievement, vocabulary acquisition (Duncan et al., 2019), language and literacy ability (Chang & Luo, 2019), as well as school readiness (Chiu & Lau, 2018). Given that both mother and father involvement is equally critical for child development, discussions on parental involvement should not be overlooked but should consider the contributions of fathers' involvement.

Due to urbanization and industrial growth, an increasing number of women entering the workforce (Danso, 2014). According to the Department of Statistics Malaysia (2022), as of February 2022, Malaysia reported an increase in both male and female labour force

participation, with the male labour force increasing from 10.05 million to 10.08 million, while the female labour force participation increased from 6.31 million to 6.32 million compared in January 2022. Although this statistic did not present a complete picture as no data shows the male and female's marital status and the presence of children, it could explain why the number of dual-earner households in Malaysia increased recently. However, current research on parental involvement mostly focuses on parents in single-earner households, which assume the fathers as the primary source of family income, and the mothers as caretakers when examining their parental involvement (Keown & Palmer, 2014). With this assumption, maternal employment and paternal involvement in children's education are given a lack of attention when understanding parental involvement (Kim & Hill, 2015). Research explained that dual-earner parents may have distinct engagement in their children's education compared to single-earner parents as they are ideally expected to have equal parental involvement (Keizer et al., 2019) and complement each other in involvement time when their spouse is working (Ferreira et al., 2018; Herawati et al, 2020). Due to the insufficient research on parental involvement in dual-earner families in Malaysia, there is a clear need for a study in this area.

Research Objectives

This study investigated the gender difference in parental involvement between father and mother in dual-earner families, in terms of overall involvement, parenting, communicating, volunteering, learning at home, decision-making and collaborating with the community.

Research Questions

This study aimed to answer the following research questions:

1. Is there a significant difference between father and mother in dual-earner families in the overall parental involvement in their children's learning?

2. Is there a significant difference between father and mother in dual-earner families in the involvement of parenting in their children's learning?
3. Is there a significant difference between father and mother in dual-earner families in the involvement of communicating in their children's learning?
4. Is there a significant difference between father and mother in dual-earner families in the involvement of volunteering in their children's learning?
5. Is there a significant difference between father and mother in dual-earner families in the involvement of learning at home in their children's learning?
6. Is there a significant difference between father and mother in dual-earner families in the involvement of decision-making in their children's learning?
7. Is there a significant difference between father and mother in dual-earner families in the involvement of collaborating with the community in their children's learning?

Research Hypotheses

Many studies have consistently shown that mothers typically demonstrate a higher level of involvement compared to fathers (Herawati et al, 2020; Hossain, 2014; Zimmermann et al., 2022). Hence, the following alternative hypotheses are constructed:

Ha1= There is a significant difference between fathers and mothers in dual-earner families in the overall parental involvement in their children's learning.

Ha2= There is a significant difference between fathers and mothers in dual-earner families in the involvement of parenting in their children's learning.

Ha3= There is a significant difference between fathers and mothers in dual-earner families in the involvement of communicating in their children's learning.

Ha4= There is a significant difference between fathers and mothers in dual-earner families in the involvement of volunteering in their children's learning.

Ha5= There is a significant difference between fathers and mothers in dual-earner families in the involvement of learning at home in their children's learning.

Ha6= There is a significant difference between fathers and mothers in dual-earner families in the involvement of decision-making in their children's learning.

Ha7= There is a significant difference between fathers and mothers in dual-earner families in the involvement of collaborating with the community in their children's learning.

Significance of Study

This study aims to make a significant contribution to future researchers' knowledge by using statistical evidence to reveal gender differences in parental involvement within dual-earner families. As highlighted in the problem statement, existing research on parental involvement in dual-earner families is limited. Therefore, this study holds important value in advancing future researchers' understanding and enriching local literature by proving gender differences in parental involvement within dual-earner families across six aspects: parenting, communicating, volunteering, decision-making, learning at home and collaborating with the community.

Moreover, this study is significant for Malaysian dual-income parents. A local study conducted by Ishak et al. (2020) revealed a concerning trend of lower parental involvement levels in Malaysia and highlighted the urgent need to address this issue. Extensive research consistently emphasized the positive correlation between parental involvement and various crucial aspects of children's development, including academic performance, school attendance and retention, cognitive advancements, and social-emotional competence (Lang et al., 2014; Ferreira et al., 2018; Baker, 2017). By examining the differences in involvement between dual-income fathers and mothers, the findings of this study have the potential to inspire Malaysian dual-income parents to reflect on their contribution to their children's learning. Furthermore, it

may prompt them to collaborate for a more equitable division of parenting responsibilities with their partners, thus enabling both parents to support their children's education together more effectively.

Last but not least, this study holds potential benefits for the schools. As highlighted by Epstein (2010), the partnership between parents and schools is essential in assisting children's learning and development. It is undeniable that the school has a significant influence in promoting and facilitating parental engagement in their children's education (Lim & Rita, 2020). With the insights gleaned from this study, school operators and administrators are inspired to develop more effective parental involvement programs aimed at fostering enhanced collaboration with parents and achieving a shared goal of enhancing children's learning outcomes (Ng & Tan, 2017).

Definition of Terms

Conceptual Definition

Gender. Gender refers to socially conceptualized masculinity and femininity, including norms, practices and responsibilities linked to being a man and a woman, as well as the relationships between them (World Health Organization, 2019).

Parental involvement. Parent's level of participation and engagement in their children's education and learning activities by collaborating with the school and teachers, and upholding their parental responsibilities to assist their children's learning process with much effort (Ntekane, 2018).

Dual-earner family. Households where both fathers and mothers are actively employed in the labour market and jointly contribute to the family's finances (Boye, 2014). According to Bergsvik et al. (2019), this is a family structure where both males and females are involved in a symmetrical pattern of income-based employment in the job

market and household tasks at home. In other words, fathers (males) and mothers (females) share equitable responsibilities in working and earning income and managing family and household duties simultaneously.

Young children. Young children refer to a person who is under eight years old (National Association for the Education of Young Children, 2019).

Operational Definition

Gender. In this study, it refers to the biological sex difference between parents, with males representing fathers and females representing mothers.

Parental involvement. In this study, it refers to the involvement of dual-earner parents in their children's learning activities in six different domains, including parenting, communicating, volunteering, decision-making, learning at home and collaborating with the community (Epstein, 2018).

- ***Parenting***: assisting families in comprehending child development and creating a home environment conducive to supporting children in their learning journey.
- ***Communicating***: having effective bidirectional communication with teachers about school programs and children's learning progress through efficient exchange of information between the school and home.
- ***Volunteering***: engaging and coordinating assistance and support voluntarily in educational institutions, home environments or other settings to bolster school and children's events.
- ***Learning at home***: offering information and suggestions to families on supporting children with homework or programme-related activities and decisions.

- ***Decision-making***: involving parents from diverse backgrounds as representatives and leaders on school councils, as well as seeking all parents' opinions when making school-related decisions.
- ***Collaborating with community***: utilizing community resources and services to scaffold the school, children, and their families, as well as conducting events that are beneficial to the communities and can broaden the children's learning opportunities.

Dual-earner family. In this study, it refers to families consisting of a father and mother with at least one child aged 3-6 years, where both parents are employed either full-time, part-time, or self-employed while playing a parenting role concurrently.

Young children. In this study, young children refer to those aged three to six years.

Conclusion

In conclusion, this study investigated gender differences in parental involvement between fathers and mothers in dual-earner families, with a specific focus on the six dimensions outlined in Epstein's framework. Given the limited local research on parental involvement among dual-earner parents in their children's learning, this study aimed to enrich the local literature and enhance future researchers' comprehension of this topic. Furthermore, it has the potential to encourage greater parental cooperation for more balanced parenting practices and offer insights for schools to develop programs aimed at enhancing collaboration with parents to improve young children's learning outcomes.

CHAPTER II

LITERATURE REVIEW

Introduction

This chapter presented an overview of the previous research about the gender differences in parental involvement within dual-earner family contexts, the theoretical framework and the conceptual framework.

Parent's Gender Differences in Overall Parental Involvement

Numerous studies indicated the existence of gender differences in parental involvement between fathers and mothers in contemporary society (Ferreira et al., 2018; Giallo et al., 2013; Herawati et al, 2020; Hossain, 2014). Some findings suggested that mothers typically display higher average levels of involvement compared to fathers (Herawati et al, 2020; Hossain, 2014; Zimmermann et al., 2022). However, Ferreira et al. (2018) found that while mothers initially exhibit higher parental involvement, fathers demonstrate significant growth over time throughout their children's early years.

Moreover, research indicated differences in the involvement styles of mothers and fathers. For instance, some studies have found that mothers actively engage more in direct involvement, such as participating in positive activities like reading together and outdoor play, both on weekdays and weekends, compared to fathers (Lang et al., 2014). Conversely, fathers are more likely to be equally involved with mothers in terms of accessibility (spending time with children without engaging in specific activities) and responsibility (e.g., providing financial or material support) (Herawati et al, 2020), which typically require fewer demanding forms of direct involvement.

These phenomena are likely influenced by conventional gender ideologies that shape parents' perceptions of their roles (Cerrato & Cifre, 2018; Pinho & Gaunt, 2020). Here,

"conventional" refers to aligning parental primary responsibilities with traditional gender norms, where fathers are expected to be the primary financial providers for the family, while mothers are designated as homemakers with the primary responsibility for child-rearing (Gaunt et al., 2022). In Malaysia, such traditional gender norms persist in contemporary society (Malaysia Population Research Hub, 2017). This observation is supported by a recent study by Zaid et al. (2020), which revealed that despite their participation in the labour market, females in Malaysia still bear the primary responsibility for family matters and parenting.

Parent's Gender Differences in Parental Involvement based on Epstein's Framework of Six Types of Parental Involvement

The parents' gender differences in parental involvement are discussed based on six involvements outlined in Epstein's framework (Epstein, 2010):

Parenting. Parenting encompasses meeting children's essential needs for survival, such as ensuring their well-being, nutrition, shelter, and safety, while also fostering a nurturing home environment conducive to their growth and development (Yamauchi et al., 2017). Examples of parental involvement in parenting include providing explanations on challenging concepts to children, preparing reading materials, establishing a daily reading routine at home and maintaining regular school attendance for children (Ringenberg et al., 2005).

Mothers tend to demonstrate greater positive parenting practices compared to fathers (Okorn et al., 2021). This is often attributed to mothers' proficiency in caring for their children, their attentiveness to their children's needs, and their close supervision of their children's activities (Ding, 2014). Additionally, mothers exhibit higher levels of parenting involvement in their children's education (Shah, 2015). For example, research has shown that mothers engage in more frequent reading sessions with their young children weekly compared to fathers (Duursma, 2014). Nevertheless, it is also noteworthy that a significant number of fathers are

actively involved in regular reading activities with their children, although it is still relatively less frequent than mothers (Duursma, 2014).

Communicating. Communicating involves establishing bidirectional channels between schools and parents to exchange information regarding children's learning progress and development (Erdener & Knoeppel, 2018; Yamauchi et al., 2017). Strategies to facilitate effective communication include scheduling regular parent-teacher meetings and conferences, employing translators for clear communication if necessary, sharing information through newsletters, sending home children's school work folders and so on (Epstein, 2019).

Research indicated that mothers engage more frequently in two-way communication with their children's teachers at school (Ding, 2014; Shah, 2015). While parent-teacher conferences serve as vital communication channels, studies have observed that mothers primarily lead in attending these meetings, with fathers less likely to participate (Burwell, 2021; Đukić et al., 2022). This is supported by research conducted by the Pew Research Center (2015), which found that 90% of mothers discussed their children's progress with teachers, compared to only 78% of fathers. One possible reason for this difference is that teachers usually perceive mothers as more approachable, as they are often more eager to learn about their children's school life and activities, as well as how they can contribute to their children's education (Burwell, 2021; Lau, 2016). Additionally, fathers' lower involvement may be attributed to constraints posed by their work schedules, such as being only able to drop off their children at school in the morning, which limits their opportunities to communicate with their children's teachers (Herawati et al., 2020).

Volunteering. Volunteering represents parents' active contributions to their children's education through various voluntary activities (Yamauchi et al., 2017). These may include supporting teachers as mentors and helpers in the classroom, raising funds for school events,

advertising the school within the community and taking part in school programs and performances (Đurišić & Bunijevac, 2017).

Mothers showed a higher level of involvement in volunteering in comparison to fathers (Shah, 2015). This finding is corroborated by research conducted by the Pew Research Center (2015), which examined parents' participation in school-based activities and found that 63% of mothers volunteer to assist with school events, activities, and class trips, compared to 57% of fathers. One possible explanation for this difference could be that mothers often feel more welcomed and encouraged by their children's teachers at schools (Yamamoto et al., 2021). On the other hand, fathers may encounter barriers to their involvement due to feelings of discomfort or embarrassment, especially in settings where female teachers are predominant (Lau, 2016). Additionally, they may struggle with specific activities like cooking and arts and crafts, while their long working hours further limit their ability to participate (Lau, 2016).

Learning at home. Learning at home involves at-home practices that parents adopt to support their children's education and assist them in making plans and decisions for their studies (Đurišić & Bunijevac, 2017; Yamauchi et al., 2017). This includes creating conducive learning environments, engaging in educational activities with their children, and exploring learning opportunities beyond the classroom (Fantuzzo et al., 2000).

Research indicated that mothers would be more exclusively involved in home learning activities with their children compared to fathers (Lau, 2016). Specifically, mothers were found to exhibit higher participation in home literacy activities (Liu & Chung, 2022) and invest more time in engaging in learning activities, reviewing schoolwork and preparing learning materials to foster a supportive home learning environment (Herawati et al., 2020).

However, a recent study proposed a more balanced involvement of both mothers and fathers in their children's home learning (Porta et al., 2022). Despite this balance, differences

in their roles emerge, with fathers often assuming teaching responsibilities related to knowledge acquisition, while mothers focus more on imparting social rules (Porta et al., 2022). Conversely, a study conducted during the Covid-19 pandemic suggested that fathers spend more time with their children at home, while mothers are more involved in school-related activities (Simsar, 2021). This shift may be attributed to evolving paternal roles, with fathers taking on increasingly active childcare responsibilities (Oláh et al., 2018). Particularly during the COVID-19 lockdown period, fathers demonstrated increased participation in their children's home learning, likely due to the transition to remote work (Mikhaylova & Sivak, 2021). Consequently, the changing dynamics during lockdowns may explain the growing involvement of fathers in their children's learning at home.

Decision-making. Decision-making is a form of involvement where parents play representative roles to actively contribute to parent-led decisions regarding school policies and management (Yamauchi et al., 2017). Several ways in which parents can participate in school decision-making include developing a comprehensive understanding of school legislation and their parental rights, offering advice to teachers about how to enhance their children's academic performance, and attending school board meetings (Ringenberg et al., 2005).

Research found mothers tend to be more involved in school decision-making compared to fathers (Shah, 2015). Fathers, on the other hand, demonstrated minimal or no involvement in activities related to decision-making, such as attendance at school advisory councils (Barnes, 2016). This result is supported by a survey conducted by the Pew Research Center (2015), which highlighted that mothers are more actively engaged in Parent Teacher Association (PTA) meetings and other school conferences compared to fathers. One potential explanation for this trend could be mothers' high involvement in school-related networks (e.g., they are main participants in school WhatsApp groups), which allow them to have easier and quicker access

to school-related events and issues (Brooks & Hodkinson, 2022). Therefore, it is often assumed that mothers are the primary decision-makers in their children's education at school.

Collaborating with community. Collaborating with the community emphasizes parents' utilization of community resources and services to facilitate their child's learning (Yamauchi et al. 2017). This includes accessing necessary services, interacting with other families at communal events, understanding the school's role in the community and recognizing the community's contribution to the school (Epstein, 2019).

Research has shown that mothers tend to be more involved in collaborating with the community compared to fathers (Shah, 2015). For instance, mothers often establish stronger connections within their communities, particularly with other mothers (Herawati et al., 2020; Neitola et al., 2023). Through these relationships, mothers have the intention to supervise and ensure their children's development, exchange information about their children with other mothers and provide care for each other's children (Shim & Shin, 2022). However, it is also important to note that fathers may not exclude themselves purposely, but may find themselves being marginalized within mother-dominated groups, such as local playgroup organizations and school WhatsApp groups (Brooks & Hodkinson, 2022; Michelsen, 2021). As a result, this creates an unwelcoming atmosphere for fathers and increases the likelihood of lower paternal involvement in collaborating with the community.

Theoretical Framework

Albert Bandura's Social Learning Theory of Gender Role Development. This study is guided by Albert Bandura's social learning theory, which explained how individuals acquire knowledge of gender roles and behaviours through observation and imitation of socialization models, such as their parents, peers, educators and media influences (Bosson et al., 2018). This process is often known as gender socialization, in which individuals absorb and adopt gender

beliefs, roles and behaviours that are socially expected and accepted as masculine and feminine (Martin, 2014; Perry & Bussey, 1979). For instance, boys are often socialized to embody independence and strength, and aim for success in their careers, while girls are encouraged to embrace nurturing qualities and engage more in domestic duties (Wood & Eagly, 2015).

In gender socialization, observational learning plays a crucial role. Children would observe, memorize and internalize gender behaviours demonstrated by role models, and later integrate these behaviours into their own set of actions for future use (Bandura, 1977; McLeod, 2024). Parents typically serve as the primary role models for a child's gender belief development as they consciously or unconsciously pass on these beliefs from their offspring's early years (UNICEF, 2021). Through observation and imitation of their parent's actions, children assimilate expected gender behaviours, including parenting practices (Endendijk et al., 2018). Notably, same-sex parental models have a greater influence on children's gender development (Perry & Bussey, 1979). For example, girls who witness their mothers engaging more frequently in nurturing and caregiving activities than their fathers may internalize the belief that these roles are primarily associated with females, thus inclining them toward adopting similar gender roles (Halpern & Perry-Jenkins, 2015). Similarly, boys who observe their fathers consistently take on stereotypically masculine tasks, such as paid work, tend to internalize the same traditional beliefs. Over time, these early gender beliefs persist and extend into parenthood, thereby contributing to gender differences in parental involvement.

Gender role development is also influenced by the outcomes of gender-related behaviours, which can either be reinforced or punished (Mischel, 1966). Reinforcement involves favourable outcomes, like receiving praise, while punishment refers to unfavourable outcomes, such as verbal scolding (McLeod, 2024). Individuals who receive praise for specific gender-related behaviours, such as being commended as a "good girl/ boy" are likely to repeat those behaviours, whereas those who face punishment are discouraged from doing so

(Endendijk et al., 2018; Mischel, 1966). For instance, if a boy receives negative comments for engaging in activities associated with nurturing, such as caring for a child during role-playing, he may internalize the belief that men are not expected to take on nurturing roles (Shi, 2023). Consequently, to avoid further negative reactions, he may be less inclined to participate in child-rearing tasks later in life, which can result in reduced paternal involvement. These positive and negative experiences related to caregiving tasks solidify gender roles in a family and eventually contribute to gender differences in parental involvement.

Urie Bronfenbrenner's Ecological System Theory Model. The Urie Bronfenbrenner's Ecological System Theory Model is used to further support the study. This theory explains how the multiple ecological systems that individuals interact with will affect how the person develops, both directly (in the microsystem and mesosystem) and indirectly (in the exosystem, macrosystem and chronosystem) (Gauvain & Cole, 1997; Kocayörük, 2016). As illustrated in Figure 1, children are located at the core of this model, with their surrounding environment being expanded to these five systems: Microsystem, Mesosystem, Exosystem, Macrosystem and Chronosystem.

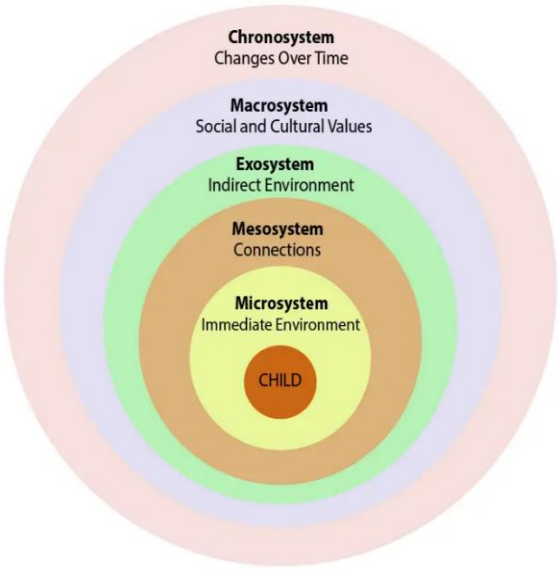


Figure 1. *Bronfenbrenner's Ecological Systems Theory Model (1979)*

Microsystem: Microsystem, including the child's immediate environment such as their family, peers, school, childcare settings and neighbourhood, constitutes the first layer of the ecosystem. Research has found that direct interactions within the microsystem have a greater impact on children's development than indirect interactions in other systems (Crawford, 2020). Hence, as a part of children's microsystem, it is imperative for both fathers and mothers to maintain regular and consistent involvement with their children to promote positive education outcomes.

Mesosystem: Mesosystem is the second layer of the ecological system, which refers to the relationships between two or more microsystems in which children are involved (Gauvain & Cole, 1997). For instance, it encompasses the dynamic connections between families, representing the home microsystem, and teachers, representing the school microsystem. Research has demonstrated that parents' supportive involvement and direct communication with teachers during children's formative years significantly contribute to their success in educational programs (Kim & Railey, 2014). Thus, it is crucial for parents and teachers to establish collaborative relationships and effective communication channels to enhance support for children's learning journey.

Exosystem: Exosystem is the third circle of the ecological system, which refers to the connection between multiple microsystems, similar to the mesosystem (Crawford, 2020). However, unlike the mesosystem where the child plays an active role, in the exosystem, the child is not directly involved. An example of the exosystem is parental employment, which has an indirect influence on children through the parents' work environment (Ferreira et al. 2018). Factors such as long working hours, parental absence from school events due to work commitments, and heavy workloads contribute to this influence (Crawford, 2020).

Research indicated that while the overall workloads of dual-earner fathers and mothers may appear balanced, this equilibrium often results from fathers assuming more paid work while mothers compensate by shouldering a greater share of domestic and caregiving responsibilities (Parker & Wang, 2014). Consequently, even within dual-earner families, a gender imbalance in parental involvement persists, with mothers assuming a higher proportion of responsibilities compared to fathers.

Macrosystem: The fourth layer of the ecosystem, namely the macrosystem, includes cultural values, customs, and laws (Bronfenbrenner, 1994). In this study, the macrosystem relates to gender ideology, which defines the roles expected of men and women. Traditionally, the societal norm has positioned mothers as the primary nurturers responsible for their children's development and education, while fathers are expected to be the main breadwinners ensuring the family's economic survival (Bornstein & Putnick, 2016). These traditional gender expectations directly influence the self-perceived roles and responsibilities of fathers and mothers. Mothers adhering to traditional gender roles often view themselves as primarily accountable for their children's education, with paternal involvement seen as merely "helping" or a stroke of luck (Gaunt et al., 2022). Consequently, traditional mothers tend to take the lead as caregivers and homemakers, thereby increasing maternal involvement and reducing paternal participation in their children's learning.

However, the transition towards egalitarian beliefs has the potential to reshape traditional notions of parental involvement within dual-earner families. Egalitarian beliefs promote the idea that both fathers and mothers should share balanced and collaborative child-rearing responsibilities, but not be assigned tasks based on one's gender (Gaunt et al., 2022). Within the framework of egalitarian belief, gender differences in parental involvement may become less apparent, as individuals embracing this belief may prioritize equitable sharing of

parental duties and are more likely to supplement parenting time when one partner is working (Pinho & Gaunt, 2020).

Chronosystem: A chronosystem includes changes or consistencies over time in the children's characteristics and their living environment (Bronfenbrenner, 1994). A clear example is the changing landscape of male and female workforce participation (Bronfenbrenner, 1986). Research revealed a notable trend worldwide: over the past three decades, more women attained higher levels of education, leading them to actively enter the workforce and engage in economic activities outside the home (Heath & Jayachandran (2016). This trend is particularly evident among women with young children (Schildberg-Hörisch, 2016). Study further suggested that when mothers are employed, their young children tend to spend more time with their fathers (Hsin & Felfe, 2014). This could reduce parental involvement differences between fathers and mothers, as both parents may share childcare responsibilities more equally.

The Covid-19 pandemic is also another example of a chronosystem. During the pandemic, there was a noticeable increase in young children's need for greater parental care, resulting in greater parental involvement (Vaterlaus et al., 2021). Additionally, various COVID-19-related factors (e.g., implementation of work-from-home and virtual learning, concern for children's emotional health) may have influenced parental involvement dynamics (Vaterlaus et al., 2021). For instance, with the closure of early childhood settings and the shift to remote work during the pandemic, fathers were found to increase their parenting time, although mothers continued to bear the primary childcare responsibilities (Walthery & Chung, 2021).

Conceptual Framework

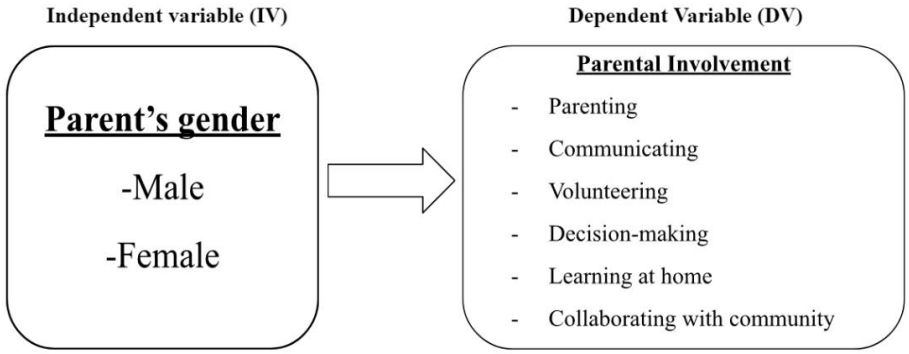


Figure 2. *Conceptual framework of the gender differences in parental involvement*

This study investigated the influence of parents' gender (IV) on six aspects of parental involvement outlined in Epstein's framework (DV), including parenting, communicating, volunteering, decision-making, learning at home, and collaborating with the community.

Grounded in the employed theories, this study hypothesized significant differences would be observed between dual-earner parents (fathers and mothers) across the six types of parental involvement listed. These hypotheses are supported by a robust body of past literature (Barnes, 2016; Burwell, 2021; Ding, 2014; Đukić et al., 2022; Duursma, 2014; Herawati et al., 2020; Hossain, 2013; Lau, 2016; Liu & Chung, 2022; Okorn et al., 2021; Pew Research Center, 2015; Shah, 2015; Zimmermann et al., 2022), which consistently indicated greater maternal involvement compared to paternal involvement in various aspects of children's education.

CHAPTER III

METHODOLOGY

Introduction

This chapter presents the research design adopted, including a description of the participants and sampling method, research instrument, data analysis method and the research procedures.

Research Design

This study adopted a quantitative research design to determine the significant differences between two groups, dual-earner fathers and dual-earner mothers in their parental involvement. Quantitative research is a method that employs natural scientific inquiry strategies for generating data in the forms of numbers and statistics (Ahmad et al., 2019). By using statistics, it enables the researcher to test hypotheses, identify causal relationships or significant correlations between two or more variables, and explain and generalize the phenomenon to a specific population, (Ahmad et al., 2019; Apuke, 2017; Daniel, 2016). Specifically, the research design employed a cross-sectional approach, which involves the collection of data at a single point in time to investigate differences among various subjects (Mertler, 2016; Wang & Cheng, 2020). Hence, data were gathered concurrently from both fathers and mothers within dual-earner families to examine their parental involvement differences.

Sampling and Respondent

In this study, respondents were recruited using purposive sampling, a non-probability technique where researchers subjectively select samples based on their judgment and knowledge of the study (Sharma, 2017). This method is particularly valuable when seeking respondents who meet specific criteria to provide the most relevant information (Campbell et al., 2020). Given the study's focus on exploring parental involvement among dual-earner

parents, purposive sampling would be the most appropriate method as it allows researchers to intentionally select working parents whose spouses are also employed, thereby facilitating a deeper understanding of parental involvement dynamics in dual-earner families. Specifically, target respondents were chosen based on three criteria: being dual-earner parents (whether full-time, part-time, or self-employed), having at least one child aged three to six years old, and residing in the Selangor area.

The target number of respondents for this study required a minimum of 60 respondents and continued the data collection within the timeframe of two weeks to enhance the study's reliability. In quantitative research, the number of participants is considered the main aspect to ensure generalizability (Mertler, 2016). Gathering data from a large number of respondents to produce more generalizable and reliable results to represent the population studied (Mertler, 2016). Eventually, within two weeks, the study successfully obtained data from 64 pairs of dual-income parents, comprising 64 fathers and 64 mothers, all of whom met the specified requirements.

Research Instrument

In this study, the survey method was used for data collection by distributing surveys or questionnaires to respondents to gather information on their characteristics, actions, and perspectives (Mertler, 2016). The most widely used survey method is a questionnaire, which consists of a list of questions (open- or closed-ended) intended to elicit information from respondents (Kabir, 2016). Compared to responding to physical paper document questionnaires, online questionnaires allowed researchers to collect data from a wide range of participants in a more rapid, inexpensive and time-efficient manner (Regmi et al., 2016). Given these benefits, the researcher chose to distribute the online questionnaire to the eligible respondents.

This study consists of two questionnaires: The demographic questionnaire and the Parent and School Survey (PASS). PASS was duplicated into separate sets- one for fathers and the other for mothers within the same family units. Fathers and mothers independently completed their respective questionnaire sets, with fathers responding to the first session, followed by mothers who responded in the subsequent session.

Demographic Questionnaire. The demographic questionnaire was used to obtain the respondents' background information. It consists of eight questions that concern the father's and mother's age, educational level, current employment status, household income and child's age to ensure the respondents are eligible to participate in the study.

Parent and School Survey (PASS). The PASS is a questionnaire developed by Ringenberg et al. (2005) based on Epstein's model of parental involvement to investigate parental involvement in children's learning. PASS consisted of 30 items in total, with the first 24 items related to parental involvement behaviours and 6 items for obstacles to involvement, which are not applicable in this study. In line with Epstein's six-construct framework, the first 24 questions are divided into six subscales: parenting (4, 14, 16, 19); communicating (3, 6, 7, 17); volunteering (1, 12, 15, 23); learning at home (2, 5, 9, 18); decision-making (8, 13, 21, 22) and collaborating with community (10, 11, 20, 24) (Ringenberg et al., 2005). These 24 items are measured on a 5-point Likert scale ranging from 1 to 5 (1= "strongly agree", 2= "agree", 3= "partially agree/ partially disagree", 4= "disagree" and 5= "strongly disagree"). Six items (6, 8, 16, 17, 18, 20) are reverse-scoring questions, in which the interpretation of each scale was reversed, to avoid careless responding and enhance response validity (Józsa & Morgan, 2017). As an example, question 17, "Talking to my child's current teacher makes me feel a little uncomfortable," would be scored as a "1" if the statement was "strongly disagree" and vice versa.

The scoring method for PASS is totalling up and finding the average score (Tseng, 2022). To find the overall parental involvement, add all scores from 24 items and divide them by 24 to find the mean. For each construct, sum up the scores for each set of items and divide them by four to calculate the average. The interpretation of the scores is that a higher score reflected more positive parental involvement (Washington, 2011). On the other hand, the six subscales in this questionnaire demonstrated high internal consistency, with Cronbach's alpha values of 0.82 (Parenting), 0.78 (Communicating), 0.85 (Volunteering), 0.81 (Learning at home), 0.87 (Decision-making) and 0.92 (Collaborating with community). George and Mallery (2020) categorized the level of reliability into: unacceptable (below 0.50), poor (0.50- 0.60), doubtful (0.60- 0.70), acceptable (0.70-0.80), good (0.80-0.90) and perfect (above 0.90). Accordingly, the "Communicating" subscale exhibited acceptable reliability, the "Collaborating with community" subscale demonstrated perfect reliability, while the remaining five subscales had good reliability.

Data Analysis Method

In this study, the Statistical Package for the Social Science (SPSS) 28.0 version will be used to produce descriptive and inferential statistics. There are two types of data are collected, namely descriptive data and inferential data.

Descriptive Statistic. Descriptive statistics are employed to organize data collected from a sample of respondents by explaining the relationship between the variables, including measures of central tendency (e.g., mean, median, mode), the measure of dispersion (e.g., range, variance, standard deviation) and distribution of data (Kaur et al., 2018). Furthermore, according to Mishra et al. (2019), it is vital to run normality tests before deciding on the use of parametric or non-parametric tests. Therefore, a Shapiro-Wilk test will be conducted initially using SPSS to test whether the variables are normally distributed. Shapiro-Wilk test is a popular

numerical-based normality test that is used to test the normality of the data (Souza et al., 2023). In the Shapiro-Wilk test, if the p-value is greater than 0.05, it indicates that the data follows a normal distribution. If it is less than 0.05, the data is not normally distributed. If the data are normally distributed and are continuous variables (Mishra et al., 2019), the mean is presented to compare between paired groups and parametric methods (e.g., paired t-test) will be used to test differences. Otherwise, if the data were not normally distributed, medians were reported and non-parametric tests (e.g. Wilcoxon Signed-Rank Test) will be used.

In this study, since the scores of overall involvements and the six subscales are continuous data, the mean and standard deviation were performed using SPSS. Additionally, the Shapiro-Wilk test showed that the p-value of the overall involvement and all the six subscales in both fathers' and mothers' columns are less than 0.05, which indicated that the data is not normally distributed. Based on this result, a non-parametric method, the Wilcoxon Signed-Rank Test, was used to compare the median scores of the two paired samples (father and mother).

Inferential Statistic. Inferential statistics were used to summarize and make inferences about the sample based on the data collected, as well as to generalize to the larger population (Gupta et al., 2019). The paired t-test is a commonly used inferential analysis tool for testing the differences between the averages of two correlated groups or conditions, while can be also applied when comparing the mean of one particular group at two separate time frames (e.g. before and after) (Ross & Willson, 2017). It is always advised to employ a paired t-test when dealing with paired data, as this test is acknowledged for its sensitivity in detecting small differences compared to an independent t-test (McDonald, 2014). On the other hand, the Wilcoxon Signed-Rank Test is a non-parametric test alternative to paired t-tests (Zimmerman, 1996). When the data is found to deviate from normal distribution, it is more appropriate and powerful to use the Wilcoxon Signed-Rank Test instead of the paired t-test, as the latter is less

robust to non-normal data distributions and outliers (McDonald, 2015). Unlike the paired t-test, which measures differences in means, the Wilcoxon Signed-Rank Test measures based on the comparisons of medians (McDonald, 2015).

In this study, the two independent variables of fathers and mothers came from the same children, which have a paired relationship in nature. Additionally, as the data did not adhere to a normal distribution according to the Shapiro-Wilk Test, the Wilcoxon Signed-Rank Test was employed to compare the median scores of overall involvement and the six subscales between fathers and mothers, to determine if statistically significant differences can be observed.

To explain the output, the p-value (Asymp. Sig) was referred to (Samuels, 2014). In the Wilcoxon Signed-Rank Test, when the p-value is equal to or less than 0.05, it concludes that there is a statistically significant difference between the two sets of scores being compared (Pallant, 2016). Other than the p-value, effect sizes were reported for a comprehensive understanding and interpretation of the research findings (Alwahaibi et al., 2020). While the p-value determines statistical significance and the likelihood of chance occurrence, it does not tell the strength of the significance (Sullivan & Feinn, 2012). Measuring effect size can address this limitation to determine how huge the significance is (Rosen & DeMaria, 2012). Moreover, p-value calculations can be affected by sample sizes: large samples may detect statistically significant results for small effects, while small samples may overlook real effects. So, measuring effect size is imperative as it focuses on the strength of the effect, which is often more meaningful (Aarts et al., 2014). In a cross-sectional study, the effect size indicates the practical significance of the observed differences between independent and dependent variables, or how strong these differences are (Sullivan & Feinn, 2012). For this study, to assess the magnitude of differences between the two groups, the effect size of the Wilcoxon Signed-Rank Test was calculated using a formula—dividing the z score by the square root of the number of samples, represented as $r = |z|/\sqrt{n}$ (DATAtab Team, 2024; Kambouri et al., 2021;

Pallant, 2016). Following Cohen's (1988) guidelines, the effect size was interpreted using Pearson's correlation coefficient (r), where values of 0.1 indicate a small effect, 0.3 a medium effect, and 0.5 a large effect. It is worth noting that if the effect size is small (less than 0.1), although the p-value shows a significant difference between the groups, the differences are considered detectable but minor, and may not hold practical significance (McLeod, 2023).

Research Procedure

The data collection process for this study commenced by identifying suitable respondents who met the participation criteria. First, the researcher reached out to preschools in the Selangor area and explained the research objectives to the preschool's principal in order to seek their permission to conduct the study with parents in their preschools. Upon receiving approval from the principals, the researcher forwarded the consent form and online questionnaire to the principals for distribution among eligible parents. Additionally, the researcher utilized social media platforms such as Facebook, RED and Instagram to actively recruit voluntary eligible respondents to speed up the recruitment of participants.

Respondents were given two weeks to begin answering the questionnaire. Throughout this period, the researcher remained accessible to address any uncertainties regarding the questionnaire and provided assistance to respondents as needed. Additionally, the researcher maintained regular communication with the principals to ensure the smooth progression of the data collection process. Upon completion of the two-week period and the data collection phase, the researcher proceeded to analyze and interpret the collected data using SPSS. Finally, the researcher drew conclusions and prepared the report based on the findings.

Conclusion

To conclude, this chapter has presented the research design, sampling method and sample identification for this study. It has also detailed the questionnaires utilized for data

collection, the method employed for data analysis and the ways of analysing and interpreting the collected information. Lastly, the research procedure was clearly discussed in a step-by-step manner.

CHAPTER IV

FINDINGS AND ANALYSIS

Introduction

In this chapter, descriptive and inferential statistics are presented and analysed. The questionnaire consists of two sections: demographic information and the Parent and School (Survey) (PASS). There are a total of 64 pairs of respondents (64 fathers and 64 mothers) answered the questionnaire. IBM SPSS Statistics was used to analyse the data for this study.

Descriptive Statistics and Analysis

The demographic items including fathers' and mothers' ages, educational level, current employment status and household income are presented.

Table 1

Father's Age

	Frequency (N)	Percent (%)
Below 20 years old	0	0
20- 29 years old	8	12.5
30- 39 years old	52	81.3
40- 49 years old	3	4.7
50 years old and above	1	1.6
Total	64	100.0

Table 1 displays the distribution of fathers across five age groups: below 20 years old, 20–29 years old, 30–39 years old, 40–49 years old, and 50 years old and above. The largest proportion of respondents falls within the 30–39 years old bracket, which comprises 52 individuals (81.3%). The 50 years and above age group had the lowest number of respondents with only one (1.6%).

This was followed by the 20-29 age group with eight respondents (12.5 %) and the 40-49 age group with three respondents (4.7 %).

Table 2

Mother's Age

	Frequency (N)	Percent (%)
Below 20 years old	0	0
20- 29 years old	16	25.0
30- 39 years old	44	68.8
40- 49 years old	4	6.3
50 years old and above	0	0
Total	64	100.0

In Table 2, the distribution of mothers across five age groups: below 20 years old, 20-29 years old, 30- 39 years old, 40- 49 years old, and 50 years old and above is presented. The largest portion of respondents falls within the 30-39 years old category, with 44 individuals (68.8%). There is no respondent below 20 years old or 50 years old and above. The age group of 20-29 years old comprised 16 respondents (25.0%), while the 40-49 years old category included four respondents (6.3%).

Table 3

Father's Educational Level

	Frequency (N)	Percent (%)
Primary Education	0	0
Secondary Education	15	23.4
Tertiary Education	49	76.6
Total	64	100.0

Table 3 illustrated the educational levels of fathers. The majority of fathers (48.6%) possess a certificate in Tertiary Education, followed by 15 fathers (23.4%) certified in Secondary Education.

Table 4

Mother's Educational Level

	Frequency (N)	Percent (%)
Primary Education	2	3.1
Secondary Education	18	28.1
Tertiary Education	44	68.8
Total	64	100.0

In Table 4, the educational levels of mothers are presented. Among 64 mothers, the highest proportion (48.6%) holds certificates in tertiary education, represented by 44 mothers, while 18 mothers (28.1%) hold certifications in Secondary Education. Only two mothers (3.1%) have certifications in Primary Education.

Table 5

Father's Current Employment Status

	Frequency (N)	Percent (%)
Employed (Full time/ Part time/ Self- employed)	64	100.0
Not Employed	0	0
Total	64	100.0

Table 5 showed that all 64 fathers surveyed are currently employed (100.0%).

Table 6

Mother's Current Employment Status

	Frequency (N)	Percent (%)
Employed (Full time/ Part time/ Self- employed)	64	100.0
Not Employed	0	0
Total	64	100.0

Table 6 indicated that all 64 mothers surveyed are currently employed (100.0%).

Table 7

Household Income

	Frequency (N)	Percent (%)
Less than RM1,000	0	0
RM 1,000- RM 1,999	2	3.1
RM 2,000- RM 2,999	4	6.3
RM 3,000- RM 3,999	4	6.3
RM 4,000- RM 4,999	8	12.5
RM 5,000- RM 5,999	9	14.1
RM 6,000- RM 6,999	9	14.1
RM 7,000- RM 7,999	8	12.5
RM 8,000- RM 8,999	10	15.6
RM 9,000- RM 9,999	3	4.7
RM 10,000 and above	7	10.9
Total	64	100.0

In Table 7, the household income of participants is presented. Among all surveyed households, 10 families (15.6%) have incomes ranging from RM 8,000 to RM 8,999. Additionally, there are the same number of families with incomes between RM 2,000- RM 2,999 and RM 3,000- RM 3,999, each comprising four families (6.3%). Similarly, eight families (12.5%) reported incomes between RM 4,000- RM 4,999 and RM 7,000- RM 7,900, while nine families (14.1%) fall within the RM 5,000- RM 5,999 and RM 6,000- RM 6,999 income brackets. Moreover, seven families (10.9%) reported household incomes of RM 10,000 and above, while three families (4.7%) fall within the RM 9,000 to RM 9,999 income range. Only two families (3.1%) reported household incomes between RM 1,000 and RM 1,999.

Table 8

Child's Age

	Frequency (N)	Percent (%)
3 years old	11	17.2
4 years old	20	31.3
5 years old	20	31.3
6 years old	13	20.3
Total	64	100.0

Table 8 presented the age distribution of the respondents' children. Both 4-year-olds and 5-year-olds are equally represented, each comprising 20 children (31.3%). The next highest group is 6 years old, with 13 children (20.3%), followed by 3 years old, with 11 children (17.2%).

Table 9

Mean, median and standard deviation for fathers' overall scores and in six subscales of PASS

Descriptive Statistics

	Frequency (N)	Mean (M)	Median (MDN)	Std. Deviation (SD)
Overall Involvement	64	3.02	2.92	0.599
Parenting	64	3.50	3.50	0.606
Communicating	64	3.07	2.75	0.908
Volunteering	64	3.16	3.00	0.689
Learning at Home	64	3.32	3.25	0.797
Decision-making	64	2.37	2.13	0.904
Collaborating with Community	64	2.73	2.75	0.765

In Table 9, the Mean, Median and Standard Deviation for fathers' overall involvement and six types of involvement are presented. The sample size (N) of the data is 64. Analysis revealed that fathers' overall involvement has a mean of 3.02 (MDN=2.92, SD=0.599). Among the six types of involvement, fathers showed the highest mean scores in parenting involvement, which is 3.50 (MDN=3.50, SD=0.606), followed by learning at home (M=3.32, MDN=3.25, SD=0.797), volunteering (M=3.16, MDN=3.00 SD=0.689), communicating (M=3.07, MDN=2.75, SD=0.908), collaborating with community (M=2.73, MDN=2.75, SD=0.765), and decision-making, showing the lowest mean (M=2.37, MDN=2.13, SD=0.904)

Table 10

Mean, median and standard deviation for mothers' overall scores and in six subscales of PASS

Descriptive Statistics

	Frequency (N)	Mean (M)	Median (MDN)	Std. Deviation (SD)
Overall Involvement	64	4.11	4.25	0.482
Parenting	64	3.95	4.00	0.654
Communicating	64	4.44	4.75	0.715
Volunteering	64	4.31	4.50	0.709
Learning at Home	64	4.24	4.38	0.662
Decision-making	64	3.76	3.75	0.695
Collaborating with Community	64	3.96	4.00	0.610

The Mean, Median and Standard Deviation for mothers' overall involvement and the six types of involvement had been shown in Table 10. The sample size (N) of the data is 64. Analysis of the results indicated that mothers' overall involvement has a mean of 4.11 (MDN= 4.25, SD=0.482). Among the six types of involvement, mothers have highest mean scores in involvement of communicating, which is 4.44 (MDN= 4.75, SD= 0.715). This is followed by volunteering (M= 4.31, MDN=4.50, SD= 0.709), learning at home (M= 4.24, MDN= 4.38, SD= 0.662), collaborating with community (M= 3.96, MDN= 4.00, SD= 0.610), parenting (M= 3.95, MDN= 4.00, SD= 0.654) and decision-making, which exhibited the lowest mean (M= 3.76, MDN= 3.75, SD= 0.695).

Inferential Statistics and Analysis

Given the non-normal distribution of the collected data, inferential analysis in this study employed the Wilcoxon Signed-Rank Test, which is the non-parametric test equivalent to the paired t-test. This analysis aimed to identify differences in parental involvement between fathers and mothers within the dual-earner families based on data from 64 pairs of local dual-earner parents in Selangor.

Table 11

Wilcoxon Signed-Rank Test: Comparison of overall involvement between fathers and mothers:

	Father	Mother	Z	p	r
	MDN	MDN			
Overall Involvement	2.92	4.25	-6.516	<.001	0.58

Note. N= 64 fathers and 64 mothers; MDN= Median

Ha1= There is a significant difference between fathers and mothers in dual-earner families in the overall parental involvement in their children's learning.

Results from Table 11 indicated a significantly higher overall parental involvement score among mothers (MDN = 4.25, N = 64) compared to fathers (MDN = 2.92, N = 64) within the same family unit ($Z = -6.516$, $p < 0.001$). The effect size $|r| = 0.58$ indicated a large effect. Thus, the hypothesis is accepted.

Table 12

Wilcoxon Signed-Rank Test: Comparison of involvement in parenting between fathers and mothers

	Father	Mother	Z	p	r
	MDN	MDN			
Parenting	3.50	4.00	-4.679	<.001	0.41

Note. N= 64 fathers and 64 mothers; MDN= Median

Ha2= There is a significant difference between fathers and mothers in dual-earner families in the involvement of parenting in their children's learning

According to Table 12, parenting involvement scores were higher among mothers (MDN = 4.00, N = 64) compared to fathers (MDN= 3.50, N = 64) within the same family unit ($Z = -4.679$, $p < 0.001$). The effect size $|r| = 0.41$ indicated a moderate effect. Given a p-value below 0.05, the results are statistically significant, which indicated a notable difference between the fathers and mothers. Hence, the hypothesis is accepted.

Table 13

Wilcoxon Signed-Rank Test: Comparison of involvement in communicating between fathers and mothers

	Father	Mother	Z	p	r
	MDN	MDN			
Communicating	2.75	4.75	-5.992	<.001	0.53

Note. N= 64 fathers and 64 mothers; MDN= Median

Ha3= There is a significant difference between fathers and mothers in dual-earner families in the involvement of communicating in their children's learning.

Based on Table 13, the result revealed significantly higher communicating involvement scores among mothers (MDN = 4.75, N = 64) compared to fathers (MDN= 2.75, N = 64) within the same family unit (Z= -5.992, $p < 0.001$). The effect size $|r| = 0.53$ suggested a large effect. A p-value less than 0.05 ($p < 0.001$) confirmed a significant difference between dual-earner fathers and mothers in communicating involvement. Therefore, the hypothesis is accepted.

Table 14

Wilcoxon Signed-Rank Test: Comparison of involvement in volunteering between fathers and mothers

	Father	Mother	Z	p	r
	MDN	MDN			
Volunteering	3.00	4.50	-6.270	<.001	0.55

Note. N= 64 fathers and 64 mothers; MDN= Median

Ha4= There is a significant difference between fathers and mothers in dual-earner families in the involvement of volunteering in their children's learning.

In Table 14, it was observed that mothers within the same family unit exhibited notably higher volunteering involvement scores (MDN = 4.50, N = 64) compared to fathers (MDN = 3.00, N = 64), with $Z = -6.270$ and $p < 0.001$. The large effect size, indicated by $|r| = 0.55$, further highlighted the significant difference in volunteering involvement between the two groups. Hence, the hypothesis is accepted.

Table 15

Wilcoxon Signed-Rank Test: Comparison of involvement in learning at home between fathers and mothers

	Father	Mother	Z	p	r
	MDN	MDN			
Learning at home	3.25	4.38	-6.418	<.001	0.57

Note. N= 64 fathers and 64 mothers; MDN= Median

Ha5= There is a significant difference between fathers and mothers in dual-earner families in the involvement of learning at home in their children's learning.

Table 15 presented significant findings regarding parental involvement in learning at home within dual-earner families. Mothers (MDN = 4.38, N = 64) demonstrated notably higher scores compared to fathers (MDN = 3.25, N = 64), as evidenced by $Z = -6.418$ and $p < 0.001$. Moreover, the effect size $|r| = 0.57$ suggested a large effect. Therefore, the hypothesis is accepted.

Table 16

Wilcoxon Signed-Rank Test: Comparison of involvement in decision-making between fathers and mothers

	Father	Mother	Z	p	r
	MDN	MDN			
Decision-making	2.13	3.75	-6.220	<.001	0.55

Note. N= 64 fathers and 64 mothers; MDN= Median

Ha6= There is a significant difference between fathers and mothers in dual-earner families in the involvement of decision-making in their children's learning.

Based on Table 16, the Wilcoxon Signed-Rank Test unveiled significant differences in decision-making involvement scores between mothers (MDN = 3.75, N = 64) and fathers (MDN = 2.13, N = 64), with $Z = -6.220$ and $p < 0.001$. The large effect size ($|r| = 0.55$) further highlighted the substantial difference observed. With a p-value lower than 0.05 which indicated a significant difference in decision-making involvement between the two groups, the hypothesis is accepted.

Table 17

Wilcoxon Signed-Rank Test: Comparison of involvement in collaborating with community between fathers and mothers

	Father	Mother	Z	p	r
	MDN	MDN			
Collaborating with community	2.75	4.00	-6.395	<.001	0.57

Note. N= 64 fathers and 64 mothers; MDN= Median

Ha7= There is a significant difference between fathers and mothers in dual-earner families in the involvement of collaborating with the community in their children's learning.

The results of the Wilcoxon Signed-Rank Test showed that scores for collaborating with the community involvement were notably higher among mothers (MDN=4.00, N=64) compared to fathers (MDN=2.75, N=64) within the same family, with $Z = -6.395$ and $p < 0.001$. The effect size $|r|=0.57$ suggested a large effect. A p-value of less than 0.05 indicated a significant difference in collaborating with community involvement between the two groups. Thus, the hypothesis is accepted.

Summary

Table 18

Summary of Findings

Hypothesis Assumption	Result	Decision
Ha1= There is a significant difference between fathers and mothers in dual-earner families on the overall parental involvement in their children's learning.	p< 0.001, r= 0.58	Accepted. Large effect size.
Ha2= There is a significant difference between fathers and mothers in dual-earner families on the involvement of parenting in their children's learning.	p< 0.001, r= 0.41	Accepted. Moderate effect size.
Ha3= There is a significant difference between fathers and mothers in dual-earner families on the involvement of communicating in their children's learning.	p< 0.001, r=0.53	Accepted. Large effect size.
Ha4= There is a significant difference between fathers and mothers in dual-earner families on the involvement of volunteering in their children's learning.	p< 0.001, r= 0.55	Accepted. Large effect size.

Ha5= There is a significant difference between fathers and mothers in dual-earner families on the involvement of learning at home in their children's learning.	p< 0.001, r= 0.57	Accepted. Large effect size.
Ha6= There is a significant difference between fathers and mothers in dual-earner families on the involvement of decision-making in their children's learning.	p< 0.001, r= 0.55	Accepted. Large effect size.
Ha7= There is a significant difference between fathers and mothers in dual-earner families on the involvement of collaborating with the community in their children's learning.	p< 0.001, r= 0.57	Accepted. Large effect size.

The findings showed that there are significant differences between dual-earner fathers and dual-earner mothers in overall parental involvement, involvement in parenting, communicating, volunteering, learning at home, decision-making and collaborating with community. In brief, the seven hypotheses H_{a1}, H_{a2}, H_{a3}, H_{a4}, H_{a5}, H_{a6} and H_{a7} are accepted. While the parenting subscale has a moderate effect size, the overall involvement and the other five subscales demonstrated large effect sizes.

CHAPTER V

DISCUSSION AND CONCLUSION

Introduction

In this chapter, the researcher discussed the findings of the descriptive and inferential analyses in Chapter 4. This chapter also presented some limitations of this study and recommendations for future research and finally ended with a conclusion to summarize the whole study.

Discussion

Overall Involvement. The research findings suggested a notable gender difference in parental involvement, with mothers demonstrating significantly higher overall engagement compared to fathers. This aligns with prior research emphasizing mothers' predominant role in fostering children's educational development (Herawati et al, 2020; Hossain, 2014; Zimmermann et al., 2022). More specifically, mothers displayed the highest engagement in communication with the school, while fathers were primarily engaged in parenting tasks. Interestingly, both fathers and mothers demonstrated the least involvement in decision-making processes.

This difference can be understood through Albert Bandura's social learning theory of gender role development, which suggested that boys and girls are socialized differently to adopt gender-appropriate behaviours aligned with societal norms (Bussey & Bandura, 1999). As societal gender norms remain traditional in Malaysia (Malaysia Population Research Hub, 2017), males and females are often taught to conform to their respective traditional gendered responsibilities. This is evident in the fact that fathers are still the primary breadwinners despite their increasing involvement in family responsibilities (Hossain & Madon, 2021). However, in terms of parenting responsibility, fathers are often regarded as secondary caregivers to complement mothers (Batalha et al., 2023). Even when fathers prioritize their careers over

parenting, they are less scrutinized due to perceived longer working hours and higher income (Our Watch, 2018). This potentially leads fathers to have a reduced sense of responsibility for engaging in child-rearing tasks, thus contributing to their lower involvement in their children's education. Conversely, contemporary society imposes dual expectations on working women by requiring them to fulfil both breadwinning and nurturing roles simultaneously (Malaysia Population Research Hub, 2017; Sumari et al., 2019; Zaid et al., 2020). Compared to fathers, dual-earner mothers are subjected to stricter social scrutiny regarding their parental responsibilities, especially if work commitments limit their involvement in their children's education. To meet standards of "good mothering" and avoid potential criticism, mothers tend to engage more with their children's development and education than fathers (Batalha et al., 2023).

Further analysis of effect sizes revealed large effects in five types of involvement: communicating, volunteering, learning at home, decision-making, and collaborating with the community. The only aspect showing a moderate effect size was parenting. This indicated that while there is a noticeable difference between fathers and mothers in parenting involvement, it is not as obvious as in the other five aspects. This could be because some fathers in this study demonstrated a certain level of engagement in parenting, although it was still lower than mothers. The increasing active participation of fathers in parenting practices may be influenced by evolving societal norms and a growing recognition of the significance of paternal involvement (Hine et al., 2022). However, societal shifts take time to fully manifest. Although there is progress in increasing father involvement, it may not yet reach the same level as mothers' involvement. This gradual process could explain why the effect size for parenting involvement is moderate rather than large.

Parenting. From the findings, it is evident that mothers demonstrated significantly greater parenting involvement than fathers. This result is consistent with prior research indicating that mothers engaged in more parenting practices than fathers (Okorn et al., 2021; Shah, 2015). This difference can be attributed to the common observation that during children's early years, mothers tend to be more actively involved in parenting activities (Garcia et al., 2022). As primary caregivers, most mothers spend more time with their children on a day-to-day basis (Okorn et al., 2021), thus being more readily available to address their children's needs and oversee their daily routines (Ding, 2014). This increased caregiving time naturally fosters a deeper understanding of their children's needs, which allows mothers to respond more sensitively and attentively compared to fathers (Hallers-Haalboom, 2015), thereby exhibiting greater parenting involvement than fathers.

Another possible explanation is related to parents' parenting self-efficacy, which refers to their confidence in fulfilling their parental responsibilities (Kong & Yasmin, 2022). Parents with higher parental self-efficacy are more aware of their important roles in shaping children's learning outcomes, believe in their parenting ability and feel assured in their capability to overcome parenting challenges (Kong & Yasmin, 2022; Tazouti & Jarlégan, 2016). Importantly, mothers often develop a stronger sense of parental self-efficacy during the early stages of their children's lives (Glatz et al., 2023). This heightened confidence empowers mothers to perceive parenting responsibilities as enjoyable and less burdensome, thereby fostering greater involvement in parenting practices (Sugiana et al., 2020). In contrast, fathers with lower levels of parental self-efficacy may display less engagement in parenting tasks (Rominov et al., 2016), hence explaining their lower parenting involvement compared to mothers.

Communicating. Consistent with previous research (Ding, 2014; Pew Research Center, 2015; Shah, 2015), the findings revealed a significant difference in communicating involvement between fathers and mothers, with mothers being found more inclined to actively

engage in two-way communication with their children's school personnel. This difference could potentially be attributed to school teachers' perceptions of approaching parents of different genders. Research suggested that preschool teachers often prefer to develop positive connections with children's mothers compared to fathers (Weisberger & Ziv, 2023). This preference may be because many preschool teachers are mainly females, and they tend to perceive parents of the same gender (mothers) as more approachable, engaged and committed than fathers when discussing children's educational progress (Burwell, 2021; Lau, 2016). As a result, teachers may naturally favour communicating with mothers, leading to greater involvement of mothers in communication. In contrast, fathers are often viewed as "difficult to reach" due to several factors such as displaying less communication interest or having busy schedules (Burwell, 2021; Herawati et al., 2020). This negative perception can inadvertently discourage teachers from initiating communication with fathers, leading fathers to feel less welcomed by teachers (Magwa & Mugari, 2017). Over time, this may demotivate fathers from interacting with teachers, thus reducing their involvement in communication (Magwa & Mugari, 2017).

Volunteering. According to the result of this study, dual-earner mothers were found to have significantly higher volunteering involvement compared to fathers. This is in line with previous research (Herawati et al., 2020; Pew Research Center, 2015; Shah, 2015), which consistently emphasized mothers' active involvement in volunteer activities within school environments in comparison to fathers. Several factors may contribute to this observed difference. Firstly, fathers often feel less at ease in early childhood institution environments where the majority of staff are female and may perceive the environment as less welcoming, which diminishes their willingness to participate in school volunteering efforts (Lau, 2016). Additionally, the lack of invitations extended to fathers poses another significant challenge to

their involvement in school volunteering activities (Herawati et al., 2020). In some cases, schools may prioritize recruiting parent volunteers from mothers but overlook fathers' potential contributions due to holding gender stereotypes that fathers are less interested in children's education (Lau, 2016). When fathers perceive a lack of outreach from the school, they may feel excluded from the school-family partnership and undervalued in their involvement, thus potentially results in lower levels of father volunteering (Magwa & Mugari, 2017).

Learning at home. In comparison to fathers, the study found that mothers exhibited a significantly greater involvement in learning at home activities. In agreement with this outcome, earlier research has revealed that mothers are actively engaged in various dimensions of home-based tasks, including home literacy activities (Lau, 2016; Liu & Chung, 2022), homework assistance and fostering a conducive learning environment at home (Herawati et al., 2020) compared to fathers. Although the data in this study was unable to investigate the reason for this difference, research on parents' work arrangements suggested a potential explanation. Study have indicated that fathers are often inclined to prioritize their career commitments over child-rearing responsibilities at home, making them less likely to rearrange their work schedule for their children (Genadek & Hill, 2017). Consequently, their time spent at home may be limited by work obligations, thus resulting in reduced involvement in their children's at-home learning activities (Herawati et al., 2020). In contrast, mothers were found to reduce their work hours during their children's early years, which implies their prioritization of achieving a better balance between work and family life (Nomaguchi & Fettro, 2018). With more manageable schedules, mothers can allocate additional time to engage in educational activities with their children at home (Genadek & Hill, 2017), which leads to increased involvement in home-based learning activities.

Decision-making. From the findings, it is evident that mothers demonstrated significantly greater decision-making involvement than fathers. This aligns with previous research, which consistently highlighted mothers' active presence in various decision-making forums, such as school advisory councils and Parent Teacher Associations (PTA) (Barnes, 2016; Pew Research Center, 2015; Shah, 2015). Brooks and Hodkinson (2022) explained several potential reasons for this difference. Firstly, mothers tend to be more active participants in school-related networks, such as WhatsApp Groups, where information about school activities and issues is shared. In contrast, fathers are often excluded from these networks, thus limiting their access to crucial information. This exclusion inevitably leaves fathers out of the decision-making process regarding their children's education. Additionally, the predominance of mothers in these networks may create an environment where fathers feel unwelcome, thus deterring them from actively sharing their perspectives and opinions (Magwa & Mugari, 2017). Consequently, father's involvement in decision-making processes may be hindered, therefore contributing to their lower involvement in this aspect.

However, it should be noted that decision-making forums such as Parent-Teacher Associations (PTAs) are relatively uncommon in Malaysia's early childhood education sector. This might explain why both fathers and mothers in this study exhibited the lowest involvement in decision-making. Investigating the reason, it may largely due to the operational model of local preschools that could further restrict parental participation in decision-making. In Malaysia, preschools typically adhere to either a standardized curriculum, such as the National Preschool Curriculum Standard (NPCS), or develop their own curriculum with predetermined delivery methods (Tee & Mariani, 2018). This standardized approach may leave little room for parental input or contribution to educational decision-making processes.

Collaborating with community. The present research indicated mothers have significantly more collaboration with community involvement than fathers in dual-earner families. As supported by the previous research (Herawati et al., 2020; Shah, 2015; Shim & Shin, 2022), mothers consistently exhibited stronger connections with other families and community organizations, such as local playgroups, compared to fathers. One potential explanation for this difference is mothers' proactive engagement in social network activities compared to fathers (Neitola et al., 2023). Upon becoming mothers, women often take the initiative in establishing broader social circles within their communities, particularly with other mothers. This enables them to seek advice, share knowledge and access valuable resources that are beneficial for their children's education (Moon et al., 2019). Such proactive involvement fosters supportive networks within the community, thereby enhancing mothers' collaboration with community organizations. While fathers demonstrated lower involvement in this aspect, it is important to consider that this may not be a deliberate act of exclusion on their part. Rather, it could be attributed to experiencing marginalization within predominantly mother-dominated groups (Brooks & Hodkinson, 2022; Michelsen, 2021). Despite their willingness to engage in community-based activities, fathers may perceive a lack of inclusion among other mothers, which could also serve as a barrier to their participation.

Implication

Active parental involvement is undoubtedly important to children as it has been found to significantly impact children's educational outcomes (Patel, 2014; Sapungan & Sapungan, 2014). However, this study's findings revealed lower father involvement in all aspects compared to mother, it serves as an alert for dual-earner parents and the preschool community to seek ways that can increase parental involvement, especially father involvement, to ensure children get maximized support from their parents to achieve academic success.

Firstly, the study's findings serve as a call to action for dual-earner parents to actively address obstacles hindering parental involvement, such as work commitments (Tully et al., 2017). This prompts them to adopt strategies aimed at achieving a healthier balance between their work and caregiving duties. Encouragingly, they are urged to establish clear boundaries between work and family life to mitigate work-family conflict (Ni et al., 2023). To achieve this, it is suggested that dual-earner parents manage work and family tasks effectively to better balance their career and family obligations (Matias & Fontaine, 2015). Practical strategies include avoiding from bringing unfinished work tasks home, muting work-related notifications after working hours and maintaining focus when spending time with their children. By implementing these strategies, dual-earner parents can effectively cope with the demands of both their career and family roles, thus enhancing their ability to actively engage in their children's education.

Besides, this study reported that fathers typically exhibit low parental involvement in school-based involvement, such as volunteering and communicating, which implies the critical need for current preschool operators to reevaluate their strategies for engaging fathers within the school environment. Research has found that parental programs that are too mother-focused tend to disengage father participation (Panter-Brick et al., 2014). Therefore, instead of exclusively targeting mothers, preschool operators are reminded to strategize initiatives to increase participation from both fathers and mothers. These strategies may include organizing more family-oriented activities that encourage the involvement of both parents, offering professional training for school staff and teachers to effectively engage with parents, scheduling evening and weekend events to accommodate working parents' schedules, collecting feedback from parents about the improvement for parental programs and so forth (Ancell et al., 2016). Besides, providing advance notice of school activities for working parents to arrange work schedules accordingly will help ensure their availability to participate (Lau &

Ng, 2019). Implementing these measures will enable preschool operators to ensure the accessibility of parental programs to both fathers and mothers, which will not only increase father involvement but also enhance the effectiveness of these programs (Lechowicz et al., 2018). Directly, these efforts contribute to improving the quality of parental programs and thus, enhancing the overall educational quality of schools.

Additionally, the same finding also offers opportunities for the professional growth of preschool teachers. It serves as a reminder for preschool teachers to enhance their skills and knowledge in engaging fathers effectively. They are encouraged to take the initiative in attending talks, workshops or training sessions provided by preschool operators or other non-profit organizations focused on engaging both parents in children's education, to equip themselves with essential knowledge and practical skills. Moreover, this study's findings also urge preschool teachers to advocate for the importance of father involvement within the school settings to raise more awareness among other colleagues. By leveraging the study's findings, preschool teachers can initiate discussions and share strategies with their colleagues about how to promote equal participation of both fathers and mothers in school-based activities, thereby increasing father involvement. Gradually, this study may have the potential to inspire teachers to challenge traditional gender roles and become pioneers in promoting parental engagement within the educational settings.

Based on the mean scores of the six subscales, it is apparent that both fathers and mothers exhibited the lowest involvement in decision-making. While this may be influenced by the realistic scenarios present in Malaysia's early childhood education sector, it can be a signal for preschool operators to engage parents in decision-making processes as much as they can. They are encouraged to begin this process by taking small steps, such as seeking feedback from parents on day-to-day matters like program activities. This sends a message to parents that their input is valued and they have the right to make suggestions to support their children's learning.

Eventually, this initial engagement may pave the way for deeper parent involvement in decision-making processes over time.

Last but not least, it is also noteworthy that both parents demonstrated a lower involvement in collaborating with the community. This finding emphasizes the need for preschool operators and teachers to implement strategies that help bridge the relationship between parents and the community. When schools and communities collaborate effectively, they can work together to successfully engage families in children's education, which further has positive impacts on the children's learning outcomes (Department of Education, 2021). An effective strategy for schools to take action is to actively build relationships with community organizations, such as museums and local libraries. By partnering with these communities, schools can access a wider range of community programs and resources for families. Subsequently, schools can inform parents about these opportunities, thus encouraging them to participate more actively in community-related activities.

Limitation

Three limitations should be acknowledged. Firstly, the chosen research design presents a constraint. This study employed a quantitative method by utilizing a five-point Likert scale to collect data on parental involvement. However, relying on this scale may restrict the in-depth exploration of the underlying meanings, reasons and explanations behind parents' perspectives (Rahman, 2017; Xiong, 2022). Parental involvement is complex and influenced by various possible factors such as parenting beliefs (Lerkkanen & Pakarinen, 2019), parents' educational levels, working duration (Jafarov, 2015), self-efficacy (Tazouti & Jarlégan, 2016), family socioeconomic status (Wang et al., 2016) and more. Yet, the quantitative approach employed may inadequately explore these complexities, which potentially leads to a superficial interpretation of the study's findings (Rahman, 2017). Additionally, reliance on self-reported measures in the survey method poses another limitation. Although the reliability and validity

of the PASS were confirmed, the self-reported nature of parental involvement measures may introduce bias, as it heavily relies on the honesty and accuracy of participants' responses (Almeida et al., 2017).

Furthermore, the study's small sample size of only 64 pairs of dual-earner parents (64 fathers and 64 mothers), presented another limitation. Within the two-week timeframe, the researcher was only able to obtain this limited permission to conduct research with parents from seven preschools in Selangor, resulting in fewer respondents being included in this study. However, considering Malaysia's dual-earner households has risen to 80% since 2014 (Khor & Mohamad, 2020), generalizing findings based on this limited sample size may not be representative enough to accurately reflect the broader population of dual-earner households in Malaysia (Gumpili & Das, 2022). Additionally, small sample sizes may result in insufficient statistical power to detect small yet significant differences between study groups, thereby increasing the likelihood of Type II errors (Gumpili & Das, 2022). Consequently, there is a risk of drawing incomplete or inaccurate conclusions from this study.

Another limitation is posed by the purposive sampling method employed. As a non-probability sampling method, purposive sampling does not offer every unit of the population an equal chance of being selected, as participants are chosen based on the researcher's judgment and preference (Sharma, 2017; Shukla, 2023). In this study, parents are exclusively recruited from preschools within a specific area of Selangor, limiting the inclusion of dual-earner parents in other regions. This selective sampling may introduce bias, as the samples may not fully represent the diverse characteristics of the entire population (Shukla, 2023). Moreover, the analysis of the demographic data also reveals a bias towards respondents with higher educational attainment and household income, with fewer representations from other socioeconomic brackets. As a result, this skewed representation may restrict the generalizability of the findings to the broader population (Andrade, 2021).

Recommendation

Three recommendations are made to address the limitations and enhance support for future research. Firstly, it is recommended to adopt a mixed-method approach that integrates qualitative research techniques. While quantitative methods develop a general understanding, qualitative methods such as interviews or focus groups can reveal aspects that quantitative methods may not explore (Pilcher & Cortazzi, 2023). By integrating both approaches, the researcher can seek elaboration and explanations from parents on their answers about their parental involvement. In this way, it enables researchers to develop a more comprehensive understanding of the complex nature of parental involvement by complementing quantitative data with qualitative insight (Ahmad et al., 2019). Furthermore, to reduce concerns regarding the accuracy of self-reported data, the researcher can employ a triangulation technique. Triangulation involves comparing and contrasting data from multiple methods to ensure coherence and credibility in the research outcomes (Schoonenboom & Johnson, 2017). By triangulating quantitative and qualitative data, researchers can gain a deeper understanding of parental involvement while reducing potential biases associated with self-reported measures.

To overcome the limitation posed by the small sample size and enhance the study's representativeness, it is recommended to expand the scope of data collection. Future researchers should consider extending the duration of data collection to facilitate outreach to a broader range of preschools and parents in order to maximize the number of responses obtained. Increasing the study's sample size is likely to provide diverse and representative data, which will result in stronger, valid and generalizable research outcomes (Andrade, 2020). One widely recognized benchmark for determining an appropriate sample size is Krejcie and Morgan's table (KMT) (Krejcie & Morgan, 1970), which is based on the size of the population of interest. According to the KMT, a sample size of 384 is recommended for a population of 1 million or more (Memon et al., 2020). However, due to a lack of available data, the population of dual-

earner families in Malaysia is currently uncertain. It is therefore suggested to aim for a maximum of 384 respondents in future research to ensure a more representative sample.

In response to the limitation of lack of generalizability posed by the purposive sampling method, it is recommended that future researchers transition to a probability sampling approach, which ensures a more inclusive and equitable representation of the target population (Elfil & Negida, 2017). Specifically, cluster sampling is proposed. Cluster sampling involves dividing the population into clusters based on geographical location, followed by a random selection of clusters from which participants are recruited (Elfil & Negida, 2017). To implement cluster sampling effectively, future researchers can first divide the districts in Selangor into different clusters. Then, a random selection process can be done to choose a predetermined number of clusters that accurately represent the entire population of Selangor. Within each selected cluster, preschools can then be randomized for inclusion in the study. Finally, all dual-earner parents from the selected preschools would be invited to participate. By utilizing cluster sampling, researchers can obtain a sample that more accurately mirrors the diversity of the population as a whole, thereby enhancing both the representativeness and generalizability of the study findings (Rahman et al., 2022).

Conclusion

In conclusion, this study investigated and discussed the gender differences in parental involvement in dual-earner families in Selangor, to bridge existing research gaps where father figures and maternal employment have been underexplored in the context of parental involvement. Employing a quantitative cross-sectional research design, the study used the Parent and School Survey (PASS) and engaged 64 pairs of dual-earner parents in Selangor. The findings revealed significant differences, with mothers exhibiting significantly greater involvement across all six subscales: parenting, communicating, volunteering, learning at

home, decision-making and collaborating with the community, compared to fathers. Notably, the effect sizes varied from moderate in parenting to large in other areas.

The study's findings have notable implications for dual-earner parents by urging them to adopt strategies to balance work and family responsibilities to enhance parental involvement. Additionally, the study suggested implications for preschool operators to reassess their approaches to engaging fathers by designing initiatives that cater to both parents. Moreover, it highlighted opportunities for preschool teachers to enhance their skills in engaging fathers and advocate for their involvement within the school setting. Lastly, the findings implied that schools should actively seek parental input in decision-making processes and foster partnerships with community organizations to promote parental participation. However, this study had limitations including constraints in the depth of exploration due to the quantitative method, limited generalizability from the small sample size, and potential bias from the purposive sampling method. In response to these limitations, it is suggested that future researchers to conduct mixed-method research, expand the sample size through prolonged data collection and implement cluster sampling technique to ensure equal opportunity for all eligible participants.

References

Aarts, S., Akker, M. V. D., & Winkens, B. (2014). The importance of effect sizes. *European Journal of General Practice*, *20*(1), 61–64. https://doi.org/10.3109/13814788.2013.818655

Ahmad, N. A., Hassan, S. A., Ahmad, A. R., Chua, L. N., & Othman, N. (2017). Parental involvement in learning environment, social interaction, communication, and support towards children's excellence at school. *Journal of Sustainable Development Education and Research*, *1*(1), 83–90. https://doi.org/10.17509/jsder.v1i1.6247

Ahmad, S., Wasim, S., Irfan, S., Gogoi, S., Srivastava, A., & Farheen, Z. (2019). Qualitative v/s. quantitative research - A summarized review. *Journal of Evidence Based Medicine and Healthcare*, *6*(43), 2828–2832. https://doi.org/10.18410/jebmh/2019/587

Almeida, F., Faria, D., & Queirós, A. (2017). Strengths and limitations of qualitative and quantitative research methods. *European Journal of Education Studies*, *3*(9), 369–387. http://dx.doi.org/10.5281/zenodo.887089

Alwahaibi, I. S. H., Al-Hadabi, D. A. M., & Al-Kharousi, H. A. T. (2020). Cohen's criteria for interpreting practical significance indicators: A critical study. *Cypriot Journal of Educational Sciences*, *15*(2), 246–258. https://doi.org/10.18844/cjes.v15i2.4624

Ancell, K. S., Bruns, D. A., & Chitiyo, J. (2016). The importance of father involvement in early childhood programs. *Young Exceptional Children*, *21*(1), 22–33. https://doi.org/10.1177/1096250615621355

Andrade, C. (2020). Sample size and its importance in research. *Indian Journal of Psychological Medicine*, *42*(1), 102–103. https://doi.org/10.4103/IJPSYM.IJPSYM_504_19

Andrade, C. (2021). The inconvenient truth about convenience and purposive samples. *Indian Journal of Psychological Medicine, 43*(1), 86–88. Sagepub. https://doi.org/10.1177/0253717620977000

Apuke, O. D. (2017). Quantitative research methods: A synopsis approach. *Kuwait Chapter of Arabian Journal of Business and Management Review, 6*(10), 40–47. https://doi.org/10.12816/0040336

Baikovich, H. H., & Yemini, M. (2023). Parent–teacher relationships in international schools in Cyprus: Challenges and opportunities. *Globalisation, Societies and Education*, 1–17. https://doi.org/10.1080/14767724.2023.2207121

Baker, C. E. (2018). When daddy comes to school: Father–school involvement and children's academic and social–emotional skills. *Early Child Development and Care, 188*(2), 208–219. https://doi.org/10.1080/03004430.2016.1211118

Bandura, A. (1977). Social learning theory. *Contemporary Sociology, 7*(1). https://www.asecib.ase.ro/mps/Bandura_SocialLearningTheory.pdf

Barnes, C. C. (2016). *The relationship between male involvement in early childhood education and student academic achievement* (p. 123) [Dissertation]. https://scholarworks.waldenu.edu/dissertations/2785/

Batalha, G. M., Costa, F. C. da, Chai, C. G., Carneiro, M. F., Riani, R. S. R., & Basílio, D. G. G. (2023). From the ethics of care to dissenting motherhood in the actions and practices of the justice system: "She did not behave like a real mother." *Beijing Law Review, 14*(3), 1596–1614. https://doi.org/10.4236/blr.2023.143086

Bergsvik, J., Kitterød, R. H., & Wiik, K. A. (2019). Parenthood and couples' relative earnings in Norway. *European Sociological Review, 36*(2), 218–235. https://doi.org/10.1093/esr/jcz062

Bidakowska, A. A., Laverty, C., & Ramchandani, P. G. (2020). Father-child play: A systematic review of its frequency, characteristics and potential impact on children's development. *Developmental Review*, *57*. https://doi.org/10.1016/j.dr.2020.100924

Bornstein, M. H., & Putnick, D. L. (2016). Mothers' and fathers' parenting practices with their daughters and sons in low- and middle-income countries. *Monographs of the Society for Research in Child Development*, *81*(1), 60–77. https://doi.org/10.1111/mono.12226

Bosson, J. K., Vendello, J. A., & Buckner, C. E. (2018). *The psychology of sex and gender*. SAGE Publications.

Bronfenbrenner, U. (1986). Ecology of the family as a context for human development: Research perspectives. *Developmental Psychology*, *22*(6), 723–742. https://doi.org/10.1037//0012-1649.22.6.723

Brooks, R., & Hodkinson, P. (2022). The distribution of "educational labour" in families with equal or primary carer fathers. *British Journal of Sociology of Education*, *43*(7), 995–1011. https://doi.org/10.1080/01425692.2022.2114426

Burwell, J. M. (2021). *Preschool teachers' perspectives on engaging fathers in their child's education child's education* (pp. 1–127) [Dissertation].

Bussey, K., & Bandura, A. (1999). Social cognitive theory of gender development and differentiation. *Psychological Review*, *106*(4), 676–713.

Cabrera, N. J., Volling, B. L., & Barr, R. (2018). Fathers are parents, too! Widening the lens on parenting for children's development. *Child Development Perspectives*, *12*(3), 152–157. https://doi.org/10.1111/cdep.12275

Campbell, S., Greenwood, M., Prior, S., Shearer, T., Walkem, K., Young, S., Bywaters, D., & Walker, K. (2020). Purposive sampling: Complex or simple? Research case examples. *Journal of Research in Nursing*, *25*(8), 652–661. https://doi.org/10.1177/1744987120927206

Cano, T., Perales, F., & Baxter, J. (2018). A matter of time: Father involvement and child cognitive outcomes. *Journal of Marriage and Family*, *81*(1), 164–184. https://doi.org/10.1111/jomf.12532

Cerrato, J., & Cifre, E. (2018). Gender inequality in household chores and work-family conflict. *Frontiers in Psychology*, *9*(1330). https://doi.org/10.3389/fpsyg.2018.01330

Chang, C. J., & Luo, Y. H. (2019). A longitudinal study of maternal interaction strategies during joint book-reading in Taiwan. *Journal of Child Language*, *47*(2), 401–417. https://doi.org/10.1017/s0305000919000746

Chiu, C. Y., & Lau, E. Y. H. (2018). Extracurricular participation and young children's outcomes in Hong Kong: Maternal involvement as a moderator. *Children and Youth Services Review*, *88*, 476–485. https://doi.org/10.1016/j.childyouth.2018.03.051

Choi, J.-K., Kim, M., & Kunz, G. M. (2018). Longitudinal relationships between unmarried fathers' involvement and their children's behavior problems: Using latent growth modeling. *Children and Youth Services Review*, *91*, 424–430. https://doi.org/10.1016/j.childyouth.2018.06.035

Chou, Y.-C., Kröger, T., & Pu, C. (2016). Universal breadwinner versus universal caregiver model: Fathers' involvement in caregiving and well-being of mothers of offspring with intellectual disabilities. *Journal of Applied Research in Intellectual Disabilities*, *29*(1), 34–45. https://doi.org/10.1111/jar.12156

Chung, H. (2021). *Shared care, father's involvement in care and family well-being outcomes: A literature review* (p. 61). Government Equalities Office. https://t.co/gGCK48vSVY?amp=1

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Routledge. https://doi.org/10.4324/9780203771587

Daniel, E. (2016). The usefulness of qualitative and quantitative approaches and methods in researching problem-solving ability in science education curriculum. *Journal of Education and Practice, 7*(15), 91–100. https://api.semanticscholar.org/CorpusID:56123083

Danso, J. (2014). Examining the practice of exclusive breastfeeding among professional working mothers in Kumasi Metropolis of Ghana. *International Journal of Nursing, 1*(1), 11–24. http://ijnnet.com/journals/ijn/Vol_1_No_1_June_2014/2.pdf

DATAtab Team. (2024). *Wilcoxon signed-rank test*. DATAtab: Online Statistics Calculator. https://datatab.net/tutorial/wilcoxon-test

Department of Education. (2021). *Advancing partnerships- parent and community engagement framework.* Queensland Government. https://education.qld.gov.au/parents/community-engagement/Documents/pace-framework.pdf

Department of Statistic Malaysia. (2022). *Key statistics of labour force in Malaysia, February 2022*. Department of Statistics Malaysia Official Portal. https://v1.dosm.gov.my/v1/index.php?r=column/cthemeByCat&cat=124&bul_id=bU9ybEFIM2UrUlpxa2g4M1JkOFhTdz09&menu_id=Tm8zcnRjdVRNWWlpWjRlbmtlaDk1UT09

Ding, G. (2014). Parental behaviors and academic achievement. *American International Journal of Social Science*, *3*(1), 25–43. https://www.aijssnet.com/journals/Vol_3_No_1_January_2014/3.pdf

Đukić, T. B. M., Bogavac, D. S., Stojadinović, A. M., & Rajčević, P. Đ. (2022). Parental involvement in education and collaboration with school. *International Journal of Cognitive Research in Science, Engineering & Education (IJCRSEE)*, *10*(1), 1–14. https://doi.org/10.23947/2334-8496-2022-10-1-01-14

Duncan, R. J., Schmitt, S. A., & Vandell, D. L. (2019). Additive and synergistic relations of early mother–child and caregiver–child interactions for predicting later achievement. *Developmental Psychology, 55*(12), 2522–2533. https://doi.org/10.1037/dev0000824

Đurišić, M., & Bunijevac, M. (2017). Parental involvement as a important factor for successful education. *Center for Educational Policy Studies Journal*, *7*(3), 137–153. http://dx.doi.org/10.26529/cepsj.291

Duursma, E. (2014). The effects of fathers' and mothers' reading to their children on language outcomes of children participating in early head start in the United States. *Fathering: A Journal of Theory, Research, and Practice about Men as Fathers*, *12*(3), 283–303. https://doi.org/10.3149/fth.1203.283

Elfil, M., & Negida, A. (2017). Sampling methods in clinical research: An educational review. *Emergency, 5*(1). https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5325924/

Endendijk, J. J., Groeneveld, M. G., & Mesman, J. (2018). The gendered family process model: An integrative framework of gender in the family. *Archives of Sexual Behavior*, *47*(4), 877–904. https://doi.org/10.1007/s10508-018-1185-8

Epstein, J. (2018). Theory and overview. In *School, family, and community partnerships: Preparing educators and improving schools.* Routledge. https://doi.org/10.4324/9780429400780

Epstein, J. L. (2019). *School, family, and community partnerships: Your handbook for action*. Corwin, Sage Publishing Company.

Erdener, M. A., & Knoeppel, R. C. (2018). Parents' perceptions of their involvement in schooling. *International Journal of Research in Education and Science, 4*(1), 1–13. https://doi.org/10.21890/ijres.369197

Erickson, J. J. (2014). Fathers don't mother and mothers don't father: What social science research indicates about the distinctive contributions of mothers and fathers to children's development. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.2519862

Fantuzzo, J., Tighe, E., & Childs, S. (2000). Family involvement questionnaire: A multivariate assessment of family participation in early childhood education. *Journal of Educational Psychology, 92*(2), 367–376. https://doi.org/10.1037/0022-0663.92.2.367

Garcia, I. L., Fernald, L. C. H., Aboud, F. E., Otieno, R., Alu, E., & Luoto, J. E. (2022). Father involvement and early child development in a low-resource setting. *Social Science & Medicine, 302*(114933), 1–9. https://doi.org/10.1016/j.socscimed.2022.114933

Gaunt, R., Jordan, A., Tarrant, A., Chanamuto, N., Pinho, M., & Wezyk, A. (2022). *Caregiving dads, breadwinning mums: Transforming gender in work and childcare?* (p. 59). https://www.nuffieldfoundation.org/project/caregiving-dads-breadwinning-mums-creating-gender-equality-in-the-home

Genadek, K. R., & Hill, R. (2017). Parents' work schedules and time spent with children. *Community, Work & Family, 20*(5), 523–542. https://doi.org/10.1080/13668803.2017.1371672

George, D., & Mallery, P. (2020). *IBM SPSS statistics 26 step by step: A simple guide and reference.* Routledge.

Glatz, T., Lippold, M. A., Chung, G., & Jensen, T. M. (2023). A systematic review of parental self-efficacy among parents of school-age children and adolescents. *Adolescent Research Review*, *9*, 75–91. https://doi.org/10.1007/s40894-023-00216-w

Goodall, J., & Montgomery, C. (2014). Parental involvement to parental engagement: A continuum. *Educational Review*, *66*(4), 399–410. https://doi.org/10.1080/00131911.2013.781576

Gumpili, S. P., & Das, A. V. (2022). Sample size and its evolution in research. *IHOPE Journal of Ophthalmology*, *1*(1), 9–13. https://doi.org/10.25259/ihopejo_3_2021

Hallers-Haalboom, E. T. (2015). *Mothers and fathers: Parenting practices in families with two children* [Thesis]. https://scholarlypublications.universiteitleiden.nl/handle/1887/35813

Halpern, H. P., & Perry-Jenkins, M. (2015). Parents' gender ideology and gendered behavior as predictors of children's gender-role attitudes: A longitudinal exploration. *Sex Roles*, *74*(11), 527–542. https://doi.org/10.1007/s11199-015-0539-0

Han, Y., Liu, K., & Xie, Y. (2023). Factors affecting father involvement in parenting and solutions. *Journal of Education, Humanities and Social Sciences*, *8*, 1969–1975. https://doi.org/10.54097/ehss.v8i.4624

Heath, R., & Jayachandran, S. (2016). The causes and consequences of increased female education and labor force participation in developing countries. In *The Oxford Handbook of Women and the Economy*. Oxford Handbooks. https://doi.org/10.1093/oxfordhb/9780190628963.013.10

Herawati, T., Rizkillah, R., & Hernawati, N. (2020). Differences in father and mother involvement and the factors that influence it on early childhood education. *The Southeast Asian Journal of Early Childhood Care Education and Parenting*, *1*(1), 17–31. https://www.researchgate.net/publication/348482138

Hine, B., Shaljean, S., & Shaljean, J. (2022). *Teachers' experiences of the impact of fatherlessness on male pupils* (pp. 1–19). https://ladsneeddads.org/wp-content/uploads/2023/01/web_LND_-Report_Teachers-experiences-impact-2022.pdf

Hossain, Z. (2013). Parental beliefs and fathers' and mothers' roles in Malaysian families. *Science across Cultures: The History of Non-Western Science*, 77–90. https://doi.org/10.1007/978-94-007-7503-9_7

Hossain, Z., & Atencio, D. J. (2014). Mothers' and fathers' perceived engagement in children's care and schooling in Bangladesh: A rural-urban comparison. *Journal of Comparative Family Studies*, *48*(4), 289–311. https://www.jstor.org/stable/44509190

Hossain, Z., & Madon, Z. (2021). Distribution of Household Labor Between Mothers and Fathers in Rural and Urban Malaysia. *Journal of Comparative Family Studies*, *52*(4), 569–595. https://doi.org/10.3138/jcfs.52.4.03

Hsin, A., & Felfe, C. (2014). When does time matter? Maternal employment, children's time with parents, and child development. *Demography*, *51*(5), 1867–1894. https://doi.org/10.1007/s13524-014-0334-5

Ishak, N. A., Mohd Satar, N. H., & Zakaria, R. H. (2020). Parental involvement in education among urban families in en Malaysia. *Journal of Southeast Asian Studies, 25*(2), 60–85. https://doi.org/10.22452/jati.vol25no2.4

Jacob, G. A. D., Chinna, K., Boerhannoddin, A., & Hussain, R. B. M. (2017). Juggling work and family beyond the mind-set: Work-family conflict in Malaysian perspective. *International Journal of Advance and Applied Sciences*, *4*(4), 143–154. https://doi.org/10.21833/ijaas.2017.04.021

Jafarov, J. (2015). Factors affecting parental involvement in education: The analysis of literature. *Khazar Journal of Humanities and Social Sciences, 18*(4), 35–44. https://doi.org/10.5782/2223-2621.2015.18.4.35

Józsa, K., & Morgan, G. A. (2017). Reversed items in Likert scales: Filtering out invalid responders. *Journal of Psychological and Educational Research, 25*(1), 7–25. https://faculty.ksu.edu.sa/sites/default/files/likert2_0.pdf

Kassambara, A. (2023). *Wilcoxon Effect Size*. Rstatix. https://rpkgs.datanovia.com/rstatix/reference/wilcox_effsize.html#:~:text=The%20effect%20size%20r%20is%20calculated%20as%20Z

Kaur, P., Stoltzfus, J., & Yellapu, V. (2018). Descriptive statistics. *International Journal of Academic Medicine*, *4*(1), 60–63. https://doi.org/10.4103/ijam.ijam_7_18

Keizer, R., Lissa, C. J., Tiemeier, H., & Lucassen, N. (2019). The influence of fathers and mothers equally sharing childcare responsibilities on children's cognitive development from early childhood to school age: An overlooked mechanism in the intergenerational transmission of (dis)advantages? *European Sociological Review*, *36*(1). https://doi.org/10.1093/esr/jcz046

Keown, L. J., & Palmer, M. (2014). Comparisons between paternal and maternal involvement with sons: Early to middle childhood. *Early Child Development and Care*, *184*(1), 99–117. https://doi.org/10.1080/03004430.2013.773510

Khor, P. G., & Mohamad, Z. S. (2020). The challenges experienced by adolescent and parents in dual-income family: A qualitative study. *Malaysian Journal of Social Science*, *5*(1), 100–111. https://unimel.edu.my/journal/index.php/JSS/article/view/662

Kim, J. (2020). Workplace flexibility and parent–child interactions among working parents in the U.S. *Social Indicators Research*, *151*(2), 427–469. https://doi.org/10.1007/s11205-018-2032-y

Kim, J., & Yu, H. M. (2022). Home-based parent involvement, parental warmth, and kindergarten outcomes among children of immigrant parents. *Early Education and Development*, 1–25. https://doi.org/10.1080/10409289.2022.2153003

Kim, S. W., & Hill, N. E. (2015). Including fathers in the picture: A meta-analysis of parental involvement and students' academic achievement. *Journal of Educational Psychology*, *107*(4), 919–934. https://doi.org/10.1037/edu0000023

Kim, Y., & Riley, D. A. (2014). Utilizing parental homework as a form of parent involvement in early care and education. *NHSA Dialog*, *17*(2), 90–94. https://journals.charlotte.edu/dialog/article/view/167

Kong, C., & Yasmin, F. (2022). Impact of parenting style on early childhood learning: Mediating role of parental self-efficacy. *Frontiers in Psychology*, *13*(928629), 1–11. https://doi.org/10.3389/fpsyg.2022.928629

Lang, S. N., Schoppe-Sullivan, S. J., Kotila, L. E., Feng, X., Kamp Dush, C. M., & Johnson, S. C. (2014). Relations between fathers' and mothers' infant engagement patterns in dual-earner families and toddler competence. *Journal of Family Issues*, *35*(8), 1107–1127. https://doi.org/10.1177/0192513x14522243

Lari, N., & Al-Emadi, N. (2021). Measuring parental involvement in dual-earner Qatari families. *Journal of Child and Family Studies*, *31*. https://doi.org/10.1007/s10826-021-02183-z

Lau, E. Y. H. (2016). A mixed-methods study of paternal involvement in Hong Kong. *British Educational Research Journal*, *42*(6), 1023–1040. https://doi.org/10.1002/berj.3248

Lau, E. Y. H., & Ng, M. L. (2019). Are they ready for home-school partnership? Perspectives of kindergarten principals, teachers and parents. *Children and Youth Services Review*, *99*, 10–17. https://doi.org/10.1016/j.childyouth.2019.01.019

Lechowicz, M. E., Jiang, Y., Tully, L. A., Burn, M. T., Collins, D. A. J., Hawes, D. J., Lenroot, R. K., Anderson, V., Doyle, F. L., Piotrowska, P. J., Frick, P. J., Moul, C., Kimonis, E. R., & Dadds, M. R. (2018). Enhancing father engagement in parenting programs: Translating research into practice recommendations. *Australian Psychologist*, *54*(2), 83–89. https://doi.org/10.1111/ap.12361

Lerkkanen, M.-K., & Pakarinen, E. (2019). The Role of Parental Beliefs and Practices in Children's Motivation in a Changing World. *Advances in Motivation and Achievement*, *20*, 151–167. https://doi.org/10.1108/S0749-742320190000020008

Lim, B. F. Y. (2019). Women left behind? closing the gender gap in Malaysia. *The Japan Institute for Labour Policy and Training*, *3*(17), 22–29.

Lim, S. P., & Rita, W. M. M. (2020). Parental Involvement on child's education at home during school lockdown. *Journal of Humanities and Social Studies*, *4*(2), 192–196. https://doi.org/10.33751/jhss.v4i2.2502

Liu, C., & Chung, K. K. H. (2022). Effects of fathers' and mothers' expectations and home literacy involvement on their children's cognitive–linguistic skills, vocabulary, and word reading. *Early Childhood Research Quarterly*, *60*, 1–12. https://doi.org/10.1016/j.ecresq.2021.12.009

Ma, X., Shen, J., Krenn, H. Y., Hu, S., & Yuan, J. (2016). A Meta-Analysis of the Relationship Between Learning Outcomes and Parental Involvement During Early Childhood Education and Early Elementary Education. *Educational Psychology Review*, *28*(4), 771–801. https://doi.org/10.1007/s-10648015-9351-1

Magwa, S., & Mugari, S. (2017). Factors affecting parental involvement in the schooling of children. *International Journal of Academic Research and Reflection*, *5*(1), 74–81. https://www.idpublications.org/wp-content/uploads/2016/12/Full-Paper.pdf

Malaysia Population Research Hub. (2017). *The evolution of gender roles in Malaysia* . MPRH. https://mprh.lppkn.gov.my/the-evolution-of-gender-roles-in-malaysia/

Martin, C. (2014). Gender: Early socialization. In *Encyclopedia of Early Childhood Development* (pp. 5–30). https://www.child-encyclopedia.com/pdf/complet/gender-early-socialization

Matias, M., & Fontaine, A. M. (2015). Coping with work and family: How do dual-earners interact? *Scandinavian Journal of Psychology*, *56*(2), 212–222. https://doi.org/10.1111/sjop.12195

McDonald, J. H. (2014). Tests for one measurement variable. In *Handbook of Biological Statistics*. Sparky House Publishing, Baltimore, Maryland. https://www.biostathandbook.com/HandbookBioStatThird.pdf

McDonald, J. H. (2015). Wilcoxon signed-rank test. In *Handbook of Biological Statistics*. Sparky House Publishing, Baltimore, Maryland. https://www.biostathandbook.com/wilcoxonsignedrank.html

McLeod, S. (2023). *What does effect size tell you?* Simply Psychology. https://www.simplypsychology.org/effect-size.html

McLeod, S. (2024, February 1). *Albert Bandura's social learning theory*. Simply Psychology. https://www.simplypsychology.org/bandura.html

Memon, M. A., Ting, H., Cheah, J.-H., Thurasamy, R., Chuah, F., & Cham, T. H. (2020). Sample size for survey research: Review and recommendations. *Journal of Applied Structural Equation Modeling*, *4*(2), i–xx. https://doi.org/10.47263/jasem.4(2)01

Mertler, C. A. (2016). Quantitative research methods. In *Introduction to Educational Research*. SAGE Publication. https://uk.sagepub.com/sites/default/files/upm-binaries/70019_Mertler_Chapter_7.pdf

Michelsen, T. H. (2021). *Fathers as stay-at-home dads: Fathers' and mothers' perspectives on children's school experiences perspectives on children's school experience* [Thesis]. https://scholarsarchive.byu.edu/etd/9228

Mikhaylova, O., & Sivak, E. (2021). Fathers' involvement in childcare, children's education and housework during the COVID-19 lockdown. *OSF*. https://doi.org/10.31219/osf.io/cz6ky

Mischel, W. (1966). A social learning view of sex differences in behavior. In *The development of sex differences* (pp. 57–81). Stanford University Press.

Mishra, P., Pandey, C., Singh, U., Sahu, C., Keshri, A., & Gupta, A. (2019). Descriptive statistics and normality tests for statistical data. *Annals of Cardiac Anaesthesia*, *22*(1), 67–72. https://doi.org/10.4103/aca.ACA_157_18

Moon, R. Y., Mathews, A., Oden, R., & Carlin, R. (2019). A qualitative analysis of how mothers' social networks are established and used to make infant care decisions. *Clinical Pediatrics*, *58*(9), 985–992. https://doi.org/10.1177/0009922819845332

Neitola, M., Ursin, P. A., & Pihlaja, P. (2023). Explaining children's social relationships in early childhood: the role of parental social networks. *European Early Childhood Education Research Journal*, 1–16. https://doi.org/10.1080/1350293x.2023.2257912

Ng, W. K., & Tan, W. C. (2017). A study on parental involvement and academic achievement in elementary school students. *Sains Humanika*, *9*(3-2), 45–50. https://doi.org/10.11113/sh.v9n3-2.1272

Ni, X., Zeng, Z., & Zhou, J. (2023). The effect of thriving at work on work-family conflict: The mediating role of workaholism. *Frontiers in Psychology*, *14*(1136470). https://doi.org/10.3389/fpsyg.2023.1136470

Nitecki, E. (2015). Integrated school–family partnerships in preschool: Building quality involvement through multidimensional relationships. *School Community Journal*, *25*(2), 195–219. http://www.adi.org/journal/2015fw/NiteckiFall2015.pdf

Nomaguchi, K., & Fettro, M. N. (2018). Childrearing stages and work-family conflict: The role of job demands and resources. *Journal of Marriage and Family*, *81*(2), 289–307. https://doi.org/10.1111/jomf.12521

Norman, H., & Davies, J. (2023). *What a difference a dad makes. Paternal Involvement and its Effects on Children's Education (PIECE) study* (pp. 4–42). University of Leeds.

OECD. (2023). *Review education policies*. Organisation for Economic Co-Operation and Development. https://gpseducation.oecd.org/revieweducationpolicies/#

Okorn, A., Verhoeven, M., & Van Baar, A. (2021). The importance of mothers' and fathers' positive parenting for toddlers' and preschoolers' social-emotional adjustment. *Parenting*, *22*(2), 1–24. https://doi.org/10.1080/15295192.2021.1908090

Oláh, L. S., Kotowska, I. E., & Richter, R. (2018). The new roles of men and women and implications for families and societies. *A Demographic Perspective on Gender, Family and Health in Europe*, 41–64. https://doi.org/10.1007/978-3-319-72356-3_4

Our Watch. (2018). *Challenging gender stereotypes in the early years: The power of parents* (pp. 4–37). https://www.ourwatch.org.au/resource/challenging-gender-stereotypes-in-the-early-years-the-power-of-parents/

Pallant, J. (2016). *SPSS survival manual* (6th ed.). McGraw-Hill. file:///C:/Users/user/Downloads/1588697869-julie-pallant-spss-survival-manual-mcgraw-hill-house-2016-1.pdf

Panter-Brick, C., Burgess, A., Eggerman, M., McAllister, F., Pruett, K., & Leckman, J. F. (2014). Practitioner review: Engaging fathers - recommendations for a game change in parenting interventions based on a systematic review of the global evidence. *Journal of Child Psychology and Psychiatry*, *55*(11), 1187–1212. https://doi.org/10.1111/jcpp.12280

Parker, K., & Wang, W. (2014). Modern parenthood: Roles of moms and dads converge as they balance work and family. In *Pew Research Center*. https://www.pewresearch.org/social-trends/chapter-4-how-mothers-and-fathers-spend-their-time/

Patel, A. (2014). Parental involvement & child development. *SSRN Electronic Journal.* https://doi.org/10.2139/ssrn.2477253

Perry, D. G., & Bussey, K. (1979). The social learning theory of sex differences: Imitation is alive and well. *Journal of Personality and Social Psychology*, *37*(10), 1699–1712. https://doi.org/10.1037/0022-3514.37.10.1699

Pew Research Center. (2015). *Parenting in America: Outlook, worries, aspirations are strongly linked to financial situation* (p. 103). https://www.pewresearch.org/social-trends/2015/12/17/4-child-care-and-education-quality-availability-and-parental-involvement/

Pilcher, N., & Cortazzi, M. (2023). “Qualitative” and “quantitative” methods and approaches across subject fields: Implications for research values, assumptions, and practices. *Quality & Quantity*. https://doi.org/10.1007/s11135-023-01734-4

Pinho, M., & Gaunt, R. (2020). The determinants of paternal and maternal involvement in childcare. In N. K. Toren & G. J. van Schalkwyk (Eds.), *Parental Involvement: Practices, Improvement Strategies and Challenges*. Nova Science Publishers.

Porta, S. L. D., Sukmantari, P., Howe, N., Farhat, F., & Ross, H. S. (2022). Naturalistic parent teaching in the home environment during early childhood. *Frontiers in Psychology*, *13*. https://doi.org/10.3389/fpsyg.2022.810400

Rahman, Md. M., Tabash, M. I., Salamzadeh, A., Abduli, S., & Rahaman, Md. S. (2022). Sampling techniques (probability) for quantitative social science researchers: A conceptual guidelines with examples. *SEEU Review*, *17*(1), 42–51. https://doi.org/10.2478/seeur-2022-0023

Rahman, S. (2017). The advantages and disadvantages of using qualitative and quantitative approaches and methods in language "testing and assessment" research: A literature review. *Journal of Education and Learning*, *6*(1), 102–112. https://eric.ed.gov/?id=EJ1120221

Rakotomanana, H., Walters, C. N., Komakech, J. J., Hildebrand, D., Gates, G. E., Thomas, D. G., Fawbush, F., & Stoecker, B. J. (2021). Fathers' involvement in child care activities: Qualitative findings from the highlands of Madagascar. *Plos One*, *16*(3), 18. https://doi.org/10.1371/journal.pone.0247112

Ramasamy, R., Hussain, Y., Fernando, Y., & Kamarudin, D. (2023). Parent's involvement in preschool and its influences on children's learning activities. *International Journal of Education & Technology*, *1*(4). https://doi.org/10.59021/ijetech.v1i4.76

Regmi, P. R., Waithaka, E., Paudyal, A., Simkhada, P., & Van Teijlingen, E. (2016). Guide to the design and application of online questionnaire surveys. *Nepal Journal of Epidemiology*, *6*(4), 640–644. https://doi.org/10.3126/nje.v6i4.17258

Ringenberg, M. C., Funk, V., Mullen, K., Wilford, A., & Kramer, J. (2005). The test-retest reliability of the parent and school survey (PASS). *The School Community Journal*, *15*(2), 121–134.

Rominov, H., Giallo, R., & Whelan, T. A. (2016). Fathers' postnatal distress, parenting self-efficacy, later parenting behavior, and children's emotional-behavioral functioning: A longitudinal study. *Journal of Family Psychology*, *30*(8), 907–917. https://doi.org/10.1037/fam0000216

Rosen, B. L., & DeMaria, A. L. (2012). Statistical significance vs. practical significance. *American Journal of Health Education*, *43*(4), 235–241. https://doi.org/10.1080/19325037.2012.10599241

Ross, A., & Willson, V. L. (2017). Paired samples t-test. *Basic and Advanced Statistical Tests*, 17–19. https://doi.org/10.1007/978-94-6351-086-8_4

Roy, M., & Giraldo-García, R. (2018). The role of parental involvement and social/emotional skills in academic achievement: Global perspectives. *School Community Journal*, *28*(2), 29–46. https://files.eric.ed.gov/fulltext/EJ1201955.pdf

Samuels, P. (2014). *Paired samples t-test*. Research Gate. https://www.researchgate.net/publication/274635625_Paired_Samples_t-test

Sapungan, G. M., & Sapungan, R. M. (2014). Parental involvement in child's education: Importance, barriers and benefits. *Asian Journal of Management Sciences & Education*, *3*(2), 42–48. www.ajmse. leena-luna.co.jp

Schildberg-Hörisch, H. (2016). Parental employment and children's academic achievement. *IZA World of Labor*, *231*. https://doi.org/10.15185/izawol.231

Schoonenboom, J., & Johnson, R. B. (2017). How to construct a mixed methods research design. *KZfSS Kölner Zeitschrift Für Soziologie Und Sozialpsychologie*, *69*(2), 107–131. NCBI. https://doi.org/10.1007/s11577-017-0454-1

Schoppe-Sullivan, S. J., Shafer, K., Olofson, E. L., & Kamp Dush, C. M. (2021). Fathers' parenting and coparenting behavior in dual-earner families: Contributions of traditional masculinity, father nurturing role beliefs, and maternal gate closing. *Psychology of Men & Masculinities, 22*(3), 538–550. https://doi.org/10.1037/men0000336

Septiani, D., & Nasution, I. N. (2018). Peran keterlibatan ayah dalam pengasuhan bagi perkembangan kecerdasan moral anak. *Jurnal Psikologi*, *13*(2), 120. https://doi.org/10.24014/jp.v13i2.4045

Shah, S. A. (2015). *South-Asian American and Asian Indian Americans parents: Children's education and parental participation* (p. 155) [Dissertation]. https://scholarworks.waldenu.edu/dissertations/1325/

Sharma, G. (2017). Pros and cons of different sampling techniques. *International Journal of Applied Research*, *3*(7), 749–752. https://doi.org/www.allresearchjournal.com

Shi, W. (2023). The influencing factors of gender stereotypes- based on early childhood education. *Proceedings of the 4th International Conference on Educational Innovation and Philosophical Inquiries*, *18*(1), 54–62. https://doi.org/10.54254/2753-7048/18/20231285

Shim, K., & Shin, H. (2022). Describing the ecology of parenting based on preschool mothers' social relationships in Korea: An ecological theory approach. *International Journal of Environmental Research and Public Health*, *19*(23), 11. https://doi.org/10.3390/ijerph192315864

Shukla, S. (2023). Non-probability sampling method. *National Faculty Development Programme*, 1–9. https://www.researchgate.net/publication/372724527_NON-PROBABILITY_SAMPLING_METHOD_1

Simsar, A. (2021). An analysis of the views of parents with preschool children in relation to science and preschool science activities. *International Journal of Research in Education and Science*, *7*(2), 383–399. https://doi.org/10.46328/ijres.2145

Souza, R. R. de, Toebe, M., Mello, A. C., & Bittencourt, K. C. (2023). Sample size and Shapiro-Wilk test: An analysis for soybean grain yield. *European Journal of Agronomy*, *142*, 126666. https://doi.org/10.1016/j.eja.2022.126666

Sugiana, S., Sasmiati, S., & Yulistia, A. (2020). Relationship between parenting self-efficacy and parenting stress on parents to support early children playing at home. *Indonesian Journal of Early Childhood Education Studies*, *9*(2), 124–129. http://dx.doi.org/10.15294/ijeces.v9i2.42212

Sullivan, G. M., & Feinn, R. (2012). Using effect size—or why the P value is not enough. *Journal of Graduate Medical Education*, *4*(3), 279–282. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3444174/

Sumari, M., Baharudin, D. F., Md Khalid, N., Ibrahim, N. H., & Ahmed Tharbe, I. H. (2019). Family functioning in a collectivist culture of Malaysia: A qualitative study. *The Family Journal: Counseling and Therapy for Couples and Families*, *28*(4), 1–7. https://doi.org/10.1177/1066480719844334

Tazouti, Y., & Jarlégan, A. (2016). The mediating effects of parental self-efficacy and parental involvement on the link between family socioeconomic status and children's academic achievement. *Journal of Family Studies*, *25*(3), 250–266. https://doi.org/10.1080/13229400.2016.1241185

Tee, Y. Q., & Mariani, M. N. (2018). Exploring issues on teaching and learning in Malaysian private preschools. *Malaysian Online Journal of Educational Management*, *6*(2), 67–82. https://doi.org/10.22452/mojem.vol6no2.4

Torres, N., Veríssimo, M., Monteiro, L., Ribeiro, O., & Santos, A. J. (2014). Domains of father involvement, social competence and problem behavior in preschool children. *Journal of Family Studies*, *20*(3), 188–203. https://doi.org/10.1080/13229400.2014.11082006

Tseng, J. (2022). *The role of parental involvement in the self-efficacy of children with exceptionalities: A case study* (pp. 1–101) [Dissertation].

Tully, L. A., Collins, D. A. J., Piotrowska, P. J., Mairet, K. S., Hawes, D. J., Moul, C., Lenroot, R. K., Frick, P. J., Anderson, V. A., Kimonis, E. R., & Dadds, M. R. (2017). Examining practitioner competencies, organizational support and barriers to engaging fathers in parenting interventions. *Child Psychiatry & Human Development*, *49*(1), 109–122. https://doi.org/10.1007/s10578-017-0733-0

UNICEF. (2021). *Gender-responsive parenting*. https://www.unicef.org/eca/media/16436/file/Gender_Responsive_Parenting.pdf

Utami, A. Y. (2022). The role of parental involvement in student academic outcomes. *Journal of Education Review Provision*, *2*(1), 17–21. https://doi.org/10.55885/jerp.v2i1.156

Walthery, P., & Chung, H. (2021). *Sharing of childcare and well-being outcomes: An empirical analysis* (p. 40). https://kar.kent.ac.uk/id/eprint/85872

Wang, S., & Chen, L. (2024). Father involvement in centre-based early childhood programs: A systematic review. *Children and Youth Services Review*, *157*, 107407–107407. https://doi.org/10.1016/j.childyouth.2023.107407

Wang, X., & Cheng, Z. (2020). Cross-Sectional studies: Strengths, weaknesses, and recommendations. *Chest*, *158*(1), 65–71. https://doi.org/10.1016/j.chest.2020.03.012

Wang, Y., Deng, C., & Yang, X. (2016). Family economic status and parental involvement: Influences of parental expectation and perceived barriers. *School Psychology International*, *37*(5), 536–553. https://doi.org/10.1177/0143034316667646

Washington, N. Y. (2011). *How are African American parents involved in their children's education, pre-kindergarten through sixth grade?* (pp. 1–142) [Dissertation].

Waters, G. M., Tidswell, G. R., & Bryant, E. J. (2022). Mothers' and fathers' views on the importance of play for their children's development: Gender differences, academic activities, and the parental role. *British Journal of Educational Psychology*, *92*(4). https://doi.org/10.1111/bjep.12520

Weisberger, I., & Ziv, Y. (2023). The child–mother–father–teacher relationship network in kindergarten and its association with children's social and academic development: An ecological perspective. *Children*, *10*(7), 1–14. https://doi.org/10.3390/children10071102

Wood, W., & Eagly, A. H. (2015). Two traditions of research on gender identity. *Sex Roles*, *73*(11-12), 461–473. https://doi.org/10.1007/s11199-015-0480-2

World Health Organization. (2019). *Gender and health*. World Health Organization. https://www.who.int/health-topics/gender

Wulansari, D., & Krisnatuti, D. (2023). Marital interaction and marital role on marital satisfaction of dual-earner family with school-age children. *Journal of Child Family and Consumer Studies*, *2*(2), 126–137. https://doi.org/10.29244/jcfcs.2.2.126-137

Xiong, X. (2022). Critical review of quantitative and qualitative research. *Advances in Social Science, Education and Humanities Research, 670*, 956–959. http://dx.doi.org/10.2991/assehr.k.220704.172

Xu, M., Fralick, D., Zheng, J. Z., Wang, B., Tu, X. M., & Feng, C. (2017). The differences and similarities between two-sample t-test and paired t-test. *Shanghai Archives of Psychiatry*, *29*(3), 184–188. https://doi.org/10.11919/j.issn.1002-0829.217070

Yamamoto, Y., Holloway, S. D., & Suzuki, S. (2021). Parental engagement in children's education: Motivating factors in Japan and the U.S. *School Community Journal*, *26*(1), 45–66. https://www.researchgate.net/publication/303922176

Yamauchi, L. A., Ponte, E., Ratliffe, K. T., & Traynor, K. (2017). Theoretical and conceptual frameworks used in research on family–school partnerships. *School Community Journal*, *27*(2), 9–34. https://files.eric.ed.gov/fulltext/EJ1165647.pdf

Zaid, Z., Amin, S. M., & Noor, A. H. M. (2020). Positioning childcare matters among working mothers. *Journal of Contemporary Social Science Research*, *4*(1), 107–116. http://ir.uitm.edu.my/id/eprint/35111/

Zaman, S., & Shahid, M. (2023). Gender roles and work-family balance among dual-earner couples in Pakistan. *Journal of Media and Entrepreneurial Studies, 3*, 27–38. https://doi.org/10.56536/jmes.v3i.27

Zhang, J., Liu, Y., & Hu, T. (2019). A meta-analysis of the relationship between father involvement and problem behaviour among preschool children. *Early Child Development and Care*, 1–23. https://doi.org/10.1080/03004430.2019.1679127

Zimmerman, D. W. (1996). An efficient alternative to the Wilcoxon Signed-Ranks Test for paired nonnormal data. *The Journal of General Psychology*, *123*(1), 29–40. https://doi.org/10.1080/00221309.1996.9921257

Zimmermann, P., Mühling, L. E., Lichtenstein, L., & Iwanski, A. (2022). Still mother after all these years: Infants still prefer mothers over fathers (if they have the choice). *Social Sciences*, *11*(2), 51. https://doi.org/10.3390/socsci11020051

Appendices

Appendix A : Questionnaire

Gender Differences in Parental Involvement in Dual-earner Family

Greeting!

You are invited to participate in a study conducted by the researcher, titled as above. You are required to answer a series of questions, which covers

1. Demographic details
2. Parents and School Survey (PASS)

A) Purpose

The purpose of this study is to determine the differences in parental involvement between fathers and mothers in dual-earner families in terms of their involvement in parenting, communicating, volunteering, learning at home, decision-making and collaborating with community.

B) Procedure:

To participate in this research, each family unit is requested to have one father and one mother answer their respective self-reported questionnaires. By granting consent, you agree to both the father and mother individually responding to their designated questionnaires. The estimated time for completion is approximately 5-8 minutes for each parent. Participation in this study is entirely voluntary, and you have the right to refrain from answering any questions you find uncomfortable.

C) Potential risks and benefits:

There are no anticipated risks associated with participating in these studies beyond those encountered in daily life.

Through this study, necessary importance could be given to examine gender differences in parental involvement in dual-earner families to raise awareness of the importance of parents' active participation in children's learning.

D) Confidentiality:

All of the information you have given will be kept private and confidential. Your information will be stored only by code, with personal details kept secured in files and computer with access only by the researcher. The final results of this study will be presented and written up in the researcher's project. In this event of publication, no personal identification will be disclosed.

Informed consent:

I have read and understood all the information stated above. I have my questions answered satisfactorily. By proceeding with the survey, I, hereby consent to voluntarily participate in this research.

SECTION A: Demographic Questions

Please provide your response to the questions below:

1. Father's Age *

Mark only one oval.

- ◯ Below 20 years old
- ◯ 20-29 years old
- ◯ 30-39 years old
- ◯ 40-49 years old
- ◯ 50 years old and above

2. Mother's Age *

Mark only one oval.

- ◯ Below 20 years old
- ◯ 20-29 years old
- ◯ 30-39 years old
- ◯ 40-49 years old
- ◯ 50 years old and above

3. Father's Educational Level *

Mark only one oval.

- ◯ Primary Education
- ◯ Secondary Education
- ◯ Tertiary Education
- ◯ Other: _____

4. Mother's Educational Level *

Mark only one oval.

- ◯ Primary Education
- ◯ Secondary Education
- ◯ Tertiary Education
- ◯ Other: _____

5. Father's Current Employment Status *

Mark only one oval.

- ◯ Employed (Full time/ Part time/ Self-employed)
- ◯ Not employed

6. Mother's Current Employment Status *

Mark only one oval.

- ◯ Employed (Full time/ Part time/ Self-employed)
- ◯ Not employed

7. Household Income *

Mark only one oval.

- Less than RM 1,000
- RM 1,000- RM1,999
- RM 2,000- RM2,999
- RM 3,000- RM 3,999
- RM 4,000- RM 4,999
- RM 5,000- RM 5,999
- RM 6,000- RM 6,999
- RM 7,000- RM 7,999
- RM 8,000- RM8,999
- RM 9,000- RM9,999
- RM 10,000 and above

8. Child's Age *

Mark only one oval.

- 3 years old
- 4 years old
- 5 years old
- 6 years old

Section B - Father (Parent and School Survey (PASS))

This session is designed for **FATHER** to provide responses.

Using the scale below, indicate **ONLY ONE** applicable response that best reflects your parental involvement on each of the following question.

1. I feel very comfortable visiting my child's school. *

Mark only one oval.

	1	2	3	4	5	
Stro	◯	◯	◯	◯	◯	Strongly Disagree

2. My child's schoolwork is always displayed in our home (e.g.hang papers on the refrigerator). *

Mark only one oval.

	1	2	3	4	5	
Stro	◯	◯	◯	◯	◯	Strongly Disagree

3. If my child misbehaved at school, I would know about it soon afterward. *

Mark only one oval.

	1	2	3	4	5	
Stro	◯	◯	◯	◯	◯	Strongly Disagree

4. I frequently explain difficult ideas to my child when she/he doesn't understand. *

Mark only one oval.

	1	2	3	4	5	
Stro	◯	◯	◯	◯	◯	Strongly Disagree

5. Every time my child does something well at school I compliment him / her. *

Mark only one oval.

	1	2	3	4	5	
Stroı	◯	◯	◯	◯	◯	Strongly Disagree

6. Talking with my child's principal makes me **un**comfortable. *

Mark only one oval.

	1	2	3	4	5	
Stroı	◯	◯	◯	◯	◯	Strongly Disagree

7. I always know how well my child is doing in school. *

Mark only one oval.

	1	2	3	4	5	
Stroı	◯	◯	◯	◯	◯	Strongly Disagree

8. I am **confused** about my legal rights as a parent of a student. *

Mark only one oval.

	1	2	3	4	5	
Stroı	◯	◯	◯	◯	◯	Strongly Disagree

9. I read to my child every day. *

Mark only one oval.

	1	2	3	4	5	
Stroı	◯	◯	◯	◯	◯	Strongly Disagree

10. I talk with other parents frequently about educational issues. *

Mark only one oval.

	1	2	3	4	5	
Stroı	◯	◯	◯	◯	◯	Strongly Disagree

11. My child attends community programs (e.g. YMCA, park/rec, community theatre) regularly. *

Mark only one oval.

	1	2	3	4	5	
Stroı	◯	◯	◯	◯	◯	Strongly Disagree

12. I have visited my child's classroom several times in the past year. *

Mark only one oval.

	1	2	3	4	5	
Stroı	◯	◯	◯	◯	◯	Strongly Disagree

13. I have made suggestions to my child's teachers about how to help my child learn. *

Mark only one oval.

	1	2	3	4	5	
Stroı	◯	◯	◯	◯	◯	Strongly Disagree

14. There are many children's books in our house. *

Mark only one oval.

	1	2	3	4	5	
Stroı	◯	◯	◯	◯	◯	Strongly Disagree

15. In the past 12 months I have attended activities at my child's school several times (e.g. * fun nights, performances, awards nights).

Mark only one oval.

	1	2	3	4	5	
Stroı	◯	◯	◯	◯	◯	Strongly Disagree

16. My child misses school several days each semester. *

Mark only one oval.

	1	2	3	4	5	
Stroı	◯	◯	◯	◯	◯	Strongly Disagree

17. Talking with my child's current teacher makes me somewhat **un**comfortable. *

Mark only one oval.

	1	2	3	4	5	
Stroı	◯	◯	◯	◯	◯	Strongly Disagree

18. I **don't** understand the assignments my child brings home. *

Mark only one oval.

	1	2	3	4	5	
Stroı	◯	◯	◯	◯	◯	Strongly Disagree

19. Reading books is a regular activity in our home. *

Mark only one oval.

	1	2	3	4	5	
Stroı	◯	◯	◯	◯	◯	Strongly Disagree

20. If my child was having trouble in school I would **not** know how to get extra help for him / her. *

Mark only one oval.

	1	2	3	4	5	
Stroı	◯	◯	◯	◯	◯	Strongly Disagree

21. I know the laws governing schools well. *

Mark only one oval.

	1	2	3	4	5	
Stroı	◯	◯	◯	◯	◯	Strongly Disagree

22. In the past 12 months I attended several school board meetings. *

Mark only one oval.

	1	2	3	4	5	
Stroı	◯	◯	◯	◯	◯	Strongly Disagree

23. In the past 12 months I volunteered at my child's school at least 3 times. *

Mark only one oval.

	1	2	3	4	5	
Stroı	◯	◯	◯	◯	◯	Strongly Disagree

24. I know about many programs for youth in my community. *

Mark only one oval.

	1	2	3	4	5	
Stroı	◯	◯	◯	◯	◯	Strongly Disagree

Section C - Mother (Parent and School Survey (PASS))

This session is designed for **MOTHER** to provide responses.

Using the scale below, indicate **ONLY ONE** applicable response that best reflects your parental involvement on each of the following question.

1. I feel very comfortable visiting my child's school. *

Mark only one oval.

	1	2	3	4	5	
Stroı	◯	◯	◯	◯	◯	Strongly Disagree

2. My child's schoolwork is always displayed in our home (e.g.hang papers on the refrigerator). *

Mark only one oval.

	1	2	3	4	5	
Stroı	◯	◯	◯	◯	◯	Strongly Disagree

3. If my child misbehaved at school, I would know about it soon afterward. *

Mark only one oval.

	1	2	3	4	5	
Stroı	◯	◯	◯	◯	◯	Strongly Disagree

4. I frequently explain difficult ideas to my child when she/he doesn't understand. *

Mark only one oval.

	1	2	3	4	5	
Stroı	◯	◯	◯	◯	◯	Strongly Disagree

5. Every time my child does something well at school I compliment him / her. *

Mark only one oval.

	1	2	3	4	5	
Stroı	◯	◯	◯	◯	◯	Strongly Disagree

6. Talking with my child's principal makes me **un**comfortable. *

Mark only one oval.

	1	2	3	4	5	
Stroı	◯	◯	◯	◯	◯	Strongly Disagree

7. I always know how well my child is doing in school. *

Mark only one oval.

	1	2	3	4	5	
Stroı	◯	◯	◯	◯	◯	Strongly Disagree

8. I am **confused** about my legal rights as a parent of a student. *

Mark only one oval.

	1	2	3	4	5	
Stroı	◯	◯	◯	◯	◯	Strongly Disagree

9. I read to my child every day. *

Mark only one oval.

	1	2	3	4	5	
Stroı	◯	◯	◯	◯	◯	Strongly Disagree

10. I talk with other parents frequently about educational issues. *

Mark only one oval.

	1	2	3	4	5	
Stroı	◯	◯	◯	◯	◯	Strongly Disagree

11. My child attends community programs (e.g. YMCA, park/rec, community theatre) regularly. *

Mark only one oval.

	1	2	3	4	5	
Stroı	◯	◯	◯	◯	◯	Strongly Disagree

12. I have visited my child's classroom several times in the past year. *

Mark only one oval.

	1	2	3	4	5	
Stroı	◯	◯	◯	◯	◯	Strongly Disagree

13. I have made suggestions to my child's teachers about how to help my child learn. *

Mark only one oval.

	1	2	3	4	5	
Stroı	◯	◯	◯	◯	◯	Strongly Disagree

14. There are many children's books in our house. *

Mark only one oval.

	1	2	3	4	5	
Stroı	◯	◯	◯	◯	◯	Strongly Disagree

15. In the past 12 months I have attended activities at my child's school several times (e.g. fun nights, performances, awards nights). *

Mark only one oval.

	1	2	3	4	5	
Stroı	◯	◯	◯	◯	◯	Strongly Disagree

16. My child misses school several days each semester. *

Mark only one oval.

	1	2	3	4	5	
Stroı	◯	◯	◯	◯	◯	Strongly Disagree

17. Talking with my child's current teacher makes me somewhat **un**comfortable. *

Mark only one oval.

	1	2	3	4	5	
Stroı	◯	◯	◯	◯	◯	Strongly Disagree

18. I **don't** understand the assignments my child brings home. *

Mark only one oval.

	1	2	3	4	5	
Stroı	◯	◯	◯	◯	◯	Strongly Disagree

19. Reading books is a regular activity in our home. *

Mark only one oval.

	1	2	3	4	5	
Stroı	◯	◯	◯	◯	◯	Strongly Disagree

20. If my child was having trouble in school I would **not** know how to get extra help for him / her. *

Mark only one oval.

	1	2	3	4	5	
Stroı	◯	◯	◯	◯	◯	Strongly Disagree

21. I know the laws governing schools well. *

Mark only one oval.

	1	2	3	4	5	
Stroı	◯	◯	◯	◯	◯	Strongly Disagree

22. In the past 12 months I attended several school board meetings. *

Mark only one oval.

	1	2	3	4	5	
Stroı	◯	◯	◯	◯	◯	Strongly Disagree

23. In the past 12 months I volunteered at my child's school at least 3 times. *

Mark only one oval.

	1	2	3	4	5	
Stroı	◯	◯	◯	◯	◯	Strongly Disagree

24. I know about many programs for youth in my community. *

Mark only one oval.

	1	2	3	4	5	
Stroı	◯	◯	◯	◯	◯	Strongly Disagree

Appendix B: Original SPSS Output

Table A1

SPSS output of descriptive statistics- Fathers' Age

Father_Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	20-29 years old	8	12.5	12.5	12.5
	30-39 years old	52	81.3	81.3	93.8
	40-49 years old	3	4.7	4.7	98.4
	50 years old and above	1	1.6	1.6	100.0
	Total	64	100.0	100.0	

Table A2

SPSS output of descriptive statistics- Mothers' Age

Mother_Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	20-29 years old	16	25.0	25.0	25.0
	30-39 years old	44	68.8	68.8	93.8
	40-49 years old	4	6.3	6.3	100.0
	Total	64	100.0	100.0	

Table A3

SPSS output of descriptive statistics- Fathers' Educational Level

Father_Educational_Level

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Secondary Education	15	23.4	23.4	23.4
	Tertiary Education	49	76.6	76.6	100.0
	Total	64	100.0	100.0	

Table A4

SPSS output of descriptive statistics- Mothers' Educational Level

Mother_Educational_Level

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Primary Education	2	3.1	3.1	3.1
	Secondary Education	18	28.1	28.1	31.3
	Tertiary Education	44	68.8	68.8	100.0
	Total	64	100.0	100.0	

Table A5

SPSS output of descriptive statistics- Fathers' Current Employment Status

Father_Current_Employment_Status

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Employed (Full time/ Part time/ Self- employed)	64	100.0	100.0	100.0

Table A6

SPSS output of descriptive statistics- Mothers' Current Employment Status

Mother_Current_Employment_Status

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Employed (Full time/ Part time/ Self- employed)	64	100.0	100.0	100.0

Table A7

SPSS output of descriptive statistics- Household Income

Household_Income

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	RM 1,000- RM 1,999	2	3.1	3.1	3.1
	RM 2,000- RM 2,999	4	6.3	6.3	9.4
	RM 3,000- RM 3,999	4	6.3	6.3	15.6
	RM 4,000- RM 4,999	8	12.5	12.5	28.1
	RM 5,000- RM 5,999	9	14.1	14.1	42.2
	RM 6,000- RM 6,999	9	14.1	14.1	56.3
	RM 7,000- RM 7,999	8	12.5	12.5	68.8
	RM 8,000- RM 8,999	10	15.6	15.6	84.4
	RM 9,000- RM 9,999	3	4.7	4.7	89.1
	RM 10,000 and above	7	10.9	10.9	100.0
	Total	64	100.0	100.0	

Table A8

SPSS output of descriptive statistics- Child's Age

Child_Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	3 years old	11	17.2	17.2	17.2
	4 years old	20	31.3	31.3	48.4
	5 years old	20	31.3	31.3	79.7
	6 years old	13	20.3	20.3	100.0
	Total	64	100.0	100.0	

Table A9

SPSS output of descriptive statistics- Mean, Median and Standard Deviation for fathers' overall involvement and six subscales of PASS

Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum	Percentiles 25th	50th (Median)	75th
Overall_Father	64	3.0247	.59917	1.67	4.46	2.6667	2.9167	3.4792
Parenting_Father	64	3.5000	.60586	2.00	5.00	3.0000	3.5000	4.0000
Communicating_Father	64	3.0742	.90816	1.50	5.00	2.3125	2.7500	3.7500
Volunteering_Father	64	3.1602	.68916	1.00	5.00	2.7500	3.0000	3.5000
Learning_at_home_Father	64	3.3164	.79712	1.75	5.00	2.7500	3.2500	4.0000
Decision_making_Father	64	2.3672	.90410	1.00	4.25	1.5000	2.1250	3.0000
Collaborating_with_community_Father	64	2.7305	.76546	1.00	4.50	2.2500	2.7500	3.2500

Table A10

SPSS output of descriptive statistics- Mean, Median and Standard Deviation for mothers' overall involvement and six subscales of PASS

Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum	Percentiles 25th	50th (Median)	75th
Overall_Mother	64	4.1113	.48233	2.75	4.92	3.8125	4.2500	4.4063
Parenting_Mother	64	3.9453	.65385	2.00	5.00	3.5000	4.0000	4.4375
Communicating_Mother	64	4.4414	.71512	1.75	5.00	4.2500	4.7500	5.0000
Volunteering_Mother	64	4.3125	.70851	2.00	5.00	4.0000	4.5000	4.7500
Learning_at_home_Mother	64	4.2422	.66214	2.25	5.00	3.8125	4.3750	4.7500
Decision_making_Mother	64	3.7617	.69498	2.00	5.00	3.5000	3.7500	4.2500
Collaborating_with_community_Mother	64	3.9648	.61053	2.00	5.00	3.7500	4.0000	4.5000

Table A11 Shapiro-Wilk Test for Normality: Overall involvement

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Overall_Father	.141	64	.003	.965	64	.070
Overall_Mother	.191	64	<.001	.886	64	<.001

a. Lilliefors Significance Correction

Table A12 Shapiro-Wilk Test for Normality: Parenting

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Parenting_Father	.129	64	.010	.975	64	.224
Parenting_Mother	.158	64	<.001	.960	64	.035

a. Lilliefors Significance Correction

Table A13 Shapiro-Wilk Test for Normality: Communicating

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Communicating_Father	.171	64	<.001	.943	64	.005
Communicating_Mother	.267	64	<.001	.764	64	<.001

a. Lilliefors Significance Correction

Table A14 Shapiro-Wilk Test for Normality: Volunteering

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Volunteering_Father	.123	64	.017	.969	64	.103
Volunteering_Mother	.199	64	<.001	.842	64	<.001

a. Lilliefors Significance Correction

Table A15 Shapiro-Wilk Test for Normality: Learning at home

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Learning_at_home_Father	.117	64	.030	.962	64	.045
Learning_at_home_Mother	.151	64	<.001	.910	64	<.001

a. Lilliefors Significance Correction

Table A16 Shapiro-Wilk Test for Normality: Decision-making

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Decision_making_Father	.158	64	<.001	.943	64	.005
Decision_making_Mother	.119	64	.025	.967	64	.088

a. Lilliefors Significance Correction

Table A17 Shapiro-Wilk Test for Normality: Collaborating with community

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Collaborating_with_community_Father	.110	64	.053	.980	64	.390
Collaborating_with_community_Mother	.179	64	<.001	.923	64	<.001

a. Lilliefors Significance Correction

Table A18

Wilcoxon Signed-Rank Test: Comparison of overall involvement between fathers and mothers

Ranks

		N	Mean Rank	Sum of Ranks
Overall_Mother - Overall_Father	Negative Ranks	6[a]	9.42	56.50
	Positive Ranks	57[b]	34.38	1959.50
	Ties	1[c]		
	Total	64		

a. Overall_Mother < Overall_Father

b. Overall_Mother > Overall_Father

c. Overall_Mother = Overall_Father

Test Statistics[a]

	Overall_Mother - Overall_Father
Z	-6.516[b]
Asymp. Sig. (2-tailed)	<.001

a. Wilcoxon Signed Ranks Test

b. Based on negative ranks.

Table A19

Wilcoxon Signed-Rank Test: Comparison of involvement in parenting between fathers and mothers

Ranks

		N	Mean Rank	Sum of Ranks
Parenting_Mother - Parenting_Father	Negative Ranks	10[a]	19.00	190.00
	Positive Ranks	43[b]	28.86	1241.00
	Ties	11[c]		
	Total	64		

a. Parenting_Mother < Parenting_Father

b. Parenting_Mother > Parenting_Father

c. Parenting_Mother = Parenting_Father

Test Statistics[a]

	Parenting_Mother - Parenting_Father
Z	-4.679[b]
Asymp. Sig. (2-tailed)	<.001

a. Wilcoxon Signed Ranks Test

b. Based on negative ranks.

Table A20

Wilcoxon Signed-Rank Test: Comparison of involvement in communicating between fathers and mothers

Ranks

		N	Mean Rank	Sum of Ranks
Communicating_Mother - Communicating_Father	Negative Ranks	6[a]	10.75	64.50
	Positive Ranks	50[b]	30.63	1531.50
	Ties	8[c]		
	Total	64		

a. Communicating_Mother < Communicating_Father

b. Communicating_Mother > Communicating_Father

c. Communicating_Mother = Communicating_Father

Test Statistics[a]

	Communicating_Mother - Communicating_Father
Z	-5.992[b]
Asymp. Sig. (2-tailed)	<.001

a. Wilcoxon Signed Ranks Test

b. Based on negative ranks.

Table A21

Wilcoxon Signed-Rank Test: Comparison of involvement in volunteering between fathers and mothers

Ranks

		N	Mean Rank	Sum of Ranks
Volunteering_Mother - Volunteering_Father	Negative Ranks	4[a]	14.00	56.00
	Positive Ranks	55[b]	31.16	1714.00
	Ties	5[c]		
	Total	64		

a. Volunteering_Mother < Volunteering_Father

b. Volunteering_Mother > Volunteering_Father

c. Volunteering_Mother = Volunteering_Father

Test Statistics[a]

	Volunteering_Mother - Volunteering_Father
Z	-6.270[b]
Asymp. Sig. (2-tailed)	<.001

a. Wilcoxon Signed Ranks Test

b. Based on negative ranks.

Table A22

Wilcoxon Signed-Rank Test: Comparison of involvement in learning at home between fathers and mothers

Ranks

		N	Mean Rank	Sum of Ranks
Learning_at_home_Mother - Learning_at_home_Father	Negative Ranks	5[a]	7.30	36.50
	Positive Ranks	54[b]	32.10	1733.50
	Ties	5[c]		
	Total	64		

a. Learning_at_home_Mother < Learning_at_home_Father

b. Learning_at_home_Mother > Learning_at_home_Father

c. Learning_at_home_Mother = Learning_at_home_Father

Test Statistics[a]

	Learning_at_home_Mother - Learning_at_home_Father
Z	-6.418[b]
Asymp. Sig. (2-tailed)	<.001

a. Wilcoxon Signed Ranks Test

b. Based on negative ranks.

Table A23

Wilcoxon Signed-Rank Test: Comparison of involvement in decision-making between fathers and mothers

Ranks

		N	Mean Rank	Sum of Ranks
Decision_making_Mother - Decision_making_Father	Negative Ranks	8[a]	13.94	111.50
	Positive Ranks	56[b]	35.15	1968.50
	Ties	0[c]		
	Total	64		

a. Decision_making_Mother < Decision_making_Father

b. Decision_making_Mother > Decision_making_Father

c. Decision_making_Mother = Decision_making_Father

Test Statistics[a]

	Decision_making_Mother - Decision_making_Father
Z	-6.220[b]
Asymp. Sig. (2-tailed)	<.001

a. Wilcoxon Signed Ranks Test

b. Based on negative ranks.

Table A24

Wilcoxon Signed-Rank Test: Comparison of involvement in collaborating with community between fathers and mothers

Ranks

		N	Mean Rank	Sum of Ranks
Collaborating_with_community_Mother - Collaborating_with_community_Father	Negative Ranks	6[a]	9.42	56.50
	Positive Ranks	55[b]	33.35	1834.50
	Ties	3[c]		
	Total	64		

a. Collaborating_with_community_Mother < Collaborating_with_community_Father

b. Collaborating_with_community_Mother > Collaborating_with_community_Father

c. Collaborating_with_community_Mother = Collaborating_with_community_Father

Test Statistics[a]

	Collaborating_with_community_Mother - Collaborating_with_community_Father
Z	-6.395[b]
Asymp. Sig. (2-tailed)	<.001

a. Wilcoxon Signed Ranks Test

b. Based on negative ranks.