RELATIONAL PATHWAYS TO RESILIENCE IN THAI PHYSICIAN TRAINEES: POSITIVE EARLY PARENTAL AND POSITIVE SUPERVISORY RELATIONSHIPS

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ABSTRACT

Resilience is a crucial psychological capacity for maintaining adaptive functioning in demanding and stressful circumstances. Physician trainees are exposed to substantial occupational demands while developing greater professional responsibility within hierarchical relationships with senior physicians. Previous research has established associations between interpersonal relationships and resilience; however, limited research has examined early parental relationships and current supervisory relationships together, particularly among physician trainees. This study aimed to examine the associations between positive early relationships with fathers and mothers, positive supervisory relationships, and resilience among Thai physician trainees. A quantitative cross-sectional design was therefore employed. Data were collected from 61 Thai physician trainees including externs, interns, and resident physicians—using measures of resilience, positive early parental relationships and positive supervisory relationships. Pearson's correlation analyses and multiple regression analyses were then conducted to examine the associations and predictive relationships among the variables. The findings indicated that positive supervisory relationship was positively associated with resilience whereas positive early relationships with both father and mother were not significantly associated with resilience. Positive early relationship with mother was also positively associated with positive supervisory relationship. In the regression analysis the overall model significantly predicted resilience and accounted for 22% of its variance. However, only positive supervisory relationship significantly predicted resilience. These findings suggest that current supervisory relationships have a more direct association with the current level of resilience among Thai physician trainees than remembered early parental relationships.

Keywords: Resilience, Early Parental Relationships, Supervisory Relationships, Physician Trainees

CITATION INFORMATION: Thongsin, C., & Pisitsungkagarn, K. (2026). Relational Pathways to Resilience in Thai Physician Trainees: Positive Early Parental and Positive Supervisory Relationships. *Procedia of Multidisciplinary Research, 4*(11), 13.

INTRODUCTION

Predictors examination and methods for cultivating resilience have been widely studied. Proposed contributing factors to resilience in individuals include personality traits, genetics, cognitive and behavioural flexibility, early attachment with caregivers, social and community support systems, nutrition, exercise, and alignment of circadian rhythms (Chbeir & Carrión, 2023). Among these, social and relational factors have emerged as especially significant (Panzeri et al., 2021; Ungar, 2013). Hartling (2008) proposed that resilience can be developed through engaging in relationships that enhance individuals' intelligence, sense of self-worth, sense of competence, sense of empowerment, and most importantly, sense of connection—in essence, resilience can be fostered through cultivating high-quality relationships. Additionally, following empirical studies had consistently demonstrated a strong positive correlation between the quality of interpersonal relationships (with peers, supervisors, and teachers, for instance) and resilience levels in various samples such as high-school students, undergraduates, nursing students, office workers, and construction workers. (Bernuzzi et al., 2023; Lee et al., 2021; Ríos Rísquez et al., 2012; Song et al., 2021). The findings aligned with Hartling's (2008) assertion that the presence of meaningful relationships serves as a significant protective factor in the development and maintenance of resilience.

Besides the current relationship with other people, findings from several studies have generally suggested a positive association between early parental relationships and subsequent resilient outcomes (Gribble et al., 1993; Kennison & Spooner, 2023; Seyrek & Ersanlı, 2021), suggesting the importance and long-lasting impact of high quality interpersonal relationship towards resilience. However, the conclusions remain inconclusive due to inconsistencies in results. One study indicated that positive early relationships with fathers are solely associated with resilience in later life (Ozbay & Aydogan, 2020). Conversely, another study suggested that only maternal relationships during childhood significantly predicted resilience (Tamura, 2019). Furthermore, a third study revealed a substantial correlation between childhood relationships with both parents and resilience (Seyrek & Ersanlı, 2021). Research indicates a significant correlation between positive parental relationships and resilience. However, the relative impact of maternal and paternal relationships remains uncertain and may fluctuate based on cultural norms and gender roles, which exhibit diverse variations across different societies (Van De Vijver, 2007).

Previous research has established an association between interpersonal relationships and resilience. However, most studies have concentrated on either current relationships with peers or romantic partners. Far fewer studies have examined how positive early parental relationships, as formative early experiences, relate to resilience in adulthood. The comparison of the influences of past and current relationships in resilience, likewise, remained lacking, particularly in terms of past parental relationships and later authority relationships. Finally, most existing research has been conducted with student samples, leaving high-stress professional populations, particularly physician trainees, underexplored.

Thai physician trainees—including extern, intern, and resident physicians—represent a professional group uniquely vulnerable to stress, burnout, and resignation due to excessive workloads, long hours, and the hierarchical structure of medical training. While resilience has been identified as a protective factor that mitigates the negative effects of stress and promotes sustained functioning, evidence shows that one specific group of physician trainees (resident physicians) reported lower levels of resilience compared to the general population (Bird & Pincavage, 2016).

In light of the importance of resilience in maintaining adaptive functioning under stressful and demanding circumstances, this study therefore investigated the associations between positive early parental relationships, positive supervisory relationships, and resilience among Thai physician trainees. The quality of supervisory relationships may therefore represent an

important current relational resource for supporting resilience, while early parental relationships may provide a developmental relational foundation that continues to influence individuals' expectations and experiences in later relationships.
Therefore, this research aims to investigate the associations between positive early relationships with fathers and mothers, positive supervisory relationships, and resilience among Thai physician trainees.

LITERATURE REVIEWS

Early Parental Relationship and Resilience

Findings from previous studies demonstrated that early parental relationships serve as a significant predictor of resilience in later stages of life. Positive parental bonds during early years have been found to foster adaptive coping mechanisms and emotional regulation, both of which contribute to greater resilience in adolescence and young adulthood (Tamura, 2019). Tamura reviewed numerous empirical works demonstrating that parental warmth, responsiveness, and positive involvement—such as consistent emotional availability, praise, and supportive communication—promote the development of resilience across developmental stages. These relational qualities encourage the internalisation of a secure attachment pattern, which, in turn, facilitates the ability to manage stress and recover effectively from adversity. Similar trends were observed in later studies. For instance, Kennison and Spooner (2023) found a significant positive correlation between positive early relationships with mothers and the level of resilience exhibited by young adults. Conversely, they identified a substantial negative correlation between resilience and negative early relationships with fathers. These findings suggest that early parental relationships, particularly those characterised by emotional support and trust, may play a protective role in fostering psychological strength and adaptability in later life.
Although, in the broader sense, the quality of childhood relationships with parents is generally associated with resilience, the specific contributions of maternal and paternal relationships remain inconsistent across studies. Beyond Kennison and Spooner's (2023) findings, other research has reported differing outcomes depending on cultural and familial contexts. For example, Seyrek and Ersanlı (2021) found a positive correlation between both early maternal and paternal relationships and resilience, suggesting that parental influence operates jointly rather than independently in shaping resilience. On the other hand, Ozbay and Aydogan (2020), examining a Turkish sample where fathers traditionally hold the dominant role in family decision-making, found that paternal—but not maternal—relationships were associated with resilience. In contrast, Tamura (2019) found that, in a Japanese cultural context where fathers are typically less involved in childrearing, only early relationships with mother were associated with resilience. Given the similarity in methodologies of the mentioned studies, which were correlational and relationship with heterosexual parents, this suggested the significance of cultural influences in shaping gender parenting roles among family with heterosexual parents. These discrepancies across studies underscore the complexity of the parental relationship-resilience association. Several factors may account for the divergent findings. Firstly, cultural norms and parental role expectations likely shape how individuals perceive and internalise parental relationships. In societies where fathers occupy an authoritative or decision-making role, their support or absence thereof may exert a more pronounced effect on the development of resilience, whereas in cultures where maternal caregiving predominates, emotional closeness with mothers may play a stronger role. Secondly, the inconsistencies may be attributable to methodological and conceptual variations across studies, including differences in the measurement of early parental relationships and resilience. For example, while some studies assess general perceptions of parental warmth and care, others differentiate between positive

and negative relational dimensions, leading to varied interpretations of what constitutes a "high-quality" relationship.

All in all, these studies highlight that while the general association between positive parental relationships and resilience is well-supported; the relative influence of maternal versus paternal relationships remains uncertain and potentially culture specific. This lack of consensus points to an important research gap: understanding how distinct parental roles and cultural contexts interact in shaping resilience across development.

The current investigations that employ comprehensive measurement of both parental relationships could elucidate these mechanisms more clearly. Additionally, given the lack of research exploring the association between early parental relationships and resilience in the Thai context, this study would make a significant contribution to the comprehension of this relationship within Thai culture. Addressing this gap would not only deepen the theoretical understanding of resilience as a relational construct but also inform interventions that strengthen resilience by fostering supportive familial and relational environments.

The influence of early parental relationships does not cease in childhood but continues to shape how individuals engage in later interpersonal contexts. Internal working models formed through early attachment experiences guide how people approach authority figures, respond to support, and manage dependency or autonomy in adulthood. In professional training environments such as medical residency, these dynamics often manifest in supervisory relationships. Therefore, examining the link between early parental relationships and supervisory relationships offers insight into how early attachment patterns influence current relational functioning within hierarchical professional settings. Accordingly, the following three hypotheses derived for this study:

H1: Positive early relationship with father will be positively associated with resilience in physician trainees.

H2: Positive early relationship with mother will be positively associated with resilience in physician trainees.

Supervisory Relationship Towards Resilience

The quality of supervisory relationships has emerged as a crucial relational factor influencing resilience in healthcare and other high-stress professions. Effective supervision provides a context in which professionals can process emotional experiences, reflect on challenges, and develop adaptive coping strategies essential for sustaining resilience (Kilminster & Jolly, 2000). Hiebler-Ragger et al. (2021) examined the relationship between resilience, personality functioning, and psychological well-being among physicians working in Austrian hospitals. Participants completed self-report questionnaires assessing resilience, personality organization, and indicators of mental health. The results revealed that higher resilience was significantly associated with healthier personality functioning, greater subjective well-being, and lower levels of anxiety and depression. Moreover, resilience was found to mediate the relationship between personality organization and psychological distress, indicating its protective role in sustaining mental stability under demanding professional conditions. These findings underscored the function of resilience as a crucial factor in maintaining psychological adaptation and well-being in high-stress environments.

Bernuzzi et al. (2023) further demonstrated that supervisees who perceived their supervisory relationships as supportive, empathic, and collaborative exhibited higher levels of psychological resilience. Their findings suggest that supervision not only enhances technical competence but also strengthens emotional endurance, self-efficacy, and the ability to recover from occupational strain.

Similarly, the qualitative study by Jarden et al. (2025) explored how clinical supervision can enhance resilience and well-being among healthcare professionals. The study adopted an interpretive descriptive methodology, using semi-structured interviews with clinical

supervisors and supervisees across various healthcare settings. The findings revealed that supervision was found to strengthen resilience by promoting reflective practice, providing emotional containment, fostering self-awareness, and facilitating meaning-making in the face of workplace adversity.

Additionally, based on Jarden et al.'s report (2025), participants highlighted that these supervisory processes not only improve coping and adaptability but also reinforce professional identity and long-term engagement in demanding clinical environments. These models operate by facilitating reflection, promoting emotional balance, and strengthening internal coping resources, thereby embedding resilience within the supervisory process itself.

Beyond general supervisory contexts, supervisory relationships are likely to carry distinct weight across the full continuum of Thai physician training. During sixth-year clerkship, externs rely heavily on attending physicians and senior residents to model clinical reasoning and professional identity formation, and resilience has been shown to buffer the adverse impact of physical workload on professional quality of life in clerkship-year medical students (Lin et al., 2019). During the compulsory internship, interns often assume frontline responsibilities with variable supervisory availability, a structural feature that coincides with elevated depersonalisation, reduced personal accomplishment, and resignation intention in the Thai context (Anuduang et al., 2025; Surawattanasakul et al., 2024). During residency, as discussed in the preceding section, empathic and collaborative supervision has been associated with adaptive functioning and reduced burnout (Nituica et al., 2021). Taken together, the quality of supervisory relationships appears to function as a developmentally continuous relational resource across the extern-intern-resident trajectory, justifying its inclusion—alongside early parental relationships—as a core variable in the present study.

Collectively, these studies underscore the pivotal role of supervision in cultivating resilience by providing a secure relational foundation from which individuals can confront and adapt to professional challenges. High-quality supervisory relationships foster resilience through trust, reflective dialogue, and emotional support—factors that enable professionals to sustain adaptive functioning and psychological stability despite ongoing exposure to stress. This therefore leads to the following hypotheses:

H3: Positive supervisory relationship will be positively associated with resilience in physician trainees.

Early Parental and Supervisory Relationships as Joint Predictors of Resilience

Taken together, the literature suggests that resilience may be shaped by relational experiences from both the past and the present. Early parental relationships are thought to establish the internal working models and attachment patterns through which individuals later manage stress and recover from adversity (Kennison & Spooner, 2023; Tamura, 2019), while supervisory relationships provide a current, context-specific relational environment in which reflection, emotional containment, and adaptive coping are actively practised (Bernuzzi et al., 2023; Jarden et al., 2025; Kilminster & Jolly, 2000). Because these two sources of relational influence operate at different points in a trainee's life, it is plausible that they contribute to resilience concurrently rather than in isolation, consistent with evidence that maternal and paternal relationships may jointly shape resilience (Seyrek & Ersanlı, 2021). However, existing studies have typically examined early parental relationships and supervisory relationships separately, leaving unclear how they combine, and which carries more weight, when considered together. Examining paternal, maternal, and supervisory relationships within a single model therefore allows their collective explanatory value, and their relative unique contributions, to be evaluated in physician trainees. Accordingly, the following hypothesis was proposed:

H4: Positive early relationship with father, positive early relationship with mother, and positive supervisory relationship will predict resilience in physician trainees.

From the literature review, the conceptual framework can be drawn as shown in Figure 1.

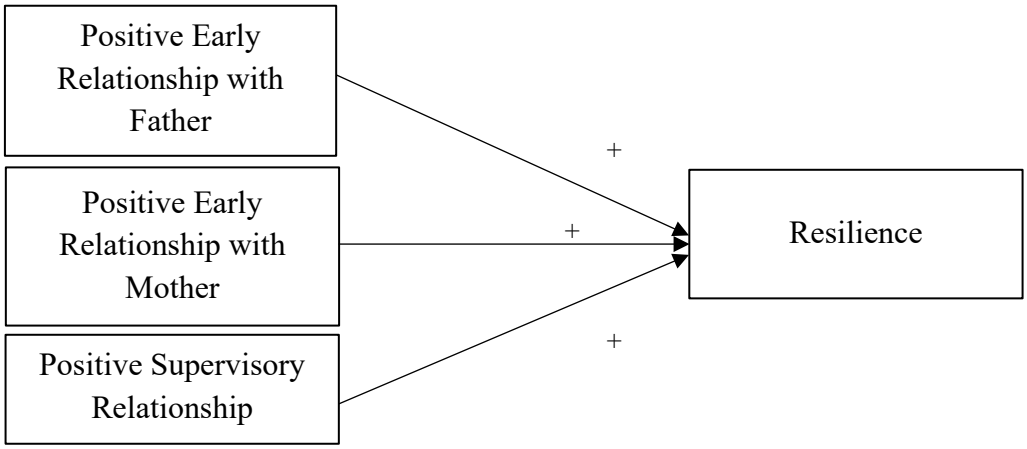

Figure 1 Conceptual Framework

RESEARCH METHODOLOGY

The current study was designed to be quantitative and cross-sectional. Data was collected via a survey to obtain data for subsequent correlational and regression analyses. The study aimed to investigate the relationship between positive early parental relationship, positive supervisory relationship, and resilience. Regression analysis was employed to determine the extent to which positive early parental relationships and positive supervisory relationship could predict resilience. The cross-sectional survey was the data collection method employed in the study.

The participants in this study were 61 Thai physician trainees—extern physicians (sixth-year medical students completing clinical clerkship), intern physicians (first-year postgraduate doctors completing the compulsory rotational internship), and resident physicians (postgraduate doctors undergoing specialty training)—recruited from affiliated teaching hospitals and participating healthcare institutions across Thailand.

A power analysis conducted using G*Power for a multiple regression model with three predictors—positive early relationship with father, positive early relationship with mother, positive supervisory relationship—indicates a minimum sample size of approximately 36 participants to detect a large effect size ($f^2 = .35$) at a significance level of $\alpha = .05$ and a power of .80. The selection of a large effect size was informed by Kennison and Spooner (2023), who reported that the combination of childhood parent-child relationship quality and adult attachment dimensions accounted for 35% of the variance in resilience ($R^2 = .35$) among young adults, which corresponds to Cohen's f^2 of approximately .54.

There are 3 inclusion criteria for the participants in this study which are 1. Participants are Thai physician trainees who are currently enrolled in one of the following programmes in Thailand: sixth-year medical clerkship (extern), compulsory one-year internship (intern), or medical-specialty residency training; 2. Participants are physician trainees who have been working with their current primary supervisor for at least 3 months; 3. Participants are physician trainees who were raised by both biological parents, both adoptive parents, or one biological and one adoptive parent. The parents who provided upbringing may currently be alive or deceased.

After excluding 15 participants (12 who did not meet the inclusion criteria and 3 who withdrawn before the study completion), 46 participants were included in the final analysis.

Measures

Back-translation Process. As the study's measurements are in English, a back-translation process was required to make them suitable for the sample. The measurement which were through the back-translation process were the 10-Item Connor-Davidson Resilience Scale (10-Item CD-RISC; Campbell‐Sills & Stein, 2007), Parents As Social Context Questionnaire (PASCQ; Skinner et al., 2005), and Perceived Quality of the Employee Coaching Relationship (PQECR; (Gregory & Levy, 2010). The process was undertaken using Brislin's (1970)

approach. Firstly, a linguistic professional did the initial translation of the measurements. After that, a medical trainee proficient in English translated the English version of the questionnaire into Thai. Then, a second trainee who is also proficient in English and had not seen the original English version translated the Thai-translated version back into English. The first and second translations were completed by medical trainees to ensure that the translators would understand and select appropriate wordings and terms for the measurement using for assessing the target sample. Each version of the measurement were then compared item-by-item to identify discrepancies in meaning tone or emphasis.

Resilience. To measure participants' resilience, the 10-Item Connor-Davidson Resilience Scale (10-Item CD-RISC; Campbell‐Sills & Stein, 2007) was employed. The instrument consists of 10 items designed to measure individuals' ability to maintain good functioning after stress exposure. Each item is rated on a five-point Likert scale, ranging from 0 (not true at all) to 4 (true nearly all of the time). The score can range between 0 and 40, with higher scores indicating greater resilience. The scale demonstrated high internal consistency, with Cronbach's $\alpha = .94$. Corrected item-total correlations ranged from 0.67 to 0.86, with all items exceeding the recommended threshold of .30, indicating adequate consistency between individual items and the overall scale. A formal request for permission to utilise the instrument was formally submitted to and approved by the original authors.

Positive Early Parental Relationships. In the current study, Parents As Social Context Questionnaire (PASCQ; Skinner et al., 2005) was the tool used for assessing the positive early parental relationship. The scale evaluates individuals' retrospective perceptions of their parents' caregiving behaviours during childhood, focusing on the degree of perceived support, warmth, structure, and autonomy facilitation.

Each item is rated on a 4-point Likert scale, allowing participants to indicate the extent to which each statement reflects their childhood experience with their parents. The measurement comprises two distinct parts, each reflecting the positive early relationship with either the father or the mother. Each part comprises questions assessing warmth, structure, and autonomy support. There are four questions for each dimension, resulting in a total of 12 questions that assess the relationship with one parent. Therefore, there are 24 questions in total, leading to a total score when summed together. Higher scores indicate a higher positive early parental relationship. the measurement demonstrated strong psychometric properties with Cronbach's α values of 0.94—with the corrected item-total correlations ranged from 0.61 to 0.81—for the father's section and 0.92—with the corrected item-total correlations ranged from 0.59 to 0.88—for the mother's section. A formal request for permission to utilise the instrument was formally submitted to and approved by the original authors.

Positive Supervisory Relationship. The positive supervisory relationship was measured by the Perceived Quality of the Employee Coaching Relationship (PQECR; (Gregory & Levy, 2010). The instrument consists of 12 items representing four dimensions: Genuineness of the Relationship (mutual respect, care, and commitment), Effective Communication (listening and availability), Comfort with the Relationship (ease in discussing concerns and being open), and Facilitating Development (support for growth and potential). Although the measurement was designed for assessing the supervisor-supervisee coaching relationship, the domains included in the measurement intersect with components of a supervisory relationship in a clinical setting, including professional competence and accountability assurance, psychological safety, constructive feedback, and emotional support provision (Sheng et al., 2020).

Additionally, to improve its contextual appropriateness, the wording of the items was adapted prior to data collection to reflect the supervisory relationships between resident physicians and their supervisors. The adapted items were subsequently reviewed by medical professionals, and content validity was assessed using the Index of Item-Objective Congruence (IOC). The IOC

scores ranged from 0.60 to 1.00. These results provided an initial assessment of the relevance of the adapted items to the intended measurement objectives.

When scores from each domain are summed together, a total score is obtained. Each item is rated on a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). After back-translated, the instrument shows high internal consistency, with Cronbach's $\alpha = .88$ for the overall scale. Corrected item-total correlations ranged from 0.50 to 0.87, with all items exceeding the recommended threshold of .30, indicating adequate consistency between individual items and the overall scale. A formal request for permission to utilise the instrument was formally submitted to and approved by the original authors.

Ethical Considerations

Data collection commenced upon receipt of approval from the Institutional Review Board. Prior to participation, an informed consent stating the purpose of the study, anonymity, confidentiality, and participants' rights to withdraw from the study at any time was provided to every participant. Once the process was finished, a debrief statement was then provided.

Data Collection

Data was collected through an online survey administered to Thai physician trainees—extern, intern, and resident physicians—currently enrolled in clinical clerkship, compulsory internship, or specialty residency programmes across hospitals in Thailand. The survey was created using a secure platform, which is Qualtrics. The questionnaire was distributed via a poster which includes the study's title, target sample, inclusion and exclusion criteria. A QR code was also be included directing participants to the Qualtrics link. The distribution method was snowballing as the poster will be shared on an online platform such as Facebook or Instagram. Those interested in the study were then be requested to forward it to potential respondents. Data were collected through an online survey administered via Qualtrics. The questionnaire was distributed through study posters containing the study information, eligibility criteria, and a QR code linking to the survey, with snowball sampling used to reach additional participants. Participants reviewed the study information and confidentiality assurances before providing electronic informed consent and completing the questionnaire.

Data Analysis

Descriptive statistics. Descriptive statistics was employed to clarify the distribution of sample data, including the mean and standard deviations of the variables of interest.

Inferential statistics. Inferential statistics was then implemented to further investigate research questions. Pearson's correlations were conducted to examine the bivariate relationships between resilience, positive early parental relationships, and positive supervisory relationships—the associations that resilience had with positive early parental relationships and positive supervisory relationships were demonstrated through this process. Subsequently, hierarchical multiple regression was applied to assess whether positive early relationships with father, positive early relationship with mother, and positive supervisory relationships predicted resilience.

RESEARCH RESULTS

Respondents' Profiles

There was a total participant of 46 individuals, male = 25 (54.3%) and female = 21 (45.7%). The mean age of the participants was 25.5 years old ($SD = 3.42$). Participants' academic status could be classified as Extern = 29 (63%), Intern = 6 (13%), and Resident = 11 (24%). On the aspect of supervisor's gender, 38 participants (82.6%) had male supervisor, while 8 participants (17.4%) had female supervisor. Majority of the participants reported to be not in a relationship ($n = 21$, 54.3%), while 19 of them (41.3%) reported to be in a relationship and 2 of them (4.4%) have married (See Table 1).

Table 1 Demographic Characteristics

Variable	Characteristics	Frequency (*n*)	Percentage
Academic Status	Extern	29	63%
	Intern	6	13%
	Resident	11	24%
	Total	46	100%
Gender	Male	25	54.3%
	Female	21	45.7%
	Total	46	100%
Age	20-29	34	74%
	30-39	12	26%
(*M* = 25.5, *SD* = 3.42)	Total	46	100%
Supervisors' Gender	Male	38	82.6%
	Female	8	17.4%
	Total	46	100%
Relationship Status	Single	25	54.3%
	In-relationship	19	41.3%
	Married	2	4.4%
	Total	46	100%

Descriptive Statistics

The collected data was calculated for descriptive data shown in the Table 2. The average scores for resilience, positive early relationship with father, positive early relationship with mother, and positive supervisory relationship were 28.09 (*SD* = 7.81), 38.96 (*SD* = 8.58), 44.87 (*SD* = 5.09), and 44.24 (*SD* = 9.77), respectively. According to the rating description of each variable, these values demonstrated that participants in the current study had a high level of resilience (*M* = 28.09), positive early relationship with father (*M* = 38.96), and positive early relationship with mother (*M* = 38.96). On the other hand, descriptive statistics suggested that, on average, participants had a moderate level of positive supervisory relationship (*M* = 44.24). Skewness values for resilience and positive supervisory relationship fell within the ±1 range, indicating an approximately symmetric distribution. Positive early relationship with the father showed moderate negative skew, while positive early relationship with the mother showed severe negative skew — consistent with a ceiling effect, given how strongly its distribution clustered toward high scores. Kurtosis values for resilience, positive early relationship with the father, and positive supervisory relationship fell within the acceptable range for normality (mesokurtic), whereas positive early relationship with the mother showed significant positive excess kurtosis (leptokurtic), reflecting a sharply peaked distribution with heavy tails relative to a normal curve.

Thus, the Positive Early Relationship with Mother variable exhibited substantial negative skewness (−2.40) and excess kurtosis (6.85), suggesting a pronounced ceiling effect. Consequently, a reflected logarithmic transformation as shown in Equation 1 (Tabachnick & Fidell, 2019)—using the formula $\ln(49 - X)$ where X represents the original maternal relationship score—was applied. The constant 49 was determined by adding one to the maximum observed score of 48, ensuring that all reflected values were positive before applying the natural logarithm. This transformation was undertaken to reduce distributional asymmetry prior to the regression analysis. The transformed maternal relationship variable was subsequently included in the correlation and multiple regression analyses alongside the untransformed resilience, paternal relationship, and perceived supervisor relationship quality variables. The remaining predictors were retained in their original forms, as comparable distributional concerns did not warrant transformation.

Table 2 Descriptive Statistics

Variables	*M*	*SD*	*Min*	*Max*	Range	Possible Range	Skewness	Kurtosis
Resilience	28.09[H]	7.81	11	40	29	0-40	-0.31	-0.86
Positive Early Relationship with Father	38.96[H]	8.58	12	48	36	12-48	-1.16	1
Positive Early Relationship with Mother	44.87[H]	5.09	23	48	25	12-48	-2.40	6.85
Positive Early Relationship with Mother (Transformed)	0.88	0.99	0	3.26	3.26	0-3.89	0.74	-0.72
Positive Supervisory Relationship	44.24[M]	9.77	25	60	35	12-60	-0.19	-0.65

Note: H indicated high level of the variable; M indicated moderate level of the variable

Equation 1 Logarithmic Transformation Equation

$X_{transformed} = \ln(X_{reflected})$

$X_{reflected} = (X_{max} + 1) - X$

Note: X_{max} = maximum observed score

Correlation Analysis

The information obtained was then further analysed to investigate relevant associations using Pearson's correlation coefficient analyses. The relationships that resilience had with each relationship as well as the intercorrelations among study variables were shown in Table 3.

Only Positive Supervisory Relationship was found to be significantly positively correlated to Resilience (r = 0.41, p < .01). Consequently, the first and second hypotheses were not supported. Only the third hypothesis of the study was.

Table 3 Correlation Analysis

Variables	Resilience	Father	Mother	Supervisor
Resilience	(.94)			
Positive Early Relationship with Father	.16	(.94)		
Positive Early Relationship with Mother	.13	.15	(.92)	
Supervisor	.41**	.01	.23	(.95)

Note: ** p < .01 (two-tailed). Values in parentheses are Cronbach's alpha. Maternal relationship scores were transformed using Reflected Logarithmic Transformation.

Multiple Regression Analysis

To answer the fourth research question, a multiple regression analysis was conducted to investigate whether positive early father relationship, positive early mother relationship, and positive supervisory relationship predicted resilience among physician trainees. Prior to conducting the analysis, the basic assumptions for multiple regression were examined. Multicollinearity was assessed using tolerance and variance inflation factor (VIF) values. The results indicated that multicollinearity was not a concern, with tolerance values ranging from 0.924 to 0.976 and VIF values ranging from 1.025 to 1.083. These values were within the recommended criteria of tolerance values greater than .10 and VIF values less than 10 (Osborne & Waters, 2002)

A multiple regression analysis was subsequently conducted. The overall regression model was statistically significant F (3, 42) = 3.36, p = .027, and the predictor variables collectively accounted for 19.4% of the variance in resilience (R^2 = .194, adjusted R^2 = .136). Examination of the individual predictors indicated that a positive supervisory relationship significantly positively predicted resilience (ß = .407, p = .007). However, a positive early father relationship was not a significant predictor of resilience (ß = .153, p = .280) and a positive early mother relationship was not a significant predictor of resilience (ß = −.015, p = .915). These results are presented in Table 4.

Table 4 Multiple Regression Analysis

Predictor Variables	**B**	**S.E.**	**ß**	**95% CI**		**Collinearity Statistics**	
				Lower	Upper	Tolerance	VIF
Constant	8.390	7.589					
Positive Early Relationship with Father	0.139	0.128	0.153	-0.118	0.397	0.976	1.025
Positive Early Relationship with Mother	-0.122	1.140	-0.015	-2.422	2.178	0.924	1.083
Positive Supervisory Relationship	0.325	0.114	0.407**	0.095	0.555	0.945	1.058

Note: Dependent variable = resilience. B = unstandardized regression coefficient; S.E. = standard error; β = standardized regression coefficient; CI = confidence interval; VIF = variance inflation factor. **p < .01. Maternal relationship scores were transformed using ln(49 − X), where X represents the original maternal relationship score.

DISCUSSION AND CONCLUSION

The current study examined associations between positive early parental relationships, positive supervisory relationships, and resilience among Thai physician trainees. The overall regression model was statistically significant, with the three relational variables jointly accounting for 19.4% of the variance in resilience. However, only positive supervisory relationship significantly predicted resilience, while neither early paternal nor maternal relationships did. Importantly, these findings should be interpreted with consideration of the relatively small sample size and limited statistical power, particularly in detecting small-to-moderate associations between early relational experiences and resilience.

The null finding for paternal relationship diverges from Ozbay and Aydogan (2020), who found paternal relationships predicted resilience in a Turkish sample, and from Seyrek and Ersanlı (2021), who found both parental relationships significant; the discrepancy may reflect cultural variation in how paternal and maternal roles shape resilience (Van De Vijver, 2007). The maternal finding is similarly at odds with Kennison and Spooner (2023) and Tamura (2019), who reported significant maternal associations with resilience in young-adult and Japanese samples respectively. This may partly reflect sample differences, since Thai physician trainees face concurrent occupational and hierarchical pressures largely absent from prior young-adult samples. It may also reflect restricted range: participants reported uniformly high maternal-relationship scores, leaving limited variability to detect an association with resilience. Neither null result should be read as evidence that parental relationships are psychologically unimportant — only that, within this sample, with limited variations in remembered parental quality might have contributed to the current outcomes. Further investigations should be conducted with the inclusion of increased variations in parental relationships.

By contrast, the significant association between supervisory relationship and resilience is consistent with Bernuzzi et al. (2023), who linked supportive, empathic supervision to higher

resilience, and Jarden et al. (2025), who proposed that supervision fosters resilience through reflective practice, emotional containment, and meaning-making. The present study extends these findings to Thai physician trainees navigating a particularly hierarchical and demanding training environment, where the supervisor functions as an especially salient relational figure. Critically, this association held even after accounting for both parental relationships, indicating that supervisory quality was not simply standing in for an unmeasured developmental factor but carried an independent, unique contribution to resilience.

The overall pattern of findings further highlights the importance of distinguishing statistical significance from the relative importance of relational experiences. Although the regression model was statistically significant, this does not imply that early parental relationships lack relevance to resilience. Rather, the present study identified a statistically significant association with supervisory relationship quality, while the associations involving remembered parental relationships remained inconclusive. The absence of statistical significance may reflect the limited sample size, restricted variability in parental relationship scores, or differences in how early and current relational experiences are associated with resilience. Accordingly, the findings should be understood as preliminary evidence of the potential relevance of current supervisory relationships, rather than evidence that these relationships outweigh the influence of early parental experiences.

Taken together, the findings highlight the potential importance of supportive supervisory relationships in the resilience of Thai physician trainees while underscoring the need for further research into the contribution of early parental relationships. Rather than establishing the superiority of current supervisory relationships over early developmental experiences, the present study offers an initial foundation for examining how past and present relational experiences may jointly relate to resilience. Future studies involving larger samples, greater variability in remembered parental relationships, and longitudinal designs may provide a clearer understanding of these associations and the potential pathways connecting early relational experiences, current supervisory relationships, and resilience.

Limitations

Several limitations should be considered when interpreting the findings. First, the sample size was relatively modest, with 46 participants included in the final analysis. Although this exceeded the minimum of 36 participants estimated during study planning, that estimate was based on detecting a large effect ($f^2 = .35$). The study therefore had limited power to detect small-to-moderate effects, such as those that may characterise the associations between early parental relationships and resilience. A larger sample would provide greater statistical power, more stable estimates, and greater confidence in interpreting the non-significant paternal and maternal findings. Therefore, the non-significant findings for positive early relationships should be interpreted with caution, particularly because small effects may not have been detected with the current sample size.

Second, the measurement of perceived supervisor relationship quality presents a potential limitation. The Perceived Quality of the Employee Coaching Relationship (PQECR) scale was originally developed to assess employee-coach relationships rather than supervisory relationships within medical training. Although the wording was adapted to the medical context prior to data collection and reviewed by medical professionals using the Index of Item-Objective Congruence (IOC), the adapted instrument may not fully capture the distinctive characteristics of relationships between resident physicians and their supervisors. These relationships involve hierarchical authority, clinical evaluation, professional development, and responsibility for patient care, which may differ from conventional employee-coach relationships. Furthermore, although the IOC assessment provided an initial indication of item relevance, it did not establish the full psychometric validity of the adapted instrument within

the target population. Accordingly, the findings concerning supervisor relationship quality should be interpreted with caution.

Future Directions

Future research may benefit from broadening the sample to include a larger and more diverse group of physician trainees. A larger sample would provide greater statistical power to detect small-to-moderate effects, including those that may characterise the associations between early parental relationships and resilience. Recruiting a more balanced number of extern, intern, and resident physicians would also allow the findings to be compared across training stages, each of which involves different levels of responsibility, autonomy, stress exposure, and dependence on authority figures.

Further research should also examine the reliability and construct validity of the adapted PQECR among resident physicians. Alternatively, researchers could consider using or developing a measurement instrument specifically designed and validated for supervisory relationships in medical training. Such efforts would help establish whether existing measures adequately capture the distinctive relational dynamics of clinical supervision.

In the further steps, drawing participants from a wider range of hospitals, specialties, and regions would improve the generalisability of the findings beyond the present sample. Extending the study to other healthcare trainees, such as nursing or dental trainees, may further clarify whether the relative contribution of current supervisory relationships and early parental relationships to resilience is specific to physician training or reflects a broader pattern in hierarchical professional settings.

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Data Availability Statement: The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

Conflicts of Interest: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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