

The Psychometric Properties of the Turkish Version of the Mothers' Object Relations Scale

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ABSTRACT

Objective: Assessing parents' perceptions of their babies and providing support to parents following this assessment have important implications for the development of the baby. In this study, the Mothers' Object Relations Scales Short-Form (MORS-SF) is adapted to Turkish in order to examine mothers' and fathers' perceptions of their babies and to determine its validity and reliability.

Methods: The participant group consisted of 528 mothers and fathers with children aged 0-2 years. The data was collected through face-to-face interviews in family health centres in a province in the Anatolian region between September and October 2024. the construct validity of the scale was tested with the EFA, CFA. The MaaP scale was used to check the test concurrent validity of the MORS-SF. The construct validity of the scale was tested with the EFA and the CFA was carried out.

Results: Exploratory factor analysis revealed 2 dimensions with eigenvalues greater than 1. The concurrent validity study showed that MaaP had a significant positive correlation with the warmth subdimension of the MORS-SF at the .01 level ($r=.384$) and a significant negative correlation with the invasion subdimension at the .01 level ($r=-.187$) according to the Spearman correlation coefficient. The Cronbach's alpha internal consistency coefficient was .799 for warmth and .704 for invasion.

Conclusion: Factor analysis and Cronbach's alpha results showed that all items of the MORS-SF have good reliability and validity in Turkish society. The Turkish MORS-SF is recommended for use in early screenings to support parent-infant relationships.

Keywords: Emotional warmth, invasion, object relation, parent-baby interaction, perception of parents.

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Introduction

The caregiver is the baby's first 'object' from the moment of birth. The baby's relationship with the caregiver is a continuation of his or her trust and attachment to the parent. The baby adopts and internalizes the parent's sense of trust and security. This internal secure attachment becomes the basis for future relationships. Parents' thoughts, feelings and perceptions about their babies influence their own behaviour (Meares et al., 1982). The object relationship is the term used in psychology to describe the emotional and psychological relationship between an individual and another person or object. This concept is part of psychoanalytic theory and plays an important role in the work of psychoanalysts such as Melanie Klein, Donald Winnicott and Ronald Fairbairn. An object in this context can mean another person, an object or an entity. Early parent-infant relationships are foundational for children's socioemotional development, attachment security, and long-term mental health outcomes. However, not all parents find it easy to interpret or respond to their infant's cues appropriately. Some parents may perceive their babies as overly demanding or emotionally distant, which may lead to maladaptive interactions. These negative perceptions may remain unnoticed without structured assessment, increasing the risk for insecure attachment patterns (Armstrong & Ross, 2023).

The object relationship refers to the baby's development of a relationship model with its mother and father during the period of growth. The object relations between the parent and the baby are not limited to the mother/father-baby interaction. In the relationship with the parent, the baby learns and develops through complex processes such as secure attachment, symbolic thinking and the representation of objects in the inner world. This shapes the individual's lifelong attachment styles and social relationships (Ainsworth, 1978; Waters & Deane, 1985). Parents' object relations influence how they provide emotional support to their babies and how they respond to their babies' emotional needs. If parents' object relations are unhealthy, that is, if they display attitudes such as excessive distance, insensitivity or excessive control towards their baby, the baby may have difficulty in forming a secure attachment from these relationships. For example, a baby crying because he or she is hungry may be interpreted by the mother as crying because the baby is hungry. However, another mother may interpret this cry as a demand that she should stop doing something when she is busy and that the baby should pay attention to her immediately. Based on this thinking, the mother may associate her baby's crying with frustration and anger. Many studies have found that parents' perceptions of their babies shape their parenting

practices (Bhopal et al., 2021; Chasson et al., 2022). For this reason, object relations theory argues that the relationships that individuals form with others, particularly in early childhood, have crucial and persisting effects on their emotional and psychological health. This theory suggests that the bonds an individual forms with their close environment, particularly with caregivers (e.g., mother, father, or other parental figures) at an early age, play a critical role in shaping personality and emotional regulation later in life. These early relationships can affect an individual's sense of trust, self-perception and trust in others, leaving a long-term mark on emotional well-being and psychological resilience (Oates et al., 2018). In line with this, Ashraf, Shah, and Vadukapuram (2023) found that children of fathers who experienced postnatal depression showed significantly increased emotional and behavioral difficulties by age five, underscoring the enduring impact of early parent-infant relational dynamics. Given the importance of the early parent-baby relationship and emotional bond, it is important to identify ways in which parents can be supported to strengthen or improve this bond. An important step in providing this support is to identify parents who are struggling to bond with their developing fetuses and/or babies and offer them additional support (Royal College of Psychiatrists, 2018). In Türkiye, family health centers provide baby and child follow-up at least nine times in the first year of life and a total of 16 times by the age of six (Republic of Türkiye Ministry of Health-TC Sağlık Bakanlığı). Although national guidelines recommend frequent well-child visits in the first years of life, these check-ups predominantly focus on physical development. Emotional and relational assessments are rarely integrated into standard pediatric or family health follow-up. Recent findings suggest that interventions targeting maternal perceptions and reflective functioning can significantly improve maternal mental health, parenting confidence, and relationship quality in the postpartum period (Cooke et al., 2023). The initial identification of problems by health professionals during routine check-ups or appointments can facilitate early interventions. However, it is not always easy for parents to share their difficulties in bonding with their developing foetus or baby with health professionals during routine check-ups. Parents may fear being seen as a failure, fear of stigmatization and fear of losing custody, such as having their baby taken away as a result of neglect (Child Protection Law, 2005; Morsbach & Prinz, 2006). Health professionals such as nurses, midwives, and pediatricians often lack brief, validated tools in Turkish to assess the emotional quality of the parent-infant bond, making early detection and intervention difficult.

Supporting parenting skills have been observed to

strengthen parents' attitudes towards their babies (Armstrong & Ross, 2023; Coster et al., 2015). It is suggested that assessing parents' perceptions of their babies and providing support to parents following this assessment will have important implications for the development of the baby. Assessment of object relations is an important tool for understanding parents' emotional accessibility, level of empathy, and responses to their babies' emotional expressions. Such assessments can reveal parents' emotional attitudes and the dynamics of their relationships with their babies. Many organizations working with parents have a need for such assessment tools. The MORS-SF scale, which is one of the scales used to assess parents' perceptions of their babies, is a widely used scale in many countries (Bhopal et al., 2022; Danis et al., 2012; Shiri et al., 2024). In a study assessing reliability, MORS-SF were all rated 'sufficient' and 'good rating' and were therefore reported as easy to understand (Wittkowski et al., 2020). Although the initial development of the MORS-SF scale was conducted only with mothers, subsequent studies have used this scale with fathers in addition to mothers (Chasson et al., 2022; Coster et al., 2015; Oates et al., 2018). The scale has been applied not only to parents of infants aged 0-1 years, but also to parents of older children (Armstrong & Ross, 2023; Simkiss et al., 2013). MORS Child is a very similar version in which the word 'child' replaces the word 'baby'. This version was validated in a study conducted by a research team at the University of Warwick Medical School and found to have good psychometric properties equivalent to MORS-SF (Cronbach's alpha .73-.79 for warmth, .71-.81 for perceived interference). As a result, various organizations and government reports have advocated the need to address the early stages of parenting in order to strengthen the early parent-baby relationship (Royal College of Psychiatrists, 2018). It is believed that translating this scale, which is widely used in the literature, into Turkish and making it available for use by nurses, doctors, child development specialists and social workers is important for early intervention. Therefore, the aim of this study is to adapt the Mothers' Object Relations Scale-Short Form (MORS-SF) into Turkish and to evaluate its psychometric properties, in order to provide professionals with a reliable and valid tool for early assessment of parent-infant relational dynamics.

Methods

Type of Research

The aim of this study is to adapt the mothers' object relations scales short-form (MORS-SF), which allows the investigation of mothers' and fathers' perceptions towards their babies, into Turkish and to carry out validity and

reliability tests.

Study Population and Design

For the purpose of the study, the participant group consisted of 528 mothers and fathers with babies aged 0-2 years. Following scale adaptation guidelines, a minimum sample of 140 was targeted (14 items \times 10) (MacCallum et al., 2001), which was exceeded. Data were collected through face-to-face interviews conducted by trained enumerators (nurses who received a one-day briefing on the study procedures) and researcher. The inclusion criteria for the study were as follows: participants had to be the biological mother or father of a child aged between 0 and 24 months, possess the ability to read and understand Turkish, and voluntarily agree to participate in the research. Parents with diagnosed cognitive or psychiatric disorders or incomplete forms were excluded. This study was collected through face-to-face interviews at family health centers in a province in central Anatolia between September and October 2024. The form was also made available online to parents who requested it. In total, 900 parents were reached; however, data from 528 participants who completed the forms fully were included in the analysis. Each participant completed the questionnaires in approximately 10 minutes. Families who participated were given an informational booklet on infant development as a token of appreciation. Data collection tools: The data of the study were collected with demographic information form and The mothers' object relations scales short-form (MORS-SF).

Demographic Information Form: This consists of information such as parental status (mother or father), age of parent, sex of baby, educational level of parent, economic status of parent, number of children, month of birth.

The Mothers' Object Relations Scale-Short Form (MORS-SF): It was used to assess parents' perceptions of their babies. The first version of the scale was developed by Oates and Gervais in 1984. Later, this 44-item scale was shortened and made available to fathers in addition to mothers. It was found that there was no difference between the MORS-SF scores of mothers and fathers for the same child, supporting the claim that the instrument measures parental perceptions according to the characteristics of the child (Oates et al., 2018). The MORS-SF is available in Arabic, Simplified Chinese, Dutch, Hebrew, Hindi, Hungarian, Polish, Russian, Somali, Spanish and Swedish, each of which has been translated and checked for semantic accuracy. The 14-item questionnaire was developed to identify potential areas of difficulty in the early parent-baby relationship and has a two-factor structure: perceived emotional warmth of the baby (e.g. 'My baby is affectionate towards me') and perceived invasiveness of the baby (e.g. 'My baby wants too

much attention'). The statements are rated in six categories from 'never' to 'always'. These were grouped into seven positive statements, and seven negative statements. Scores range from 0 to 35. The Warmth subdimension assesses parents' perceptions of how warm their baby is towards them. It is scored by summing the scores for items 1, 3, 4, 6, 8, 11 and 13. The average score is around 29; a score of less than 20 indicates possible concern, while a score of 11 or less should be a sign of concern. The Invasion subdimension measures the extent to which a mother experiences feelings of unwelcome intrusion or a sense of being controlled by her baby. The scale is scored by summing the scores for items 2, 5, 7, 9, 10, 12 and 14. An average score on this scale is usually around 10. A score above 12 may indicate a potential problem, suggesting that the mother may be experiencing significant feelings of being overwhelmed or invaded by her baby's needs or behaviour. Scores of 17 or above are generally considered to be a clear indication of concern, possibly warranting further assessment or intervention.

Ethical Approval

Ethical approval was given by Anadolu University Research and Publication Ethics Committee in accordance with the Ethics Committee Decision No. 767032 dated August 26, 2024. The Helsinki rules were followed in the conduct of the study.

Statistical Analysis

Data were analyzed using IBM SPSS Statistics 24 and IBM SPSS Amos 24 packages. Kolmogorov-Smirnov tests were used to assess the normality of the data. After analyzing the construct validity of the scale with the EFA test, CFA was performed. The MaaP scale was used to test the concurrent validity of the MORS-SF. Cronbach's alpha was used to assess the reliability coefficient of the scale.

Results

Language Validity

Permission to adapt the scale to Turkish was obtained from the owner of the scale on 20/10/2023. The translation and retranslation method was used to test the linguistic validity. The scale was translated from English into Turkish by two independent foreign language experts. It was sent to two Turkish language experts to determine the comprehensibility of the expressions in the translation and their suitability to the structure of the Turkish language. The opinions of 2 child development specialists and 1 psychologist were sought regarding the appropriateness of the language translation of the items for this area. The Turkish form was retranslated by a foreign language expert who had not seen the original version. The words 'annoy', 'irritate' and 'wind up' have similar meanings in the Turkish

language. However, there are slight differences between them (Table 2). For this reason, the owner of the scale was contacted and asked for semantic approval. Once approval was obtained, it was accepted by Oaster that the translation did not create a semantic difference and that the items were equivalent. The translation was piloted with 10 mothers and 10 fathers who voluntarily agreed to give their opinion in order to assess its comprehensibility by the study group. After the pilot study, the items were found to be understandable by the parents in the study group. Finally, the final version of the inventory was drawn up.

Construct Validity

In order to determine the construct validity of the scale, an exploratory factor analysis was first carried out. In this analysis, the number of factors of the scale was tested and the factor loadings were examined to determine the relationship between the items and the factors. In factor analysis, those with an eigenvalue of 1 or more are accepted as factors (Büyüköztürk, 2002). In this scale, there are 2 dimensions (3.678 and 2.700) with eigenvalues greater than 1 (Figure 1). This corresponds to the number of dimensions in the original version of the scale.

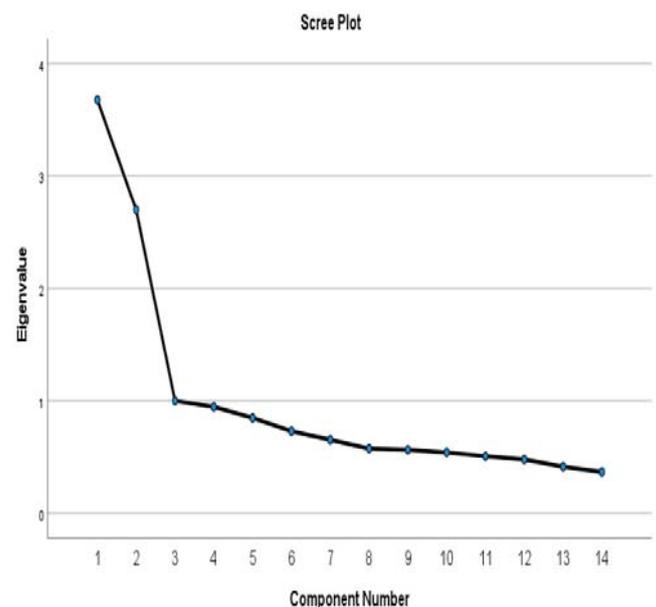


Figure 1.

Factor Eigenvalue of the MORS-SF

Factor loadings were then analysed to determine the relationship between items and dimensions. Items with factor loadings between 0.30 and 0.60 are considered to be at a moderate level, while factor loadings above 0.60

indicate a higher fit with the measured structure (Klein, 2005). When analysing the factor loadings of the 14 items of the scale, it can be seen that the lowest value is 0.33 (item 7). Therefore, there was no need to remove any item from the scale.

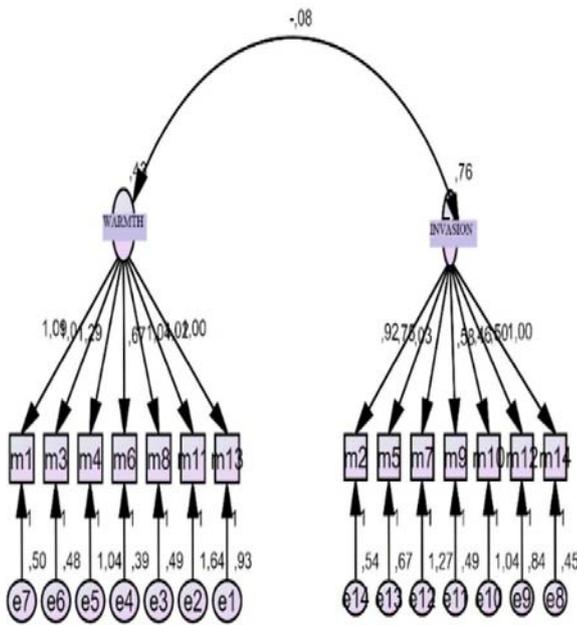


Figure 2.

Confirmatory Analysis of the Two-Factor Structure
Extracted EFA

Confirmatory factor analysis was carried out using AMOS 23 software. This programme was used to plot the two-dimensional model of the scale and to examine the fit statistics obtained. Figure 2 shows that a correlation coefficient of -0.08 was also found between the two factors ($p=.00$, CMIN/DF=3.83, GFI=0.92, CFI=0.88, RMSEA=0.07, AGFI=0.9).

Concurrent Validity

As a test of the concurrent validity of the MORS-SF, parents were also asked to complete the Me as a Parent: Parenting Self-Regulation Scale. The Me as a Parent: Parenting Self-Regulation Scale (MaaP) was developed by Hamilton et al. (2015). The Cronbach's alpha value for the internal consistency of the scale was found to be 0.85. The validity and reliability study of this scale was conducted by the author in 2022, and the coefficient was calculated to be 0.814. According to the Spearman rank correlation coefficient analysis, a significant relationship was found between MaaP and MORS-SF.

The concurrent validity study showed that MaaP had a

significant positive correlation with the warmth subsdimension of the MORS-SF at the 0.01 level ($r=0.384$) and a significant negative correlation with the invasion subsdimension at the 0.01 level ($r=-0.187$) according to the Spearman correlation coefficient (Table 1).

Table 1. Correlation of subscales of MORS-SF and MaaP					
	mean	std	1	2	3
Warmth	27.7121	5.24689	-	-0.096*	0.384**
Invasion	12.5152	4.42305		-	-0.187**
MaaP	65.5511	7.85840			-

* $p < .05$, ** $p < .01$

Reliability

The results of the reliability analysis of the items in the MORS-SF were analyzed according to the total mean and Cronbach's alpha coefficient. Looking at the item-total correlation, it can be seen that all items except item 7 are greater than 0.2. The Cronbach's alpha of the Warmth subsdimension was 0.799 and the Invasion subsdimension was 0.704 (Figure 2). Due to the high overall correlations of the items, no changes were made, such as removing items, so as not to disrupt the structure of the scale (Table 2).

Relationship with MORS-SF Score and Sociodemographic Factors

The mean warmth score was 27.71 and invasion score was 12.52 (possible range 0–35) (Figure 3). In the analysis of the parents' warmth scores, 6.8% were found to be of low possible concern and in the analysis of the invasion scores, 46.3% were found to be of possible concern.

There was no significant difference between the warmth scores of the parents according to the status of being a parent ($U= 33591.0$, $Z= -0.55$, $p=.57$), gender of their babies ($U=32290.5$, $Z=-1.28$, $p=.19$), parental age ($\chi^2=1.82$, $sd=5.24$, $p=.76$), parental education level ($\chi^2= 7.29$, $sd=5.24$, $p=.20$) and parental economic level ($\chi^2=3.86$, $sd=5.24$, $p=.14$). However, a significant difference was found according to the number of children the parents had ($\chi^2=12.77$, $sd=5.24$, $p=.005$) and the month of the babies ($\chi^2= 15.22$, $sd=5.24$, $p=.00$). Parents with more than 2 children had lower warmth and invasion scores than parents with 1 and 2 children. Both warmth and invasion scores increased as the child's age increased. There was no statistically significant difference between the invasion scores according to parental age ($\chi^2=4.96$, $sd=4.42$, $p=.29$), parental education level ($\chi^2= 5.83$, $sd=4.420$, $p=.32$) and parental economic level ($\chi^2= 0.162$, $sd=4.42$, $p=.92$).

Original Scale Items	\bar{X}	Sd	Total Corelation	Cronbach's Alpha if Item Deleted	Cronbach α
1.My baby smiles at me	4.18	1.005	0.595	0.763	.799
3.My baby likes doing things with me	4.21	0.963	0.596	0.763	
4.My baby talks to me	3.77	1.325	0.582	0.764	
6.My baby likes me	4.62	0.765	0.482	0.785	
8.My baby laughs	4.13	0.979	0.586	0.765	
11.My baby like to please me	2.97	1.443	0.440	0.800	
13.My baby is affectionate towards me	3.83	1.166	0.538	0.771	
2.My baby annoys me	1.78	1.087	0.576	0.626	.704
5.My baby irritates me	0.86	1.051	0.483	0.652	
7.My baby wants too much attention	3.91	1.126	0.078	0.756	
9.My baby gets moody	1.88	0.865	0.507	0.653	
10.My baby dominates me	1.09	1.099	0.352	0.687	
12.My baby cries for no obvious reason	1.62	1.017	0.387	0.677	
14.My baby winds me up	1.38	1.102	0.590	0.621	

However, a significant difference was found according to the status of being a parent ($U= 27178.5$, $Z= -4.24$, $p=.00$), the number of children the parents had ($\chi^2= 11.01$, $sd= 4.42$, $p=.01$), the sex of the babies ($U= 30919.00$, $Z=-2.07$, $p=.03$) and the month of birth ($\chi^2= 17.02$, $sd=4.42$, $p=.00$). Mothers had higher invasion scores than fathers and parents with male children had higher invasion scores than parents with female children.

Discussion

The aim of this study was to validate the Turkish translation version of the MORS-SF scale. According to the exploratory factor analysis, 2 dimensions with eigenvalues greater than 1 were found, and this result was consistent with the number of dimensions in the original scale. The concurrent validity study showed that MaaP had a significant positive correlation with the warmth subdimension of the MORS-SF and a significant negative correlation with the invasion subdimension (Büyüköztürk, 2020). Parents' self-regulation skills, which include behavioral, cognitive, and emotional dimensions, play a decisive role in both their communication with their babies and their parenting styles (Barros et al., 2015; Hamilton et al., 2015). Therefore, in line with the results of this study, it is assumed that there is a relationship between parents' self-regulation skills (MaaP) and their perceptions of their babies (MORS-SF). Construct validity showed that it is a valid scale for Turkish parents. The Cronbach's alpha internal consistency coefficient was 0.799 for warmth and 0.704 for invasion. In a validation study conducted on British and Hungarian samples, Cronbach's alpha was found to be 0.75 for warmth and 0.81 for invasion in the British sample and 0.79 for warmth and 0.71 for invasion in the Hungarian sample (Oates et al., 2018; Simkiss et al., 2013). This is quite similar to the internal consistency of the original version of the scale.

The negative correlation between the warmth and invasion subdimension suggests that these two factors examine two separate concepts. The finding that warmth scores were relatively high but contributed less significantly to MORS concern levels than invasion scores is noteworthy. It was observed that some parents scored high on both factors simultaneously. This suggests that while parents may generally report feeling warm and affectionate toward their baby, they may simultaneously experience a sense of invasion from their babies. For example, parents may endorse items such as "My baby wants too much attention," reflecting a nuanced interplay between positive affective experiences and feelings of being overwhelmed within the parent-baby relationship. To the statement 'My child wants too much attention', 43% of Turkish parents answered 'always', while 40% of Indian mothers answered 'always'. The higher invasion scores observed among Turkish mothers may be influenced not only by individual stress levels but also by cultural expectations surrounding maternal responsibility. In traditional caregiving contexts, mothers often bear the primary burden of childcare, leading to perceptions of being emotionally and physically overwhelmed (Cooke et al., 2023). This is consistent with the finding that although warmth and invasion can coexist, feelings of being "invaded" by the infant's needs may reflect maternal overload rather than actual hostility toward the child.

In this study, Turkish mothers reported significantly higher scores on the invasion subdimension compared to fathers, while no significant gender difference was found in warmth scores. These findings suggest that mothers may perceive the infant's demands as more emotionally intrusive, possibly as a result of traditional caregiving roles and the greater caregiving burden they typically bear. Similar patterns were

observed in the Persian validation of the MORS-SF by Shiri et al. (2024), where cultural norms appeared to influence how parental invasion was perceived and reported. Such results underscore the importance of localizing psychometric tools to reflect culturally shaped parental experiences. Bhopal et al. (2022) found that warmth scores on the MORS-SF were positively associated with home environment quality, whereas higher invasion scores were negatively correlated with these outcomes. Additionally, a Hungarian study by Szabó et al. (2023) found that higher levels of mindful parenting were linked to increased warmth and reduced invasion perceptions, suggesting underlying psychological mechanisms influencing parental representations. These findings align with our results showing the distinct yet related nature of warmth and invasion in Turkish parents, and support the cross-cultural validity of the scale as demonstrated in earlier British and Hungarian adaptations (Oates et al., 2018).

Findings indicated that parents with more than two children reported lower scores on both the warmth and invasion subdimensions. This may be due to the reduced emotional and attentional resources available in larger families, a phenomenon described by the resource dilution model (Downey, 2001). Furthermore, we observed that warmth and invasion scores increased with the child's age. As children grow, their behaviors become more complex and expressive, potentially triggering a wider range of emotional responses from parents. This is supported by findings from Rothenberg et al. (2020), who reported that parental warmth and control perceptions shifted over time and had varying effects on children's internalizing behaviors across different cultures, reflecting developmental and contextual influences. In addition, mothers in our sample had higher invasion scores than fathers, and parents of boys reported more perceived invasion than those of girls. These results align with prior cross-cultural research indicating that parental perceptions and emotional responses vary based on both parental role and child gender. For instance, Rothenberg et al. (2022) demonstrated that maternal acceptance-rejection patterns had stronger predictive power on children's internalizing and externalizing symptoms, and these patterns were significantly moderated by cultural norms and expectations around caregiving roles and child behavior.

Conclusion and Recommendations

Factor analysis and Cronbach's alpha results showed that all items of the MORS-SF have good reliability and validity in Turkish society. Furthermore, the fact that no item was removed from the scale confirms that all items are

appropriate for the Turkish culture. The findings also revealed culturally relevant patterns such as higher invasion scores among mothers, which may reflect the unequal distribution of caregiving responsibilities in Turkish families. However, the inclusion of fathers and the identification of similar emotional patterns, such as moderate levels of perceived intrusion, suggest that changing gender roles and increasing paternal involvement are influencing early parent-infant relationship dynamics in Türkiye.

From a clinical perspective, the MORS-SF can serve as a brief yet effective screening tool in primary care settings, such as family health centers, during routine well-child visits. Health professionals could use the tool to identify parents at risk for relational stress, and refer them to support interventions, such as parenting education or counseling. This approach may be especially valuable in early postpartum months when support needs are highest. Based on these results, it is recommended that the MORS-SF be used not only to screen for early relational difficulties but also to guide culturally sensitive and inclusive interventions. Parent-focused programs should be adapted to the evolving structure of parenting in Türkiye and actively include fathers as equal partners in early caregiving.

Ethics Committee Approval: Ethics committee approval was received for this study from the ethics committee of Anadolu University (Date: August 26, 2024, Number: 767032).

Informed Consent: Parents who participated in the study were asked to fill in the informed consent form.

Peer-review: Externally peer-reviewed.

Author Contributions: Concept -GYB; Design-GYB; Supervision-GYB; Resources-GYB; Data Collection and/or Processing-GYB; Analysis and/or Interpretation-GYB; Literature Search-GYB; Writing Manuscript-GYB; Critical Review-GYB; Other-GYB.

Conflict of Interest: The author has no conflicts of interest to declare.

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