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ORIGINAL ARTICLE

STRENGTHENING RESILIENCE: PARENT EXPERIENCES IN DEVELOPING THEIR CHILDREN EXECUTIVE FUNCTION SKILLS

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ABSTRACT

Executive functions (EF) play a key role in child development. However, Thai parents' knowledge and practice skills for their children's EF are still limited. This study aimed to explore the lived experiences of Thai parents in developing their children's EF skills in a semi-rural sociocultural context. The theme pattern was interpreted using the Heideggerian hermeneutic phenomenological approach, and the themes were reflected in Van Manen's fundamental existential themes of the life world. As many as 16 parents were selected using the purposive sampling method. Semi-structured interviews were conducted. The results of this study revealed seven themes: 1) strong resilience, self-confidence, and responsibilities; 2) challenges in handling misbehaving family members and children with poor self-control; 3) living in a natural and peaceful environment; 4) staying away from terrible things; 5) practicing time management; 6) trying to use the mobile phone safely; and 7) organizing belongings and toys. In conclusion, nurses can help parents to increase their children's EF skills by strengthening parents' resilience, self-confidence, and responsibilities; supporting parents and co-parents to deal with terrible situations; time management; and preparing a safe, green, and natural environment for children to develop their EF skills.

Keywords: *Executive function; parents' experience; self-confidence; strengthening resilience*

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INTRODUCTION

Executive functions (EF) play a key role in child development. It is associated with prefrontal cortex functions and goal-directed behaviors (Friedman & Robbins, 2022). The higher the children's executive function, the better their complex skills performance, including working memory, inhibitory control, cognitive flexibility, and planning skills (Laureys et al., 2022). These skills support the children's academic outcomes (Spiegel et al., 2021). Executive functions were also related to health-protective behaviors (Gray-Burrows et al., 2019). On the contrary, executive dysfunction (ED) has been observed in children with behavioral and psychological problems, including attention-deficit hyperactive disorder (ADHD) (Kaga et al., 2020), learning disabilities (Ji et al., 2021), and substance use disorder (Inozemtseva & Mejía Núñez, 2019). Research has also shown that the lower the child's ED, the higher their happiness level (Sung & Choi, 2021).

To date, the prevalence of behavioral and psychological problems among Thai preschool children is high (23.6%). Data revealed that Thai preschool children had lacked inhibition, emotional control, planning and organization, and working memory impairment (Wannapaschaiyong et al., 2023). Suspected delayed development in early childhood was reported at 40.9% (Rithipukdee & Kusol, 2022). The risk of dyslexia was also 15.81% in a study with first-grade students (Lerthattasilp et al., 2022). Furthermore, in northeastern Thailand, 60.7% of students are adolescent drinkers, and 20.7% are smokers (Yangyuen et al., 2021).

Maltreatment, such as abuse, neglect, and violence, has a strong relationship with ED among children (Lund et al., 2020). Parental divorce, severe family conflicts, parent and child health problems, and chronic illness of family members were common risk factors for behavioral and emotional problems among Thai preschool children (Teekavanich et al., 2017).

EF skills could be cultivated through scaffold training (Zelazo, 2020) and cognitive training for psychological development

among preschoolers (Scionti et al., 2020). Although early childhood teachers in child care centers in Thailand are trained to develop their abilities using EF guidelines (Poowanna et al., 2022), parents' EF knowledge and practices of parents about EF are still limited. Only 38.73% of parents in northeastern Thailand have promoted EF skills in early childhood children (Arsarthong & Palapol, 2022). This research aimed to explore the experiences of Thai parents in developing their children's executive function skills in a semi-rural sociocultural context and to explore the lived experiences of parents to understand their unique knowledge of EF.

METHOD

Study design

This qualitative research employed a hermeneutic phenomenological approach (Polit & Beck, 2021) to gain a deeper understanding of the lived experiences of Thai parents in developing their children's EF. A Heideggerian interpretive phenomenological approach (Suddick et al., 2020) was used to uncover and interpret how individuals understand the common meanings of their experiences in their situational contexts. The phenomena experienced by individual parents were identified through their descriptions of their inner world. Next, the researchers reflected the lived experiences of parents through Van Manen's fundamental lifeworld existential themes (van Manen & van Manen, 2021) comprising lived body (corporeality), lived time (temporality), lived space (spatiality), and lived relation (relationality), as well as lived things (Pool, 2018).

Informants

At the beginning of the study, potential informants received information about the study's processes. The inclusion criteria included the primary caregivers of the children willing to participate and share their experiences. The exclusion criterion was individuals unwilling to participate in the research. After obtaining the agreement to participate, ensuring confidentiality, and obtaining permission to audiotape the interviews and publish the results, we began the data collection process.

Sixteen parents who are the primary caregivers of the children studying at the community childcare center (8 mothers and 8 grandmothers) participated through criteria-based purposive sampling. They resided in a semi-rural sociocultural location in Mahasarakham province, Thailand, and had adequate experience in child care. Heterogeneity was reflected in the background, age, number of children, occupation, and educational level of the participants. The number of participants was decided by the main researcher who determined the level of data saturation during data collection. Saturation was reached when no new themes emerged from the participants and data were repeated (Moser & Korstjens, 2018).

Instrument

A semi-structured interview guide was used to allow participants to freely express their experiences (Cheron et al., 2022).

Data collection

Face-to-face interviews were conducted in a comfortable and trusting room at a community childcare center in the village. The interviews were semi-structured to ensure the interviews were focused (Turner III & Hagstrom-Schmidt, 2022). Individual interviews were conducted between May and August 2023 by the first author. The parents decided on the date, place, and duration of the interviews. The interviews were recorded digitally and lasted between 39 and 68 minutes (mean 48.2 minutes). An interview schedule was developed in the Issan and Thai dialects. The following open-ended questions were asked: "What does the word 'executive functions' make you think?" "Tell me about your experiences in developing your child's executive functions" "What problems have you encountered in your lived experiences that made you feel defeated in the development of your child's executive functions? And how did you and your child manage to overcome these situations?" Additional questions were asked in response to the participants' responses and reactions during the interview, such as, "Tell me more about that, how did you feel?" "What is your perception of that?" "What was it like? And please describe some examples of the events that happened" (Creswell & Creswell, 2018).

Data analysis

In this research, the Heideggerian existential phenomenology as a philosophical framework was employed because it has contributed to nursing research. It allowed the researcher to clarify the meaning of the parents' experiences. The first and second authors were involved in the interview process. The third and fourth authors transcribed the in-depth interviews verbatim from a digital recording. Nonverbal expressions of emotion, such as silence and laughter, were included in the transcription to understand the lived experiences of the parents. All transcriptions were confirmed to be accurate in Thai. The first author read and reread all transcriptions line by line several times to gain an understanding of the overall picture. The meaning units were marked and reviewed to extract codes. Similar codes were grouped into categories. All categories were refined and discussed to reduce bias. Significant themes were interpreted to understand the lived experiences of parents of the studied phenomena. In the last phase, English translations were conducted after all quotes explaining the themes were discovered.

Trustworthiness

The trustworthiness of the data was established using Lincoln and Guba's criteria (Stahl & King, 2020). Credibility was established by checking preliminary findings and interpretations against raw data through member check. The interview transcripts accurately reflect the meaning of the participants. Before the interview started, the participants were informed about the study objectives, and the researchers obtained their informed consent. The dependability of the data was confirmed through a systematic research process that included the context, participants, data collection, and analysis stages. Confirmability was established throughout the study by keeping digital recordings of interviews and interview transcripts as audit trails. The purpose of this study was not to generalize its findings to other populations and only explore the truth in the study area. Transferability was applied in a similar setting and context by a clear method of participant recruitment in the setting and context, explaining the emergent themes with direct verbatim excerpts.

Ethical consideration

Ethical approval for the study was obtained from the research and ethics committee of Mahasarakham University with reference number 139-130/2023.

RESULT

The highest level of education of the eight grandparents who participated was grade 6 of primary school and were housewives and farmers. Meanwhile, the highest level of education for most of the mothers participating was grades 9

and 12 of secondary school. Only a mother graduated with a bachelor's degree. They were housewives, vendors, nurse aids, and babysitters. They had experience raising children in their home. They all had children in the early childhood stage. Some of the participants had children with special needs, such as Down syndrome, substance use, obesity, poor memory, and speech delay.

Table 1. Characteristics of the participants

Child's relationship	Age (years)	Highest level of education	Occupation	Children in responsibility	*Notes*
Mother	30	Grade 9	Housewife	3 years 6 months 14 years	- -
Mother	41	Grade 9	Fried banana vender	4 years 15 years	- Down syndrome
Mother	27	Grade 9	Meat ball vender	4 years	-
Grandmother	51	Grade 6	Farmer	4 years 9 months	-
Grandmother	55	Grade 6	Farmer	3 years 4 months 9 years 1 month	- - -
Grandmother	52	Grade 6	Farmer	2 years 8 months 7 years	- -
Grandmother	52	Grade 6	Farmer	2 years 6 month	-
Mother	28	Grade 9	Nurse aid	3 years 9 month	*Obesity*
Mother	26	Grade 12	Vender	3 years 5 month	-
Grandmother	49	Grade 6	Farmer	5 years 4 years	*Speech delay* *Speech delay*
Grandmother	55	Grade 6	Housewife	2 years 4 month	-
Grandmother	53	Grade 6	Farmer	4 years	-
Mother	24	Grade 9	Online vender	2 years (daughter) 6 years (niece) 11 years 13 years	*Daughter* *Niece* *Nephew* *Nephew (substance use)*
Mother	34	Grade 12	Housewife	6 years 12 years	- -
Grandmother	58	Grade 6	Housewife	2 years 6 month 16 years 11 years	- - -
Mother	40	Bachelor's degree	Babysitter	4 years 7 years 15 years	- - *Poor memory*

This study found seven themes: 1) the parents' strong resilience, self-confidence, and responsibilities; 2) challenges in handling misbehaving family members and children with poor self-control; 3) living in a natural and peaceful environment; 4) staying away from bad things; 5) practicing time management; 6) trying to use the mobile phone safely; and 7) organizing belongings and toys. The data is shown in Table 2.

Table 2. Themes of parents' lived experiences in developing executive function skills for children in the early childhood stage

Lived existential themes	Theme
Lived body	1. The parents' strong resilience, self-confidence, and responsibilities
Lived relation	2. Challenges in handling misbehaving family members and children with poor self-control
Lived space	3. Living in a natural and peaceful environment 4. Staying away from terrible things
Lived time	5. Practice time management
Lived things	6. Trying to use mobile phone safely 7. Organizing belongings and toys

Lived body

Theme 1: The parents' strong resilience, self-confidence, and responsibilities.

The participants addressed their feelings about how they take care of their bodies in the context of developing EF skills for their children. They spoke of their resilience to avoid smoking and drug use, even though some parents were tempted to use substances when they were young due to the problems of their families. They had previous experience in fostering resilience in their children. One of the parents reported:

"Both of my sisters used illegal substances, but I did not. My goal was to be a good daughter only. I felt so sorry for my parents. They were stressed and lost money to save my sisters. The addictive substances were inexpensive and easy to obtain. I will teach my daughter not to do that. I believe that they will not use any addictive substances because they have seen the results already." (P13)

Some parents also had self-confidence in the way they cared for their family and were proud of themselves, as shown in the following statement:

"*…I feel so proud of myself. I am a single mom who could take care of two boys while my first child has Down syndrome. People in the community said that I am a talented mother.*" *(P2)*

Parents also realized that they were responsible for helping their children develop EF skills. They needed to ensure their children's future success. They taught them to be kind, polite, and diligent in learning. The statements of the participants are as follows:

"It's my responsibility to raise them. I love them and will try my best to support them. I will let them try new things to learn and gradually teach them how to be a good and polite person with a nice personality and diligent in learning." (P14)

Lived relation

Theme 2: Challenges when handling misbehaving family members and children with poor self-control.

The participants expressed their feelings toward misbehaving family members in the context of developing their children's EF skills. They stated that some of their family members were not role models for children due to substance abuse and the use of mobile phones as babysitters. Participants found it challenging to deal with such family members. These experiences were reflected in the following statements:

"The father and mother are untrustworthy for child care. They smoke, drink, and do not have enough money to support their children. It is not good. They are not good role models for their children. If the children's grandparents did not support them, how would the children's well-being be?" (P15)

"*…Her father left home when she was only two years old. He was jailed for drug abuse and alcohol addiction. Now, her grandparents support her and are her father and mother figures." (P4)*

"Their mother (my daughter-in-law) has used a mobile phone as a babysitter since her child was two years old. My nephews had phone addiction, no set mealtimes, stayed up late, and fell asleep while on the phone. That is why they had delayed their speech. I try to practice talking to them and motivating them to practice everyday skills. Their skills are now quite better, but they are still delayed compared to their friends in the childcare center. (P10)

The participants also shared their experiences with children who are inattentive and lack self-control. They addressed their feelings toward these children about the development of EF skills in the following statements:

"She wanted to go to the candy store outside. I did not let her go. She screamed, cried, and threw a tantrum. She insisted that she must go (to the candy store)." (P 5)

"It is hard to control their behavior, especially when we have to get ready for school in the morning. He reluctantly took a bath, dressed up, and had breakfast. In the evening, they were unable to focus on their homework. They could not sit still. They play and jump. I told him to stop jumping and sit for 5 minutes to do his homework." (P6)

Lived space

Theme 3: Living in a natural and peaceful environment

The participants shared their feelings about the environmental context and how living in a natural and peaceful environment can help children develop their EF skills. These feelings were reflected in the following statements:

"I happily practiced (different skills) with my children in the rice fields surrounding my home. They can learn to be a farmer by helping their mom and dad. They can play football, ride bicycles, climb trees, and dig the ground. They play safely in my sight. There is no internet, Wi-Fi, or mobile phone for the children to play with." (P16)

"I teach my child the way of life in the countryside. She learns how to feed the cows and herd them into the pen. She knows that her mom will get money from cattle sales." (P13)

"I play with my girl in my back garden. We pick red sandalwood seeds in the garden for her grandma. She sells these sandalwood seeds. We would walk happily together to look at the cattle, chickens, and crows in the rice field." (P8)

Theme 4: Stay away from horrible things

The participants expressed their feelings about developing their children's EF skills and how they set boundaries to protect their children from people who smoke, drink, or use drugs. These feelings are described in the following statements:

"My neighbor's child smokes electric cigarettes. He is only a grade 5 student. The teacher called his parents to school because a video of him smoking was uploaded to social media. I told my child not to follow him or try to do bad things." (P5)

"Their uncle may use substances. I am not sure. I saw his friends smoking at his house. I told my children to stay away from their uncle. I don't want them to see bad things." (P6)

"Drugs or illegal substances in the community are very scary. I will protect my children (from them). I don't get close to people who like to party with smoking, drinking, and substance use. We just stay at home." (P 14)

Lived time

Theme 5: Practicing time management

The participants reflected on their lived experience in developing their children's EF skills, specifically time management. Children should learn to manage their time in everyday life. These experiences were explained in the following statements:

"I teach her about time. This is the time for dinner, drink milk, bathe, and brush your teeth. I teach her about time management. She can remember when it is time to go to bed; she turns off the light and sleeps on her bed." (P11)

"I teach her to be responsible and how to manage her time. When it is time to wake up, listen to the alarm clock, then wake up and go to the bathroom without crying. I teach her when it's time to have breakfast, to eat by herself, and when it's time to go to school so that she won't be late." (P8)

"He knows when to stop watching videos on his mobile phone. At 8 o'clock, he returns his mobile phone to his father and goes to bed." (P1)

Lived things

Theme 6: Trying to use mobile phones safely

The participants reflected on their feelings about their lived experiences in developing children's EF skills, specifically with respect to mobile phones. Mobile phones are things that children should try to use safely. The following statements are some of the participant's responses:

"She follows the dance moves of dancers who uploaded their clips to an application on a mobile phone. There is a channel that teaches children how to help parents. I told her that it is good for children to help their parents. I try to teach her what is good or bad when we watch videos on the mobile phone together." (P9)

"She learned how to make ice cream from watching a video on a mobile phone. She put her milk in an ice cream container and then left it to freeze in the refrigerator. She did it herself without help." (P5)

"Her parents would video phone call her every day. Her mother sings children's songs and she dances along with her mother's singing. (P11)

Theme 7: Organizing belongings and toys

The participants reflected on their feelings about developing their children's EF skills in terms of belongings and toys. These feelings are described in the following statements:

"I play with toys with her. After playing, she always followed me to put her toys in a basket. (P7)

"I told her to put her bag back on the shelf, put her clothes in a basket, and put her pencils in a box after using it. So, things would not disappear because she would know where it is." (P8)

"I told her to collect the clothes used to wash, then she would help me put the clothes on the hanger to dry." (P12)

DISCUSSION

Van Manen's fundamental existential themes from the life world: lived body, lived relation, lived time, lived space, and lived things were used to discuss the lived experiences of parents about developing their children's EF skills.

Lived body

The interviews revealed that with respect to their lived body experience, the participants were proud of themselves. They stated that although they come from broken families, have low levels of education, and are poor, they could adapt to any situation while developing their children's EF skills. Individually, they faced many problems in their families. Some single parents stated that they struggled emotionally as they would feel isolated and guilty if they could not face the stigma directly (Chung & Son, 2022). In contrast, self-confident parents could tackle situations effectively. Self-confidence was associated with self-acceptance, where the higher the level of self-acceptance, the higher the level of self-confidence (Pastimo & Muslikah, 2022).

Additionally, participants said that they felt responsible for raising their children. They teach their children with love and support because they want their children to be nice, polite, and not aggressive. Parents and child interactions play a significant role in EF development (Koşkulu-Sancar et al., 2023). Supportive parents result in fewer child behavioral problems (Choi & Becher, 2019). The response of the mother was also negatively associated with behavioral problems in the child. Therefore, strengthening responsiveness and reducing stress among mothers and fathers will improve the well-being of their children (Ward & Lee, 2020).

Lived relation

The participants also shared how it was challenging to handle family members who misbehave, have substance use problems, are negative role models, and they use mobile phones as babysitters while developing their children's EF skills. In toddlerhood, a child's EF skills can be predicted by their parents' EF skills (Ribner et al., 2022). Positive parenting predicted high EF skills in low- and high-income children (Murphy et al., 2022). Children's EF difficulties are correlated with their parents' problematic smartphone use (Yang et al., 2023). In addition, parental substance use, including alcohol and illicit drugs, can influence their children's behavior, academic performance, and goal attainment (Lowthian, 2022).

In this study, the participants also mentioned children who had parents-grandparents co-parenting them. This co-parenting approach reduced conflicts. The more supportive the parents-grandparents co-parenting is, the fewer behavioral problems are seen in the children. Unsupportive co-parenting was more associated with children's problem behaviors (Xu et al., 2023). Furthermore, positive discipline strategies in parenting may help strengthen self-control and self-regulation in children who lack self-control, particularly when they exhibit tantrum behaviors (Sangsuk & Thipchart, 2023).

Lived space

The participants addressed their feelings about the environmental context and how living in a natural and peaceful environment helped children develop their EF skills. The children played and learned in rice fields, gardens, and rural areas. The participants stated that they restricted their children's play space due to safety concerns and the responsibilities that the children were expected to fulfill. Children were usually allowed to play outside within seeing and hearing distance of their parents. A Belgian study finding further supports the parents' perspective. The correlation between early life exposure to residential green space and improved cognitive function in children aged 4-6 years emphasized the importance of the environment in shaping cognitive development. Childhood green space reduces hyperactivity and improves attention and visual memory (Dockx et al., 2022). Therefore, providing opportunities for young children to connect with nature, particularly in educational settings, can benefit the children's cognitive functioning (Vella-Brodrick & Gilowska, 2022).

Additionally, the participants stated that keeping their children away from people who smoke, drink, or use drugs and dangerous situations provided a sense of security. Meanwhile, home visit programs may benefit families affected by substance use disorders. Relationship-based parenting intervention can also help parents with substance use disorders overcome emotional barriers (Lowell et al., 2023).

Lived time

Next, the participants reflected on their feelings about time when developing their children's EF skills. They stated that children should be able to manage their time in daily life.

Working parents should plan their time effectively to balance their work and caring for their young children. During the early stages of child development, timely scheduling practices are more advantageous. Good time management and self-control skills support the children's academic performance. Time management skills can be honed through practice (Trentepohl et al., 2022). It also requires people to organize and prioritize their time based on what is most important to them (De Jesus & Garcia, 2023).

Lived things

The participants stated that children should use their mobile phones safely by monitoring high-quality content when practicing EF skills. In Thailand, less positive parenting and screen use from an earlier age (particularly at 18 months) has been linked to behavioral problems in preschool and school-aged children (Srisinghasongkram et al., 2021). Screen time exceeding 2 hours a day and difficult temperament were the two factors associated with suspected delays in language development in Thai children between the ages of 24 and 60 months (Rithipukdee & Kusol, 2022). Furthermore, lower quality media are linked to global executive dysfunction, including inhibition, emotional control, planning, and organizing. Impaired working memory was also associated with extended viewing of low-quality media content (Wannapaschaiyong et al., 2023).

Therefore, screen time must not replace other activities for a child's health and development, such as peer and family interactions, outdoor physical activities, schoolwork, and sleep. Families should provide a safe, fun, caring, nurturing, and safe environment for their children. The content being watched should be monitored to be age-appropriate, constructive, and instructive (Gupta et al., 2022).

Finally, participants focused on organizing belongings and toys when developing their children's EF skills. Children's actions, such as putting toys or belongings back in their place, keeping them clean, and being tidy at home and school, are linked to a sense of responsibility and awareness of moral rules. Their moral values also result from their relationship with older people and family members (Yalçin, 2021).

The earliest expression of EF skills for children's self-regulation is through their actions and gestures with and through their belongings. At the end of the first year, the children began to conventionally use objects and instruments according to their social function. They learned about the material world when faced with challenges in using that material in everyday life. Children not only perform actions, but also understand their actions and their goals (Rodríguez, 2022). Furthermore, the self-directed interaction that young children have with objects during play plays a crucial role in early-age development (Riede et al., 2023).

The limitations of this research findings may be subject to temporal dynamics. It may not reflect the experiences of parents from urban or more remote rural areas in the country, as their views may be influenced by different socioeconomic conditions, technological advancement, or educational reforms.

CONCLUSION AND RECOMMENDATION

This research may be beneficial to nurses in nursing practice. Nurses play a vital role in strengthening the EF of parents by building their resilience, self-confidence, and sense of responsibility. Providing this support would help families achieve their goals and promote the development of children's EF skills. When providing parenting support, nurses should provide guidance on handling conflicts, properly managing time, and intervening in inappropriate use of the mobile phone. Nurses should also strengthen children's EF skills by increasing their self-control, self-regulation, self-discipline, sense of responsibility, awareness of moral rules, and time management. In addition, children's development of EF should be supported by positive environments, such as safe areas with access to greenery and nature.

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