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Effects of Turkish family life and child-rearing attitudes on the development of functional constipation in infants

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Abstract

Objectives: The aim of this study was to investigate the effect of Turkish family life and child-rearing attitudes on the development of functional constipation (FC) in infants aged between three and 12 months.

Patients and methods: Between June 2024 and September 2024, a total of 72 mothers (mean age: 29.4±3.6 years; range, 25 to 38 years) were included in this prospective study. The constipated group consisted of 36 mothers of infants between the ages of three to 12 months who were admitted to the hospital due to constipation and diagnosed with FC according to Rome IV criteria. The control group included 36 mothers and was selected from those of infants admitted to the hospital for any reason other than constipation between the same dates. Demographic characteristics of the participants and data obtained using the Parental Attitude Research Instrument (PARI test) were evaluated.

Results: The mean age of infants diagnosed with FC was 8.72±2.41 (range, 3 to 12) months. Demographically, mothers of infants diagnosed with constipation had lower educational level. No relationship was found between employment status of the mothers and constipation. The participants in the constipated group were more likely to be overprotective mothers (p=0.001) and to reject the role of homemaker (p=0.002). Also, husband-wife discord (p=0.000) and oppressive discipline (p>0.001) were higher than in the control group. Democratic attitude and equality recognition mean scores (p=0.002) were higher in the control group.

Conclusion: Considering family therapy in the approach to infants with FC may add a new dimension to treatment and may significantly affect treatment planning and intervention strategies.

Keywords: Functional constipation, infants, psychological stress, psychosomatic.

Constipation, which is defined as hard, painful and infrequent defecation in general, is an extremely common gastrointestinal disorder in children. It is observed in 3 to 5% of children admitted to general pediatric outpatient clinics and in 10 to 25% of children admitted to pediatric gastroenterology clinics.[1] The majority of cases (96%) are due to functional causes.[2] Functional constipation (FC) is defined as the act of stool retention, despite the normal functioning of the structure and nerve equipment of the intestine.[3] The prevalence of pediatric FC was reported to be between 0.7 and 29.6%.[4]

In the early period, when the mental apparatus is not sufficiently developed and language is not used as a means of expression, the baby is highly psychosomatic.[5] Considering the possibility that constipation may emerge as a symptom resulting from psychological concerns, it is mandatory to examine the temperament, attitude and psychological characteristics of the mother with whom the baby has the first contact in the early period.[6] The infant is intertwined with the spirituality of the mother in the early period and is affected one-to-one.[7,8] Studies reported that the incidence of constipation in the infantile period is between 8.3 and 11.7%.[9]

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In the literature, few studies have examined infantile constipation in the context of maternal psychological characteristics and family life. In the present study, we aimed to examine Turkish family life and child-rearing attitudes in the development of FC in infants aged three to 12 months.

PATIENTS AND METHODS

This single-center, prospective cohort study was conducted at Eskişehir City Hospital, Eşkisehir, Türkiye, Department of Pediatric Surgery between June 2024 and September 2024. The study sample consisted of a total of 72 mothers (mean age: 29.4±3.6 years; range, 25 to 38 years) of infants between the ages of three to 12 months who were admitted to our clinic. Written informed consent was obtained from the mothers of the infants. The study protocol was approved by the Eskişehir City Hospital Scientific Research Ethics Committee (Date: 27.06.2024, No: ESH/BAEK 2024/33). The study was conducted in accordance with the principles of the Declaration of Helsinki.

The constipated group consisted of 36 mothers of infants between the ages of three to 12 months who were admitted to the hospital due to constipation and diagnosed with FC according to Rome IV criteria. The diagnosis of FC was made by considering the criteria of defecation frequency of two times a week or less for at least one month, stretching of the body during defecation, red coloration of the face, grimacing and crying based on Rome IV criteria.[9] The control group included 36 mothers and was selected from those of infants admitted to the hospital for any reason other than constipation between the same dates. To minimize the influence of adverse factors, the sample group was composed of mothers with equivalent sociodemographic characteristics. Those with a history of organic gastrointestinal diseases (e.g., celiac disease, inflammatory bowel disease, food allergy, and gastrointestinal tract surgery) were excluded. In this study, demographic characteristics of the participants and the results of the Parental Attitude Research Instrument (PARI) questionnaire were used.

Questionnaires

Data collection was conducted using a two-section questionnaire.

Section 1: Questions about demographic information such as the age of the baby and the mother, and the mother's education and employment status.

Section 2 (PARI): The Parental Attitude Research Instrument was first developed by Schoefer and Bell[10] in the United States. The scale, which was adapted into Turkish by Le Compte et al.[11] and reorganized in accordance with the conditions in our country, consists of 60 items. Each item is evaluated according to a 4 (1-4) point scale. The 2nd, 29th, and 44th questions on the scale are reverse graded. The scale consists of five sub-dimensions: "overprotective motherhood", "rejection of the role of homemaker", "democratic attitude and recognition of equality", "husband-wife discord" and "oppression-discipline".

Statistical analysis

Statistical analysis was performed using the IBM SPSS for Windows version 28.0.1.1 software (IBM Corp., Armonk, NY, USA). Continuous data were expressed in mean ± standard deviation (SD) or median (min-max), while categorical data were expressed in number and frequency. The chi-square test was used to detect differences in constipation and control groups for categorical variables, with the confidence interval (CI) set at 95%. The independent sample t-test was used to analyze differences between means of continuous variables. Tests were two-tailed with CI set at 95%. Multiple logistic regression analysis was performed using a model which included all variables found to have a significant association with FC during univariate analysis. The adjusted odds ratio (OR) and independent association between FC and risk factors were determined. A p value of <0.05 was considered statistically significant.

RESULTS

Twelve mothers could not answer the questionnaires; therefore, these patients were excluded from the study. The mean age of infants diagnosed with FC was 8.72±2.41 (range, 3 to 12) months. Considering the demographic characteristics of the mothers who participated in the study, the age range of the mothers was between 25 and 38 years (Table 1). While 44.4% of the mothers with infants diagnosed with FC were aged 30 years or younger, 36.1% of the mothers in the control group were aged 30

TABLE 1
Demographic characteristics of the study subjects according to group

	Constipated group		Control group		Total	
	n	%	n	%	n	%
Age range of mothers						
30 years old and under	16	44.4	13	36.1	29	40.3
Over 30 years old	20	55.6	23	63.9	43	59.7
Education status						
Basic education	24	66.7	15	41.7	39	54.2
University	12	33.3	21	58.3	33	45.8
Employment status						
Yes	11	30.6	20	55.6	31	43.2
No	25	69.4	16	44.4	41	56.8
Total	36	100.0	36	100.0	72	100.0

years or younger. Only 33.3% of the mothers with infants diagnosed with constipation were university graduates, whereas 58.3% of the mothers in the control group were university graduates. Only 30.5% of the mothers of infants with FC were employed, whereas 52.5% of the mothers in the control group were employed.

The "overprotective mothering" scores of mothers with infants diagnosed with constipation ($\bar{x}$=52.849) were higher than the "overprotective mothering" scores of mothers with infants without constipation ($\bar{x}$=44.212). As a result of the t-test conducted to determine whether the "overprotective mothering" mean scores of the mothers participating in the study were significantly different according to the group variable, the difference between the group means was found to be statistically significant ($p<0.05$). The "democratic attitude and recognition of equality" scores of mothers in the control group ($\bar{x}$=34.303) were higher than the scores of mothers in the constipation group ($\bar{x}$=31.212). As a result of the t-test conducted to determine whether the "democratic attitude and recognition of equality" mean scores for mothers participating in the study showed a significant difference according to the group variable, the difference between the group averages was found to be statistically significant ($p<0.05$).

The "refusal of homemaking role" scores ($\bar{x}$=40.394) for mothers in the constipation group were higher than the "refusal of homemaking role" scores ($\bar{x}$=32.667) for mothers with infants without constipation diagnosis. As a result of the t-test conducted to determine whether the mean scores for mothers who participated in the study were significantly different according to the group variable, the difference between the group averages was statistically significant ($p<0.05$). The "husband-wife incompatibility" scores ($\bar{x}$=22.303) for mothers with infants with constipation were higher than the "husband-wife incompatibility" scores ($\bar{x}$=17.909) for mothers with infants without constipation. As a result of the t-test conducted to determine whether the "husband-wife incompatibility" mean scores of mothers participating in the study showed a significant difference according to the group variable, the difference between the group means was found to be statistically significant ($p<0.05$). The "pressure-discipline" scores of mothers with infants diagnosed with constipation ($\bar{x}$=51.182) were higher than the "pressure-discipline" scores of mothers with infants without constipation ($\bar{x}$=38.030). As a result of the t-test conducted to determine whether the "pressure-discipline" mean scores for mothers participating in the study showed a significant difference according to the group variable, the difference between the group means was found to be statistically significant ($p<0.05$). The statistical comparison of family life and child-rearing attitudes in the groups is summarized in Table 2.

TABLE 2
Statistical comparison of family life and child-rearing attitudes in the groups

	Constipated group (n=36)	Control group (n=36)		
	Mean±SD	Mean±SD	t(64)	*p*
Overprotective mothering	52.849±11.342	44.212±9.736	3.319	0.001
Democratic attitude and recognition of equality	31.212±4.608	34.303±3.167	3.176	0.002
Rejecting the role of a homemaker	40.394±7.314	32.667±6.003	4.691	0.000
Husband-wife discord	22.303±4.194	17.909±3.234	4.766	0.000
Oppressive discipline	51.182±9.580	38.030±9.976	5.462	0.000

SD: Standard deviation.

DISCUSSION

According to the psychoanalytic approach, the body and the psyche are a whole and cannot be considered to function separately from each other.[12] The word "psychosomatic" was introduced based on the idea that emotional conflicts occurring in the psychic apparatus may cause somatic symptoms.[13] According to this idea, constipation is considered to be a symbolic expression of the effort to maintain possession of something precious and not to let it go. Inadequacies and deficiencies experienced in the mother-infant relationship in the early period lead to symbolic and emotional disorders that are difficult to repair.[14] Unresolved traumas experienced by parents in the past, mental problems, difficulties of the parents in acting as a harmonious couple, and inadequate satisfaction of the baby's emotions by the mother in the early period may lead to somatic symptoms such as vomiting, encopresis and constipation in infancy and early childhood.[14] When the psychoanalytic literature is examined, the basis for constipation is, indeed, attributed to the inadequacy of the mother's alpha function in the mother-infant relationship in the early period.[15]

To the extent that the mother is able to include and transform her baby's emotional needs, the baby develops the capacity to establish a relationship and make emotional investments in the relationship.[16] At this point, it is possible to talk about the concept of "holding" in early childhood when the baby needs protection, help and attention.[17] Beyond physical holding, the mother's spiritual embrace of the baby causes the mother to function as a "solid shelter". Both physical and spiritual "holding" by the mother creates integrity between the soul and the body and completes the "psychosomatic existence" of the baby.

Democratic attitude is a child-rearing attitude in which control and acceptance-concern are seen together and in a balanced way, the wishes of the child are also given importance and verbal communication is emphasized.[18] Attitudes affect the development of the baby and affect their personality and mental health. However, as time passes, the state of being "one" between the baby and the mother should gradually decrease.[19] After a while, the mother's mental preoccupations with other interests (e.g., her desire for love from her partner) increase and she has to make room for a third person in her mind besides the baby. When the mother's mind makes room for a third, the infant feels a "lack of stimulation" and this activates auto-eroticism and imaginative activities.[20] If the imaginative world, i.e., mentalization, remains poor, the baby's impulses and anxieties are expressed through the body.[21] The necessity of "primary maternal distress" has been mentioned based on the fact that the relationship between the baby and the mother is an inseparable whole during the care of the baby.[22] The sensitized mother who experiences primary maternal concern is one who puts herself in the baby's shoes, thinks for the baby, is there whenever the baby needs her, and offers herself to the baby with a suitable object such as the "breast". This is necessary for healthy development and the formation of a solid self. In the process, the mother's concern for her baby (primary maternal concern) gradually decreases and the baby gains a certain

autonomy of function.[23] In this way, the baby gradually sheds all illusions of strength during the period of complete harmony with the mother. This is necessary for separation and differentiation. In our study, the "democratic attitude and recognizing equality" attitude scores for mothers in the control group were significantly higher than those for mothers in the constipation group.

When a mother's image penetrates through pressure and discipline or overprotective mothering attitude, it becomes difficult for the infant to emerge from the illusion, and individualization and symbolization capacity are negatively affected.[24] In such a situation, the baby, whose symbolization and mentalization capacity cannot develop, may activate the body and develop constipation symptoms, and the mother's attitude may have an effect on the occurrence of this disorder. It is thought that "food" and "toilet" issues, which are the basis of individualization, affect each other. In clinical studies, excessive parental intervention in one of these two areas was observed to interrupt the functioning in the other area, as if "making the parent pay" (children who have difficulty in eating do not want to leave the "diaper" during toilet training, refuse to defecate in the toilet, etc.).[25] The mother's desire and compulsion to give food to the baby may be felt by the baby as a penetration into its body. At this point, with Freud's urge to "take control of one's own body", the baby's effort to become the master of its own organs can be mentioned in relation to constipation.[26] It can be associated with the baby, who is subjected to pressure to eat, feeling they are "in control of their own body" by "holding poop" against the environment's effort to establish control over their body. When the baby sucks their finger, the mother's prevention of this makes the baby's libidinal investments unfavorable and interrupts the baby's pleasure. The lack of space for the baby's auto-eroticism may damage the libidinal relationship between mother and baby, causing the baby to overinvest in the "control drive".[27] In this case, constipation may emerge as a symptom. In our study, the "overprotective motherhood" and "pressure-discipline" attitude scores for mothers in the constipation group were significantly higher than those in the control group.

In addition, the lack of emotional intimacy between mother and father (failure of the lover's censorship to come into play) may cause the mother to place her child in the position of "emotional partner".[28] In such a situation, the father cannot function as a separator, the mother cannot move away from the baby, and the imaginative world of the baby cannot develop. Difficulties in acting as a harmonious couple may lead to somatic symptoms such as vomiting, encopresis and constipation in infancy and early childhood.[29] In our study, mothers of infants diagnosed with constipation had significantly higher "husband-wife discord" scores.

Children with full-time employed mothers may be more likely to be obese compared to children with mothers who are not employed outside the home, as they consume more unhealthy foods and snacks.[30] However, although the consumption of unhealthy foods is considered a risk factor for constipation, we showed in our study that the employment status of mothers was not associated with constipation.

The small sample size, the fact that the study covered only the infantile period between three and 12 months and was completed in a single center were the main limitations to this study. Increasing the sample size and repeating the study would increase the reliability of the study.

In conclusion, psychotherapeutic work with the infant's family in the early period, when the psychological apparatus is not sufficiently developed and language is not used as a means of expression, would be beneficial and may prevent psychosomatic disorders that may be seen later in life. Understanding how family life and child-rearing attitudes intersect with different psychiatric conditions can significantly influence treatment planning and intervention strategies.

Data Sharing Statement: The data that support the findings of this study are available from the corresponding author upon reasonable request.

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