

Thai Adaptation and Psychometric Evaluation of the Experiences in Close Relationships Scale-Short Version for Measuring Parent-Child Attachment

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Abstract

This methodological, cross-sectional psychometric validation study aimed to translate and culturally adapt the Experiences in Close Relationships Scale-Short Form (ECR-S) into Thai for parent self-assessment of parent-child attachment, resulting in the Thai-ECR-SP, and to evaluate its psychometric properties. The study was conducted in two phases: translation and cultural adaptation, including expert review and pretesting, followed by psychometric testing among 299 parents of children aged 3–13 years. Most participants were female, and parent age ranged from 23 to 58 years. Content validity was assessed using the item-objective congruence index. Factorial validity was examined using confirmatory factor analysis, and internal consistency reliability was evaluated using Cronbach's alpha. The findings supported the content validity and factorial validity of the scale, along with satisfactory internal consistency. The revised two-factor structure representing attachment avoidance and attachment anxiety was supported, resulting in a final 9-item version. The overall Cronbach's alpha coefficient was .86. The Avoidance subscale, consisting of four items, yielded an alpha of .78, while the Anxiety subscale, consisting of five items, yielded an alpha of .76. These findings provide preliminary support for the reliability and factorial validity of the Thai-ECR-SP as a brief tool for assessing parent-child attachment within the Thai cultural context.

Keywords

Attachment anxiety; attachment avoidance; parent-child attachment; psychometric validation; Thailand

Introduction

Parent-child attachment is a central component of family relationships and plays an important role in children's emotional, social, and developmental outcomes. Attachment theory, developed by Bowlby and Ainsworth, provides a foundation for understanding how early relationships with caregivers shape expectations, emotions, and patterns of relating across the lifespan (Ainsworth et al., 1978; Ainsworth, 1989; Bowlby, 1969, 1977, 1982). Within the parent-child relationship, responsive and consistent caregiving supports children's sense of security, whereas parental insecurity, insensitive caregiving, or inconsistent responsiveness has been associated with later adjustment difficulties (Jones & Cassidy, 2014; Thompson, 2008). Therefore, assessing attachment-related patterns in the parent-child relationship is important for research on child development, family functioning, and social well-being.

Attachment has been conceptualized both categorically and dimensionally. Early attachment research classified individuals into secure, anxious, and avoidant attachment patterns (Ainsworth et al., 1978; Bartholomew & Horowitz, 1991). Later adult attachment research emphasized two core dimensions of attachment insecurity, attachment anxiety and attachment avoidance (Brennan et al., 1998; Fraley et al., 2000). Attachment anxiety reflects concerns about rejection, abandonment, insufficient affection, and relational availability, whereas attachment avoidance reflects discomfort with closeness, dependence, emotional openness, and reliance on others. Although these dimensions have been widely used in adult attachment research, they may also provide a useful framework for understanding how parents experience emotional closeness, insecurity, and relational concerns regarding their child.

The operationalization of attachment concepts through reliable and culturally appropriate instruments is essential for advancing attachment research. The Experiences in Close Relationships Scale (ECR), developed by Brennan et al. (1998), is a widely used self-report measure of attachment anxiety and avoidance. The original ECR consists of 36 items, with 18 items assessing anxiety and 18 items assessing avoidance. Although the ECR has demonstrated strong psychometric utility, its length can present practical limitations in survey-based research. To reduce respondent burden, Wei et al. (2007) developed the ECR-Short version (ECR-S), a 12-item short form designed to provide a brief measure of adult attachment anxiety and avoidance.

Previous adaptation studies suggest that ECR-based measures can be meaningfully applied across cultural and relational contexts when appropriate validation procedures are used. In Thailand, Wongpakaran and Wongpakaran (2012) examined a short version of the ECR-R in non-clinical and clinical samples, supporting the relevance of ECR-based assessment in Thai adult close relationships. Beyond adult romantic attachment, the ECR framework has also been extended to parent-child contexts. For example, Brenning et al. (2011) adapted the ECR-R for children and adolescents to assess attachment anxiety and avoidance toward parents, and subsequent studies examined shorter ECR-RC versions in child and adolescent samples (Marci et al., 2019). These studies suggest that attachment anxiety and avoidance can be examined beyond romantic relationships, provided that items are developmentally, relationally, and culturally adapted.

Although several instruments have been developed to assess attachment-related constructs, not all are suitable for assessing parents' attachment-related feelings within the parent-child

relationship. The Inventory of Parent and Peer Attachment primarily assesses adolescents' perceived attachment to parents and peers (Armsden & Greenberg, 1987), whereas the Parental Bonding Instrument focuses on retrospective perceptions of parental care and overprotection (Parker et al., 1979). The Attachment Q-sort provides rich observational information about child attachment behavior, but it requires trained observers and is less practical for large-scale survey research (Waters & Deane, 1985). These instruments are valuable in their respective contexts, but they do not directly provide a brief parent self-report measure of attachment anxiety and avoidance in the parent-child relationship.

The ECR-S was selected for adaptation because it is brief, theoretically grounded, and directly aligned with the two attachment dimensions of anxiety and avoidance (Wei et al., 2007). However, because the original ECR framework was developed in the context of adult close and romantic relationships, direct translation alone would not be sufficient for use in the parent-child context. Parent-child relationships differ conceptually from romantic relationships in terms of caregiving roles, emotional responsibility, dependence, and relational expectations. In the parent-child context, attachment anxiety may involve parental concerns about emotional availability, rejection, or insufficient affection from the child, whereas attachment avoidance may involve discomfort with emotional closeness, reluctance to be emotionally open, or a tendency to maintain distance within the parent-child relationship. Therefore, the ECR-S items required conceptual, cultural, and relational adaptation to ensure that they reflected parent-child attachment dynamics rather than romantic attachment or inappropriate emotional dependence on the child.

In the Thai context, existing ECR-based measures have primarily been used to assess attachment in close adult relationships (Wongpakaran & Wongpakaran, 2012). However, despite prior Thai validation studies of ECR-based measures for adult close relationships and international studies adapting ECR-based tools for child-parent attachment, a brief culturally adapted Thai parent self-report measure of attachment anxiety and avoidance in the parent-child relationship remains limited. This gap is important because parent-child attachment is relevant not only to psychological assessment but also to research on family relationships, child development, caregiving experiences, socioeconomic conditions, and social well-being. A brief Thai measure may therefore support future studies examining how parent-child relational processes vary across caregiver characteristics, family structure, income background, and child developmental contexts.

Accordingly, this study aimed to translate, culturally adapt, and evaluate the psychometric properties of the 12-item ECR-S for assessing parent-child attachment through parent self-assessment in the Thai context. The adapted measure, termed the Thai-ECR-SP, was designed to assess parents' attachment-related anxiety and avoidance in relation to their child. By developing a brief Thai-language measure, this study seeks to support future research on parent-child attachment, family dynamics, child development, and broader social well-being in Thailand.

Methods

The methodological approach consisted of two main phases: translation and cultural adaptation of the scale, including expert review, followed by psychometric testing to evaluate its validity and reliability. Ethical approval was obtained from the IPSR Institutional Review Board at Mahidol University (COA No. 2019/02-057) and Mahidol University's Institutional

Review Board (MUSSIRB Approval No. 2020/201.0311). Written informed consent was obtained from all participants before their participation.

Participants were recruited using purposive sampling from schools and health or child development services in Nakhon Pathom Province, Thailand. Eligible participants were parents or primary caregivers of children aged 3–13 years who could read Thai and provided informed consent. Participants who did not meet the eligibility criteria or had incomplete questionnaire data were excluded from the analysis. A total of 327 parents were approached or accessed the survey, and 299 participants with complete data were included in the final psychometric analysis.

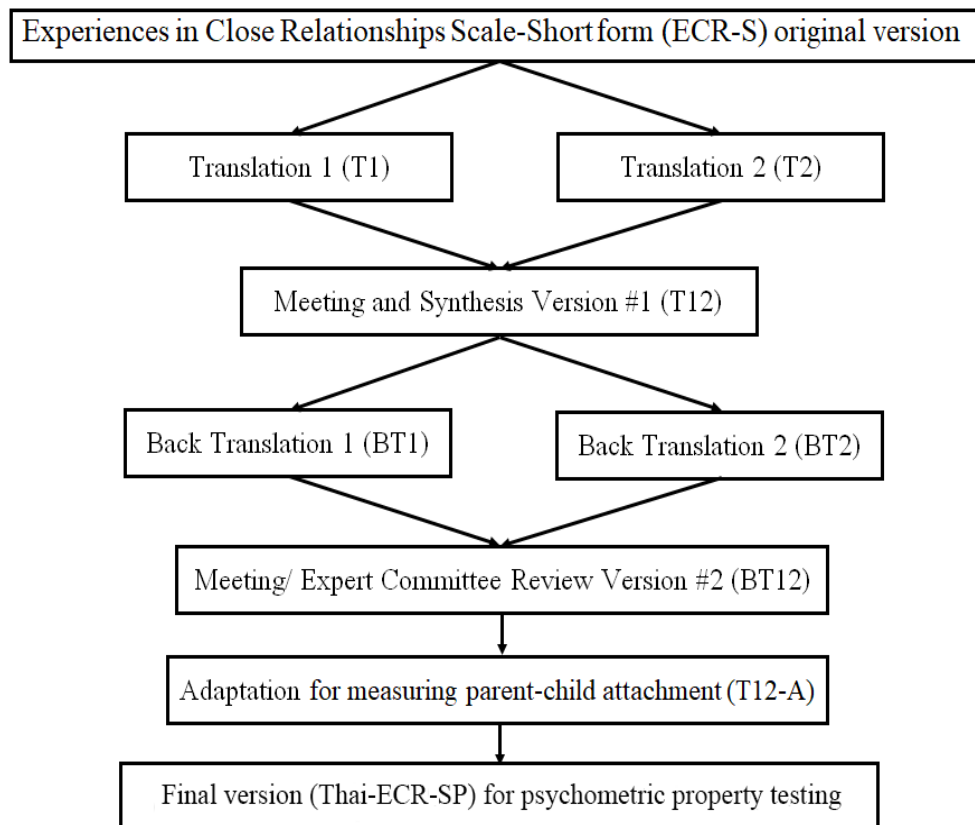
The study employed the 12-item ECR-S (Wei et al., 2007), comprising six items each for measuring attachment anxiety and attachment avoidance. Participants responded using a 7-point Likert scale, where 1 indicated “strongly disagree,” and 7 indicated “strongly agree.” Four of the items were reverse-scored, including three from the avoidance subscale and one from the anxiety subscale. Participants rated each statement according to the extent to which it reflected their typical attachment-related feelings and experiences. Higher scores on the anxiety and avoidance subscales reflect elevated levels of attachment anxiety and avoidance, respectively.

Step 1: Translation and adaptation processes

Permission to translate and adapt the 12-item ECR-S was granted by the first author of the original scale (Wei et al., 2007). The adapted Thai-ECR-SP was designed to assess parents’ attachment-related anxiety and avoidance in relation to their child from the parents’ perspective. It was not intended to directly assess the child’s attachment security or the quality of parental caregiving behavior. Therefore, the adaptation process addressed not only linguistic equivalence but also conceptual and relational appropriateness for the parent-child context.

The translation and adaptation process followed several steps (see Figure 1). First, the first and corresponding authors independently translated the original English version of the 12-item ECR-S into Thai, producing two forward translations (T1 and T2). Discrepancies between the two versions were discussed and resolved to create a unified Thai version (T12). When disagreement occurred, a psychologist was consulted to ensure conceptual accuracy. Second, two bilingual English-Thai university lecturers who were unfamiliar with the original ECR-S independently back-translated the T12 version into English, resulting in two back-translated versions (BT1 and BT2). Third, a research committee reviewed the original scale, the forward translations, the unified Thai version, and the back-translations to evaluate linguistic accuracy, conceptual equivalence, cultural appropriateness, and relevance to the parent-child relationship.

During this process, each item was reviewed to ensure that the wording reflected parent-child attachment dynamics rather than adult romantic attachment. Particular attention was given to avoiding wording that could imply romantic attachment, role reversal, or inappropriate emotional dependence on the child. The committee then produced the pre-final Thai-ECR-SP for further review and pretesting.

Figure 1: Translation and Cross-Cultural Adaptation Process

To clarify the conceptual adaptation process, Table 1 summarizes how the original ECR-S item concepts were adapted for the Thai parent-child context. The adaptation aimed to retain the core attachment dimensions of anxiety and avoidance while replacing romantic relationship content with parent-child relational content. This process ensured that the adapted items assessed parents' attachment-related anxiety and avoidance in relation to their child in a culturally and relationally appropriate manner.

Table 1: Conceptual Adaptation of the ECR-S Items for the Thai Parent-Child Attachment Context

Item	Original ECR-S item	Adaptation principle	Thai-ECR-SP example
1	It helps to turn to my romantic partner in times of need.	Reframed emotional comfort from a romantic partner as the parent's sense of comfort within the relationship with the child	I feel comforted by my relationship with my child during difficult times.
2	I need a lot of reassurance that I am loved by my partner.	Reframed reassurance-seeking as parental concern about whether the child expresses love or affection	I often worry about whether my child loves me.
3	I want to get close to my partner, but I keep pulling back.	Reframed approach-avoidance conflict as the parent's wish for closeness while behaving in ways that create emotional distance	I want to be close to my child, but I often act in ways that create distance.
4	I find that my partner(s) don't want	Reframed perceived lack of closeness as the parent's concern that the child	I feel that my child does not want to be as close to me as I would like.

Item	Original ECR-S item	Adaptation principle	Thai-ECR-SP example
	to get close as I would like.	does not want the same level of closeness	
5	I turn to my partner for many things, including comfort and reassurance.	Reframed comfort and reassurance as emotional security experienced within the parent-child relationship, while avoiding wording that implies dependence on the child	I feel comforted and reassured by my relationship with my child.
6	My desire to be very close sometimes scares people away.	Reframed excessive closeness as parental concern that the child may feel uncomfortable with the parent's desire for closeness	Sometimes I want to be very close to my child, but I worry that this may make my child feel uncomfortable.
7	I try to avoid getting too close to my partner.	Reframed avoidance of romantic closeness as emotional distancing within the parent-child relationship	I tend to avoid getting too close to my child.
8	I do not often worry about being abandoned.	Reframed abandonment concern as worry about rejection or emotional separation from the child	I rarely worry that my child will reject or leave me.
9	I usually discuss my problems and concerns with my partner.	Reframed communication with a partner as emotional openness with the child	I feel comfortable being emotionally open with my child.
10	I get frustrated if romantic partners are not available when I need them.	Reframed partner unavailability as parental distress when desired closeness or emotional response from the child is not received	I feel upset when I want to feel close to my child but do not receive the response I hope for.
11	I am nervous when partners get too close to me.	Reframed discomfort with partner closeness as parental nervousness when the child becomes emotionally close	I feel nervous when my child gets too close to me.
12	I worry that romantic partners won't care about me as much as I care about them.	Reframed concern about unequal care as parental worry that the child may not care as much as the parent does	I worry that my child may not care about me as much as I care about them.

Step 2: Scale testing

The pretest phase aimed to identify and address potential issues with the questionnaire, including response patterns, item clarity, and time commitment. Thirty parents participated in this phase, and the average time to complete the 12-item questionnaire was approximately 6 minutes. No major changes were required following the pretest; however, minor wording refinements were made to improve item clarity and alignment with the parent-child attachment context. Consequently, the final version, the Thai-ECR-S-Parent (Thai-ECR-SP), was developed from the prefinal adapted version.

The evaluation process included assessment of the scale's content and face validity, followed by psychometric testing of its factor structure and reliability. A multidisciplinary panel of experts, including a researcher, psychologist, pediatric occupational therapist, bilingual expert, and linguist, reviewed the pre-final 12-item Thai-ECR-SP through a consensus-based process. The panel evaluated the clarity, cultural appropriateness, and conceptual relevance of each item used to assess parent-child attachment. Feedback from parents during the pretesting phase was also considered to ensure that the items were understandable and

acceptable to respondents. Based on this input, minor revisions were made to improve item clarity and alignment with the parent-child attachment context.

The experts also assessed item-objective congruence (IOC) for the anxiety and avoidance subscales. Further psychometric properties testing, involving 299 participants, employed the Kolmogorov-Smirnov test to examine the normality of score distributions. Confirmatory factor analysis (CFA) was performed to validate the instrument's original structure. Internal consistency was assessed using Cronbach's alpha for the total scale and each subscale.

Data analysis

Continuous variables were reported as mean values with their corresponding standard deviations. A *p* value of less than .05 was considered statistically significant. All statistical analyses were conducted using SPSS version 30.0. Content validity was assessed by calculating each item's IOC value, with a value of 0.5 or higher deemed satisfactory (Rovinelli & Hambleton, 1977). CFA of the ECR-SP in the Thai sample was conducted using STATA 17 for Windows (StataCorp LLC, College Station, TX). Several goodness-of-fit indices (GFI), including the Comparative Fit Index (CFI) greater than 0.95, the Root Mean Square Error of Approximation (RMSEA) less than 0.05, and the Normed Fit Index (NFI) greater than 0.95, were used to assess model fit, in line with established criteria for well-fitting models (Hu & Bentler, 1999). Factorial validity was examined using confirmatory factor analysis. Internal consistency was assessed using Cronbach's alpha, with values above 0.6 considered acceptable (Taber, 2018).

Results

Descriptions of the sample

Before conducting factor analyses, the demographic characteristics of the participants were assessed (see Table 2). The mean age was 35.02 years, with a range from 23 to 58 years. By gender, 11.4% were male and 88.6% were female. In terms of education, 57.5% of parents had less than a bachelor's degree, while 26.4% held a bachelor's degree. Regarding household income, the largest proportion of participants (28.4%) reported a monthly income of 10,000–15,000 THB, followed by 22.1% with an income of less than 10,000 THB. Other income ranges included 20.1% earning more than 60,000 THB per month, 13.4% earning 15,001–30,000 THB per month, 9.7% earning 45,001–60,000 THB per month, and 6.4% earning 30,001–45,000 THB per month.

Table 2: Demographic Characteristics of 299 Participants

Profile	Number	Percent
Age (Mean ± SD)	35.02 ± 7.80	
Sex		
Male	34	11.4
Female	265	88.6
Education level		
Lower than bachelor degree	172	57.5

Profile	Number	Percent
Bachelor degree	79	26.4
Master degree	41	13.7
Higher than Master degree	7	2.3
Household income (THB/month)		
< 10,000	66	22.1
10,000–15,000	85	28.4
15,001–30,000	40	13.4
30,001–45,000	19	6.4
45,001–60,000	29	9.7
> 60,000	60	20.1

Note: Household income is reported in Thai baht (THB). Approximate USD equivalents may be estimated using the exchange rate of 1 USD ≈ 33.38 THB.

Validity

The translation process progressed smoothly, with no significant challenges encountered. Minor discrepancies arose between the forward and backward translations, but these were resolved without difficulty. Similarly, the expert committee identified no major concerns during their review. To adapt the 12-item ECR-SP for the parent-child context, modifications were made to better reflect the dynamics of this relationship. For example, original items such as “It helps to turn to my romantic partner in times of need” and “I need a lot of reassurance that I am loved by my partner” were rephrased as “I feel comforted by my relationship with my child during difficult times” and “I often worry about whether my child loves me,” respectively. Adjustments included simplifying language, removing double negatives, and significantly rewording items to enhance their relevance to the parent-child attachment context. The expert panel confirmed that the revised items were clear and conceptually appropriate.

Content validity was assessed using IOC values, which ranged from 0.6 to 1.00, indicating acceptable content validity (Butt et al., 2009). Items 2, 6, 7, 8, 9, 11, and 12 received the highest IOC score of 1.00, while the remaining items received a score of 0.6 (see Table 3 for details). During the pretest phase, the adapted questionnaire was administered to a group of parents. Participants generally understood most items and provided feedback to improve clarity and meaning. Based on this feedback, additional revisions were made, resulting in the final Thai-ECR-SP, which was subsequently used in the study (see Table 3 for detailed item descriptions).

Table 3: Experts’ Evaluation of Content Validity of the Thai-ECR-SP

Items	Item Content	IOC
1.	I feel comforted by my relationship with my child during difficult times.	0.6
2.	I often worry about whether my child loves me.	1.0
3.	I want to be close to my child, but I often act in ways that create distance.	0.6
4.	I feel that my child does not want to be as close to me as I would like.	0.6
5.	I feel comforted and reassured by my relationship with my child.	0.6
6.	Sometimes I want to be very close to my child, but I worry that this may make my child feel uncomfortable.	1.0
7.	I tend to avoid getting too close to my child.	1.0
8.	I rarely worry that my child will reject or leave me.	1.0
9.	I feel comfortable being emotionally open with my child.	1.0

Items	Item Content	IOC
10.	I feel upset when I want to feel close to my child but do not receive the response I hope for.	0.6
11.	I feel nervous when my child gets too close to me.	1.0
12.	I worry that my child may not care about me as much as I care about them.	1.0

Confirmatory Factor Analysis (CFA)

Confirmatory factor analysis was conducted using the variance-covariance matrix, with parameters estimated by maximum likelihood. Model adequacy was evaluated using multiple fit indices, including χ^2/df , RMSEA, SRMR, GFI, and CFI. As shown in Table 4, the initial 12-item two-factor model showed poor fit to the data, $\chi^2(26) = 342.68$, $p < .001$, $\chi^2/\text{df} = 13.18$, RMSEA = 0.200, SRMR = 0.073, GFI = 0.80, and CFI = 0.92.

Because the initial model did not demonstrate adequate fit, poorly performing indicators were examined based on factor loadings, item reliability, and overall model fit. Three indicators, PA1, PA8, and PA9, were excluded from the measurement model due to their poor statistical performance. After these modifications, the revised 9-item two-factor model demonstrated good model fit, $\chi^2(14) = 18.45$, $p = 0.19$, $\chi^2/\text{df} = 1.31$, RMSEA = 0.033, SRMR = 0.020, GFI = 0.99, and CFI = 1.00 (Table 4).

Table 4: Fit indices for the proposed model of the Thai-ECR-SP

Fit index	Criterion	Initial 12-item model	Revised 9-item model
χ^2 (p value)	$p > .05$	342.68 (.000)	18.45 (.19)
χ^2 / df	< 2.00	13.18	1.31
RMSEA	≤ 0.05	0.20	0.033
SRMR	≤ 0.08	0.073	0.020
GFI	> 0.95	0.80	0.99
CFI	> 0.90	0.92	1.00

Note: df, degrees of freedom; CFI, comparative fit index; GFI, goodness-of-fit index; RMSEA, root mean square error of approximation; SRMR, standardized root mean square residual.

Table 5 presents the standardized factor loadings, standard errors, test statistics, squared multiple correlations, and Cronbach's alpha coefficients for the revised 9-item model.

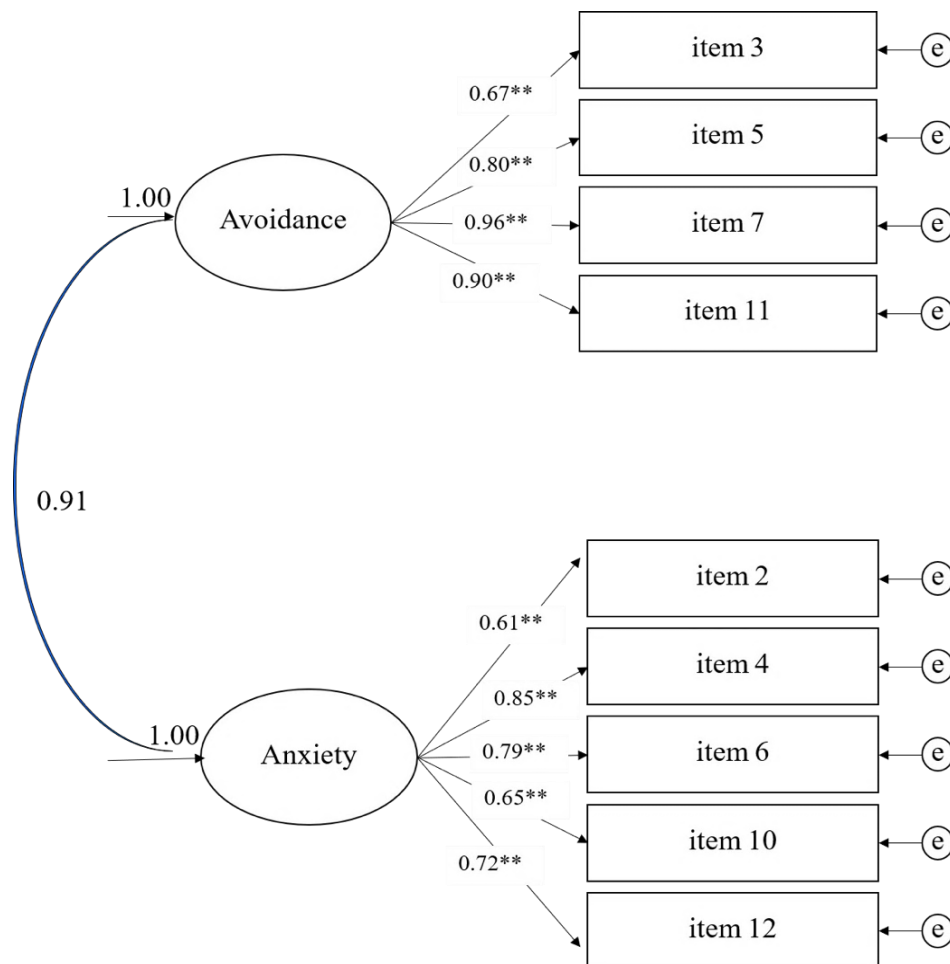
Table 5: Standardized Coefficients and Related Data for the Models

Items	Standardized Loading	SE	t value	R ²	Cronbach's alpha
Avoidance					0.78
Item 3	0.67	0.081	12.48**	0.44	
Item 5	0.80	0.043	16.46**	0.64	
Item 7	0.96	0.056	22.03**	0.92	
Item 11	0.90	0.052	19.75**	0.80	
Anxiety					0.76
Item 2	0.61	0.120	11.09**	0.37	
Item 4	0.85	0.070	17.73**	0.73	
Item 6	0.79	0.070	15.51**	0.62	
Item 10	0.65	0.083	12.07**	0.42	
Item 12	0.72	0.086	13.98**	0.52	
Total 9 items					0.86

Note: ** $p < .01$. $\chi^2 = 18.45$ ($df = 14$, $p = .19$), $\chi^2/\text{df} = 1.31$, RMSEA = .033, CFI = 1.00, NNFI = 1.00, NFI = 1.00, GFI = .99, AGFI = .96, and SRMR = .020.

According to structural equation modeling guidelines, standardized factor loadings of 0.50 or higher are generally considered acceptable, whereas loadings of 0.70 or higher are preferable (Hair et al., 2010). In the revised model, the standardized factor loadings ranged from 0.67 to 0.96 for the Avoidance factor and from 0.61 to 0.85 for the Anxiety factor. The final model consisted of nine items, with four loading on the Avoidance factor and five on the Anxiety factor. The revised model, termed the 9-item Thai-ECR-SP, is presented in Figure 2.

Figure 2: Two-Factor Model of the 9-Item Thai-ECR-SP



Note: ** p value < .01, $\chi^2 = 18.45$ ($df = 14$, $p = .19$), $\chi^2/df = 1.31$, RMSEA = .033, CFI = 1.00, NNFI = 1.00, NFI = 1.00, GFI = .99, AGFI = .96, SRMR = .020.

Reliability

The overall Cronbach's alpha for the 9-item Thai-ECR-SP was 0.86, indicating good internal consistency (Table 5). At the subscale level, the Avoidance subscale, consisting of four items, demonstrated acceptable internal consistency with a Cronbach's alpha of 0.78, while the Anxiety subscale, consisting of five items, also showed acceptable internal consistency with a Cronbach's alpha of 0.76 (Table 5). These findings indicate that the 9-item Thai-ECR-SP demonstrated acceptable to good internal consistency in the present Thai parent sample. The Anxiety and Avoidance subscales were strongly positively correlated, $r = 0.79$, indicating that parents who reported higher attachment anxiety also tended to report higher attachment avoidance.

Discussion

Adult attachment is currently conceptualized as having two primary dimensions: anxiety and avoidance (Mikulincer et al., 2003). Attachment anxiety involves a fear of rejection or abandonment by others and an intense need for approval. When a partner is unavailable or unresponsive, individuals with high attachment anxiety often experience considerable distress. In contrast, attachment avoidance is marked by a fear of dependence and interpersonal closeness, along with a strong preference for self-sufficiency and a reluctance to share personal information (Lopez & Brennan, 2000; Mallinckrodt, 2000).

Since the ECR-S was originally developed for adult close relationships, its adaptation to the parent-child context required careful conceptual reinterpretation. In particular, attachment anxiety and avoidance needed to be considered in relation to asymmetrical caregiving roles, developmental expectations, and the emotional boundaries of the parent-child relationship. This study is the first in Thailand to translate, culturally adapt, and psychometrically evaluate the 12-item ECR-S for assessing parents' attachment-related anxiety and avoidance toward their child, resulting in the Thai-ECR-SP. The translation and adaptation process suggested that the original ECR-S items could be meaningfully modified for the parent-child context when linguistic, cultural, and relational appropriateness were carefully considered.

Expert review supported the content validity of the adapted items, with IOC values ranging from 0.60 to 1.00, and indicated that the revised items were generally clear and conceptually relevant. Feedback from the pretest further informed minor wording refinements, particularly by simplifying language, reducing ambiguity, and ensuring that the items reflected parent-child attachment dynamics rather than romantic attachment or inappropriate emotional dependence on the child. Although the findings suggest that attachment anxiety and avoidance may be meaningfully assessed from the parent perspective, further validation is needed to examine how Thai parents interpret items concerning closeness, reassurance, emotional availability, and relational distance.

According to the findings, 9 items were retained from the original 12-item ECR-SP, consisting of 5 attachment anxiety items and 4 attachment avoidance items. The 9-item Thai-ECR-SP demonstrated acceptable internal consistency and preliminary evidence of factorial validity. Among Thai parents, the scale demonstrated an interpretable two-factor structure and acceptable internal consistency, providing preliminary evidence of factorial validity and reliability. Overall, the findings provide preliminary evidence that the 9-item Thai-ECR-SP may be useful as a brief research instrument for assessing parents' attachment-related anxiety and avoidance in relation to their child. However, further validation in independent, more diverse samples is needed before the scale can be recommended for broader application.

The reliability results further supported the internal consistency of the final scale. The overall Cronbach's alpha of the 9-item Thai-ECR-SP was 0.86, indicating good internal consistency. The avoidance subscale demonstrated acceptable internal consistency, with a Cronbach's alpha of 0.78, while the anxiety subscale also showed acceptable internal consistency, with a Cronbach's alpha of 0.76. Given the relatively small number of items in each subscale, these coefficients suggest that the retained items are sufficiently consistent for assessing parent-child attachment in Thai parent samples.

Although the 9-item Thai-ECR-SP appears to be a potentially useful instrument with preliminary evidence of reliability and factorial validity, it should be noted that the anxiety and avoidance subscales contained unequal numbers of items, with five and four items, respectively. In addition, one avoidance item was reverse-scored. Although this unequal distribution may affect the operationalization of the anxiety and avoidance dimensions, the original 12-item ECR-SP also reflects an unequal distribution of reverse-scored items, with one reverse-scored item for anxiety and three for avoidance (Wei et al., 2007). Furthermore, the internal consistency of the 9-item Thai-ECR-SP, both embedded within the full questionnaire and administered as a stand-alone questionnaire, was assessed in this study. However, test-retest reliability was not examined. As a result, future research should look into this issue. Nonetheless, the current Thai-ECR-SP, with its nine items, appears to be a promising short tool for assessing anxious and avoidant attachment representations in parents.

The present study also contributes to population and social studies by providing a brief Thai-language measure for examining parent-child attachment as part of broader family and social research. Parent-child attachment is not only an individual psychological construct but also a relational indicator that may reflect family functioning, caregiving experiences, and the emotional context in which children develop. In population-based research, such a measure may help researchers examine how attachment-related anxiety and avoidance are distributed across caregiver characteristics, household income, family structure, and child developmental contexts.

The Thai-ECR-SP may also be useful for studies investigating the links among parent-child attachment, child development, parenting stress, family well-being, and social vulnerability. In Thailand and other Southeast Asian contexts, where family relationships are shaped by cultural expectations, intergenerational caregiving, economic conditions, and changing family structures, a culturally adapted attachment measure may provide a useful tool for understanding how relational insecurity is associated with broader social and developmental outcomes. However, because the current findings are preliminary, future research should validate the scale in more representative samples and examine its associations with external indicators of child adjustment, parenting quality, family functioning, and social well-being.

The Anxiety and Avoidance subscales were strongly positively correlated, $r = 0.79$, indicating that parents who reported higher attachment anxiety also tended to report higher attachment avoidance. This finding is consistent with the broader ECR framework, which conceptualizes attachment anxiety and attachment avoidance as two dimensions of attachment insecurity rather than completely unrelated constructs (Brennan et al., 1998). However, the magnitude of the correlation in the present study was relatively high. Although ECR-based measures commonly distinguish anxiety, which reflects fear of rejection or insufficient affection, from avoidance, which reflects discomfort with closeness and dependence (Wei et al., 2007), the present result suggests substantial overlap between the two subscales in this Thai parent sample.

This finding is broadly consistent with ECR-RC research in the parent-child context, in which attachment anxiety and avoidance were modeled as two related but distinguishable dimensions (Brenning et al., 2011). However, the correlation observed in the present study was stronger than those reported in previous ECR-RC studies. Therefore, although the two-factor structure was retained, the discriminant validity between the Anxiety and Avoidance subscales should be interpreted cautiously and examined further in future research. This overlap may reflect a broader attachment-insecurity factor, item-level similarity, or cultural-

linguistic differences in how Thai parents interpret items concerning closeness, emotional distance, and relational concern. Future studies should therefore compare one-factor, two-factor, and bifactor models and further examine the discriminant validity of the Anxiety and Avoidance subscales in larger and more diverse Thai parent samples.

In summary, the revised 9-item Thai-ECR-SP demonstrated acceptable to good internal consistency and an interpretable two-factor structure in this Thai parent sample. However, because the final model was derived and tested within the same sample, future studies should cross-validate the 9-item version in independent samples and examine its utility alongside the original 12-item version, including in clinical and demographically diverse parent populations.

Strengths and limitations

A key strength of this study is its pioneering effort to adapt the ECR-S for application in Thailand, addressing a significant gap in the assessment of parent-child attachment in this cultural context. The systematic translation and cultural adaptation process supported the relevance of the Thai-ECR-SP for the Thai parent-child context, while the psychometric evaluation provided preliminary evidence of its reliability and factorial validity. The brief nature of the 9-item version enhances its practical utility, particularly in settings where respondent burden is a concern.

Several limitations should be noted. First, although the sample size was increased from the original pilot sample, the study was conducted with a non-clinical parent sample that was predominantly female. Therefore, the findings may not fully generalize to fathers, male caregivers, parents of children with developmental disorders, or other clinical populations. Second, the sample's demographic distribution may not fully represent the diversity of Thai families across income groups, urban and rural settings, and caregiving contexts. Third, the final 9-item Thai-ECR-SP included unequal numbers of items across the Anxiety and Avoidance subscales, with five items assessing anxiety and four items assessing avoidance. This imbalance, together with the distribution of reverse-scored items, may affect the operationalization of the two attachment dimensions. Fourth, test-retest reliability was not examined; therefore, the temporal stability of the scale remains to be established. Finally, because the final 9-item model was derived and tested using the same sample, future studies should cross-validate this factor structure in independent samples and examine its measurement properties among more diverse parent populations, including fathers, higher-income families, urban and rural caregivers, and parents of children with developmental or clinical conditions.

Implication and recommendation

The findings of this study emphasize the importance of culturally adapting psychological assessment tools for use in specific family and social contexts. The 9-item Thai-ECR-SP provides researchers with a brief and practical instrument for assessing parent-child attachment in Thai parent samples. Its preliminary psychometric evidence suggests potential utility in academic research and community-based studies, particularly those examining family relationships, child development, parenting experiences, and social well-being.

From a population and social studies perspective, the Thai-ECR-SP may support future research on how parent-child attachment varies across socioeconomic backgrounds, family structures, caregiver characteristics, and developmental contexts. The scale may also be integrated into broader studies examining associations between family relational processes and outcomes such as child adjustment, caregiver stress, family functioning, and access to social or developmental support services. To strengthen the scale's applicability, future research should validate the Thai-ECR-SP in independent and demographically diverse samples, including fathers, higher-income families, urban and rural caregivers, and parents of children with developmental or clinical conditions. Longitudinal studies and studies using external developmental or family well-being indicators would further clarify the scale's usefulness for population-level research and social policy.

Conclusions

This study translated, culturally adapted, and evaluated the psychometric properties of the ECR-S for assessing parent-child attachment in Thai parent samples, resulting in the 9-item Thai-ECR-SP. The findings provide preliminary support for the scale's internal consistency and factorial validity, with an interpretable two-factor structure representing attachment anxiety and attachment avoidance. However, the final model was derived and tested within the same sample, and the Anxiety and Avoidance subscales were strongly correlated. Therefore, the discriminant validity and stability of the factor structure should be examined further. Future studies should cross-validate the 9-item Thai-ECR-SP in independent samples and evaluate its applicability in clinical, socioeconomically diverse, and demographically representative populations before recommending the scale for broader applied use.

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