



**UNIVERSITY
OF TURKU**

The Associations Between Parental Knowledge and Parental Difficulties in Emotional Regulation with Children's Social Competence

Faculty of Education
Master's thesis
Department of Education

Author(s):
Lifeng Yin

24.6.2024
Turku

The originality of this thesis has been checked in accordance with the University of Turku quality assurance system using the Turnitin Originality Check service.

Bachelor's thesis / **Master's thesis** / Licentiate thesis

Subject: Educational Science

Author(s): Lifeng Yin

Title: The associations between parental knowledge, parental difficulties in emotional regulation, and children's social competence

Supervisor(s): Dr. Koen Veermans

Number of pages: 73 pages

Date: 24.6.2024

Abstract

In an increasingly complex and fast-paced world, children's social competence is critical to them to optimistically and effectively coordinate their relationships with others, to adapt to the development of the society. However, the development of children's social competence cannot be separated from their families, especially the influence of parents, whose mastery the knowledge of child development and understanding and cognition of their own emotions are important factors affecting parental practice. In the process of children's growth, how parents respond to children's needs according to their knowledge and emotional regulation ability could affect the formation of a benign family environment, thus providing support for children's overall development. With limited studies regarding parental knowledge of child development in China compared to studies in western countries. This paper discusses the complex relationship between parents' knowledge, parents' emotional regulation difficulties and children's social competence on the premise of the Chinese environment.

On the basis of theoretical background review, this research applies qualitative approach to collect data, with the primary goal of investigating in the relationships between parental knowledge, emotional regulation difficulties and children's social competence. Using convenient sampling, 201 parents from a kindergarten in Lincang City, Yunnan Province, China, participated in answering an online questionnaire that combined with the scales of KIDI-P, DERS, and SCBE-30. Based on parents' self-report, the statistical analysis results showed: parents' parental knowledge was at a medium level and difficulties in emotional regulation is low which indicates they could regulate their emotion well, and children generally had a fair good level of social competence. Significant differences were found in some subscales under the influence of demographic traits. Parents' knowledge of normative behaviours showed significant differences in parents' educational background; children's sensitive-cooperation revealed significant differences in both parents' educational background and children's age; significant differences were found in awareness in terms of parents' age and educational background; there were also significant differences in impulse

and strategies in terms of parental role; and in terms of the child's status, there were significant differences in goals. The result also found that parental knowledge was negatively correlated to parental difficulties in emotional regulation; parents' difficulties in emotional regulation was negatively correlated to children's social competence. While parental knowledge was positively correlated with children's social competence.

Key words: parental knowledge, emotion regulation, children's social competence.

Table of contents

1	Introduction	7
2	Theoretical Frameworks	10
2.1	Bioecological Theory	10
2.2	Social Learning Theory	11
2.3	Social Emotional Learning	13
3	Theoretical Background	15
3.1	Children’s Social Competence	15
3.2	Parental Knowledge of Child Development	17
3.3	Difficulties in Emotion Regulation	19
4	Methodology	23
4.1	Research design and research questions	23
4.2	Participants	23
4.3	Instruments	25
4.3.1	The Knowledge of Infant Development Inventory (KIDI-Preschool)	25
4.3.2	Children Social Competence and Behaviour (SCBE)	26
4.3.3	Difficulties in Emotional Regulation Scale (DERS)	27
4.4	Data Collection	27
4.5	Data Analysis	28
5	Results	30
5.1	The reliability of the translated questionnaires	30
5.2	Parental knowledge of child development (KIDI-P)	30
5.2.1	T-test analysis of parent role differences on KIDI-P	31
5.2.2	One-way ANOVA analysis of parents’ age differences on KIDI-P	32
5.2.3	One-way ANOVA analysis of parents’ educational background differences on KIDI-P	32
5.2.4	T-test analysis of parents’ ethnicity differences on KIDI-P	33
5.2.5	T-test analysis of status of the child on KIDI-P	33
5.2.6	T-test analysis of children’s gender differences on KIDI-P	34
5.2.7	One-way ANOVA analysis of children’s age differences on KIDI-P	34
5.3	Children’s social competence and behaviour (SCBE-30): Descriptive Statistics	35

5.3.1	T-test analysis of parents' role differences on SCBE-30 results	36
5.3.2	One-way ANOVA analysis of parents' age differences on SCBE-30 results	36
5.3.3	One-way ANOVA analysis of parents' educational background differences on SCBE-30 results	37
5.3.4	T-test analysis of parents' ethnicity differences on SCBE-30 results	37
5.3.5	T-test analysis of the status of the child on SCBE-30 results	38
5.3.6	T-test analysis of children's gender differences on SCBE-30 results	38
5.3.7	One-way ANOVA analysis of children's age differences on SCBE-30 results	39
5.4	Difficulties in emotional regulation scale (DERS): Descriptive statistics	39
5.4.1	T-test analysis of parents' role differences on DERS results	40
5.4.2	One-way ANOVA analysis of parents' age differences on DERS results	41
5.4.3	One-way ANOVA analysis of parents' role differences on DERS results	42
5.4.4	T-test analysis of parents' ethnicity differences on DERS results	42
5.4.5	T-test analysis of the status of the child differences on DERS results	43
5.4.6	T-test analysis of children's gender differences on DERS results	43
5.4.7	One-way ANOVA analysis of children's age differences on DERS results	44
5.5	Correlation analysis	44
5.5.1	Correlation analysis between parental knowledge, parental difficulties in emotion regulation, and children's social competence in total	45
5.5.2	Correlation analysis between parental knowledge, parental difficulties in emotion regulation, and children's social competence in subscales	45
5.6	Conclusion in results	46
6	Discussion	49
6.1	Discussion on overall levels of parental knowledge, parental difficulties in emotional regulation, and children's social competence	49
6.1.1	Parents' overall knowledge level of child development	49
6.1.2	Parents' overall level of difficulties in emotional regulation	50
6.1.3	Children's overall level of social competence	50
6.2	Discussion on results of t-tests and ANOVA analysis based on demographic characteristics	52
6.2.1	Differences of parents' knowledge level of child development	52
6.2.2	Differences of parents' levels of difficulties in emotional regulation	54
6.2.3	Differences of children's social competence level	55
6.3	Discussion on the correlations amongst parental knowledge, parental difficulties in emotional regulation, and children's social competence	56
7	Conclusion and limitations	60

7.1 Conclusion	60
7.2 Limitations	62
References	63
Appendices	73
Appendix 1 The structure of final synthesized questionnaire and specific dimensions in each part	73

1 Introduction

Due to the growing influence of technologies and social media in today's complex and evolving world, children are facing unprecedented challenges. High social competence is required for children to meet these challenges. Prepare children with the ability to achieve personal goals in social interactions while maintaining positive relationships with others over time and across different situations is the key for developing social competence (Rubin & Rose-Krasnor, 1992). Social competence encompasses a broad range of social abilities, including interpersonal interactions, peer acceptance, and the ability to maintain social relationships (Rose-Krasnor, 1997; Rubin et al., 2012). Furthermore, social competence in early childhood serves as a predictor for children's future social, emotional, and academic outcomes. Because it is a fundamental aspect of a child's development that influences children's peer relationships, academic achievements, and long-term psychological well-being (Eisenberg et al., 2000; Masten & Coatsworth, 1998). Therefore, understanding a child's social competence development offers insights into their potential for success in school, relationships, overall adjustment in society and it is essential for a child's future achievement in a variety of life domains.

Numerous studies have suggested that the relationship between parents and their children is pivotal to the development of children's social competence, as parental behaviour and the quality of the parent-child relationship playing a vital role in shaping children's social skills and interaction (Eisenberg et al., 1996; McElwain. N, et al., 2007; Zhang, X. 2013; Meng et al., 2020; Saral & Acar, 2021; Qian et al., 2022). According to the Social Learning Theory (Bandura, 1977), parents play a crucial role in shaping their children's social competence development. Specifically, they have a significant impact on their children's ability to navigate and interact with others in different social situations by demonstrating all the behaviors as a role model to children. Although many studies that have highlighted the profound influence of parenting on the development of children's social competence, most have focused on parenting styles, parental involvement, and the quality of parent-child relationships. It is still not fully understood which aspects of parenting have the greatest impact on children's social competence. This study suggests that one crucial factor is parental knowledge of child development, which influences parenting practices. Parental knowledge of child development refers to an understanding of "developmental norms and milestones, processes of child development, and familiarity with caregiving skills" (Huang K et al., 2005).

It includes the knowledge and understanding of their children's development from birth to adolescence in terms of their physical, cognitive, emotional, and social progress (Armstrong et al., 2018). With this knowledge, parents may better adapt to their children's changing needs, foster their positive development with appropriate support. Researchers contend that by possessing a deep understanding of child development, parents can employ intelligent and effective parenting strategies to meet their children's unique requirements at different stages of development (Bornstein, 2020; Sameroff, 2010).

Though knowledge is fundamental for parenting practices to promote child development, children's social outcomes are not solely determined by the knowledge. Studies have suggested social emotional skills are core for higher social competence development, that children with better emotional skills showed higher levels of empathy, prosocial behaviour to maintain positive social relationships, handle social challenges, and perform better academically (Eisenberg et al, 2000; Eisenberg et al, 2001; Denham et al, 2003; Blair & Raver, 2015). Thus, parents' emotional regulation is another key factor to the development of children's social competence. As the social learning theory (Bandura, 1977) states that children develop their social, emotional skills by observing and imitating from parents for their behaviour patterns, social skills, and emotional strategies. Due to the significant role models that parents act for their children, children learn emotional regulation strategies by observing how their parents manage their own emotions through parental emotional expression, support and responsiveness, coping strategies, and parent-child, child-parent transactional emotion regulation (Eisenberg et al.,1998; Bridgett et al., 2011; Lunkenheimer et al., 2007). However, research has shown that this can be very challenging for parents who struggle with managing emotion to engage in emotional interactions with children, which can undermine children's capacity to recognize and understand emotions appropriately (Cassano and Zeman, 2010). Parents' emotion regulation problems and difficulties may affect the process and outcome of parental emotion socialization which may contribute to children's poor emotional regulatory strategy learning from parents, thus effects children's emotional regulation (Han & Shaffer, 2013). Therefore, investigating parents' difficulties in emotion regulation is essential to understand how it may affect parenting practice and emotional atmosphere in the family for children's social competence development.

In China, parenting is influenced by unique cultural, social, and economic factors. The importance of familial roles and responsibilities are highlighted by the traditional emphasis on academic achievement, together with the influence of Confucian values. In addition, as a

result of one-child policy which was in place for three decades, has posted distinct challenges and pressures to a generation of parents related to child-rearing (Fong, 2002). Chinese parents show high levels of involvement and investment in their children's education and development. Nonetheless, new stresses and complexities have been brought along the rapid modernization and urbanization in the country. These changes call for a more thorough comprehension of how parental knowledge and emotion regulation influence children's social competence within the Chinese context.

Taken together, it is critical to consider parent's knowledge of child development and difficulties in emotional regulation when investigating how children develop social competence. Though studies on these topics has been done extensively in Western contexts, there is a lack of literature regarding parenting and child development within the Chinese context. In this study, Chinese parents of pre-schoolers aged 3 to 6 were chosen, with a primary goal to investigate on the complex relationships between their parental knowledge, emotional regulation difficulties and their children's social competence and aim to improve the social competence development of the next generation. In addition to contributing to a better understanding of the relationship between parenting practices and child outcomes cross different cultures, the findings of this study can also provide insightful information that support parents, professionals, and educators in developing interventions and educational programs that promote children's healthy development and overall well-being.

2 Theoretical Frameworks

In this chapter, three primary theories will be presented as the theoretical framework that guides this research. They are Bioecological Theory, Social Learning Theory, and Social Emotional Learning (SEL). These theories provide a deeper comprehension of the variables affecting parental knowledge, emotional control, and children's social competence.

2.1 Bioecological Theory

Bioecological Theory, which was first put forth by Bronfenbrenner, claimed that an individual's development is impacted by a variety of interrelated environmental systems, which include personal settings such as their family, siblings, friends and broader social structures like their community, culture. According to the theory, one's growth is supported and shaped by five organized subsystems: microsystem, mesosystem, exosystem, macrosystem, and chronosystem (Bronfenbrenner, 1994).

Microsystem which refers to a person's immediate surroundings such as family, parents, siblings, friends, school, and neighborhood. Microsystem is the most influential level of the ecological system theory according to Bronfenbrenner. Because interactions with people around children directly influence the actions, growth, learning and development of them. For instance, parents provide educational activities like reading at home, may positively influence their child's cognitive and language skills.

Mesosystem means the relationships that exist between the various microsystems in a person's life make up the mesosystem. A child's growth may be influenced, for instance, by the link between their family and school, since experiences in one environment might affect those in another.

Exosystem refers to a wider range of both formal and informal social structures and organizations that not directly interacting with the child. For example, parents' workplaces, government policies, media, community resources. The person's experiences and possibilities in their immediate surroundings may be impacted by these influences as well.

Macrosystem shows that on this level, the larger cultural and societal context in which development takes place is represented. This mainly covers the socioeconomic status, cultural norms, values, ideologies, attitudes, and beliefs that influence people's experiences and actions.

Chronosystem is the final level of the ecological system which related to life transitions, historical occurrences, and socio-historical shifts that impact individual's development. For instance, moving to a new city, parental divorce etc. This level of system recognizes the dynamic nature of environmental circumstance and their effects.

Based on these five systems, Bronfenbrenner revised and renamed this theory to Bioecological model with the main change which was to focus on child's developmental process individual experience instead of environmental influences, which means bioecological model concentrates on micro-level interactions more. Nonetheless, because these proximal processes varied and have different effects on different people, Bronfenbrenner recommended that in order to comprehend how these processes affect development, we must concentrate on the individual, the context, and the developmental outcome (Bronfenbrenner & Evans, 2000).

To sum up, Bronfenbrenner's bioecological theory provides a useful framework for comprehending the intricate interactions between various elements that affect human development. To study a child's development, their immediate environment and all the interactions within larger environment must be taken into consideration. This theory's application to research has shed light on the dynamic interactions that occur between people and their environments in a variety of developmental domains like psychology, education, and social work.

2.2 Social Learning Theory

Social Learning Theory, which was developed by Albert Bandura (1977), claimed that people's behaviours were mainly shaped by modelling, imitation, and observational learning. Bandura posits that observational learning can lead to the acquisition of both positive and negative behaviours in individuals, based upon the models they observe. Observational learning is the key concept rooted in social learning theory.

Three models of observations are presented from the theory: "a live model" which consists of a real person performing or displaying a behaviour; "a symbolic model", in which characters from books, movies, TV shows, or internet media-real or imaginary-display certain behaviours; "a verbal instructional model", in which actions are described and clarified. Four cognitive processes are highlighted by Bandura (1977) in effectively imitating observed behaviours, which are attention, retention, reproduction, and motivation. When the model

capture the observer's interest, then the observer would pay attention to the behaviour and its consequences, start the imitation process. However, for effective imitation, observers need to intentionally organize these behaviours into simply understood patterns and store them in images that are symbolic (Bandura, 1972). After you have paid attention to the model and retained the information, the next step is to perform the observed behaviours which is called reproduction. Further practice of the learned behaviour can result in improvement and skill enhancement, but when observers are limited by physical ability, the reproduction would be hampered. Thence, in order to complete successful observational learning, observers have to be motivated to imitate. Reinforcement and punishment would be needed and the process of it indicates the perceived benefits or drawbacks of imitating the model's behaviour, which can either raise or lower the possibility of imitation, meaning the observer will take into account the benefits and risks of a particular behaviour, thus to make the decision of imitate more or less. Back in 1980s, punishment might be more likely to be one of the ways for parents and teachers to negatively reinforce children's learning and behaviours but, nowadays, with the popularization of the idea of scientific parenting, encouraging parenting gradually replaced punitive parenting. Punishment as negative reinforcement may be no longer promoted in most educational contexts for the learning of children. Another important concept of the Social Learning Theory (SLT) is vicarious reinforcement. According to SLT, people can learn from the experiences of others even without personally experiencing reinforcement or punishment themselves (Bandura, 1986). By observing learning, children are more likely to learn social skills and behaviours from in their culture, and also develop efficient problem solving skills, emotion regulation skills from parents' behaviours patterns and emotional expressions. Therefore, it is important for parents to be aware of their actions and the kinds of reinforcement they conduct while they are around their children since children, the observer at home, will adjust their own behaviour accordingly based on their observation.

Social Learning Theory offers a thorough framework which highlighted the importance of modelling and vicarious learning for individuals to learn new behaviours through cognitive processes, imitation, and observation. Moreover, Social Learning Theory serves as a useful framework for learning the dynamics of socialization in early childhood education, particularly in light of parental involvement. Parents would become more conscious of their own behaviours when conducting daily interactions with their children might promote the learning of behaviours of the children. Based on this theory, educators and other practitioners

can develop effective interventions and programs that help parental practices and promote children's holistic development.

2.3 Social Emotional Learning

The Social Emotional Learning (SEL) Theory is a developmental framework that focused on emotional development. Rooted in educational theory and developmental psychology, Social Emotional Learning extends across multiple domains of life such as behaviour outcomes (Payton et al, 2008), social skills and relationships (Wentzel, 2015), emotional well-being (Zins& Elias, 2007) and academic performance (Durlak et al, 2011). The definition from CASEL (2020) claims that SEL is the process that individuals build necessary skills to understand and manage emotions, show empathy for other, set personal goals thus to create and sustain supportive relationships. In another word, SEL is the way how to better response people.

Based on the CASEL definition, five key competencies of SEL are highlighted. First is the self-awareness, which means be able to accurately recognize one's own emotions, thoughts, as well as understanding how they influence behaviour. This includes the ability to acknowledge both one's strengths and limitations. Second is the self-management and this means be able to handle one's thoughts, feelings, and actions in a variety of contexts, emphasizing the capability that individuals possess to set and maintain personal goals.

Third is the social awareness. It means the ability to understand and care about other's emotions, feelings and perspectives. Thus, social awareness emphasizes empathy, respect for other people, and the capacity for cooperative work in a variety of contexts. Fourth is the relationship skills. Relationship skills means be able to develop and preserve positive, crucial relationships with different people and settings. Specifically, to be capable to negotiate, cooperate, compromise and handling conflicts with others. Fifth is the responsible decision making. This means the capacity to make responsible decisions by considering the results of one's behaviours, in light of societal norms, safety considerations, and ethical standards. Making decisions responsibly requires using ethical thinking, problem-solving skills, and consideration for the welfare of others as well as oneself.

These five competencies are constructed based on the development of cognition and by fostering these, as what Jones an Bouffard (2012) believe, it is crucial for equipping children for the complex world of today. Because it acknowledges the interdependence of social and emotional development and its major impact on children's emotion regulation, social skills, academic achievement and general well-being.

Moreover, Durlak (2011) proposed that SEL integrating social and emotional learning into educational environment to enhance children's holistic development. Numerous benefits for students and educators have shown from SEL intervention, which includes better academic achievement, enhanced social competence, less behavioural issues, increased emotional well-being, and heightened resilience in the face of hardship (Durlak et al., 2011; Jones & Bouffard, 2012). Thus, SEL is a vital component of education in today's world and also of significant importance for children's emotional intelligence and social competence development.

2.4 Summary

Based on Bronfenbrenner's Bioecological Theory, parents are key component in microsystem to engage with their children directly and shape their experiences. Meanwhile, Albert Bandura's Social Learning Theory posits that children pick up social norms, values, and behaviours through modelling, imitation, and observation from parents. In their process of learning, Social Emotional Learning theory underscores that parents are essential as the main role models to nature children's social emotional learning through appropriate self-awareness and management on demonstrating proper emotional responses, teaching strategies. Moreover, parents create a safe, caring and emotional supportive home learning environment for them to practice social skills and manage emotions effectively. Hence, for younger children, parents are the ones shape their immediate environment (microsystem), the ones who provide role modelling, emotional support and cognitive stimulation for them, to develop their social skills, emotional regulation and cognitive development through parental practice and parent-child interaction. Thus, the interplay of social learning theory, bioecological theory, and social emotional learning theory highlights the complex role that parents have in influencing the development of their children.

3 Theoretical Background

In this chapter, the key concepts and theoretical background pertained to the current research will be discussed. This part will explore theoretical underpinnings and previous research on emotional regulation issues, parental knowledge, and children's social competence. By delving into these ideas and reviewing relevant literature, it is hoped to create a thorough framework that serves as the foundation for this investigation. In addition to elucidating the connections between these factors, this theoretical foundation will direct the ensuing analysis and interpretation of the research results.

3.1 Children's Social Competence

Lacking a universally agreed definition of social competence, various researchers worked on the components of social competence from different perspectives. Researchers D'Zurilla & Goldfried (1971) suggested that social problem-solving skill would be an aspect of social competence, because it enables individual to address interpersonal conflicts. Spitzberg & Cupach (1989) argued that one of the essential factors for social competence is interpersonal communication. The skill of communication between individuals psychologically involved self-awareness of emotions, cultures that might influence a person's behaviour. Davis (1996) emphasized that the fundamental factor of social competence is the ability to understand and share feelings of others which is recognized as empathy. Rose Krasnor (1997) outlines four preliminary categories of operational definitions of social competence: relationship-based approaches, social skills approaches, peer status approaches, and functional approaches that are typically connected to goal attainment which are basically the original components for later definition of social competence. In 2000, Eisenberg and colleagues highlight that emotional regulation serves as the core to social competence. According to their research, emotional regulation contains stress coping strategies, impulse control and constructive expression of emotions. In 2008, Gresham and Elliott further explained that social skills are components of social competence. They believed that skills such as empathy and cooperation facilitate interaction and communication with others, thus influencing interpersonal skills. Stichter and coworkers (2012) also suggested that beyond simple social skills, social competence is a complex and interrelated set of abilities that help us negotiate social situations and establish and sustain relationships with others. To sum up, the general categories included in social competence can be narrowed down to the following aspects: social values (such as caring, honesty, and respect), self-regulation (including impulse control

and resisting temptations or peer pressure), positive self-identity (including self-awareness and self-efficacy), planning and decision-making skills (including making choices and problem-solving), interpersonal skills (such as friendship and communication skills), and emotional intelligence (including labeling emotions and empathy).

In short, social competence is defined as a multifaceted construct that generally encompasses the broad range of cognitive and personal-social dimensions of a person's various aspects of life, including social skills, interpersonal communication, and behaviours (Semrud-Clikeman, 2007).

Based on the definition of social competence, for young children, social competence is also being perceived on the base of a developmental perspective (Pellegrini, 2000). According to Bronfenbrenner's developmental models of social competence (1979), children are influenced through their interactions with different systems such as family, peer and communities, from microsystem to macrosystem. Children's social competence refers to children's growth and mastery of the interpersonal skills, emotional control, and social skills required for successful social interactions and relationships (Denham, 2006). It includes skills like sharing and taking turns, cooperating, empathizing, and settling disputes, which are the cornerstones of a child's good social development.

Numerous research on children's social competence highlight its crucial role for adolescent's and preschoolers' development, school readiness, and peer relationships (Fantuzzo & McWayne, 2002; Fabes et al, 2006; Attili et al, 2010; Jones et al, 2015; Joy, 2016; Blažević, 2016; Perry et al, 2018; Kochenderfer-Ladd & Ladd, 2019; Saral & Acar, 2021). Children who have strong social competence skills are better at regulating their emotions and dealing with stress, which could lead to effective problem-solving and conflict resolution, thus are less likely to exhibit behavioural problems and negative interactions with others (Eisenberg et al, 2006; Eisenberg et al, 2010). Healthy early relationships can influence the ability to form close relationships during adolescence and adulthood, as well as future social interactions (Howes et al, 1988), more specifically, healthy relationships with peers, teachers and family members offer the support, encouragement and opportunities for children's social development and growth (Zins et al, 2007; Wentzel, 2016). As what Malecki and Elliot have found in 2002, that children who are socially competent are more likely to be seen favorably by their teachers, which may result in greater opportunities and assistance for them in the classroom, thus influencing the achieving of academic success. Legkauskas and

Magelinskaitė-Legkauskienė (2019) revealed that social competence tends to connect to school adjustment in the beginning years of elementary school, which is important for children's academic achievement as well. Therefore, it is important to pay attention to the development of children's social competence in early age, because even before children enter kindergarten, they can approach a healthy trajectory of social-emotional development by demonstrating positive relationships and developing social competence. Other than that, good social competence has been seen as a protective factor in good mental health, and also been linked to healthy self-adjustment throughout life; while poor social competence has been linked to delinquency and psychopathology during adolescence (Viding et al., 2012; Suharni et al, 2020; Alduncin et al, 2014).

In summary, a child's future success and well-being are significantly predicted by their social competency in their early years. It affects many different outcomes, including social interactions, mental health, and academic achievement.

3.2 Parental Knowledge of Child Development

“Parenting is multidimensional” (Khatun, 2020), as family environment is one of the most significant influences on a child's development, and parents, as children's primary caregivers during their formative years in family, their skills on raising a child are crucial factor on a child's different domains of development through their interactions (Campbell, 1997; Ramey & Ramey, 1998; Sanders & Morawska, 2005). To respond and meet the diverse needs of children, parents should develop their knowledge which includes being aware of children's developmental milestones, norms, processes and expectations across various domains of the children (Benasich & Brooks-Gunn, 1996). According to Dichtelmiller et al (1992), parental knowledge refers to parents' comprehension of child development processes, parenting, childrearing skills and norms. Bornstein (2022) claimed that parental knowledge is the understanding parents have on how children develop and address their needs on the physical, social, emotional and biological levels. Based on different statements from diverse researchers, parental knowledge of child development refers to parents' understanding and comprehension information of typical stages of growth and development in children, which encompasses awareness and recognition of children's physical, cognitive, social, emotional and behavioural changes arise at different stages of a child's life.

The importance of parents' knowledge of child development to child outcomes has been highlighted by numerous studies. Parents with better understanding of development of

children often result in higher-quality home environment, because they are able to provide more verbal and physical responses in interactions with children (Huang et al, 2005). This is beneficial for children's formation of secure attachment and psychological development. Parents who with greater parental knowledge are also positively associated with greater parenting competence (Hess et al, 2004; Rikhy et al, 2010). With better parenting competence, parents can critically assess how their experiences have impacted their current parenting practices and consider other efficient way to guide and interact with their children (Bornstein et al., 2003; Burchinal et al., 2006). A meta-analysis conducted in 2006 by Karreman et al. revealed that parents with more parental knowledge of child development were more likely to interact with their kids in a stimulating and supportive way, which improved the kids' socioemotional and cognitive development.

Furthermore, parents' interpretation and anticipation may be affected by the parental knowledge of child development thus influence parent-child interactions in a responsive and supportive way (Murphey, 1992; Marjanovič-Umek, L., & Fekonja-Peklaj, 2017), hence influences the shape of children's social competence. Given that knowledge about child development seems to be associated with parental practices, parenting discipline strategies, parents' attitudes, and positive child outcomes, it can be estimated that the parental knowledge could have impacts on children's social competence. As a crucial part of children's growth and development, children's social competence contains domains of interpersonal, emotional and social skills that children learn from caregivers/parents, which are in line with the impact that parental knowledge has on child development.

In all, it is crucial for parents to equip them with the developmental knowledge, because firstly, parents would be able to tailor their parenting practices and set appropriate expectations for children to better suit children's need at right times of development. For example, fostering emotional security and trust in infancy time; encouraging curiosity in toddlerhood; and supporting teenagers in establishing a sense of self in adolescence (Morawska & Sander, 2011). Secondly, parents would provide more effective communication to foster responsive and sensitive interactions with children, so they better develop a secure attachment and emotional security (Ainsworth et al, 2015). Thirdly, parents can recognize children's developmental issues to provide timely interventions and support (Glascoe, 2013). Thus, parental knowledge of child development is a foundation for effective parenting. Parents can greatly enhance their children's developmental outcomes and overall wellbeing by being well-informed of parental knowledge.

3.3 Difficulties in Emotion Regulation

As mentioned in the section on children's social competence, emotional regulation is essential for children's social development. Current research is to examine how parents' emotion regulation is related to their children's emotional competence and how it, in turn, influences their social development. According to Gross (1998), the definition of emotion regulation refers to “the processes by which individual influence which emotions they have, when they have them, and how they experience and express these emotions.” In another word, it refers to the capacity that parents possess to monitor, assess, and control their emotional experiences, expressions, and reactions in order to accomplish desired outcomes and adaptively cope with internal and external stressors. Emotion regulation is a term that encompasses several processes including cognitive, behavioural, and physiological when one is managing his emotions (Gross, 1998; Gratz & Roemer; 2004). Eisenberg and Morris (2002) defined emotion regulation is the process of controlling the occurrence, persistence, and strength of internal emotional states (both positive and negative) and physiological reactions related to emotions. Existing studies highlighted the importance of internal states of a person's emotional regulation process, where internal components refer to neurological mechanism and cognitive strategies to manage one's emotions while external components refer to outer resources (like parents) that one uses to help him regulate this emotions, especially refers to children who are lack of neurobiological and cognitive capacities.

Research have shown that children with poor emotion management skills have been linked to unfavourable behavioural, academic, and social outcomes (McDowell et al. 2002; Graziano et al. 2007; Zeman et al. 2006). The risk of anxiety, depression, and other psychological issues is increased in kids who struggle to regulate their emotions (Cole et al., 2004); while children with better emotion management skills are more likely to focus on their work, finding solutions, and showing more persistence in the face of challenges (Blair & Razza, 2007), and they are less prone to aggression, tantrums, and other disruptive behaviours which contribute to a positive class environment for their overall wellbeing (Eisenberg et al., 2003). Bandura's Social Learning Theory (1977) has highlighted that children are more likely to learn social skills and efficient emotional regulation approaches from parents who are able to regulate their own emotions. For young children, their emotion regulation relies on caregivers (Kopp, 1989), and the ability of emotion self-regulating develops as they grow but affected by observing and imitating their parents' practices, behaviours, modelling, and the emotional climate of the family (Morris et al, 2007). O'Connor et al. (2012) also explained that children

pick up social skills and emotion management techniques through experience. The parent-child relationship is typically where children learn from and the main source of these experiences can be the family environment. Therefore, again, parenting is of significant importance to children's development of emotion regulation. Researchers focused on how parents emotionally socialized their kids, discovering that it can be crucial to assisting kids in developing into emotionally and socially competent teenagers and adults (Denham et al, 2000; Dunbar et al, 2017; Eisenberg et al, 2017). However, parent emotion regulation strategies may help or hinder parent-child relationship as well as children's recognition, expression in the emotional development (Eisenberg et al., 2017; Schwartz et al., 2012; Schultheiset al, 2019). Namely, when parents with effective emotion regulation ability, by modelling healthy responses, constructive communication, empathy, and consistency, they would foster a supportive environment for their children's emotional growth. In contrast, a less stable and supportive environment would be created if parents demonstrate ineffective strategies like emotional suppression, high negative emotional expressiveness and inconsistent responses. For instance, parents with emotion regulation problems can make it extremely difficult for them and their kids to talk about emotions, which can undermine the children's ability to recognize and comprehend emotions appropriately (Cassano & Zeman, 2010). Children of mothers who frequently display negative emotions often have poor regulation of the emotion since the young child internalize and models the parent (Eisenberg et al, 2001). Children with greater emotion regulation and less internalizing symptoms are raised in positive parenting behaviours by parents who have stronger emotion regulation skills or fewer difficulties. (Zimmer-Gemback et al, 2022). And empathetic parenting has been associated with increased emotional competence and prosocial behaviour in kids, according to research by Zhou et al. (2014). Parents who find it difficult to control their own emotions may unintentionally teach their kids unhealthy coping mechanisms for handling emotions (Eisenberg et al., 1998). Children may learn to react in a similar way from parents who frequently show anger or hostility in response to stressors, which can cause problems with emotion management and interpersonal interactions. Hence, it is necessary to pay attention to different dimensions of parental regulation strategies that may lead to emotion dysregulation, which might include the parents' understanding and awareness of their own emotions, their clarity in how well they comprehend how emotions make them feel, and how disruptive emotions are to carrying out goal-directed behaviours (Gratz & Roemer, 2004). Results from Aldao (2010) consist with Gratz and Roemer's study, that people with emotion dysregulation have difficulties in identifying emotions and understanding the causes and consequences of emotions, some may

avoid or suppress their negative emotions instead of confronting and processing them. Carver et al (2000) revealed that emotional difficulties can lead to tendency to impulsive behaviours, such as maladaptive responses to distressing emotions. Many mental health conditions, such as depression, anxiety disorders, borderline personality disorder, and substance use disorders, are known to have difficulties with emotion regulation (Aldao et al., 2010; Berking et al., 2011).

In all, emotional regulation difficulties can be seen as problems or challenges people experience managing and responding to their emotions experiences in an adaptive way, which can have a variety of psychological and social repercussions. Research has indicated that parents' difficulties in regulating their emotions have a significant impact on their parenting behavior and practices (Leerkes et al., 2015). This includes the transmission of emotions across generations within families, conflicts within the parent-child relationship (Eisenberg et al., 1998), as well as the understanding of parents' wellbeing and mental health (Barroso et al., 2019). Thus, based on Social Learning Theory (Bandura, 1970), children learn their emotion regulation strategies also by observing, modelling parent, and emotional communications with parents. Therefore, parents' emotional regulation difficulties influences children's emotional development significantly through their parenting practices and behaviors. Investigating parents' difficulties in emotion regulation can understand the emotional connections between parents and children, highlight the importance of supporting parents in developing effective emotion regulation strategies. This can not only promote their children's healthy emotional growth but also provide valuable insights for the development of targeted interventions and support programs that promote positive family functioning and overall emotional health in children.

However, in the context of China, studies on the role of parental knowledge of child development in fostering parental emotional regulation and children's social competence are limited, instead, more were focusing on influences that parenting styles and parenting beliefs have on children's socialization development. There is lack of research on the impact of parental emotion regulation difficulties on children's emotional and behaviour outcomes in China while Western research provides a solid foundation on the impact of parental knowledge and their emotion regulation on child development. Understanding how Chinese parents' parenting practice and emotional regulation which affected by the emphasis on

academic achievement and emotional restraint in Chinese cultural background is essential for developing a comprehensive understanding of child development across cultures.

4 Methodology

4.1 Research design and research questions

This research is a cross-sectional correlational design which adopted a quantitative research approach to examine the relationships among parents' knowledge of child development, their difficulties in emotional regulation, and children's social competence within Chinese context. With the goals to assess the level of parental knowledge; to evaluate the difficulties Chinese parents experience in emotional regulation; to measure children's social competence as reported by their parents. A convenience sampling is utilized to recruit participants from a local kindergarten in the target region of China. Targeted participants are parents of kindergarten children aged 3-6 years. Participants are recruited through school announcements. Data is collected through online-link survey which distributed to parents during school hours. The questionnaire included demographic information and pre-existing inventories that of good reliability for assessing parental knowledge of child development, parental difficulties of emotion regulation, and children's social competence. T-tests and variance analysis will be conducted to measure the differences caused by demographic information in the three main research variables, and correlation analysis will be used to test how each variable and its subscales related to each other.

This research sought to answer the following questions:

1. What are the overall levels of parents' knowledge of child development, parents' difficulties in emotional regulation, and children's social competence?
2. Are there any significant differences in parental knowledge, parental difficulties in emotional regulation, and children's social competence based on the demographic traits of parents and children?
3. Are there any relationships amongst parental knowledge, parents' difficulties in emotional regulation, and children's social competence?

4.2 Participants

Through convenience and voluntary response sampling, parents whose children were aged from 3 to 6 from a kindergarten in Lincang city of Yunnan province in China were recruited. Using an online questionnaire, informed consent were obtained from a total of 202 parents

who filled out the questionnaire survey. One parent was excluded because of the short response survey time (average response time was > 8 minutes). Thus, 201 parents were viewed as valid sample for final data analysing. Among the 201 parents, 181(90%) mothers and 20 (10%) fathers. Regarding to children's age, there were 44 (3 years old), 65 (4 years old), 57 (5 years old), and 35 (6 years old); by gender, there were 95 (47.3%) boys and 106 (52.7%) girls; from Table1, 44.3% of the children were from only- child families, 55.7% of the children were from non-only child families. The ages of parents were between 26 and 50, and 78.11% of parents were between 31-40 years old. Parents vary in ethnicities, majority of them are Han which is 116, among others, there are 22 Yi, 10 Bai, 11 Dai, 11 Bulan, 11 Lahu, 6 Wa, 5 Hui, 2 Miao and 1 for each of the rest ethnicities which are Hani, Deang, Buyi, Dong, Tu, and Achang. Due to the relatively small participant number from minority groups in this research, parents' ethnicities were categorized into two major groups: Han Majority and Minorities. Regarding to the education background of parents, 1.49% were lower secondary and below degree, 9.45% were upper secondary degree, 13.93% were junior college degree, 68.16% were bachelor degree, and 6.97% were masters and higher degree.

Table 1 Parents' and children's demographic information (N=201parents)

Demographic characteristics		N (Total=201)	%
Parents role	father	20	9.95%
	mother	181	90.5%
Gender of the child	boy	95	47.26%
	girl	106	52.74%
Age of the child	3 year-old	44	21.89%
	4 year-old	65	32.34%
	5 year-old	57	28.36%
	6 year-old	35	17.41%
Status of the child	only child	89	44.28%
	none-only child	112	55.72%
Age of the parent	26-30 year-old	26	12.94%
	31-40 year-old	157	78.11%
	40-50 year-old	18	8.96%
Ethnicity of the parent	Han majority	116	57.7%
	Minorities	85	42.3%
Educational background of the parent	lower secondary and below	3	1.49%
	upper secondary	19	9.45%
	junior college	28	13.93%
	bachelor	137	68.16%
	maters and higher	14	6.97%

(ethnicity of the parent: Minorities includes 14 minority ethnicities which are 10 Bai, 11 Dai, 22 Yi, 11 Bulan, 11 Lahu, 6 Wa, 5 Hui, 2 Miao, 1 Dong, 1 Hani, 1 Tu, 1 Deang, 1 Achang, and 1 Buyi minorities.)

4.3 Instruments

The survey questionnaire is divided into four main parts. The first part includes questions that gather basic demographic information about parents and their children (refer to Table 1). The remaining three parts consist of existing questionnaires that have been adapted from previous research. Part 2 is the Knowledge of Infant Development Inventory (KIDI-P), which assesses parents' knowledge of child development. Part 3 is the Difficulties in Emotion Regulation Scale (DERS), which allows parents to self-report their own difficulties with emotional regulation. Lastly, part 4 is the Social Competence and Behaviour Evaluation Scale (SCBE-30), which enables parents to evaluate their children's social competence. Given that the original questionnaires are in English, the questionnaires were translated to Chinese in order to assist Chinese parents in understanding and completing the survey. A Chinese version of Social Competence and Behavior Evaluation Scale was adapted in this research, which was translated by Chinese researchers Yu Liu and Yuan Song in 2012. The KIDI-P and DERS questionnaires were translated from English to Chinese, and then back-translated to English by author and a Chinese doctoral researcher in the Education department of Turku University. During the comparison of the back translation to the original English version, one item was deleted due to a lack of semantic equivalence between the languages.

4.3.1 The Knowledge of Infant Development Inventory (KIDI-Preschool)

Knowledge of Infant Development Inventory was original formulated by MacPhee in 1981 which included 75 items that assess parental knowledge of children's developmental processes, and behaviours (MacPhee, 1981), with four scales in the questionnaire, namely: parenting practices, norms and milestones, health and safety, and principles. The inventory was revised in 2002 by MacPhee and the items were narrowed down to 58 (KIDI-P) with a 0.82 Cronbach alpha value showing the internal consistency, applying to preschool children (MacPhee, 2002). The first 39 items in the revised version focus on knowledge of normative children's behaviours and items 40-58 focus on a child's developmental milestones. KIDI-P is widely used in the study of parenting knowledge and infant development (Zolotor et al., 2008; Morawska et al., 2009; Bornstein et al., 2010; Smit et al., 2021). Hence, the KIDI-P was adapted in this study, and in this research, two main scales (children's normative behaviours and developmental milestones) from MacPhee 2002 revised version were kept. After responses to the total 58 items are collected, KIDI-P calculates three final scores with all the items: Attempted, Accuracy and Total by answering agree, disagree, or not sure to the

questions. Attempted reflects the confidence that parents have in their parental knowledge. Accuracy reflects the reliable, standard information about children, which is the percentage of answering items correctly and not-sure items are not involved. Total represents the percentage of correct answers out of all items on the KIDI-P; in items 40-58, if parents disagree with the statement, they have to indicate whether older children or younger children will behave as the question states. The answer to each item is marked as correct (1 point), incorrect (-1 point) or not sure (0 point), thus the KIDI-P results will be focused on the percentage of questions correctly answered which is the Total score. In this research only the attempted score and total score will be used for further data analysis based on the research questions. Because the attempted score indicates how confidence parents have in themselves which might be providing a potential explanation related to the score of parental knowledge; for the total score, the higher percentage they get, indicating greater knowledge of child development. Given that one question omitted from the questionnaire during translation process which failed to find semantically equivalent, the 57-item KIDI-P ran the Cronbach alpha test again and the result is 0.83.

4.3.2 Children Social Competence and Behaviour (SCBE)

Social Competence and Behaviour Evaluation Scale (SCBE) was first formulated by Lafreniere and Jean in 1996, which applied to children aged 3 to 6 years old. The SCBE-30 is the short form which is widely used in the international literature examining children's social competence, with high credibility and reliability. The scale is divided into 3 dimensions: anxiety withdrawal, anger aggression, and sensitive cooperation, with 10 items in each dimension (Lafreniere & Dumas, 1996). In this study, a Chinese version was adopted which was translated and used by Chinese researchers Yu Liu, Yuan Song, Zongbao Liang, YiBo and HuihuaDeng in their study in 2012. The revised Chinese version kept the original three dimensions with Cronbach alpha values between 0.66-0.81, aiming to children aged from 3-7 years old. Parents rated each item on a 5-point Likert scale from 1 (almost never) to 5 (almost always) (Liu et al., 2012). When calculating the total score for social competence, the two dimensions, anxiety withdrawal, anger aggression will be scored reversely, the higher score children get, the higher level of their social competence would be in their parents' perspective.

4.3.3 Difficulties in Emotional Regulation Scale (DERS)

Difficulties in Emotional Regulation Scale is a popular self-report tool for assessing one's emotional control, which was first developed by Gratz and Roemer in 2004. It contains 36 items and sub-scaled into six dimensions: non-acceptance of emotional responses (NONACCEPTANCE, 6 items), which means one's tendency to react negatively to one's own distress by the way of secondary emotions like guilt, shame, rage about feeling distressed; difficulties engaging in goal directed behaviour (GOALS, 5 items), means one has difficulties in focus and complete tasks when experiencing negative emotions; impulse control difficulties (IMPULSE, 6 items), means that one is having problems with controlling behaviours when experiencing negative emotions; lack of emotional awareness (AWARENESS, 6 items), reflects a lack of awareness or attention to emotional responses; limited access to emotion regulation strategies (STRATEGIES, 8 items), shows one's belief that there isn't much one can do to successfully control their emotions; and lack of emotional clarity (CLARITY, 5 items), means one has challenges in understanding and recognizing feelings and emotions. With original Cronbach's alpha ranged from 0.80 to 0.89 for the six dimensions, and a strong total internal consistency ($\alpha=0.93$), DERS indicates a strong correlation with other measures of emotion regulation (Gratz & Roemer, 2004). DERS has been used as psychometric instrument for research in different countries (Countinho et al., 2010; Dan-Glauser & Scherer, 2013; Westerlund & Santtila, 2018; Cancian et al., 2019). Participants assess each item on a 5-point Likert scale from 1 (almost never) to 5 (almost always), depending on how they believe it relates to them. The higher the participant's score is, the more difficulties and lower level of emotional regulation abilities they have.

The finalization of the questionnaire process can be concluded in two procedures (1) translate the KIDI-P and DERS into target language by the author and another translator, test the reliability of the translated versions; (2) compile all the translated versions into an integrated questionnaire. (The structure of final synthesized questionnaire and specific dimensions in each part can be seen in Appendix)

4.4 Data Collection

Data collection started on 11th December, 2023 (via online link), and was completed within the following two weeks. First, having discussion and getting the permission with the principal of the sample kindergarten, the survey link was sent to the principal. Second, from

the principal, all the class-teachers (17 teachers) got the survey link then re-shared in their class Wechat group (teacher-parent communicating online platform) to invite parents to participate in the survey voluntarily. The informed consent form was provided within the linked survey, before parents started filling the questionnaire with personal and demographic data. On 18th Dec, class-teachers sent a follow up message to the Wechat group to remind parents who had not completed the survey yet and again, invite more parents to participate. By the end of the second week (22nd), the researcher received the final number of completed questionnaires.

4.5 Data Analysis

For data preparation, first, is to identify the valid questionnaires. The data was checked for missing data, errors, or inconsistencies in the questionnaire responses. In this research, one questionnaire was eliminated due to the short response time given the time used to complete the questionnaire revealed the participant's attitude towards the survey thus indicated the quality of the questionnaire. The average time needed to complete the questionnaire was about 8-15 minutes for most participants. Among 202 collected questionnaires, the one that deleted was completed in 4 minutes (less than average 8 minutes). Eventually, 201 completed questionnaires were viewed as valid for data analysis.

Once the data cleaning and preparation was done, SPSS 29.0 was used to conduct data analysis. First, the reliability of the questionnaire was tested. Factor analysis (principal components analysis) were run when low reliability of the scales of the questionnaire occurred, to make sure the quality of the data and make it reliable for further comparisons between different groups. Descriptive and repeated measures ANOVA statistics were used to summarize the characteristics of the sample and the key research variables, for example, describe the frequencies, means and standards deviations of the participants' demographic information and research variables to answer research question 1: what the overall level of parental knowledge of child development, the level of parental difficulties in emotional regulation and children's social competence are. Independent samples t-test and variance analysis (one-way ANOVA) were chosen for analysis to answer research question 2: are there any significant differences that caused by the demographic traits of parents and children to parental knowledge, parental difficulty in emotion regulation and children's social competence. The Pearson Correlation analysis was used to help identify whether and to what extent the research variables are related to each other, thus to answer research question 3: if

there are any relationships among parental knowledge, parental difficulties in emotional regulation and children's social competence.

5 Results

5.1 The reliability of the translated questionnaires

Three translated pre-existing questionnaires were included in the current survey questionnaire, and each of them was tested for reliability. The Cronbach's alpha values of the questionnaire part 2 (parental knowledge of child development and its two dimensions) were 0.83, 0.76, and 0.77, showed good reliability. The Cronbach's alpha values of the questionnaire part 3 (parents' difficulty in emotion regulation and its six dimensions) were 0.90, 0.78, 0.73, 0.82, 0.79, 0.70, 0.72, showed good reliability as well. However, the Cronbach's alpha values of the questionnaire part 4 (children's social competence and its three dimensions) were 0.52, 0.62, and 0.37, which were much lower, not indicating good reliability. To get good reliability for current research, by running the factor analysis (Principal component analysis), three main dimensions of children's social competence were maintained but adjustment of items within each dimension was made. For instance, item 82 (takes pleasure in own accomplishments), item 88 (attentive towards younger children), item 91 (shares toys), and item 94 (helps with every-day tasks) were reset from dimension anxiety withdrawal to dimension sensitive cooperation; and item 81 (gets angry when interrupted), item 84 (hits, bites or kicks other children), item 87 (hits teacher or destroys things when angry with teacher), item 90 (forces other children to do things they don't or won't do), and item 93 (opposes the teacher's suggestions) reset from dimension sensitive cooperation to dimension anger aggression. The final items in each dimension were adjusted: 8 items in anxiety withdrawal with Cronbach's alpha value 0.70, 13 items in anger aggression with Cronbach's alpha value 0.71, and 9 items in sensitive cooperation with Cronbach's alpha value 0.79. After good reliabilities of each part of the questionnaire were confirmed, the data was ready for further analyses.

5.2 Parental knowledge of child development (KIDI-P) results

In this part, descriptive analysis, repeated measures ANOVA, t-test and one-way ANOVA analysis were used to answer first and second research questions regarding to the parental knowledge aspect. Result of descriptive analysis and repeated measures ANOVA in part 5.2.1 is to answer the overall level of parental knowledge of child development that parents had presented. Results of t-test and one-way ANOVA analysis from part 5.2.2 to 5.2.8 are to

answer the differences that caused by demographic traits of parents and children in parental knowledge.

5.2.1 Descriptive statistics on KIDI-P results

Observed from Table 2, means and standard deviations were calculated. Normative behaviours scale has a mean of .41 (SD=.13), and milestone scale has a mean of .20 (SD=.26). KIDI-Total score is with means of .57 (SD=.11) and the attempted scale with means of 0.81 (SD=.13). After running the repeated measures ANOVA to compare the mean scores of normative behaviours and milestones, the result revealed a significant effect, $F=126.01$, $p<.001$, which means the mean score of normative behaviours is higher than the mean score of milestones. This indicates that parents who participated in this research showed relatively more knowledge in children's normative behaviours than that in milestone.

Table 2 Descriptive and Repeated measures ANOVA analysis of KIDI-P Scale

	N	Min	Max	Mean	SD
1. Normative behaviours	201	.05	.72	.41	.13
2. Milestones	201	-.37	.74	.20	.26
Attempted	201	.49	1.00	.81	.13
KIDI-Total	201	.28	.81	.57	.11

Repeated measures ANOVA result: $1>2$, $p<.001$

5.2.2 T-test analysis of parent role differences on KIDI-P

Observed from Table 3, the independent samples t-test results of the total scores, milestones, and normative behaviours based on the parental role, p value for each scale was bigger than 0.05, showing no statistical significant difference between fathers and mothers on the three scales. This indicates parents' knowledge of child development was not influenced by parents' role.

Table 3 T-test analysis of parent role differences on KIDI-P

Variables	Role of the parent (M/SD)		t	p
	1 (n=20)	2 (n=181)		
Normative behaviours	.43 / .11	.41 / .13	.79	.49
Milestones	.16 / .25	.21 / .26	-.83	.41
KIDI-Total	.57 / .11	.57 / .11	.018	.99

(1=father, 2=mother)

5.2.3 One-way ANOVA analysis of parents' age differences on KIDI-P

As shown from the Table 4, normative behaviours ($F=2.43$, $p=.09>.05$), milestones ($F=.63$, $p=.53>.05$), total score ($F=1.36$, $p=.26>.05$), they all showed no statistical significant difference based on the age difference. This indicates that parents' knowledge of child development was not influenced by parents' age.

Table 4 One-way ANOVA analyses of parents' age differences on KIDI-P

Variables	Parents' age group (M/SD)			F	p
	1 (n=26)	2 (n=157)	3 (n=18)		
Normative behaviours	.37 / .12	.41 / .13	.46 / .12	2.43	.09
Milestones	.24 / .28	.20 / .26	.15 / .20	.63	.53
KIDI-Total	.54 / .11	.58 / .11	.57 / .12	1.36	.26

(1= age group "26-30", 2= age group "31-40", 3=age group "41-50")

5.2.4 One-way ANOVA analysis of parents' educational background differences on KIDI-P

Significant differences in Normative behaviours across parents' educational level were found with ($F=5.08$, $p<.001$). Following with Post-hoc tests that indicated parents with upper secondary education level exhibited significant lower knowledge level of normative behaviours of children than parents with bachelor degree, master's and higher degree. Similar patterns were observed with significant differences in Total score ($F=5.12$, $p<.001$), indicating that the percentage of correct answers of the KIDI-P knowledge from parents with different education levels is significantly different. Showing in post-hoc results, the mean score of parents with upper secondary education is lower than that of parents with bachelor degree, and master's and higher degree in the dimension of normative behaviours. The mean score of parents with junior college education is lower than that of parents with bachelor degree in the dimension of KIDI-total. This indicates that parents with upper secondary education exhibited lower knowledge level of normative behaviours than parents with bachelor degree, and master's and higher degree. And in general, parents with junior college education showed lower level of parental knowledge than parents with bachelor degree. No significant differences were found from Milestones scale on parents' educational backgrounds ($F=.10$, $p=.98$). Based on the results, it indicates that parents in this research who were with higher education background showed more knowledge of child development than parents who were with lower education background.

Table 5 One-way ANOVA analysis of parents' educational background differences on KIDI-P

Variables	Parents' educational background (M/SD)					F	p
	1 (n=3)	2 (n=19)	3 (n=28)	4 (n=137)	5 (n=14)		
Normative behaviours	.28 / .16	.33 / .16	.38 / .12	.42 / .12	.50 / .12	5.08	<.001
Milestones	.18 / .11	.24 / .17	.20 / .23	.20 / .28	.20 / .27	.10	.98
KIDI-Total	.49 / .08	.51 / .13	.53 / .11	.59 / .10	.62 / .11	5.12	<.001

(1= lower secondary and below, 2= upper secondary, 3= junior college, 4= bachelor, 5= masters and higher)

Post-hoc comparison results: 2<4,5, p<.05; 3<4, p<.05

5.2.5 T-test analysis of parents' ethnicity differences on KIDI-P

Observed from Table 6 the independent samples t-test scores of normative behaviours, milestones, and KIDI-Total based on the ethnicities of parents, with t values -1.02, -.87, -1.40 and p values .31, .38, .17 respectively, showing no significant differences found between parents who were Han majority and who were minority. This indicates parents' knowledge of child development was not influenced by parents' ethnicities.

Table 6 T-test analysis of parent's ethnicity differences on KIDI-P

Variables	Parents' ethnicity (M/SD)		t	p
	1 (n=116)	2 (n=85)		
Normative behaviours	.40 / .13	.42 / .13	-1.02	.31
Milestones	.19 / .26	.22 / .26	-.87	.38
KIDI-Total	.56 / .11	.59 / .11	-1.40	.17

(1=Han majority, 2=minority)

5.2.6 T-test analysis of status of the child on KIDI-P

Observed from the results of t-test on normative behaviours, milestones, and KIDI-Total based on the status of the child, with t value .59, -.55, -.16, and p value .56, .59, .88 respectively, indicating no significant differences found between only child parents and non-only child parents. This indicates parents' knowledge of child development was not influenced by the status of the child.

Table 7 T-test analysis of status of the child on KIDI-P

Variables	Status of the child (M/SD)		t	p
	1 (n=89)	2 (n=112)		
Normative behaviours	.42 / .13	.41 / .13	.59	.56
Milestones	.19 / .24	.21 / .28	-.55	.59
KIDI-Total	.57 / .10	.58 / .12	-.16	.88

(1=only child, 2=non-only child)

5.2.7 T-test analysis of children's gender differences on KIDI-P

Observed from the scores of t-test on normative behaviours, milestones, and KIDI-Total based on the gender of the child, with t values .33, -.57, -.58 and P values .74, .57, .56 respectively, no significant differences found on parents' knowledge level between boys and girls. This indicates parents' knowledge of child development was not influenced by children's gender.

Table 8 T-test analysis of children's gender differences on KIDI-P

Variables	Gender of the child (M/SD)		t	p
	1 (n=95)	2 (n=106)		
Normative behaviours	.41 / .12	.41 / .13	.33	.74
Milestones	.19 / .28	.21 / .24	-.57	.57
KIDI-Total	.57 / .11	.58 / .11	-.58	.56

(1=boy, 2=girl)

5.2.8 One-way ANOVA analysis of children's age differences on KIDI-P

Observed from Table 9, the scores of ANOVA analysis based on different age groups of children, normative behaviours ($F=1.16$, $p=.33>0.05$), milestones ($F=.76$, $p=.52>0.05$), and total score ($F=.21$, $p=.89>0.05$) all showed no statistically significant difference based on age difference. This indicates parents' knowledge of child development was not influenced by children's ages.

Table 9 One-way ANOVA analysis of children's ages differences on KIDI-P

Variables	Children's ages (M/SD)				F	p
	1 (n=44)	2 (n=65)	3 (n=57)	4 (n=35)		
Normative behaviours	.44 / .12	.40 / .13	.41 / .14	.40 / .11	1.16	.33
Milestones	.20 / .25	.24 / .28	.18 / .24	.16 / .28	.76	.52
KIDI-Total	.57 / .11	.57 / .11	.58 / .11	.57 / .10	.21	.89

(1=age "3", 2=age "4", 3= age "5", 4= age "6")

5.3 Children's social competence and behaviour (SCBE-30) results

In this part, descriptive analysis, repeated measures ANOVA, t-test and one-way ANOVA analysis were used to answer first and second research questions regarding to the children's social competence aspect. Result of descriptive and repeated measures ANOVA analysis in part 5.3.1 is to answer the overall level of children's social competence that been evaluated by parents. Results of t-test and one-way ANOVA analysis from part 5.3.2 to 5.3.8 are to answer the differences that caused by demographic traits of parents and children in children's social competence.

5.3.1 Descriptive analysis results on SCBE-30

Using a 5-point Likert scale, with a maximum score of 5 points for each item, the higher the score that SCBE gets, the higher level of children's social competence parents evaluate the child. As can be seen from Table 10, the mean score for children's social competence (SCBE) is 3.83 (SD=.31) which indicates that parents have a relative high evaluation on their children's social competence level. Given that the significant differences showed after running a repeated measures ANOVA ($F=21.26$, $p<.001$) to compare the mean scores among dimensions. Followed with post hoc tests that showed the mean score of anger-aggression ($M=3.90$, $SD=.35$) is higher than sensitive-cooperation ($M=3.84$, $SD=.44$), and sensitive-cooperation is higher than anxiety-withdrawal ($M=3.70$, $SD=.43$). These findings suggest that based on parents' evaluation of their children's social competence, children were showing more anger-aggression than sensitive-cooperation, and the anxiety-withdrawal was the least among the three dimensions.

Table 10 Descriptive and Repeated measures ANOVA analysis of SCBE-30 Scales

	N	Min	Max	Mean	SD
1. Anxiety-withdrawal	201	2.75	4.75	3.70	.43
2. Anger-aggression	201	3.08	4.69	3.90	.35
3. Sensitive-cooperation	201	2.22	4.89	3.84	.44
SCBE	201	3.03	4.60	3.83	.31

Post-hoc comparison results: 2>3>1, $p < .001$

5.3.2 T-test analysis of parents' role differences on SCBE-30 results

Observed from the results (Table 11), no significant differences were found in all scales of anxiety-withdrawal, anger-aggression, sensitive-cooperation scales and the total score of SCBE. This indicates that there was no difference in the social competence level of children between fathers and mothers.

Table 11 T-test analysis of parent role differences on SCBE-30

Variables	Parent's role (M/SD)		t	p
	1 (n=20)	2 (n=181)		
Anxiety-withdrawal	3.77 / .36	3.70 / .44	.74	.46
Anger-aggression	3.90 / .32	3.90 / .35	-.07	.95
Sensitive-cooperation	3.84 / .44	3.84 / .44	.07	.95
SCBE	3.85 / .28	3.83 / .32	.27	.79

(1=father, 2=mother)

5.3.3 One-way ANOVA analysis of parents' age differences on SCBE-30 results

Observed from the results (Table 12), no significant differences were found in all scales of anxiety-withdrawal, anger-aggression, sensitive-cooperation scales and the total score of SCBE. This indicates that the social competence level of children was not influenced by parents' ages.

Table 12 One-way ANOVA analysis of parents' age differences on SCBE-3

Variables	Parent's age group (M/SD)			F	p
	1 (n=26)	2 (n=157)	3 (n=18)		
Anxiety-withdrawal	3.84 / .37	3.67 / .44	3.74 / .40	1.67	.19
Anger-aggression	3.84 / .35	3.91 / .34	3.86 / .41	.55	.58
Sensitive-cooperation	3.77 / .37	3.84 / .44	3.89 / .52	.50	.61
SCBE	3.82 / .29	3.83 / .31	3.84 / .37	.24	.98

(1= age group "26-30", 2= age group "31-40", 3=age group "41-50")

5.3.4 One-way ANOVA analysis of parents' educational background differences on SCBE-30 results

Significant differences in sensitive-cooperation scale across parents' educational level were found with ($F=4.55$, $p=.002<.05$). Following with Post-hoc tests showed that the mean score of parents with upper secondary education is lower than that of parents with bachelor, master's and higher education degree. This indicates that parents with upper secondary education exhibited significant lower level of sensitive-cooperation of children than parents with bachelor degree, master's and higher degree. Another significant difference was found in the total score of SCBE with an F value 3.43 and p value .01. However, there was no differences showing in further post-hoc tests. No significant differences were found on anxiety-withdrawal and anger-aggression scales.

Table 13 One-way ANOVA analyses of parent educational background differences on SCBE-30

Variables	Parents' educational background (M/SD)					F	p
	1 (n=3)	2 (n=19)	3 (n=28)	4 (n=137)	5 (n=14)		
Anxiety-withdrawal	3.71 / .26	3.61 / .33	3.61 / .38	3.73 / .45	3.73 / .42	.66	.62
Anger-aggression	3.56 / .29	3.76 / .28	3.82 / .39	3.93 / .35	3.98 / .24	2.28	.06
Sensitive-cooperation	3.41 / .26	3.54 / .46	3.75 / .37	3.90 / .44	4.00 / .31	4.55	.002
SCBE	3.56 / .25	3.65 / .29	3.75 / .28	3.86 / .32	3.92 / .27	3.43	.01

(1= lower secondary and below, 2= upper secondary, 3= junior college, 4= bachelor, 5= masters and higher)

Post-hoc comparisons results: $2<4,5$, $p<.05$

5.3.5 T-test analysis of parents' ethnicity differences on SCBE-30 results

Observed from the results (Table 14), no significant differences were found in all scales of anxiety-withdrawal, anger-aggression, sensitive-cooperation scales and the total score of

SCBE. This indicates that the social competence level of children was not influenced by parents' ethnicities.

Table 14 T-TEST analysis of parent's ethnicity differences on SCBE-30

Variables	Parents' ethnicity (M/SD)		t	p
	1 (n=116)	2 (n=85)		
Anxiety-withdrawal	3.72 / .41	3.68 / .46	.73	.47
Anger-aggression	3.91 / .35	3.88 / .35	.71	.48
Sensitive-cooperation	3.82 / .45	3.86 / .42	-.72	.47
SCBE	3.83 / .31	3.82 / .32	.31	.76

(1=Han majority, 2= minority)

5.3.6 T-test analysis of the status of the child on SCBE-30 results

Observed from the t-test results, no significant differences found in anxiety-withdrawal, anger-aggression, sensitive-cooperation scale, and the total score of SCBE between only-child and non-only child, with t values -.91, .15, .17, -.19 and p values .36, .88, .86, .85 respectively. This indicates that the social competence level of children was not influenced by the status of the child.

Table 15 T-test analysis of the status of the child differences on SCBE-30

Variables	Status of the child (M/SD)		t	p
	1 (n=89)	2 (n=112)		
Anxiety-withdrawal	3.67 / .45	3.72 / .41	-.91	.36
Anger-aggression	3.90 / .36	3.90 / .34	.15	.88
Sensitive-cooperation	3.84 / .41	3.83 / .46	.17	.86
SCBE	3.82 / .32	3.83 / .31	-.19	.85

(1=only-child, 2=non-only child)

5.3.7 T-test analysis of children's gender differences on SCBE-30 results

Observed from the t-test results, no significant differences were found in anxiety-withdrawal, anger-aggression, sensitive-cooperation, and total score of SCBE, with t values 1.33, 1.55, -1.03, .80 and p values .18, .12, .31, .42 respectively. This indicates that the social competence level of children was not influenced by the gender of the child.

Table 16 T-test analysis of children's gender differences on SCBE-30

Variables	Gender of the child (M/SD)		t	p
	1 (n=95)	2 (n=106)		
Anxiety-withdrawal	3.74 / .41	3.66 / .44	1.33	.18
Anger-aggression	3.94 / .34	3.86 / .36	1.55	.12
Sensitive-cooperation	3.80 / .43	3.87 / .44	-1.03	.31
SCBE	3.85 / .29	3.81 / .33	.80	.42

(1=boy, 2=girl)

5.3.8 One-way ANOVA analysis of children's age differences on SCBE-30 results

Observed from the results of ANOVA analysis in anxiety-withdrawal, anger-aggression, sensitive-cooperation scales and the total score of SCBE, significant differences were found in sensitive-cooperation ($F=4.44$, $p=.005$). Following with post-hoc tests that showed the mean scores of children aged three and four are lower than the that of children aged six. This indicates that children aged six showed more sensitive-cooperation than children aged three and four. No significant differences were observed for anxiety-withdrawal ($F=.05$, $p=.99$), anger-aggression ($F=2.44$, $p=.07$), and total score of SCBE ($F=2.4$, $p=.07$).

Table 17 One-way ANOVA analysis of children's age differences on SCBE-30

Variables	Children's ages (M/SD)				F	p
	1 (n=44)	2 (n=65)	3 (n=57)	4 (n=35)		
Anxiety-withdrawal	3.70 / .47	3.70 / .45	3.71 / .39	3.69 / .41	.05	.99
Anger-aggression	3.78 / .38	3.91 / .34	3.93 / .33	3.96 / .32	2.44	.07
Sensitive-cooperation	3.72 / .38	3.76 / .43	3.91 / .40	4.01 / .50	4.44	.005
SCBE	3.74 / .33	3.81 / .31	3.87 / .28	3.90 / .32	2.4	.07

(1=age "3", 2=age "4", 3= age "5", 4= age "6")

Post-hoc comparison results: $4 > 1,2$, $p < .05$

5.4 Difficulties in emotional regulation scale (DERS) results

In this part, descriptive analysis, repeated measures ANOVA, t-test and one-way ANOVA analysis were used to answer first and second research questions regarding to the parents' difficulties in emotional regulation aspect. Results of descriptive and repeated measures ANOVA analysis in part 5.4.1 is to answer the overall level of parental difficulties in emotional regulation that parents had self-reported. Results of t-test and one-way ANOVA

analysis from part 5.4.2 to 5.4.8 are to answer the differences that caused by demographic traits of parents and children in parents' difficulties in emotional regulation.

5.4.1 Descriptive analysis result on DERS results

Using a 5-point Likert scale, DERS has a maximum score of 5 points for each item, the higher score the parent gets, the more difficulties he/she has in regulating their emotions. Seen from the Table 18, the mean score for DERS is 2.01 (SD=.40), which is not high, reflecting that parents from this research have a tendency of having less difficulty in regulating their emotions in general. Given that the significant differences were found by running a repeated measures ANOVA ($F=227.67$, $p<.001$) within the six mean scores, post hoc tests were used to test the significance of the mean scores among the six subscales. Post-hoc results showed the mean score of awareness ($M=2.96$, $SD=.71$) is the highest among all the subscales; the second highest mean score is the goals ($M=2.20$, $SD=.70$). The findings indicated that, based on the self-report result, parents have the most difficulties in emotional awareness (recognizing and identifying their own emotions) and also have more difficulties in goals (engaging in goal directed behaviour when feeling upset) compared with the rest of the four subscales.

Table 18 Descriptive and Repeated measures ANOVA of DERS Scales

	N	Min	Max	Mean	SD
1.Non-acceptance	201	1.00	4.00	1.82	.56
2.Goals	201	1.00	4.20	2.22	.61
3.Impulse	201	1.00	4.83	1.72	.60
4.Strategies	201	1.00	4.50	1.72	.50
5.Clarity	201	1.00	3.20	1.71	.54
6.Awareness	201	1.00	4.67	2.96	.71
DERS	201	1.14	3.47	2.01	.40

Post-hoc comparison results: 2>1,3,4,5, $p<.001$; 6>1,2,3,4,5, $p<.001$.

5.4.2 T-test analysis of parents' role differences on DERS results

Significant differences revealed in impulse ($t=-2.20$, $p=.03$), in strategies ($t=-2.07$, $p=.04$), and in total scores of DERS ($t=-1.98$, $p=.05$) between fathers and mothers, which suggested that fathers and mothers have significantly difference in general, especially indicating difficulties in emotion impulse and strategies scales. Based on the mean scores, it showed mothers had higher level of difficulties than fathers in both scales, meaning mothers have more difficulties

in regulate their behaviours when experiencing negative emotions and more difficulties in adopting effective ways to improve their feeling when upset. No significant differences were found in non-acceptance, goals, clarity, and awareness.

Table 19 T-test analysis of parental role differences on DERS

Variables	Role of the parent (M/SD)		t	p
	1 (n=20)	2 (n=181)		
Non-acceptance	1.75 / .62	1.82 / .55	-.56	.57
Goals	2.00 / .50	2.25 / .63	-1.73	.09
Impulse	1.44 / .39	1.75 / .61	-2.20	.03
Strategies	1.50 / .36	1.74 / .51	-2.07	.04
Clarity	1.53 / .35	1.73 / .55	-1.61	.11
Awareness	2.92 / .62	2.97 / .72	-.26	.79
DERS	1.84 / .25	2.03 / .41	-1.98	.05

(1=father, 2=mother)

5.4.3 One-way ANOVA analysis of parents' age differences on DERS results

Observed from the Table 20, overall, no significant differences were found in non-acceptance, goals, impulse, strategies and clarity. A significant difference was observed in awareness across parents' age groups ($F=3.61$, $p=.03$). Followed with post-hoc comparison test, which showed that the mean score of parents in age group "26-30" is higher than that of parents in age group "41-50". This indicates that older parents have less difficulties in awareness, meaning parents have more attention to identify their emotional experiences.

Table 20 One-way ANOVA analysis of parents' age differences on DERS

Variables	Parents' age group (M/SD)			F	p
	1 (n=26)	2 (n=157)	3 (n=18)		
Non-acceptance	1.86 / .44	1.81 / .57	1.81 / .64	.09	.92
Goals	2.05 / .36	2.25 / .62	2.27 / .79	1.27	.28
Impulse	1.62 / .48	1.73 / .61	1.72 / .65	.38	.68
Strategies	1.69 / .40	1.72 / .52	1.76 / .47	.12	.89
Clarity	1.86 / .63	1.71 / .53	1.56 / .46	1.78	.17
Awareness	3.28 / .68	2.94 / .71	2.76 / .62	3.61	.03
DERS	2.04 / .34	2.01 / .41	1.97 / .47	.17	.84

(1= age group "26-30", 2= age group "31-40", 3=age group "41-50")

Post-hoc comparison test results: $1 > 3$, $p < .05$

5.4.4 One-way ANOVA analysis of parents' role differences on DERS results

Observed from the Table 21, no significant differences were found in non-acceptance, goals, impulse, strategies and clarity. A significant difference was observed in awareness (difficulties in recognizing and identifying emotions as they occur) across parents' age groups ($F=3.61$, $p<.001$). Post-hoc comparison test showed that the mean score of parents with lower secondary, upper secondary, junior college education background are higher than that of parents with master's and higher education background in the subscale of awareness. This indicates that parents with lower secondary, upper secondary, junior college education background had significantly higher emotional difficulty level in awareness than parents with master's and higher education background. In turn, it indicates that parents who were with higher education background could recognize and identify their emotions better than parents who were with lower education background.

A significant difference was also found in the total score of DERS. However, further post-hoc test results didn't show any more difference on the difficulty level of parents based on their different educational backgrounds. This indicates, on an overall level, educational background didn't influence parents' difficulties in emotional regulation.

Table 21 One-way ANOVA analysis of parents' educational background differences on DERS

Variables	Parents' educational background (M/SD)					F	p
	1 (n=3)	2 (n=19)	3 (n=28)	4 (n=137)	5 (n=14)		
Non-acceptance	1.83 / .58	1.83 / .61	1.98 / .60	1.80 / .55	1.70 / .49	.78	.54
Goals	2.80 / 1.25	2.13 / .52	2.26 / .65	2.21 / .58	2.33 / .80	.94	.44
Impulse	2.23 / 1.78	1.61 / .50	1.82 / .77	1.72 / .55	1.51 / .60	1.47	.21
Strategies	2.04 / .44	1.71 / .48	1.79 / .68	1.71 / .46	1.60 / .61	.68	.61
Clarity	2.33 / .42	1.76 / .62	1.90 / .59	1.66 / .51	1.51 / .44	.04	.04
Awareness	3.94 / .10	3.32 / .67	3.21 / .70	2.90 / .67	2.51 / .72	5.75	<.001
DERS	2.51 / .71	2.05 / .39	2.14 / .43	1.99 / .38	1.84 / .47	2.75	.03

(1= lower secondary and below, 2= upper secondary, 3= junior college, 4= bachelor, 5= masters and higher)

Post-hoc comparison test results: $5>1,2,3$, $p<.05$

5.4.5 T-test analysis of parents' ethnicity differences on DERS results

Observed from the t-test results (Table 22), no significant differences found in all scales between parents who were Han majority and parents who were minority. This indicates that parents' difficulties in emotional regulation was not influenced by parents' ethnicities.

Table 22 T-test analysis of parent's ethnicity differences on DERS

Variables	Status of the child (M/SD)		t	p
	1 (n=116)	2 (n=85)		
Non-acceptance	1.82 / .59	1.81 / .51	.11	.91
Goals	2.24 / .62	2.20 / .60	.55	.58
Impulse	1.73 / .65	1.70 / .52	.43	.67
Strategies	1.73 / .52	1.72 / .49	.26	.80
Clarity	1.72 / .58	1.71 / .48	.17	.87
Awareness	2.94 / .70	3.00 / .72	-.61	.54
DERS	2.01 / .42	2.01 / .38	.17	.87

(1=Han majority, 2=minority)

5.4.6 T-test analysis of the status of the child differences on DERS results

Observed from Table 23, no significant differences were found in subscales non-acceptance, impulse, strategies, clarity, awareness, and total score of DERS. Significant differences were found in Goals (difficulties engaging in goal directed behaviours), $F=-2.36$, $p=.02$, and based on means scores which suggested parents who have more than one child at home have more difficulties in engaging in goal directed behaviours than parents who have only one child.

Table 23 T-test analysis of the status of the child differences on DERS

Variables	Status of the child (M/SD)		t	p
	1 (n=89)	2 (n=112)		
Non-acceptance	1.81 / .55	1.82 / .57	-.05	.96
Goals	2.11 / .58	2.31 / .62	-2.36	.02
Impulse	1.66 / .55	1.76 / .63	-1.27	.21
Strategies	1.70 / .47	1.74 / .53	-.61	.54
Clarity	1.70 / .55	1.73 / .53	-.34	.73
Awareness	2.89 / .71	3.02 / .70	-1.34	.18
DERS	1.97 / .40	2.05 / .40	-1.44	.15

(1=only child, 2=non-only child)

5.4.7 T-test analysis of children's gender differences on DERS results

Observed from the t-test results (Table 24), no significant differences were found in all subscales among parents whose children are boys or girls. This indicates that parents' difficulties in emotional regulation was not influenced by the gender of the child.

Table 24 T-TEST analysis of children's gender differences on DERS

Variables	Gender of child (M/SD)		t	p
	1 (n=95)	2 (n=106)		
Non-acceptance	1.81 / .58	1.82 / .54	-.11	.92
Goals	2.27 / .66	2.20 / .60	1.12	.26
Impulse	1.73 / .65	1.70 / .52	1.43	.15
Strategies	1.73 / .52	1.72 / .49	1.27	.21
Clarity	1.72 / .58	1.71 / .48	-.10	.92
Awareness	2.94 / .70	3.00 / .72	.08	.95
DERS	2.01 / .42	2.01 / .38	.170	.865

(1=boy, 2=girl)

5.4.8 One-way ANOVA analysis of children's age differences on DERS results

Observed from the t-test results (Table 25), no significant differences were found in all subscales among parents whose child was in different age group. This indicates that parents' difficulties in emotional regulation was not influenced by age of the child.

Table 25 One-way ANOVA analysis of children's age differences on DERS

Variables	Children's age group (M/SD)				F	p
	1 (n=44)	2 (n=65)	3 (n=57)	4 (n=35)		
Non-acceptance	1.86 / .52	1.77 / .53	1.85 / .57	1.80 / .64	.32	.81
Goals	2.22 / .64	2.17 / .56	2.34 / .64	2.13 / .60	1.16	.33
Impulse	1.70 / .66	1.74 / .57	1.77 / .64	1.60 / .49	.67	.57
Strategies	1.71 / .58	1.71 / .49	1.79 / .50	1.63 / .44	.68	.57
Clarity	1.76 / .57	1.75 / .56	1.72 / .53	1.58 / .47	.96	.41
Awareness	3.00 / .83	2.94 / .69	2.95 / .62	3.02 / .73	.13	.94
DERS	2.03 / .42	2.00 / .39	2.06 / .44	1.995 / .35	.56	.64

(1=age "3", 2=age "4", 3= age "5", 4= age "6")

5.5 Correlation analysis

In this part, correlation analysis was used to answer the research question 3 on the relationships among three main research variables, namely parental knowledge of child development, parents' difficulties in emotional regulation, and children's social competence.

5.5.1 Correlation analysis between parental knowledge, parental difficulties in emotion regulation, and children's social competence in total

Observed from Figure 1, there was a significant negative correlation between parental knowledge and difficulties in emotional regulation ($r=-.17$, $p<.05$), a significant negative correlation between difficulties in emotional regulation and children's social competence ($r=-.38$, $p<.01$), and a significant positive correlation was found between parental knowledge and children's social competence ($r=.23$, $p<.01$)

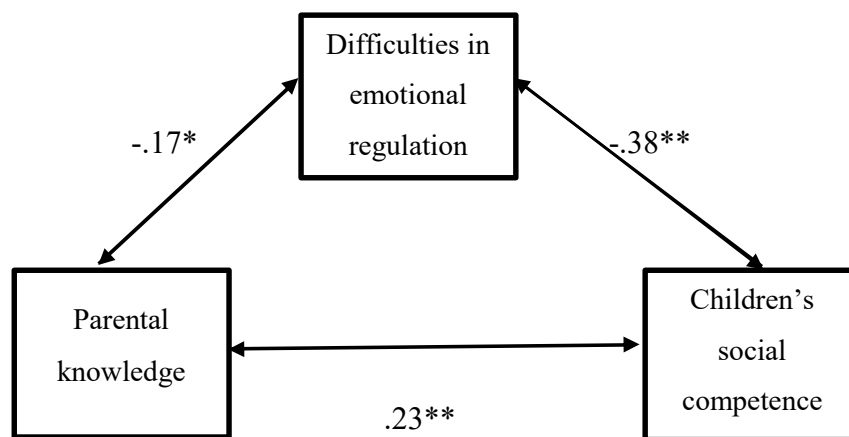


Figure 1 Correlations among parental knowledge, parental difficulties in emotion regulation, and children's social competence. * $p<.05$, ** $p<.01$

5.5.2 Correlation analysis between parental knowledge, parental difficulties in emotion regulation, and children's social competence in subscales

Table 26 Correlation analysis of parental knowledge and difficulties in emotional regulation with children's social competence in subscales

Subscales	1	2	3	4	5	6	7	8	9	10	11
1. Normative behaviours	-										
2. Milestones	.21**	-									
3. Non-acceptance	-.14	-.11	-								
4. Goals	-.07	.07	.32**	-							
5. Impulse	-.14*	-.03	.51**	.56*	-						
6. Strategies	-.14	-.04	.55**	.52**	.69**	-					
7. Clarity	-.19**	.03	.42**	.34**	.55**	.56**	-				
8. Awareness	-.27**	.03	.13	-.02	.14*	.15**	.44**	-			
9. Anxiety-withdrawal	.07	-.08	-.13	-.15*	-.12	-.24**	-.24**	-.07	-		
10. Anger-aggression	.17*	-.05	-.15*	-.14*	-.17**	-.24**	-.35**	-.29**	.48**	-	
11. Sensitive-cooperation	.21**	-.09	-.10	-.15*	-.22**	-.19**	-.40**	-.37**	.36**	.46**	-

*. Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

KIDI-Total subscales: 1&2; DERS subscales: 3,4,5,6,7 & 8; SCBE-30 subscales: 9,10 &11

Seen in Table 26, start observing from KIDI, it's apparent that subscale milestones didn't show any correlations to any subscales in DERS and SCBE-30. While normative behaviour from KIDI had a positive correlation with milestones ($r=.21, p<.01$), and negative correlations with subscales: impulse, clarity, and awareness in DERS, with $r = -.14, p<.05$; $-.19, p<.01$; $-.27, p<.01$ respectively; normative behaviour also had positive correlations with subscales: anger-aggression and sensitive-cooperation in SCBE-30, with $r=.17, p<.05$; $r=.21, p<.01$ accordingly.

For subscales of DERS, non-acceptance had positive correlations with goals, impulse, strategies, and clarity with $r=.32, p<.01$; $r=.51, p<.01$; $r=.55, p<.01$; $r=.42, p<.01$ respectively; a negative correlation was also found between non-acceptance and anger-aggression from SCBE ($r=-.15, p<.05$).

Goals had positive correlations with impulse ($r=.56, p<.05$), strategies ($r=.52, p<.01$), and clarity ($r=.34, p<.01$); goals also had negative correlations with all three subscales in SCBE with $r=-.15, p<.05$, $r=-.14, p<.05$; $r=-.15, p<.05$ respectively.

Impulse was positively correlated with strategies ($r=.69, p<.01$), clarity ($r=.55, p<.01$), awareness ($r=.14, p<.05$), and negatively correlated with subscales anxiety-withdrawal and anger-aggression in SCBE with $r=-.17, p<.01$; $r=-.22, p<.01$.

While strategies and clarity showed similar patterns that they had positive correlations towards each other and also having negative correlations with anxiety-withdrawal, anger-aggression, and sensitive-cooperation in SCBE.

Awareness found negatively correlated to anger-aggression and sensitive-cooperation from SCBE with $r=-.29, p<.01$, $r=-.40, p<.01$.

Regarding to anxiety-withdrawal, anger-aggression and sensitive-cooperation in SCBE, positive correlations were found among them and towards each other.

5.6 Conclusion in results

In this study, t-test, repeated measures ANOVA, and one-way ANOVA test were used to analyse the influences of parental roles, parents' age, parents' educational background, parents' ethnic background, children's family status, children's gender and children's age on parents'

parenting knowledge, emotional regulation difficulty and children's social competence. The analysis results showed that: parental knowledge of child development showed significant difference in parents' education backgrounds. On the subscale of normative behaviours, the knowledge level of parents who were with upper secondary education was lower than the knowledge level of parents who were with bachelor, masters and higher education; and in total score, same pattern was found as well. Moreover, the knowledge level of parents who were with junior college education was lower than the knowledge level of parents who were with bachelor education. No significant differences were found in parents' role, age, ethnicities and in children's status at home, gender and ages.

Parents' difficulty level of emotional regulation showed significant differences in four demographic characteristics which were: parents' role, parents' age, parents' education background, and child's status at home. For parents' role at home, there were significant differences in the subscales of impulse, strategies and total score of DERS between fathers and mothers; In parents' age, parents who aged between 26-30 had higher level of difficulty in emotional awareness than parents who aged between 41-50; in terms of parents' education background, parents who had masters and higher education background showed lower difficulty level of emotional awareness than parents who had junior college, upper secondary or lower secondary; and in child's status at home, parents who had more than one children showed higher difficulty level in engaging in goal directed behaviour than parents who had only one child.

Significant differences revealed in children's social competence in parents' education background and children's age. In terms of parents' education background, children's sensitive-cooperation level of parent who had upper secondary education is lower than that of parents who had bachelor, masters and higher education. In terms of children's age, sensitive-cooperation level of children who were 3 and 4 years old is lower than that of children who were 6 years old.

In order to analyse the relationships between parental knowledge of child development, parents' difficulty in emotional regulation and children's social competence, this study also used correlation analysis to examine the correlations amongst parenting knowledge with its two scales, parents' difficulty in emotional regulation with its six subscales and children's social competence with its three subscales. The results showed that: 1. A significant negative correlation was found between parental knowledge of child development and parents'

difficulties in emotion regulation. Among which, only the subscale normative behaviour in parental knowledge had negative correlations with subscales of impulse, clarity, and awareness in difficulties in emotion regulation; no correlations were found between the subscale milestone and any other subscales of parents' difficulties in emotional regulation. 2. A significant positive correlation was found between parental knowledge of child development and children's social competence. Among which, the subscale normative behaviour in parental knowledge positively correlated with subscales of anger-aggression and sensitive-cooperation in children's social competence. No correlations were found between the subscale milestone and any other subscales of children's social competence. 3. A significant negative correlation was found between parents' difficulties in emotion regulation and children's social competence. Among which, subscales in difficulties in emotion regulation: goals, strategies, clarity, all had negative correlation with anxiety-withdrawal, anger-aggression, and sensitive-cooperation in children's social competence; the subscales of impulse and awareness in difficulties in emotion regulation, had negative correlation with the subscales of anger-aggression and sensitive-cooperation in children's social competence; the subscale non-acceptance had negative correlation with the subscale anger-aggression in children's social competence.

6 Discussion

6.1 Discussion on overall levels of parental knowledge, parental difficulties in emotional regulation, and children's social competence

6.1.1 Parents' overall knowledge level of child development

This current study found that the overall mean score for parental knowledge was .57 (SD=.11) which similar to the results from Nobre-Lima et al research in 2014. In their research the mean for the total score of the parental knowledge was .63 (SD=.10), reflecting a moderate level of mastery of the developmental knowledge. Similar results also found from another study by Alqurashi et al (2021). Alqurashi and his co-workers found that parents had a fair level of parental knowledge with a mean for the total score of KIDI-P was .54 (SD=.01). Thus in contrast, the result from current research showed that parents were fairly knowledgeable in child development. What's more, based on the results, it also presented that parents had relatively more knowledge in children's normative behaviours than in children's developmental milestones. And attempted score of KIDI from this research was also similar to the result from Alqurashi et al research (2021) as well, parents were showing more confidence in their knowledge regardless of the low correction percentage of answers for KIDI. The possible reason that parents had high confidence in their knowledge but just showing medium level of correction percentage of the answers of KIDI could be: first, social influences and cultural norms. Cultural narratives and societal expectations frequently support the belief that parenting is an innate skill that doesn't always require a college degree or a lot of study. Second, overreliance on personal experience. For instance, anecdotal information from their own childhood, observations of other parents, and their own personal experiences are frequently the main sources of support for parents. Third, lack of reliable information source. Nowadays with multi-social medias on internet, parents easily get fragmented instead of systematic information from inaccurate sources which mislead parents to believe they have attained abundant knowledge. Just as what Westgarth (2019) found that parents frequently have trouble telling the difference between information that has been verified by science and advice that is anecdotal or deceptive, which can result in inaccurate trust in their understanding. Overall, the results showed that the parents were at a moderate level about their children's developmental understanding, and the parents' confidence in their own knowledge was generally high.

6.1.2 Parents' overall level of difficulties in emotional regulation

The results of this research, based on parents' self-report, showed that the general level of parents' difficulties in emotion regulation was moderately low ($M=2.01$), indicating parents' emotional management ability was generally good. This finding is in line with Gross's study (2015) which emphasized that as parents acquire more experience and understanding of parenting, they would develop effective emotion regulation. Among six subscales of the DERS (non-acceptance, goals, impulse, strategies, clarity and awareness), parents experienced the most difficulties in awareness, meaning parents had more difficulties in recognizing and identifying their own emotion accurately and effectively than in other subscales; the lowest level difficulties was emotional clarity, indicating that parents were quite clear about their expression of emotions and understand their emotional experiences; fair low level of difficulties on the rest of three subscales which are the impulse control difficulties, the limited access to emotion regulation strategies, and non-acceptance of emotional responses. The possible reason for having a good emotion regulation ability in general could be first related to personal development from parenthood. Belsky (1984) suggested that parenthood often associated with personal growth and maturity, which can contribute to improved emotion regulation abilities. Research from Robert et al (2006) also showed that through transitions like marriages and parenthood, people tend to experience increased emotional stability and maturity. Increased awareness and access to resources might be another possible reason for parents nowadays having better emotion regulation ability. The importance of awareness of emotion regulation is growing in parenting nowadays and parenting workshops, self-help books, online courses, and counselling services, all of which place an emphasis on the development of emotional management skills are now more readily available to parents.

6.1.3 Children's overall level of social competence

Based on the results of children's social competence, the mean of total score of children's social competence is 3.83, which is relatively high above the average, indicates that children had fairly high level of social competence. The differences in means amongst its three subscales (anxiety-withdrawal, anger-aggression, and sensitive-cooperation) were small, showing that children's general development of social competence was balanced based on parents' evaluation. The possible reasons for getting good level of children's social competence could be: first, the general result of overall development of children. Children's

social competency is improved as they become older because they have more opportunity to interact with peers and more life experience. Children and teenagers in school acquire increasingly complex social abilities, such as empathy, bargaining, and group dynamics (Rose-Krasnor, 1997). Second, given that data was completed only by parents, lack of teachers or the third evaluation, thus only through parents who might be more likely to be affected by parental bias that led to subjective evaluation. Parents tend to have a natural bias to positively perceiving their children, which may lead to overestimate their children's social competence (Bugental & Johnston, 2000). Third, the general outcomes of education system and quality of the targeted kindergarten. The social competence of children can also be improved by their involvement in early childhood education programs and social skills approaches. Children get the chance to learn and practice social skills in quality preschool programs that place a strong emphasis on cooperative play, social interaction, and emotional regulation. The targeted kindergarten is one of the Chinese chain brand of kindergartens which have more than 1300 day-care centers and 500 kindergartens throughout China, covering more than 300 cities. From day-care, preschool to kindergarten, children aged 0-6 receive early childhood education based on themes. Adhering to the educational concept of "Learning through play", their education focusing on promoting children's development in six domains: personality, emotional and social, physical, communication, language, reading and writing, knowledge and comprehension of the world, mathematics, art and creativity, and all-encompassing development of children's healthy personalities and comprehensive intelligence. It is seen as a high-quality private educational institution. As Barnett (2011) suggested that early childhood education programs have long-lasting beneficial benefits on children's social and cognitive development, which helps them achieve better levels of social competence.

In all, through testing, parents showed a medium knowledge level of child development but relatively high confidence in their knowledge; by self-report, parents showed a moderate level of difficulties in emotion regulation; and evaluated by parents, children's social competence was fairly high.

6.2 Discussion on results of t-tests and ANOVA analysis based on demographic characteristics

6.2.1 Differences of parents' knowledge level of child development

In line with findings from Nobre-Lima et al (2013), this study also found associations only between parents' education background and parental knowledge of child development; no associations with parents' role, age, ethnicity and child status at home; the results showed that parents with lower education degree have lower knowledge level than parents with higher education degrees.

Some research found that multiple demographic traits have impact on parental knowledge, like in the study of Sullivan et al (2021), they found that parental knowledge was strongly associated with parents' age, ethnicity, education, marital status, and incomes. While the findings of Kagitcibasi's study (2005), highlighted that parents' educational attainment may be a better indicator of their degree of understanding of child development than age.

Approximately 75% of the parents who took part in the survey had a higher education background, according to their demographic data. The study revealed that more exposure to formal education and professional training, which provide information about child development, is linked to higher educational levels. Hence, parents' education can be seen as a broadly agreed factor that influences parental knowledge. As Acharya and Joshi (2009) discovered in their study that parents who have received more education are more likely to understand how children develop and to be motivated to achieve their goals by using educational resources like books, websites, parenting forums, and support.

From the results of this research, there was no significant differences showed in parental knowledge in terms of parents' ethnicity. According to the demographic data, there were 42.3% of the parents who were ethnic minorities, however, despite making up almost half of the total, there were 14 types of the ethnic minorities and the number of parents within each group was too small which made the data less representative. It is understandable that families living in the same region (cities, towns, and villages) sharing similar life styles, living environment would lead to similar understanding of parenting and generating common parenting knowledge. Meanwhile, families from these backgrounds have also become more culturally assimilated as a result of urbanization and the expansion of public education in China. China has started the expansion of higher education (钟秉林&赵应生,2007) since

1998 along with the rapid urbanization process, and by the end of 2014, the urbanization rate had reached 50.11% all over China (韩本毅, 2011), with a context like that, selective acculturation is a phenomenon in which parents from ethnic minority backgrounds embrace certain features of the mainstream culture while retaining elements of their own cultural heritage. Parents from different ethnic backgrounds may have equal levels of knowledge about child development as a result of this process (Berry, 2003). Moreover, though parenting practice may be influenced by cultural factors, the relationship between ethnicity and parental knowledge level may be mediated by parenting behaviours rather than direct effects of ethnicity. Therefore, parents with different ethnic backgrounds might employ similar parenting strategies, regardless of their ethnicity in the same living region (Cabrera et al, 2014).

It is also worth noting that in this research, results showed that the level of parental knowledge didn't have association with the child status at home, meaning it made no difference in parental knowledge whether they had only one or more than one children, which is inconsistent with the results of Mason (2016). In Mason's study, his co-workers and him asserted that parents with numerous children may have accumulated more parenting experience over time, potentially improving their degree of understanding regarding child development. Parenting techniques can be learned and adjusted based on the unique requirements and traits of each child through real-world parenting experience. However, there are possible reasons why number of the children didn't affect. According to Grusec's study (2011), the results showed that parents tend to adapt and modify knowledge and strategies on the base of experiences gained from the first child, then applied to subsequent children. Bornstein and Putnick's (2012) also believed that although individual experiences may vary amongst children, fundamental principles and knowledge of child development remain consistent across children. As a result, parents' initial learning curve built on the experience with the first child and gives them a solid foundation of general knowledge. Based on this finding from current research, future research on analysing families with two or multiple children could highlight knowledge that may or may not gain from accumulated parenting experience. Because by pinpointing specific particular categories where experience with multiple children improves parental knowledge compared to areas where it stays constant.

6.2.2 Differences of parents' levels of difficulties in emotional regulation

Based on the results from variance analysis, amongst six subscales of DERS, parents' levels of difficulties in emotion regulation showed significant differences in terms of parents' role, age, education background and the status of the child; no differences showed in terms of parents' ethnicities, child's gender and child's age.

First, parents' levels of difficulties in emotion regulation, specific in emotional awareness showed significant difference in terms of parents' age and parents' education respectively, indicating that younger parents and parents with lower education background had more difficulties in identifying and understand better in their own emotions. According to Mikulincer & Shaver (2007), emotion awareness is closely related to cognition, and they claimed that education can enhance cognition development, because parents with higher education might greater access to resources on psychology and support that aid in developing emotion awareness and regulation skills. Bracket et al (2011) also indicated in their study that higher education levels were connected with higher emotion intelligence and coping strategies. While in terms of parental age, according to Krauss (1993), that it may be more difficult for younger parents to handle the emotional demands of parenting because they are still developing their coping mechanisms and emotional regulation abilities. Older parents generally have more life experiences and emotion maturity that could develop better emotion identification skill to adopt more effective strategies for responding to children's needs (Gross et al., 1997; Aldwin, 2014).

For parents' role, mothers had showed higher level of difficulties in emotion regulation in subscales of impulse control and access to emotion regulation strategies than father. First of all, in this research, the majority of respondents were mothers, which was up to 180, while fathers were 20. The big number disparity between mothers and fathers might had an impact on the result of analysis. Nevertheless, the reasonable explanation in general could also be the biological differences between females and males. Neuroimaging studies have shown that mothers experience significant hormonal fluctuations in many ways in life, which could impact their mood, anxiety and heightened emotional sensitivities. To put it more specifically, that the amygdala and prefrontal cortex, two brain regions linked to emotional processing, are often more activated in women, which may explain their higher emotional reactivity and difficulty with regulation (Domes et al., 2010). Besides, traditionally, fathers tend to be less involved in daily caregiving, which may lessen emotional stress and make it easier for them to

control their emotions (Craig, 2006). Compared to men, women are frequently socialized to express their feelings more freely, which might lead to more emotional problems. Because of societal standards that may encourage women to be more emotionally responsive, this openness can also make impulse control harder to maintain (Brody & Hall, 2008).

Another intriguing finding was that there was also significant difference in the subscale of goals in terms of the status of the child, meaning parents who had more than one children had more difficulty in engaging in goal directed behaviour than parents who had only one child. This counterintuitive result is not in line with prior studies conducted by Feinberg & Hetherington (2001) and McHale et al (2012). Both of the studies indicated that parents with more children developed better goal-directed behaviours due to increased experience or more effective parenting strategies. The possible explanations might be the rising parenting stress and fatigue for multiple children, as Crnic and Low (2002) highlighted in their research. They claimed that higher chronic stress level and cumulative fatigue were reported by parents for managing multiple children, which reduced mental energy for planning, organizing and completing goal-directed tasks. Parents who have more than one child are required to multitask and divide attention on households and work, which would burden their cognitive load of managing effectiveness (Gauvain & Huard, 1999). Lareau (2011) explained that parents with multiple children often feel compelled to heavily invest in the education and extracurricular activities of each child. This increased involvement can result in greater financial challenge and less time for their personal objectives. Again, the greater educational expenses and childcare costs, the greater stress and logistical burdens parents will encounter, which hinders their ability to engage in goal-directed behaviours (Jenkins et al, 2003). Future research should further explore the specific mechanism by which parents' ability in engaging in goal-directed behaviours is effected with multiple children.

6.2.3 Differences of children's social competence level

As it has been shown from this research, among three subscales of children's social competence, which are anxiety-withdrawal, anger-aggression, and sensitive-cooperation, only sensitive-cooperation showed significant difference in parents' education background and children's age, indicating that children whose parents were with lower education had lower sensitive-cooperation level than children whose parents with higher education; And children who were age 3 and 4 had lower sensitive-cooperation level than children who were 6 years old. This result consists with the results from prior studies. For example, Lareau (2018) found

that children from more educated families in circumstances that were more structured and encouraging, which promoted improved social skills, including collaboration. Hoff et al (2019) found in their study that children demonstrated better language skill and social competence like cooperation if they were from higher-educated families, because higher educated parents are more likely to have greater access to resources for parenting and for better understanding of child development (which has been discussed in KIDI discussion), thus they tend to have more advanced cognitive, communication skills, problem-solving, and emotion regulation skills to scaffold children's overall development.

Regarding to children's age, a study by Gleason (2005) has shown that younger children like under 6 are still developing social skills and their behaviours are more egocentric, by the age of 6, they have had more socialization experiences through preschool, kindergarten and their cognitive and emotional abilities grow. So does their social competence, especially in cooperation. From the perspective of children's language development, Pellegrini (2001) argued that language development plays a crucial role in social competence in children development, since younger children need language abilities to collaborate and communicate successfully, as they get older, their language skills develop and they can express their demands, negotiate, and resolve conflicts more effectively.

6.3 Discussion on the correlations amongst parental knowledge, parental difficulties in emotional regulation, and children's social competence

Present findings show that parental knowledge was negatively correlated to difficulties in emotion regulation, suggesting parents who possess more knowledge of child development experience fewer difficulties in their own emotion regulation, meaning having better emotion regulation abilities. A plausible reason for this correlation could be that parents who possess more knowledge are better equipped to comprehend their children's demands and actions, leading to a decrease in stress and emotional difficulties.

From the correlation results in subscales of both KIDI and DERS, knowledge of children's normative behaviours can negatively predict difficulties in impulse, clarity, and awareness parents experience. This means the more knowledge of children's normative behaviour parents possess, the fewer difficulties in impulse, clarity and awareness they will experience. It suggests that parents who have a clear understanding of their children's typical behavior are also better equipped to handle impulsive reactions. Instead of setting unreasonable

expectations, these parents respond to their children's actions with calm and patience. Additionally, parents who are more aware of normative behaviors are better able to understand and regulate their own emotions. This clarity helps them identify and process their feelings more effectively, reducing confusion and emotional distress, understand the context of their emotional responses thus leading to greater emotional awareness and self-regulation. Research by Gratz & Roemer (2004) supported this finding, they suggested that educating parents about normative children behaviours will improve their awareness and mindfulness, which will improve their ability to regulate emotions. However, the knowledge of children's milestones was not correlated to any subscales of parents' difficulties in emotional regulation in this research. The plausible explanation might be the gap between knowledge and practical application of parents. Knowledge of child developmental milestones involves cognitive understanding and information retention, while emotional regulation is more closely related to psychological processes and neural mechanisms. Gross (2009) suggested that different brain regions are involved in cognitive and emotional processes, which may not have direct connections to each other. Dunsmore et al (2009) also found that emotion regulation relies more on emotional skills, practices, and coping mechanisms than on cognitive knowledge alone. Additionally, John & Gross (2004) emphasized that parents' individual personality traits are strong predictors of emotional capabilities. Therefore, parents' individual personality traits can be considered as one possible reason why knowledge of milestones may not be correlated with difficulties in emotional regulation.

Parental difficulties in emotion regulation was negatively correlated to children's social competence, indicating that the more difficulties that parents experience in their emotion regulation, the lower social competence in their children. This underscores the importance of modelling based on Bandura's social learning theory, that children's observational learning. The emotional climate of the family and model can be used to understand this relationship. Children who witness their parents struggling with emotion control may internalize and imitate their parents' negative emotional expressions in their own social interactions. Take a closer look at the correlations among the subscales in both DERS and SCBE, non-acceptance can only negatively predict children's anger-aggression, indicating that parents who find it difficult to accept their own emotional response may unintentionally set a bad example for their children by expressing negative emotions, which lead to increased anger and aggression in their children. Impulse and awareness negatively predict anger-aggression and sensitive-cooperation, indicating children with parents who have difficulties controlling their impulses

and emotional awareness tend to be less sensitive and cooperative but more likely to display anger and aggressiveness. Goals, clarity and strategies negatively predict all subscales in SCBE, namely, anxiety-withdrawal, anger-aggression, and sensitive-cooperation, indicating that parents who have clear emotion goals, understand their emotions clearly and employ effective strategies to manage their emotions are usually more consistent and supportive in nurturing children's social competence. Also based on the results from current research, 6 subscales of DERS all positively correlated towards each other, therefore, they all comprehensively interconnected with subscales in SCBE.

Parental knowledge of child development was positively correlated to children's social competence, indicating that the more parental knowledge that parents have, the higher level of social competence in their children. This supported SEL theory, which emphasizes the development of social emotional competences through informed and deliberate behaviours. However, another counterintuitive finding in the correlations in subscales, which was normative behaviours positively predict children's anger-aggression, indicating that parents who have a better understanding of typical child behaviours may observe and report more anger-aggression in their children. One possible explanation could be that parents with greater knowledge are more perceptive of their children's behaviours and more likely to identify and accurately report instances of anger and aggression. On the other hand, it may reflect that an increased sensitivity and understanding of children's developmental norms leads to more vigilant monitoring and recording these behaviours. Meanwhile, normative behaviours also positively correlated to children's sensitive-cooperation, which indicating parents who understand typical child development are more likely to create supportive, cooperative, and sensitive behaviours in children. A home environment that fosters empathy and collaboration can be created by knowledgeable parents who serve as better role models for these social skills.

Contrary to expectation, the knowledge of developmental milestones did not show no correlations with any subscales of children's social competence. This calls into question the idea that broad developmental information is enough to nurture social skills, arguing that understanding of specific social norms and behaviours may be more important. Nonetheless, one of the possible reason could still can be the gap between knowledge and the practice of application of parents. Knowledge of milestone tends to be general and abstract which as Bornstein and Bradley (2014) asserted that it is not enough for parents to teach their children social skills like sharing, empathy by knowing when a child should begin walking or talking.

Because what is critical for social competence is social emotion development, which focuses more on interpersonal interaction and problem/conflicts solving, while milestones often emphasize cognitive and motor development rather than social and emotional skills (Ladd & Pettit, 2002).

7 Conclusion and limitations

In this chapter, the study's main discussions are summed up in respect to the research questions and objectives. And limitations of this research will be discussed in order to help contextualize the results and provide guidance for future research.

7.1 Conclusion

In current research, parents showed a medium level of knowledge of child development through test and showed a moderately low level of difficulties in emotional regulation by self-report. Children, on the other hand, have a moderately high level of social competence which was evaluated by parents. Based on demographic traits of parents and children, significant differences were observed in parental knowledge, parental emotional regulation and children's social competence in different subscales. Parents' educational background was a crucial factor for causing most of the significant differences in subscales based on this research. This indicates that parents should be encouraged to stay updated to the knowledge of child development and good parenting techniques, regardless of their current age or educational background and to stay informed about the latest research and practices by enlarging social networks and reliable learning resources. In terms of updating parental knowledge, given only the knowledge of normative behaviours connected to parents' difficulties in emotional regulation and children's social competence in this research. Parents might consider prioritizing learning about normative behaviours since practical knowledge is more directly applicable to day-to-day parenting and also greatly affects their emotion management and children's social skill.

Regarding emotional regulation difficulties, parents should focus on improving the emotion regulation ability, particularly regarding to the two aspects of awareness and goals. This means if parents can better understand and recognize their own emotions, they could be better equipped to respond to their children's need without overreacting or overlooked. For the same reason, if parents could stay focus on their parenting objectives to maintain the consistency and reliability in their behaviours, they could create a stable and nurturing home environment for children feel secure to develop their social skills.

In relation to correlations, parental knowledge of child development is positively correlated to children's social competence, but negatively correlated to parental difficulties in emotional regulation; while parental difficulties in emotional regulation is negatively correlated to

children's social competence. The dynamic interplay of parental knowledge, parental difficulties in emotion regulation and children's social competence is crucial for understanding the broader context of child development and effective parenting practices. As children learn by observing and imitating their parents, it is critical for parents to realize the importance of their role in social behaviours and emotion response modelling for their children. Develop their emotional regulation skills and strategies, especially on improving their own ability to recognize and identify emotions as well as helping children develop these skills.

In summary, the interaction of parental knowledge of child development, parents' difficulties in emotional regulation and children's social competence emphasizes the need for comprehensive parenting support strategies. Through the management of these interconnected domains, parents can greatly improve their capacity to foster their children's social and emotional growth, which will ultimately result in more favourable developmental paths and well-rounded individuals.

7.2 Limitations

As a small-scale quantitative study, there are several limitations of the current research. Firstly, self-selection is an issue since willing participants could not be representative of the total population due to certain traits. The sample of parents were the ones that voluntarily to participate thus may not be generalizable to the whole kindergarten. And extra demographic information such as socio-economic status, parents' job, and geographic location of the parents can be included, which might offer more different result and insight to broader level. Moreover, in the current research, participated mothers outnumbered fathers which from a certain extent, didn't extensively explore how parental roles differentially impact the research variables. Secondly, the self-reported data. As all the data gathered for this research comes from parents' self-reported measures, which may contain biases like recall or social desirability bias. The findings may not be as accurate if parents underreported or over-reported their problem with emotional difficulties or exaggerated the behaviour problems of children's. In terms of children's social competence, it would be more comprehensive and objective to include teachers' evaluation as well, because different evaluator may bring various perspective and experiences in different context and times which may shed light on perceptual differences for data analysis and discussion. Thirdly, lack of qualitative data. If data from parents' interview were to be collected, more in-depth and context would be embraced to fully understand the significant differences that appeared from the results. For instance, social competence among children from parents' evaluation was relatively high, qualitative data can provide stories and examples to make those relatable. Moreover, qualitative data can also provide explanations that may not be apparent through numbers alone, offering insights into parents' own experiences, perceptions, and motivations towards the questions from the survey (Maxwell, 2012). Last, using a cross-sectional design, the research collects data at a specific point in time. This strategy includes the inability to investigate the longitudinal effects of parental knowledge and emotional regulation challenges on children's social competence over time, or to infer causality.

References

- Ainsworth, M. D. S., Blehar, M. C., Waters, E., & Wall, S. (2015). *Patterns of Attachment: A Psychological Study of the Strange Situation*. Psychology Press.
- Aldao, A., Nolen-Hoeksema, S., & Schweizer, S. (2010). Emotion-regulation strategies across psychopathology: A meta-analytic review. *Clinical Psychology Review, 30*(2), 217–237.
- Armstrong, E., Eggins, E., Reid, N., Harnett, P., & Dawe, S. (2018). Parenting interventions for incarcerated parents to improve parenting knowledge and skills, parent well-being, and quality of the parent–child relationship: A systematic review and meta-analysis. *Journal of Experimental Criminology, 14*, 279-317.
- Bajcar EA, Babel P. How Does Observational Learning Produce Placebo Effects? A Model Integrating Research Findings. *Front Psychol.* 2018;9:2041. doi:10.3389/fpsyg.2018.02041
- Bandura, A., & Walters, R. H. (1977). *Social learning theory* (Vol. 1). Prentice Hall: Englewood cliffs.
- Barroso, N. E., Hungerford, G. M., Garcia, D., Graziano, P. A., & Bagner, D. M. (2019). Psychometric properties of the Difficulties in Emotion Regulation Scale (DERS) and its short forms in adults with and without parent-reported ADHD symptoms. *Journal of Psychopathology and Behavioral Assessment, 41*(4), 696–710.
- Benasich, A. A., & Brooks-Gunn, J. (1996). Maternal Attitudes and Knowledge of Child-Rearing: Associations with Family and Child Outcomes. *Child Development, 67*(3), 1186–1205. doi:10.1111/j.1467-8624.1996.tb01790.x
- Berking, M., Wupperman, P., Reichardt, A., Pejic, T., Dippel, A., & Znoj, H. (2011). Emotion-regulation skills as a treatment target in psychotherapy. *Behaviour Research and Therapy, 49*(11), 832–841.
- Bernier, A., Carlson, S. M., & Whipple, N. (2010). From external regulation to self-regulation: Early parenting precursors of young children’s executive functioning. *Child development, 81*(1), 326-339.
- Blair, C., & Raver, C. C. (2015). School readiness and self-regulation: A developmental psychobiological approach. *Annual Review of Psychology, 66*, 711-731.
<https://doi.org/10.1146/annurev-psych-010814-015221>

- Blair, C., & Razza, R. P. (2007). Relating effortful control, executive function, and false belief understanding to emerging math and literacy ability in kindergarten. *Child development, 78*(2), 647-663
- Bornstein, M. H., & Bradley, R. H. (Eds.). (2014). *Socioeconomic status, parenting, and child development*. Routledge
- Bornstein, M. H., Cote, L. R., Haynes, O. M., Hahn, C. S., & Park, Y. (2022). Parenting knowledge: Experiential and sociodemographic factors in European American mothers of young children. In *Parenting: Selected Writings of Marc H. Bornstein* (pp. 195-231). Routledge.
- Bornstein, M. H., Yu, J., & Putnick, D. L. (2020). Mothers' parenting knowledge and its sources in five societies: Specificity in and across Argentina, Belgium, Italy, South Korea, and the United States. *International journal of behavioral development, 44*(2), 135-145. <https://doi-org.ezproxy.utu.fi/10.1177/0165025419861440>
- Bridgett, D. J., Gartstein, M. A., Putnam, S. P., Lance, K. O., Iddins, E., Waits, R., ... & Lee, L. (2011). Emerging effortful control in toddlerhood: The role of infant orienting/regulation, maternal effortful control, and maternal time spent in caregiving activities. *Infant Behavior and Development, 34*(1), 189-199.
- Bronfenbrenner, U. (1994). Ecological models of human development. *International encyclopedia of education, 3*(2), 37-43.
- Bronfenbrenner, U., & Evans, G. W. (2000). Developmental science in the 21st century: Emerging questions, theoretical models, research designs and empirical findings. *Social development, 9*(1), 115-125.
- Burchinal, M., Roberts, J. E., Zeisel, S. A., Hennon, E. A., & Hooper, S. (2006). Social risk and protective child, parenting, and child care factors in early elementary school years. *Parenting: Science and Practice, 6*(1), 79-113.
- Campbell, S. B. (1997). Behavior problems in preschool children: Developmental and family issues. In *Advances in clinical child psychology* (pp. 1-26).
- CASEL. (2020). What is SEL?. Collaborative for Academic, Social, and Emotional Learning. Retrieved from <https://casel.org/what-is-sel/>

- Cassano, M. C., & Zeman, J. L. (2010). Parental socialization of sadness regulation in middle childhood: The role of expectations and gender. *Developmental Psychology, 46*(5), 1214–1226. <https://doi.org/10.1037/a0019851>
- Crnic, K., & Low, C. (2002). Everyday stresses and parenting. *Handbook of Parenting Volume 5: Practical Issues in Parenting, 2*, 243-267.
- Denham, S. A., Bassett, H. H., & Wyatt, T. M. (2010). Gender differences in the socialization of preschoolers' emotional competence. *New Directions for child and adolescent development, 2010*(128), 29-49. <https://doi-org.ezproxy.utu.fi/10.1002/cd.267>
- Denham, S. A., Blair, K. A., DeMulder, E., Levitas, J., Sawyer, K., Auerbach–Major, S., & Queenan, P. (2003). Preschool emotional competence: Pathway to social competence?. *Child development, 74*(1), 238-256. <https://doi-org.ezproxy.utu.fi/10.1111/1467-8624.00533>
- Dichtelmiller, M., Meisels, S. J., Plunkett, J. W., Bozytnski, M. E. A., Clafin, C., & Mangelsdorf, S. C. (1992). The relationship of parental knowledge to the development of extremely low birth weight infants. *Journal of Early Intervention, 16*(3), 210-220.
- Dunsmore, J. C., Booker, J. A., & Ollendick, T. H. (2013). Parental emotion coaching and child emotion regulation as protective factors for children with oppositional defiant disorder. *Social Development, 22*(3), 444-466. <https://doi-org.ezproxy.utu.fi/10.1111/j.1467-9507.2011.00652.x>
- Durlak, J. A., Weissberg, R. P., Dymnicki, A. B., Taylor, R. D., & Schellinger, K. B. (2011). The impact of enhancing students' social and emotional learning: A meta-analysis of school-based universal interventions. *Child development, 82*(1), 405-432.
- D'zurilla, T. J., & Goldfried, M. R. (1971). Problem solving and behavior modification. *Journal of abnormal psychology, 78*(1), 107.
- Eisenberg, N., & Morris, A. S. (2002). Children's emotion-related regulation. In H. Reese & R. Kail (Eds.), *Advances in child development and behavior* (Vol. 30, pp. 189–229). San Diego, CA: Academic Press.

- Eisenberg, N., Cumberland, A., & Spinrad, T. L. (1998). Parental Socialization of Emotion. *Psychological Inquiry*, 9(4), 241–273. https://doi-org.ezproxy.utu.fi/10.1207/s15327965pli0904_1
- Eisenberg, N., Cumberland, A., & Spinrad, T. L. (2001). Parental socialization of emotion. *Psychological Inquiry*, 12(2), 82-119.
- Eisenberg, N., Cumberland, A., Spinrad, T. L., Fabes, R. A., Shepard, S. A., Reiser, M., & Guthrie, I. K. (2001). The relations of regulation and emotionality to children's externalizing and internalizing problem behavior. *Child Development*, 72, 1112–1134.
- Eisenberg, N., Fabes, R. A., & Murphy, B. C. (1996). Parents' reactions to children's negative emotions: Relations to children's social competence and comforting behavior. *Child development*, 67(5), 2227-2247. <https://doi-org.ezproxy.utu.fi/10.1111/j.1467-8624.1996.tb01854.x>
- Eisenberg, N., Fabes, R. A., & Spinrad, T. L. (2006). Prosocial development. In N. Eisenberg (Ed.), *Handbook of child psychology: Vol. 3. Social, emotional, and personality development* (6th ed., pp. 646–718).
- Eisenberg, N., Fabes, R. A., Guthrie, I. K., & Reiser, M. (2000). Dispositional emotionality and regulation: Their role in predicting quality of social functioning. *Journal of Personality and Social Psychology*, 78(1), 136–157. <https://doi.org/10.1037/0022-3514.78.1.136>
- Eisenberg, N., Fabes, R. A., Guthrie, I. K., & Reiser, M. (2002). The role of emotionality and regulation in children's social competence and adjustment. *Paths to successful development: Personality in the life course*, 46-70.
- Eisenberg, N., Spinrad, T. L., Fabes, R. A., Reiser, M., Cumberland, A., Shepard, S. A., ... & Thompson, M. (2004). The relations of effortful control and impulsivity to children's resiliency and adjustment. *Child development*, 75(1), 25-46.
- ELLIOTT, STEPHEN N., and FRANK M. GRESHAM. "Children's Social Skills: Assessment and Classification Practices." *Journal of counseling and development* 66.2 (1987): 96–99. Web.
- Fabes, R. A., Gaertner, B. M., & Popp, T. K. (2006). Getting Along with Others: Social Competence in Early Childhood. In K. McCartney & D. Phillips (Eds.), *Blackwell handbook*

of early childhood development (pp. 297–316). Blackwell Publishing. <https://doi.org/10.1002/9780470757703.ch15>

Fantuzzo, J., & McWayne, C. (2002). The relationship between peer-play interactions in the family context and dimensions of school readiness for low-income preschool children. *Journal of Educational Psychology, 94*(1), 79–87. <https://doi.org/10.1037/0022-0663.94.1.79>

Fryling MJ, Johnston C, Hayes LJ. Understanding Observational Learning: An Interbehavioral Approach. *Anal Verbal Behav.* 2011;27(1):191-203. doi:10.1007/bf03393102

Gauvain, M., & Huard, R. D. (1999). Family interaction, parenting style, and the development of planning: A longitudinal analysis using archival data. *Journal of Family Psychology, 13*(1), 75–92. <https://doi.org/10.1037/0893-3200.13.1.75>

Glascoe, F. P. (2013). Collaborating with Parents: Using Parents' Evaluations of Developmental Status to Detect and Address Developmental and Behavioral Problems. *Pediatrics, 131*(Supplement 2), S96-S110.

Gratz, K. L., & Roemer, L. (2004). Multidimensional assessment of emotion regulation and dysregulation: Development, factor structure, and initial validation of the difficulties in emotion regulation scale. *Journal of psychopathology and behavioral assessment, 26*, 41-54.

Graziano, P. A., Reavis, R. D., Keane, S. P., & Calkins, S. D. (2007). The role of emotion regulation in children's early academic success. *Journal of School Psychology, 45*(1), 3–19. <https://doi.org/10.1016/j.jsp.2006.09.002>

Gross, J. J. (1998). The emerging field of emotion regulation: An integrative review. *Review of general psychology, 2*(3), 271-299.

Gross, J. J., & John, O. P. (2003). Individual differences in two emotion regulation processes: Implications for affect, relationships, and well-being. *Journal of Personality and Social Psychology, 85*(2), 348–362. <https://doi.org/10.1037/0022-3514.85.2.348>

Han, Z. R., & Shaffer, A. (2013). The relation of parental emotion dysregulation to children's psychopathology symptoms: The moderating role of child emotion dysregulation. *Child*

Psychiatry & Human Development, 44, 591-601. <https://doi-org.ezproxy.utu.fi/10.1007/s10578-012-0353-7>

Hess, C. R., Teti, D. M., & Hussey-Gardner, B. (2004). Self-efficacy and parenting of high-risk infants: The moderating role of parent knowledge of infant development. *Journal of applied developmental psychology*, 25(4), 423-437.

Howes, C., Rubin, K. H., Ross, H. S., & French, D. C. (1988). Peer interaction of young children. *Monographs of the society for research in child development*, i-92. <https://doi.org/10.2307/1166062>

Huang, K. Y., Caughy, M. O. B., Genevro, J. L., & Miller, T. L. (2005). Maternal knowledge of child development and quality of parenting among White, African-American and Hispanic mothers. *Journal of applied developmental psychology*, 26(2), 149-170.

Jenkins, J. M., Rasbash, J., & O'Connor, T. G. (2003). The role of the shared family context in differential parenting. *Developmental Psychology*, 39(1), 99-113. <https://doi.org/10.1037/0012-1649.39.1.99>

John, O. P., & Gross, J. J. (2004). Healthy and unhealthy emotion regulation: Personality processes, individual differences, and life span development. *Journal of Personality*, 72(6), 1301-1333. <https://doi-org.ezproxy.utu.fi/10.1111/j.1467-6494.2004.00298.x>

Krauss, M. W. (1993). Child-related and parenting stress: similarities and differences between mothers and fathers of children with disabilities. *American journal of mental retardation: AJMR*, 97(4), 393-404.

Ladd, G. W., & Pettit, G. S. (2002). Parenting and the development of children's peer relationships. In M. H. Bornstein (Ed.), *Handbook of Parenting: Volume 5: Practical Issues in Parenting* (pp. 269-309). Lawrence Erlbaum Associates. <https://doi-org.ezproxy.utu.fi/10.1111/1467-8624.00468>

LaFreniere, P. J., & Dumas, J. E. (1996). Social competence and behavior evaluation in children ages 3 to 6 years: The short form (SCBE-30). *Psychological Assessment*, 8(4), 369-377. <https://doi.org/10.1037/1040-3590.8.4.369>

- Lareau, A. (2018). Unequal childhoods: Class, race, and family life. In *Inequality in the 21st Century* (pp. 444-451). Routledge.
- Leerkes, E. M., Su, J., Calkins, S. D., Supple, A. J., & O'Brien, M. (2015). Pathways by which mothers' physiological arousal and regulation while caregiving predict sensitivity to infant distress. *Journal of Family Psychology*, *29*(6), 784–794
- Li, X., Jiao, D., Matsumoto, M., Zhu, Y., Zhang, J., Zhu, Z., ... Anme, T. (2022). Home environment and social skills of Japanese preschool children pre- and post-COVID-19. *Early Child Development and Care*, *192*(15), 2475–2486. <https://doi-org.ezproxy.utu.fi/10.1080/03004430.2021.2021896>
- Lunkenheimer, E. S., Shields, A. M., & Cortina, K. S. (2007). Parental emotion coaching and dismissing in family interaction. *Social Development*, *16*(2), 232-248. <https://doi-org.ezproxy.utu.fi/10.1111/j.1467-9507.2007.00382.x>
- Malecki, C. K., & Elliot, S. N. (2002). Children's social behaviors as predictors of academic achievement: A longitudinal analysis. *School Psychology Quarterly*, *17*(1), 1–23. <https://doi.org/10.1521/scpq.17.1.1.19902>
- Marjanovič-Umek, L., & Fekonja-Peklaj, U. (2017). The roles of child gender and parental knowledge of child development in parent-child interactive play. *Sex Roles*, *77*, 496-509.
- Masten, A. S., & Coatsworth, J. D. (1998). The development of competence in favorable and unfavorable environments: Lessons from research on successful children. *American Psychologist*, *53*(2), 205–220. <https://doi.org/10.1037/0003-066X.53.2.205>
- Maxwell, J. A. (2012). *A realist approach for qualitative research*. Sage.
- McDowell, D. J., Kim, M., O'neil, R., & Parke, R. D. (2002). Children's emotional regulation and social competence in middle childhood: The role of maternal and paternal interactive style. *Marriage & Family Review*, *34*(3–4), 345–364.
- McElwain, N. L., Halberstadt, A. G., & Volling, B. L. (2007). Mother-and father-reported reactions to children's negative emotions: Relations to young children's emotional understanding and friendship quality. *Child development*, *78*(5), 1407-1425. <https://doi-org.ezproxy.utu.fi/10.1111/j.1467-8624.2007.01074.x>

- Meng, K., Yuan, Y., Wang, Y., Liang, J., Wang, L., Shen, J., & Wang, Y. (2020). Effects of parental empathy and emotion regulation on social competence and emotional/behavioral problems of school-age children. *Pediatric investigation*, 4(02), 91-98.
- Morawska, A., & Sanders, M. R. (2011). Parental Use of Time Out Revisited: A Useful or Harmful Parenting Strategy? *Journal of Child and Family Studies*, 20(1), 1-8. <https://doi-org.ezproxy.utu.fi/10.1007/s10826-010-9371-x>
- Morris, A. S., Silk, J. S., Steinberg, L., Myers, S. S., & Robinson, L. R. (2007). The role of the family context in the development of emotion regulation. *Social Development*, 16(2), 361–388. <https://doi.org/10.1111/j.1467-9507.2007.00389.x>.
- Murphey, D. A. (1992). Constructing the child: Relations between parents' beliefs and child outcomes. *Developmental review*, 12(2), 199-232
- Nobre-Lima, L., Vale-Dias, M. da L., Mendes, T. V., Mónico, L., & Mac Phee, D. (2014). The Portuguese version of the Knowledge of Infant Development Inventory-P (KIDI-P). *European Journal of Developmental Psychology*, 11(6), 740–745. <https://doi-org.ezproxy.utu.fi/10.1080/17405629.2014.929941>
- O'Connor, E., Rodriguez, E., Cappella, E., Morris, J., & McClowry, S. (2012). Child disruptive behavior and parenting efficacy: A comparison of the effects of two models of insights. *Journal of community psychology*, 40(5), 555-572.
- Payton, J., Weissberg, R., Durlak, J., Dymnicki, A., Taylor, R., Schellinger, K., & Pachan, M. (2008). The positive impact of social and emotional learning for kindergarten to eighth-grade students: Findings from three scientific reviews. Collaborative for Academic, Social, and Emotional Learning.
- Ramey, C. T., & Ramey, S. L. (1998). Early intervention and early experience. *American psychologist*, 53(2), 109.
- Rikhy, S., Tough, S., Trute, B., Benzies, K., Kehler, H., & Johnston, D. W. (2010). Gauging knowledge of developmental milestones among Albertan adults: a cross-sectional survey. *BMC public health*, 10, 1-9.

- Rose-Krasnor, L. (1997). The nature of social competence: A theoretical review. *Social development*, 6(1),111-135.<https://doi-org.ezproxy.utu.fi/10.1111/j.1467-9507.1997.tb00097.x>
- Rubin, K. H., Begle, A. S., & McDonald, K. L. (2012). Peer relations and social competence in childhood. *Developmental social neuroscience and childhood brain insult: Theory and practice*, 23-44.
- Rubin, K.H., Rose-Krasnor, L. (1992). Interpersonal Problem Solving and Social Competence in Children. In: Van Hasselt, V.B., Hersen, M. (eds) Handbook of Social Development. Perspectives in Developmental Psychology. Springer, Boston, MA. https://doi-org.ezproxy.utu.fi/10.1007/978-1-4899-0694-6_12
- Sameroff, A. (2010). A unified theory of development: A dialectic integration of nature and nurture. *Child Development*, 81, 6–22. <https://doi.org/10.1111/j.1467-8624.2009.01378.x>.
- Saral, B., & Acar, I. H. (2021). Preschool children’s social competence: the roles of parent–child, parent–parent, and teacher–child relationships. *European Early Childhood Education Research Journal*, 29(6), 856–876. <https://doi-org.ezproxy.utu.fi/10.1080/1350293X.2021.1985557>
- Semrud-Clikeman, M., & Semrud-Clikeman, M. (2007). Development of social competence in children. *Social competence in children*, 11-37.
- Spitzberg, B. H., & Cupach, W. R. (1989). Handbook of Interpersonal Competence Research. New York: Springer-Verlag. <https://doi.org/10.1007/978-1-4612-3572-9>
- Stichter, J. P., O’Connor, K. V., Herzog, M. J., Lierheimer, K., & McGhee, S. D. (2012). Social competence intervention for elementary students with aspergers syndrome and high functioning autism. *Journal of Autism and Developmental Disorders*, 42(3), 354-366.
- Tamis-LeMonda, C. S., Shannon, J. D., Cabrera, N. J., & Lamb, M. E. (2004). Fathers and mothers at play with their 2-and 3-year-olds: Contributions to language and cognitive development. *Child development*, 75(6), 1806-1820.
- Viding, E., Fontaine, N. M., & McCrory, E. J. (2012). Antisocial behaviour in children with and without callous-unemotional traits. *Journal of the Royal Society of Medicine*, 105(5), 195-200. <https://doi-org.ezproxy.utu.fi/10.1258/jrsm.2011.110223>

Wentzel, K. R. (2015). Social competence at school: Relation between social responsibility and academic achievement. *Review of Educational Research*, 71(1), 1-24. <https://doi-org.ezproxy.utu.fi/10.3102/0034654306100100>

Wentzel, K. R. (2016). Social and emotional learning: Benefits for children's academic and social competence in school. In J. A. Durlak, C. E. Domitrovich, R. P. Weissberg, & T. P. Gullotta (Eds.), *Handbook of social and emotional learning: Research and practice* (pp. 67–83).

Zeman, J., Cassano, M., Perry-Parrish, C., & Stegall, S. (2006). Emotion regulation in children and adolescents. *Journal of Developmental & Behavioral Pediatrics*, 27(2), 155–168.

Zhang, X. (2013). Bidirectional longitudinal relations between father–child relationships and Chinese children's social competence during early childhood. *Early Childhood Research Quarterly*, 28(1), 83-93.

Zins, J. E., & Elias, M. J. (2007). Social and emotional learning: Promoting the development of all students. *Journal of Educational and Psychological consultation*, 17(2-3), 233-255. <https://doi-org.ezproxy.utu.fi/10.1080/10474410701413152>

Zins, J. E., Weissberg, R. P., Wang, M. C., & Walberg, H. J. (Eds.). (2007). Building academic success on social and emotional learning: What does the research say?

钟秉林, & 赵应生. (2007). 我国高等教育大众化进程中教育公平的重要特征(The important characteristics of educational equity in the process of higher education popularization in our country). *北京师范大学学报: 社会科学版*, 1, 5-9.

韩本毅. (2011). 中国城市化发展进程及展望(The development process and prospect of urbanization in China). *西安交通大学学报: 社会科学版*, 31(3), 18-22.

Appendices

Appendix 1 The structure of final synthesized questionnaire and specific dimensions in each part

Integrated Questionnaire			
Structure	Content	Items number	Subscales
Part one	Demographic characteristics (parents and children)	1-8	
Part two	Parental knowledge of child development (KIDI-P)	9-65	<ol style="list-style-type: none"> 1. Normative behaviours 2. Milestones
Part three	Children' social competence (SCBE-30)	66-95	<ol style="list-style-type: none"> 1. Anxiety-withdrawal 2. Anger-aggression 3. Sensitive-cooperation
Part four	Difficulties in emotional regulation (DERS)	96-131	<ol style="list-style-type: none"> 1. Non-acceptance 2. Goals 3. Impulse 4. Awareness 5. Strategies 6. Clarity