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The Relationship between Maternal Emotional Responses to Children's Negative Emotions and Somatization Problems in First and Second Grade Elementary School Children in Malayer City

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Abstract

Introduction: Somatization in childhood refers to the expression of psychological distress through physical symptoms without an identifiable medical cause. Parental emotion socialization, particularly maternal responses to children's negative emotions, may be associated with these symptoms. This study used a cross-sectional correlational design to examine the association between maternal emotional reactions and somatic complaints in early elementary school children.

Method: In this cross-sectional correlational study, 454 mother–child dyads were recruited using multistage cluster sampling from elementary schools in Malayer, Iran. After excluding cases with incomplete data, 429 mother–child dyads were included in the final analyses. Mothers completed the Child Behavior Checklist (CBCL) Somatic Complaints subscale and the Coping with Children's Negative Emotions Scale (CCNES), which assesses supportive and non-supportive maternal reactions. Data were analyzed using Pearson correlation and multiple linear regression.

Results: Non-supportive maternal reactions were positively associated with children's somatic complaints ($r = 0.20$, $p < 0.001$). In the regression analysis, only non-supportive reactions were significantly associated with somatic complaints ($\beta = 0.20$, $p < 0.001$), whereas supportive reactions were not ($\beta = -0.01$, $p = 0.835$). The overall model explained 4.1% of the variance in children's somatic complaints ($R^2 = 0.041$).

Conclusion: Non-supportive maternal reactions showed a modest but statistically significant association with children's somatic complaints, whereas supportive reactions were not significantly associated with somatic complaints. Given the small effect size and the cross-sectional design, the findings should be interpreted cautiously. Longitudinal studies are needed to clarify the direction and mechanisms of these associations.

Keywords: Somatization, Maternal Emotional Responses, Emotion Regulation, Parenting

Introduction

Childhood is one of the most critical developmental periods, during which biological, psychological, and social experiences establish the foundation for health and well-being across the lifespan [1]. Children frequently report physical discomforts and health concerns, although many of these complaints cannot be fully explained by identifiable medical conditions. Such complaints are common reasons for repeated visits to school health services, school absenteeism, and increased healthcare utilization, placing a considerable burden on children, families, and educational systems [2, 3].

Somatization in childhood refers to the manifestation of psychological distress through

physical symptoms that cannot be fully explained by an underlying medical condition. Common symptoms include recurrent headache, abdominal pain, dizziness, fatigue, nausea, and musculoskeletal pain, all of which may substantially interfere with children's daily functioning and school participation [1, 4]. Growing evidence indicates that somatic complaints frequently coexist with emotional difficulties, particularly anxiety and depression, and may represent one pathway through which psychological distress is expressed during childhood [1, 4, 5].

Current evidence conceptualizes childhood somatization as a multifactorial condition resulting from the interaction of biological vulnerability, psychological processes, family functioning, and environmental influences rather than any single causal mechanism [1]. Although some physical symptoms have clear medical explanations, many recurrent somatic complaints emerge in the context of psychosocial stressors within the family or school environment [1]. Children who experience difficulties recognizing, understanding, or verbally expressing negative emotions may be especially likely to communicate emotional distress through physical symptoms. Nevertheless, this mechanism should be considered one of several possible developmental pathways contributing to childhood somatization rather than a universal explanation [1, 6, 7, 8].

Early identification of recurrent somatic complaints is clinically important because persistent symptoms have been associated with subsequent emotional disorders, functional impairment, reduced quality of life, and increased healthcare utilization [3, 5]. A recent systematic review and meta-analysis reported that approximately one-third of children and adolescents experience recurrent somatic symptoms, although diagnosed somatic symptom disorders are considerably less common, highlighting substantial heterogeneity across populations and assessment methods [5]. Furthermore, recurrent somatic complaints are consistently associated with poorer academic adjustment, impaired psychosocial functioning, sleep disturbances, and elevated levels of internalizing symptoms, suggesting that childhood somatization should be understood within a broader biopsychosocial framework [5, 2].

Attachment theory proposes that repeated interactions with primary caregivers shape children's expectations regarding emotional availability and influence the development of emotion regulation capacities across childhood [9, 10]. Rather than directly causing physical symptoms, insensitive or emotionally invalidating caregiving may contribute to less adaptive emotion regulation, greater psychological distress, and ultimately an increased likelihood of emotional and behavioral difficulties, including somatic complaints [6, 11].

Similarly, Gross's process model of emotion regulation emphasizes that children's ability to identify, understand, and regulate emotions develops through repeated interpersonal experiences with caregivers who provide emotional guidance and socialization [12]. Within this framework, parental reactions to children's negative emotions represent an important mechanism of emotion socialization. Supportive reactions including problem-focused assistance, emotion-focused comfort, and encouragement of emotional expression may promote children's emotional competence and adaptive regulation. In contrast, non-supportive reactions, such as punitive, minimizing, or distressed responses, may interfere with children's acquisition of effective emotion regulation skills and increase vulnerability to emotional distress [13, 14].

Consistent with these theoretical perspectives, previous studies have shown that parental emotion socialization is associated with children's emotional adjustment, internalizing symptoms, behavioral functioning, and psychosomatic health [15, 8]. Nevertheless, relatively few investigations have specifically examined maternal reactions to children's negative emotions in relation to somatic complaints during early childhood. Moreover, most available evidence has been derived from Western populations, adolescent samples, or clinical settings, whereas evidence from community-based samples of younger school-aged children in non-Western cultural contexts remains limited [15, 8, 16]. Consequently, it remains unclear whether supportive and non-supportive maternal reactions demonstrate differential associations with somatic complaints during the early years of elementary school.

Accordingly, the present cross-sectional correlational study examined the association between maternal supportive and non-supportive reactions to children's negative emotions and somatic complaints among first- and second-grade elementary school children in Iran.

Method

This study employed a cross-sectional correlational design to examine the association between maternal supportive and non-supportive reactions to children's negative emotions and children's somatic complaints. Because of the cross-sectional nature of the study, the direction of the observed associations cannot be determined, and causal inferences cannot be made.

The target population consisted of first- and second-grade elementary school children and their mothers in Malayer, Iran, during the 2018–2019 academic year. The required sample size was estimated using GPower software based on an expected effect size of 0.15, a significance level of 0.05, and a statistical power of 0.95, resulting in a target sample of 454 mother–child dyads.

A multistage cluster sampling procedure was employed. First, five elementary schools were randomly selected. Within each selected school, two or three first- and second-grade classrooms were randomly chosen, and meetings were organized for mothers of students in those classrooms.

The inclusion criteria were: (a) children enrolled in the first or second grade of regular elementary schools, (b) children living with both biological parents, and (c) mothers willing to participate in the study. The inclusion criterion requiring children to live with both biological parents was adopted to reduce potential confounding

associated with major family structural changes (e.g., parental separation, divorce, or parental death), which may independently influence children's emotional and behavioral adjustment. This criterion was intended to improve the internal validity of the study by reducing heterogeneity in the family structure rather than implying greater risk among children from other family arrangements.

The exclusion criteria included mothers who were unable to complete the questionnaires independently, mothers who declined participation, and questionnaires with substantial missing data. Mothers who were unable to complete the questionnaires independently were excluded because both study instruments were self-report measures requiring adequate reading comprehension to ensure accurate and complete responses. This decision was made to maintain data quality rather than to exclude any particular socioeconomic group.

A total of 454 mother–child dyads initially participated in the study. After data screening, 25 questionnaires (5.5%) were excluded because of incomplete responses on one or more study variables. Consequently, data from 429 mother–child dyads were included in the final analyses. No formal comparison was performed between included and excluded participants; therefore, the possibility of attrition bias cannot be ruled out.

After obtaining an approval from the Ethics Committee of Malayer University and permission from the local Department of Education, the research team contacted the principals of the selected elementary schools to arrange data collection. Meetings were organized at each participating school for mothers of first- and second-grade students.

At the beginning of each meeting, the principal investigator (Ph.D. in Psychology of Exceptional Children) delivered a brief psychoeducational lecture on normative child development, common developmental and behavioral difficulties, and the importance of early identification of children's emotional and behavioral problems. The presentation was intended as a general educational activity for parents and was not designed as part of the research protocol. It did not include information about the study hypotheses, maternal reactions to children's negative emotions, somatic complaints, or the expected relationships among the study variables.

Following the presentation, mothers were informed about the study objectives and were invited to participate voluntarily. Written informed consent was obtained from those who agreed to participate. Mothers who consented received the study questionnaires and completed them individually during the same session in a quiet classroom. Participants were instructed to answer the questions independently and honestly. Members of the research team were available only to clarify procedural questions and did not provide guidance regarding questionnaire responses. Completion of the questionnaires required approximately 25–30 minutes, and all questionnaires were collected immediately after completion.

Participation was entirely voluntary, and mothers who chose not to participate were free to leave the meeting without any consequences. After all questionnaires had been collected, mothers who requested professional advice regarding their children's emotional or behavioral functioning received brief individual consultation from the principal investigator. Because this consultation was offered only after questionnaire completion, it could not have influenced participants' responses.

Data were analyzed using IBM SPSS Statistics version 26. Descriptive statistics (means, standard deviations, frequencies, and percentages) were calculated to summarize participants' demographic characteristics and study variables. Pearson's correlation coefficients were computed to examine bivariate associations between maternal emotional reactions and children's somatic complaints. Subsequently, multiple linear regression analysis (Enter method) was performed to examine the associations between supportive and non-supportive maternal reactions and children's somatic complaints.

Before conducting the regression analysis, the assumptions of linear regression were evaluated. Multicollinearity was assessed using tolerance and Variance Inflation Factor (VIF) values. Tolerance values were 0.98 and VIF values were 1.01 for both predictor variables, indicating no evidence of problematic multicollinearity. Independence of residuals was examined using the Durbin–Watson statistic (1.61), suggesting acceptable independence of errors. Normality of residuals was evaluated using standardized normal probability plots and inspection of standardized residuals, and no substantial deviations from normality were observed.

Although 454 mothers initially agreed to participate, analyses were conducted using data from 429 participants with complete information on the study variables. Cases with missing data were excluded using listwise deletion. Because of the cross-sectional correlational design, the regression analyses were interpreted as estimates of statistical association rather than evidence of causal or temporal relationships.

The tools used in this study were as follows:

Child Behavior Checklist (CBCL): The Child Behavior Checklist for Ages 6–18 (CBCL/6–18), developed by Achenbach and Rescorla, is a widely used parent-report instrument designed to assess children's emotional and behavioral problems. The questionnaire contains 113 items rated on a three-point Likert scale (0 = not true, 1 = somewhat or sometimes true, and 2 = very true or often true). The CBCL yields scores for broadband dimensions, syndrome scales, and DSM-oriented scales. The present study used the DSM-oriented Somatic Problems subscale as the outcome measure. Higher scores indicate greater severity of somatic complaints. The Persian version of the CBCL has previously demonstrated acceptable psychometric properties in Iranian children, with evidence supporting its reliability and construct validity [18]. In the present sample, the internal consistency of the DSM-oriented Somatic Problems subscale was acceptable ($\alpha = 0.65$).

Coping with Children's Negative Emotions Scale (CCNES):

The Coping with Children's Negative Emotions Scale (CCNES) was developed by Fabes, Eisenberg, and Bernzweig [13] in order to assess parental responses to children's negative emotional experiences. The instrument presents 12 hypothetical situations in which children experience negative emotions such as sadness, anger, fear, or frustration. Parents indicate how likely they are to respond in each manner using a seven-point Likert scale ranging from 1 (very unlikely) to 7 (very likely). The original instrument comprises six response dimensions: problem-focused responses, emotion-focused responses, expressive encouragement, minimization reactions, punitive reactions, and distressed reactions. Consistent with previous research, these six dimensions were aggregated into two higher-order composite scores. Supportive reactions consisted of the problem-focused, emotion-focused, and expressive encouragement subscales, whereas non-supportive reactions consisted of the minimization, punitive, and distressed response subscales. These two composite scores served as the principal predictor variables in the present study. The validated Persian version developed by Kosari and Esmaeilinasab [14] was used in this study. Previous research has demonstrated acceptable construct validity and internal consistency for the Persian version. In the present sample, Cronbach's alpha coefficients were 0.92 for the supportive reactions composite and 0.83 for the non-supportive reactions composite, indicating excellent and good internal consistency, respectively. Because the aim of the present study was to investigate associations among variables rather than to evaluate the psychometric properties of the instrument, the previously validated Persian version was used without re-examining its factor structure.

Results

Data from 429 mother–child dyads with complete data on the study variables were included in the final analyses. Among the participating children, 163 (37.9%) were boys and 266 (62.1%) were girls. The mean age of the children was 7.11 years (SD = 0.58), and the mean age of their mothers was 33.9 years (SD = 5.37). Most mothers (86.7%) had a high school diploma or lower educational attainment, and 95.5% were homemakers. Descriptive statistics for the main study variables have been presented in Table 1.

Pearson correlation coefficients were computed to examine the associations among the study variables (Table 2). Non-supportive maternal reactions were positively associated with children's somatic complaints ($r = 0.20$, $p < .001$), indicating that mothers who reported greater use of non-supportive reactions tended to report higher levels of somatic complaints in their children. In contrast, supportive maternal reactions were not significantly associated with children's somatic complaints ($r = 0.01$, $p = .713$). A weak positive correlation was observed between supportive and non-supportive reactions ($r = 0.13$, $p = .005$).

Multiple linear regression analysis was conducted to examine the associations between maternal emotional reactions and children's somatic complaints. Prior to model estimation, the assumptions of multiple regression were evaluated. Multicollinearity was not evident (Tolerance = 0.98; VIF = 1.01 for both predictors), and the Durbin–Watson statistic (1.61) indicated acceptable independence of residuals. Inspection of standardized residuals and normal probability plots revealed no substantial violations of normality assumptions.

The overall regression model was statistically significant, $F(2, 426) = 9.10$, $p < .001$, explaining 4.1% of the variance in children's somatic complaints ($R^2 = 0.04$, Adjusted $R^2 = 0.03$). Although the explained variance was modest, the model indicated a statistically reliable association between maternal emotional reactions and children's somatic complaints. As shown in Table 5, non-supportive maternal reactions were significantly and positively associated with children's somatic complaints ($\beta = .20$, $p < .001$). In contrast, supportive maternal reactions were not significantly associated with children's somatic complaints ($\beta = -0.01$, $p = 0.835$).

Table 1. Descriptive Statistics of the Main Study Variables

Variable	N	Mean	SD	Minimum	Maximum
Somatic complaints	429	1.23	1.73	0	10
Supportive reactions	429	60.18	17.43	19	84
Non-supportive reactions	429	17.63	9.12	2	38

Table 2. Pearson Correlations Among the Main Study Variables

Variable	1	2	3
1. Somatic complaints	—		
2. Supportive reactions	0.01	—	
3. Non-supportive reactions	0.20**	0.13**	—

Note. **p < 0.01.

Table 3. Summary of the Multiple Regression Model

R	R^2	Adjusted R^2	Std. Error	Durbin–Watson
0.20	0.04	0.03	1.69	1.61

Table 4. Analysis of Variance for the Regression Model

Source	SS	df	MS	F	p
Regression	52.50	2	26.25	9.10	< 0.001
Residual	1228.55	426	2.88		
Total	1281.06	428			

Table 5. Multiple Linear Regression Predicting Children's Somatic Complaints

Predictor	B	SE	β	t	p
Constant	0.60	0.31	—	1.89	0.059
Supportive reactions	-0.001	0.005	-0.01	-0.20	0.835
Non-supportive reactions	0.03	0.009	0.20	4.25	< 0.001

Discussion

The present study examined the associations between maternal reactions to children's negative emotions and somatic complaints among first- and second-grade elementary school children. Two main findings emerged. First, non-supportive maternal reactions were positively associated with children's somatic complaints and remained significantly associated after controlling for supportive reactions. Second, supportive maternal reactions were not significantly associated with children's somatic complaints. Although the overall regression model was statistically significant, it explained a relatively small proportion of the variance in somatic complaints, indicating that maternal emotional reactions represent only one component of a broader network of factors associated with childhood somatic symptoms. Therefore, the findings should be interpreted as evidence of statistical associations rather than causal relationships.

The positive association between non-supportive maternal reactions and children's somatic complaints may be understood within the framework of emotion socialization theory. According to this perspective, children's understanding and regulation of emotions develop through repeated interactions with caregivers [9, 12, 15]. When children's expressions of sadness, fear, anger, or frustration are consistently met with criticism, punishment, minimization, or parental distress, children receive limited support in identifying, expressing, and managing these emotional experiences. Consequently, emotional arousal may remain unresolved and be expressed through physical complaints rather than verbal communication [1, 6]. Importantly, the present findings do not imply that non-supportive maternal reactions directly cause somatic complaints. Rather, they suggest that such reactions may constitute one interpersonal context associated with the expression of somatic symptoms during early childhood [10, 6]. This interpretation is consistent with contemporary models of emotion regulation, which emphasize that children's regulatory capacities emerge through ongoing interactions between individual characteristics and caregiving environments rather than through parental behaviors alone [12, 15].

This interpretation is also consistent with recent evidence indicating that parents who experience greater difficulties in understanding and responding to children's emotional experiences tend to have children with higher levels of functional somatic symptoms, highlighting the importance of parental emotion-related processes in children's psychosomatic adjustment [8].

The present findings are generally consistent with previous research demonstrating that less supportive parental emotional responses are associated with poorer psychological and psychosomatic adjustment in children and adolescents. For example, Kehoe et al. [15] reported that parents' emotion socialization practices were related to adolescents' somatic complaints, while Rousseau et al. [11] found that maladaptive parenting behaviors were associated with somatization through physiological stress responses. Similarly, Fostini et al. [8] showed that parental reflective functioning and emotion regulation were associated with children's functional somatic symptoms. Although these studies differed from the present investigation in participants' age, cultural context, or conceptualization of parenting behaviors, they converge in suggesting that the quality of parents' responses to children's emotional experiences is associated with children's psychological adjustment, including the expression of somatic symptoms. The consistency of these findings across different populations supports the possibility that emotion-related parenting behaviors represent one of several family factors associated with childhood somatization. [15, 8, 16]

An additional finding of the present study was that supportive maternal reactions were not significantly associated with children's somatic complaints. This result should be interpreted cautiously. The absence of a statistically significant association does not necessarily indicate that supportive emotional responses are unimportant for children's psychological adjustment. Rather, it suggests that, within the context of the present study, supportive reactions were not independently associated with variation in somatic complaints after accounting for non-supportive reactions. Somatic complaints are influenced by multiple biological, psychological, familial, and environmental factors [1,3]. Consequently, the potential contribution of supportive parenting may be relatively small or may depend on other child and family characteristics that were not examined in the present study.

Previous studies have likewise reported inconsistent findings regarding the protective role of supportive parenting in relation to children's somatic symptoms [17, 11, 8, 16]. Differences in children's developmental stage, cultural context, measurement approaches, and the specific dimensions of parenting assessed may partly explain these inconsistencies. Because the present study did not evaluate potential mediating or moderating variables, such as children's emotion regulation abilities, parental psychological distress, or family stress, no conclusions can be drawn regarding the mechanisms underlying the absence of a significant association. Future longitudinal studies incorporating these variables are needed to clarify the conditions under which supportive parental reactions may contribute to lower levels of childhood somatic complaints.

Although the observed association was modest, the findings may have practical implications for professionals working with young children and their families. Awareness of mothers' emotional responses to children's negative

emotions may be useful when assessing children who frequently present with unexplained somatic complaints. Rather than focusing exclusively on children's physical symptoms, clinicians, school psychologists, and counselors may benefit from considering the broader emotional and family context in which these symptoms occur [8]. The present findings support the inclusion of parental emotion socialization as one of several domains that may be explored during psychological assessment, while recognizing that childhood somatic complaints are influenced by multiple interacting factors.

Because the present study was observational and cross-sectional, the effectiveness of parent-focused interventions cannot be inferred from these findings alone. Nevertheless, future intervention studies may examine whether programs designed to enhance supportive emotional communication and reduce non-supportive parental reactions are associated with improvements in children's emotional adjustment and somatic complaints. Such hypotheses require confirmation through longitudinal and experimental research.

Several limitations should be considered when interpreting the findings of the present study. First, the cross-sectional correlational design precludes any conclusions regarding the temporal direction or causality of the observed associations. Although non-supportive maternal reactions were associated with higher levels of children's somatic complaints, it is equally plausible that children with more frequent somatic complaints may evoke different emotional responses from their mothers, or that both variables are influenced by other unmeasured factors. Longitudinal and prospective studies are needed to clarify the directionality of these associations.

Second, all study variables were obtained from maternal self-report questionnaires. Consequently, the observed associations may have been influenced by shared method variance and reporting bias. Mothers who perceive their children as having more behavioral or emotional difficulties may also report their own parenting behaviors differently. Future studies should incorporate multiple informants, including fathers, teachers, clinicians, or direct behavioral observations, to reduce the possibility of common method bias.

Third, participants were recruited using multistage cluster sampling from elementary schools in Malayer. Although schools and classes were randomly selected, the clustered structure of the data was not explicitly modeled in the statistical analyses. Ignoring potential clustering at the school or classroom level may have affected the estimation of standard errors. Future studies with larger samples should consider multilevel analytical approaches when cluster sampling is employed.

Fourth, the inclusion criteria restricted participation to children living with both parents and mothers who were able to complete written questionnaires. These criteria were adopted to ensure that the primary caregiver could reliably complete the study measures and to reduce heterogeneity in caregiving arrangements. Nevertheless, these decisions may have limited the generalizability of the findings to children from single-parent families or families with different socioeconomic and educational backgrounds.

Finally, the study was conducted in a single Iranian city, and the sample consisted predominantly of homemaker mothers with relatively low educational attainment. Parenting practices and the expression of children's emotional and somatic symptoms may vary across cultural and socioeconomic contexts. Therefore, caution is warranted when generalizing the findings to other regions or populations. Replication in more diverse cultural and demographic samples is recommended.

Conclusion

The present study found that non-supportive maternal reactions to children's negative emotions were modestly associated with higher levels of somatic complaints among first- and second-grade elementary school children, whereas supportive reactions were not significantly associated with children's somatic symptoms. Although the observed effect size was small, the findings contribute to the growing literature highlighting the potential importance of parental emotion socialization in children's psychosocial adjustment.

These findings suggest that children's somatic complaints should be understood within a broader biopsychosocial framework in which parental emotional responses represent one of several interacting familial factors. Accordingly, consideration of parent–child emotional interactions may complement the psychological assessment of children presenting with recurrent somatic complaints. However, because of the cross-sectional correlational design, no conclusions can be drawn regarding causal relationships or the effectiveness of parent-focused interventions.

Future longitudinal and intervention studies are needed to clarify the temporal relationships between parental emotional responses and childhood somatic complaints, to examine potential mediating mechanisms such as children's emotion regulation, and to identify additional individual, familial, and environmental factors that contribute to the development and maintenance of somatic symptoms.

Conflict of Interest

The authors declare that there are no financial, professional, or personal conflicts of interest that could have influenced the results or interpretation of this study.

Ethical Approval

This study was conducted in full accordance with ethical principles for research involving human participants. The research protocol was approved by the Ethics Committee of Malayer University (Ethics Code: IR.MALAYERU.REC.1399.006). Written informed consent was obtained from all participating mothers prior to inclusion in the study. Participants were assured of confidentiality and informed of their right to withdraw from the study at any stage without any consequences.

Declaration of Generative AI and AI-Assisted Technologies

The authors used ChatGPT (OpenAI, GPT-5.5) to assist with improving the clarity, grammar, language editing, and academic writing of the manuscript. The AI-assisted output was carefully reviewed, revised, and verified by the authors. The authors take full responsibility for the accuracy, integrity, and originality of the final content of this publication.

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References

1. Díez-Suárez A, Hernández-González C. Somatization in childhood and adolescence: a guide to facilitate its understanding. Anales de Pediatría (English Edition). 2025 Feb 13:503711. Doi:10.1016/j.anpede.2025.503711
2. Meyer RM, Fleischman KM, Young CM, Gold JI. Somatization, fatigue, and quality of life in children and adolescents with chronic pain. J Child Fam Stud. 2020;29:1293–1300. Doi:10.1007/s10826-019-01624-0
3. Vesterling C, Schütz-Wilke J, Bäker N, Bolz T, Eilts J, Koglin U, Rademacher A, Goagoses N. Epidemiology of Somatoform Symptoms and Disorders in Childhood and Adolescence: A Systematic Review and Meta- Analysis. Health & Social Care in the Community. 2023;2023(1):6242678. Doi:10.1155/2023/6242678
4. Semen MO, Lychkovska OL. Trait anxiety and somatization levels in children with irritable bowel syndrome. Childs Health. 2023;18(1):53–59. Available from: Doi:10.22141/2224-0551.18.1.2023.1559
5. Pardej SK, Waschbusch DA, Calhoun SL, Mayes SD. Somatic symptoms in a population-based sample from childhood to adolescence: Stability and concurrent and longitudinal predictors. Child Psychiatry Hum Dev. 2024;1–10. Doi:10.1007/s10578-024-01578-z
6. Yesil H, Özdogan B, Ünübol H, Sayar GH. Examining the relationship between attachment, somatization, and expressing emotions. The Journal of Neurobehavioral Sciences. 2021 May 1;8(2):119-24. DOI: Doi:10.4103/jnbs.jnbs_19_21
7. Suveg C, Shaffer A, Morelen D, Thomassin K. Links between maternal and child psychopathology symptoms: Mediation through child emotion regulation and moderation through maternal behavior. Child Psychiatry & Human Development. 2011 Oct;42:507-20. Doi:10.1007/s10578-011-0223-8
8. Fostini A, Zaravinos-Tsakos F, Kolaitis G, Giannakopoulos G. Parents' Reflective Functioning, Emotion Regulation, and Health: Associations with Children's Functional Somatic Symptoms. Psychology International. 2025 Apr 3;7(2):31. Doi:10.3390/psycholint7020031
9. Bowlby J. The Bowlby-Ainsworth attachment theory. Behavioral and Brain Sciences. 1979;2(4):637–8. Doi:10.1017/S0140525X00064955
10. Markosyan A. Exploring the impact of caregiver separation in childhood on adult anxiety, attachment style, and emotion regulation and the role of substitute caregivers [doctoral dissertation]. San Diego: Alliant International University; 2023.
11. Rousseau S, Grietens H, Vanderfaeillie J, Hoppenbrouwers K, Wiersema JR, Baetens I, Vos P, Van Leeuwen K. The association between parenting behavior and somatization in adolescents explained by physiological responses in adolescents. International Journal of Psychophysiology. 2014 Aug 1;93(2):261-6. Doi:doi.org/10.1016/j.ijpsycho.2014.05.008
12. Gross JJ. Conceptual foundations of emotion regulation. In: Gross JJ, Ford BQ, editors. Handbook of emotion regulation. 3rd ed. Guilford Press; 2024. p. 3-12.
13. Fabes RA, Poulin RE, Eisenberg N, Madden-Derdich DA. The Coping with Children's Negative Emotions Scale (CCNES): Psychometric properties and relations with children's emotional competence. Marriage & Family Review. 2002. Doi:10.1300/J002v34n03_05
14. Kosari F., Esmaeilinasab M.. The Relation Between Mothers' Cognitive Emotion Regulation Style and Their Reactions to Children' s Negative Emotions. Journal of Family Research. 2018;14(54):237-251. [Persian]
15. Kehoe CE, Havighurst SS, Harley AE. Somatic complaints in early adolescence: The role of parents' emotion socialization. The Journal of Early Adolescence. 2015 Oct;35(7):966-89. Doi:10.1177/0272431614547052
16. Grigorian K, Östberg V, Raninen J, Låftman SB. Parenting Practices and Psychosomatic Complaints Among Swedish Adolescents. Int J Public Health. 2023;68:1606580. Doi:10.3389/ijph.2023.1606580
17. Renzi A, Lionetti F, Bruni O, Parisi P, Galli F. Somatization in children and adolescents with headache: the role of attachment to parents. Current Psychology. 2024 Apr;43(16):14358-66. Doi:10.1007/s12144-023-05466-4