





Evaluation of sleep quality of mothers of children diagnosed with food allergy

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ABSTRACT

Objective: The purpose of the study was to investigate the sleep quality among mothers of food-allergic children.

Material and Methods: The universe of the case–control study contains the mothers of children with food allergy who came to the pediatric allergy and immunology outpatient clinic for the case group. The control group was the mothers of children who applied to the pediatrics outpatient clinic without a diagnosis of food allergy and other chronic diseases. Within the scope of the study, a face-to-face questionnaire and the Pittsburgh Sleep Quality Index (PSQI) were used for both the control group and the case group. Apart from PSQI, mothers' age and self-assessments of quality of life were also evaluated in the study. The mothers' quality of life was evaluated as self-assessment, scoring their general quality of life from 1 to 10 with a single question.

Results: In the study, the mother of 55 children having food allergy diagnosis was the case group; mothers of 55 children with no diagnosis of food allergy were considered the control group. The case and control groups were statistically similar in terms of gender, age, and maternal age ($p>0.05$). The overall quality of life median value of the control group was higher (8.0 [6.0–9.0], 5.0 [1.0–8.0], respectively) ($p<0.001$). Except for the subdimensions of subjective sleep quality and use of sleeping pills, all of the PSQI scores and total PSQI scores were higher in the case group than in the control group. In other words, the sleep quality of the case group was significantly worse ($p<0.001$).

Conclusion: The life and sleep quality of mothers may be adversely affected while coping with the children's diseases as caregivers. Interventions with psychiatrists should be planned if there is a need.

Keywords: Children, food allergy, mothers, quality of life, sleep quality.

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INTRODUCTION

Food allergy indicates a specific immunological response of the body to certain foods.^[1] The frequency of food allergy is increasing.^[2] According to a recent systematic review, the incidence of physician-diagnosed food allergy under the age of 1 year was reported as 4.7%. In the same study, the incidence of food allergy in patients aged 2–5 years was reported as 4.7–9.8%.^[3] Food allergy is accepted as a public health issue as it sometimes has some serious consequences such as anaphylaxis.^[4] For this reason, it is extremely necessary to provide clinical control of the disease by avoiding allergenic foods in children with food allergies.^[5] In disease management, as caregivers of children, it is extremely important to improve parents' health as well as to improve the knowledge and awareness of parents about the disease.^[6,7]

The life quality and sleep quality of parents of children having chronic diseases are adversely affected.^[8,9] Sleep is an important component needed for health; in other words, it is one of the essential determinants of general well-being.^[10] In many studies in the literature, sleep quality is negatively affected in children with allergic diseases.^[11–13] According to the literature, the sleep of children, having diagnosis of allergic diseases, and their parents, is negatively affected. In one of the studies, the sleep quality of children having allergic conjunctivitis as well as their mothers and fathers was worse than the control group.^[12] According to the results of a recent study, the sleep of mothers having children with atopic dermatitis was affected more negatively than that of mothers of children in the same age group without a diagnosis of atopic dermatitis.^[14] Another study reported similarly, that the sleep quality of the mothers of food-allergic children was poorer when compared with the control group.^[15]

While there are much epidemiological researches focusing on the sleep properties among children having chronic illnesses, the number of studies investigating the sleep of mothers of food-allergic children is limited. Sleep quality of mothers of food-allergic children is extremely important both for their health and for the health of the child as the caregiver. In this context, the purpose of our research was to evaluate sleep among mothers of food-allergic children. In addition, our secondary aim is to compare the perceived life qualities, and sleep qualities among mothers having children with and without food allergies.

MATERIAL AND METHODS

Research Type, Population, Sample

The study is a case–control type of research. The universe of the study consists of the mothers of food-allergic children applied to pediatric allergy and immunology outpatient clinic for the case group and the mothers of children having no food allergy or any other chronic disease for the control group. The mothers having children aged 0–2 years who have food allergy and applied to pediatric allergy and immunology clinic were participants of our study. The Pittsburgh Sleep Quality Index (PSQI) was used for the evaluation of the sleep of the mothers. The same questionnaire was applied to the mothers having children aged 0–2 years who applied to the pediatrics outpatient clinic for other reasons without a diagnosis of food allergy, as a control group. The minimum number of sample size was calculated as 43 mothers for each group (43 mothers for case and 43 mothers for control) as the mean

total score of PSQI mothers having food-allergic children and without a diagnosis of food allergy was 7.09 ± 3.1 and 5.15 ± 2.6 , respectively, with the strength 95%, and the confidence level 95%.^[15] Totally 110 participants were included 55 for the case group and 55 for the control group.

Measures

The study aimed to evaluate the quality of life and sleep quality of mothers and to evaluate whether having a child with food allergies is associated with quality of life or sleep or both. For this purpose, a face-to-face questionnaire applied to mothers in the outpatient clinic was used by the researchers. The same questionnaire was used for both the case and control groups. PSQI was used for the evaluation of mothers' sleep. Besides, mothers' age and quality of life were also investigated. The mothers' quality of life was evaluated as self-assessment, scoring their general quality of life from 1 to 10 with a single question. Mothers who perceived their general quality of life as bad gave a score of 1 or close to 1 for this question; mothers who perceived their quality of life better scored this question higher. In other words, the higher the score obtained from this question, the higher the mothers perceived overall quality of life.

PSQI: This index was developed by Buysse et al.,^[16] and the Turkish adaptation was done by Ağargün et al.,^[17] it evaluates sleep quality and sleep disturbance for the past month. PSQI consists of 24 questions. While 19 questions of the scale were self-report questions; 5 questions were answered by the roommate. The scale consists of 7 different subdimensions. These 7 subdimensions are; subjective sleep quality, sleep latency, sleep duration, habitual sleep efficiency, sleep disturbance, use of sleep medication, and daytime dysfunction. The minimum and maximum scores for each subdimension are 0 and 3, respectively. The sum of all 7 subdimensions 2 scores gives the total score of the PSQI. The total score obtained from the PSQI is between 0 and 21, and a total score above 5 means that sleep quality is poor.

Statistical Analyses

For statistical analysis and record of the data SPSS for Windows 25.0 program was used. Descriptive results were presented with median, minimum, maximum values, numbers (n), and percentages (%). The normal distribution was investigated with visual and analytical methods (Kolmogorov–Smirnov/Shapiro–Wilk tests). For non-normally distributed data, the Mann–Whitney U test was used to compare two independent variables. Spearman correlation analysis was used to compare two numerical variables. $P < 0.05$ was set as the statistical significance level.

Ethics

Ethics committee approval was obtained from the Ethics Committee of Ümraniye Training and Research Hospital with decision number 394 on December 22, 2022 for the conduct of the study.

RESULTS

In the study, the mother of 55 children with food allergy was the case group; mothers of 55 children without a diagnosis of food allergy were considered the control group. There was no statistical difference between the case and control groups in terms of gender, age, and maternal age ($p > 0.05$) (Table 1).

Table 1: Gender, age, and maternal age in case and control groups

	Group		p
	Case (n=55)	Control (n=55)	
Gender, n (%)			0.563
Female	22 (40.0)	25 (45.5)	
Male	33 (60.0)	30 (54.5)	
Age (months), median (min–max)	9.0 (0.0–24.0)	10.0 (1.0–22.0)	0.734
Maternal age (years), median (min–max)	29.0 (21.0–42.0)	30.0 (24.0–39.0)	0.576

Min: Minimum; Max: Maximum.

Table 2: Laboratory and clinical features of children with food allergy

Absolute eosinophil ($10^3/uL$), Median (min–max)	335.0 (10.0–2140.0)
Eosinophil (%), Median (min–max)	3.50 (0.1–19.2)
Total IgE (IU/mL), Median (min–max)	20.50 (0.0–927.0)
Egg allergy, n (%)	41 (74.5)
Cow's milk protein allergy, n (%)	37 (67.3)
Hazelnut allergy, n (%)	6 (10.9)
Other allergies, n (%)	3 (5.5)
Presence of multiple food allergies, n (%)	26 (47.3)
Atopic dermatitis, n (%)	26 (47.3)
Urticaria, n (%)	50 (90.9)
Allergic rhinitis, n (%)	6 (10.9)
Gastrointestinal system findings, n (%)	24 (43.6)
Reactive airway, n (%)	7 (12.7)
History of anaphylaxis, n (%)	4 (7.3)

Min: Minimum; Max: Maximum.

Absolute eosinophil, eosinophil (%), and total IgE values of 55 children with food allergy were 335.0 (10.0–2140.0), 3.50 (0.1–19.2), and 20.50 (0, 0–927.0), respectively. While egg allergy was the most common allergy in children (n=41, 74.5%); the allergy against cow's milk was the second most common type of food allergy observed in our patients (n=37, 67.3%). Multiple food allergies were present in 47.3% (n=26) of the children. Of the children, 90.9% (n=50) had urticaria, 47.3% (n=26) had atopic dermatitis, 43.6% (n=24) had gastrointestinal system findings, 12.7% (n=7) had reactive airway, and 10.9% (n=6) had allergic rhinitis. Four children (7.3%) had a history of anaphylaxis (Table 2).

The mothers of both case and control groups were asked to score their overall quality of life from 1 to 10. The overall quality of life self-assessment median value of the control group was high-

Table 3: Gender, age, and maternal age in case and control groups

	Group		p
	Case (n=55) Median (min–max)	Control (n=55) Median (min–max)	
Mother's quality of life score (self-assessment)	5.0 (1.0–8.0)	8.0 (6.0–9.0)	<0.001
Subjective sleep quality	1.0 (1.0–3.0)	1.0 (0.0–3.0)	0.147
Sleep latency	1.0 (0.0–3.0)	1.0 (0.0–3.0)	<0.001
Sleep duration	2.0 (0.0–3.0)	1.0 (0.0–3.0)	<0.001
Habitual sleep efficiency	2.0 (0.0–3.0)	0.0 (0.0–3.0)	<0.001
Sleeping disturbance	2.0 (1.0–3.0)	1.0 (0.0–2.0)	<0.001
Use of sleep medication	0.0 (0.0–0.0)	0.0 (0.0–0.0)	1.000
Daytime dysfunction	2.0 (1.0–3.0)	0.0 (0.0–3.0)	<0.001
Total PSQI score	10.0 (4.0–16.0)	4.0 (1.0–15.0)	<0.001

PSQI: Pittsburgh Sleep Quality Index; Min: Minimum; Max: Maximum.

er (8.0 [6.0–9.0], 5.0 [1.0–8.0], respectively) ($p<0.001$). According to the PSQI questionnaire, in which we evaluated sleep quality in mothers, all PSQI subdimension scores and total PSQI scores were significantly higher in the case group than in the control group, except for subjective sleep quality and sleep medication use subdimensions. In other words, the sleep quality and related subdimension scores of the case group were worse than the control group ($p<0.001$) (Table 3).

The factors associated with quality of life self-assessments were evaluated in mothers of food-allergic children. Maternal age, child's age, eosinophil value, and total IgE values were not significantly associated with quality of life. The quality of life self-assessment score of the mothers of children with multiple food allergies was found to be lower than those without multiple food allergies, but no statistical significance was found (Table 4).

The sleep quality is considered poor if a PSQI score is 5 or above. According to this, all but except one mother in the case group had poor sleep quality. Whereas, 49.1% (n=27) of mothers in the control group had poor sleep quality ($p<0.001$) (Table 5).

Since the sleep quality of all but except one mother in the case group was poor according to the cutoff level of the PSQI scale of 5, the median value of the PSQI total score was used as the cutoff level for multivariate analysis. The sleep quality of those who had a total score above the median value (10 and above) according to the PSQI scale was considered poor. Multivariate analysis of factors that may be associated with poor sleep quality in the case group was evaluated by logistic regression analysis. According to the analysis, maternal age, child's age, self-assessment of maternal quality of life, eosinophils, total IgE values, and the presence of multiple food allergies were not significantly associated with poor sleep quality in the mother (Table 6).

Table 4: Factors associated with quality of life in mothers of children with food allergies

	Mother's quality of life score
Maternal age	
r	0.039
p-value	0.775
Age	
r	0.056
p-value	0.684
Eosinophil (absolute)	
r	-0.200
p-value	0.147
Eosinophil (%)	
r	-0.215
p-value	0.119
Total IgE	
r	-0.148
p-value	0.285
Multiple food allergies, median (min–max)	
Yes	5.0 (3.0–8.0)
No	6.0 (1.0–8.0)
p-value	0.883

Min: Minimum; Max: Maximum.

DISCUSSION

Quality of life and sleep are factors associated with the well-being of individuals, and both can be affected by many parameters. The life and sleep quality of the parents having children with chronic illnesses are negatively affected. The life and sleep quality of the caregivers should be at a good level for the continuation of the well-being of children and the management of their chronic diseases. In our study, the sleep quality of mothers of 0–2-year-old children with food allergies was evaluated. Moreover, the mothers' self-assessments of quality of life and sleep quality were compared with the mothers of the control group without a diagnosis of food allergy.

According to the literature, the quality of life of parents having children with chronic illnesses is negatively affected.^[18] Parents of children having chronic illnesses spend a significant amount of time with the care of their children and program their activities of daily living according to the care of the children.^[8,19] This situation can cause negative effects on their quality of life. In our study, the quality of life of mothers of food-allergic children was significantly lower than the control group. Maternal age, child's age, eosinophil value, total IgE values, the presence of multiple food allergies did not have a significant effect on the mother's self-assessment of quality of life. Older parental age, higher income, higher educational level, and older chil-

Table 5: Sleep quality of case and control groups

Sleep quality	Case n (%)	Control n (%)	p
Good (0–5)	1 (1.8)	28 (50.9)	<0.001
Poor (>5)	54 (98.2)	27 (49.1)	

dren were associated with higher life quality in parents of children having chronic diseases, according to the studies.^[8]

In our study, when we compare the sleep quality of the mothers of the case and control groups, the PSQI scores of the mothers of food-allergic children are significantly higher. In other words, their sleep quality is lower. In addition, according to the PSQI scale, the sleep quality of all but except one of the mothers of food-allergic children was found to be poor. In the control group, nearly half of the mothers had poor sleep quality (49.1%). In the literature; similar to our study, the sleep quality of mothers of children diagnosed with chronic illnesses is worse than mothers of the control group.^[20] Similarly, in another study, the sleep quality of mothers of children diagnosed with food allergy was lower than that of the control group.^[15] The studies evaluating sleep quality in parents of children with food allergies are quite limited. In our study, it was observed that the sleep quality of the food-allergic mothers of children was negatively affected, in line with the literature. Therefore, interventions should be planned to improve the sleep quality of mothers. Furthermore, qualitative and quantitative studies are needed for other determinants of poor sleep quality in parents.

In our study, the sleep and life quality of mothers of children aged 0–2 were evaluated. In this age group, it is expected that the life and sleep quality of mothers as a caregiver for their children will be negatively affected.^[21,22] Since children under the age of 2 years wake-up frequently for feeding at night and sleep disorders can be seen more frequently in this age group, the sleep quality of mothers may also be adversely affected.^[23] Likewise, the quality of life may be lower in mothers with children in this age group. In the study, the comparison of sleep and quality of life of the case group with the control group allows us to evaluate this situation better. However, factors such as depression, anxiety, and stress which may be related to mothers' sleep status and the presence of chronic disease in the mother were not investigated in the study. This is a limitation of our study. While there are many studies in the literature evaluating the sleep quality of children with a diagnosis of chronic diseases, the number of studies evaluating the sleep and life quality of mothers of children diagnosed with food allergy food allergies is very limited. Our study makes an important contribution to the literature by evaluating both the life and sleep quality of mothers of children diagnosed with food allergy. This is the strength of this study. In addition, the fact that we evaluated mothers' sleep and perceived quality of life with a questionnaire in our study may have created awareness in mothers on this issue. Mothers who previously took care of their children may not be able to focus on their health. We think that by answering our questionnaire the awareness of mothers who need support in this regard may have increased.

Table 6: Multivariate analysis of factors that may be associated with poor sleep quality in the case group

	p	OR	95% CI	
			Lower	Upper
Maternal age	0.729	1.022	0.904	1.155
Age	0.920	0.994	0.881	1.121
Mother's Quality of Life Score (self-assessment)	0.431	1.156	0.806	1.658
Eosinophil (absolute)	0.478	0.999	0.998	1.001
Total IgE	0.210	1.004	0.998	1.009
Presence of multiple food allergies*	0.915	1.072	0.299	3.839

*: Reference: Children with multiple food allergies; OR: Odd ratios; CI: Confidence interval.

CONCLUSION

In our study, sleep and life quality of mothers of food-allergic children were examined and compared with the mothers of children without a food allergy diagnosis. While almost all mothers of the case group had poor sleep quality; almost half of the control group mothers had poor sleep quality. The self-evaluation of mothers of food-allergic children indicates that the quality of life was worse than the other mothers. Unfortunately, the life and sleep quality of parents with children under the age of 2 years are low. This situation is significantly more pronounced in mothers of children having food allergies than control group. There is a need to evaluate both life and sleep quality, especially in mothers of children diagnosed with allergic diseases. The life and sleep quality of mothers may be adversely affected while coping with the children's diseases as caregivers. While focusing on patient care and disease management in the clinic; parents' health is often overlooked. However, as the caregivers of the children, the health of the parents is an important issue that should be emphasized as it will also be related to the well-being of the child. In this respect, it is essential to evaluate sleep characteristics, which are indicators of good health, quality of life, and related factors in parents of children with chronic diseases. Few studies in the literature have evaluated this situation in families of children with food allergies. There is a need for studies and planning in this area. Besides, interventions with psychiatrists should be planned if there is a need for this area.

Statement

Ethics Committee Approval: The Ümraniye Training and Research Hospital Clinical Research Ethics Committee granted approval for this study (date: 22.12.2022, number: 394).

Informed Consent: Written informed consent was obtained from patients who participated in this study.

Peer-review: Externally peer-reviewed.

Author Contributions: Concept – EN, UA, ZMA, MYÖ; Design – EN, UA, ZMA, MYÖ; Supervision – EN, UA, ZMA, MYÖ; Data Collection and/or Processing – UA, MYÖ; Analysis and/or Interpretation – EN, UA, ZMA, MYÖ; Literature Search – EN, UA, ZMA, MYÖ; Writing – EN, UA, ZMA, MYÖ; Critical Reviews – EN, UA, ZMA, MYÖ.

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REFERENCES

- Boyce JA, Assa'ad A, Burks AW, Jones SM, Sampson HA, Wood RA, et al. Guidelines for the diagnosis and management of food allergy in the United States: Summary of the NIAID-sponsored expert panel report. *J Am Acad Dermatol* 2011;64:175–92.
- Köken G. Çocukluk çağı besin alerjilerinin klinik fenotiplendirmesi. Specialty thesis. Ankara: Hacettepe University; 2019.
- Spolidoro GC, Amera YT, Ali MM, Nyassi S, Lisik D, Ioannidou A, et al. Frequency of food allergy in Europe: An updated systematic review and meta-analysis. *Allergy* 2023;78:351–68.
- Centers for Disease Control and Prevention (CDC). Food allergies. Available at: <https://www.cdc.gov/healthyschools/foodallergies/index.htm#:~:text=Food%20allergies%20are%20a%20growing,children%20in%20the%20United%20States.&text=That's%201%20in%2013%20children,immune%20response%20to%20certain%20foods>. Accessed Sep 14, 2023.
- Sicherer SH, Sampson HA. Food allergy: A review and update on epidemiology, pathogenesis, diagnosis, prevention, and management. *J Allergy Clin Immunol* 2018;141:41–58.
- Birdi G, Cooke R, Knibb R. Quality of life, stress, and mental health in parents of children with parentally diagnosed food allergy compared to medically diagnosed and healthy controls. *J Allergy (Cairo)* 2016;2016:1497375.
- Ridolo E, Caffarelli C, Olivieri E, Montagni M, Incorvaia C, Baiardini I, et al. Quality of sleep in allergic children and their parents. *Allergol Immunopathol* 2015;43:180–4.
- Toledano-Toledano F, Moral de la Rubia J, Nabors LA, Domínguez-Guedea MT, Salinas Escudero G, Rocha Perez E, et al. Predictors of quality of life among parents of children with chronic diseases: A cross-sectional study. *Healthcare (Basel)* 2020;8:456.
- Meltzer LJ, Moore M. Sleep disruptions in parents of children and adolescents with chronic illnesses: Prevalence, causes, and consequences. *J Pediatr Psychol* 2008;33:279–91.
- Kyle S, Henry AL. Sleep is a modifiable determinant of health: Implications and opportunities for health psychology. *Br J Health Psychol* 2017;22:661–70.
- Urrutia-Pereira M, Solé D, Rosario N, Neto H, Acosta V, Almendarez C, et al. Sleep-related disorders in Latin-American children with atopic dermatitis: A case control study. *Allergol Immunopathol* 2017;45:276–82.
- Li J, Zhang SY, Fan Z, Liu R, Jin L, Liang L. Impaired sleep quality in children with allergic conjunctivitis and their parents. *Eye (Lond)* 2023;37:1558–65.

13. D'Elia C, Gozal D, Bruni O, Goudouris E, Meira e Cruz M. Allergic rhinitis and sleep disorders in children-coexistence and reciprocal interactions. *J Pediatr* 2022;98:444–54.
14. Sari S, Geckalan Soysal D, Turkeli A. Evaluation of quality of life and sleep in family members of children with atopic dermatitis. *Pam Med J [Article in Turkish]* 2022;15:475–83.
15. Filiz S, Keleş Ş, Akbulut UE, Işık IA, Kara MZ. Sleep disturbances and affecting factors in young children with food allergy and their mothers. *Allergol Immunopathol (Madr)* 2020;48:158–64.
16. Buysse DJ, Reynolds III CF, Monk TH, Berman SR, Kupfer DJ. The Pittsburgh Sleep Quality Index: A new instrument for psychiatric practice and research. *Psychiatry Res* 1989;28:193–213.
17. Ağargün MY, Kara H, Anlar O. The validity and reliability of the Pittsburgh Sleep Quality Index. *Turk Psikiyatri Derg [Article in Turkish]* 1996;7:107–15.
18. Toledano-Toledano F, Moral de la Rubia J, McCubbin LD, Cauley B, Luna D. Brief version of the coping health inventory for parents (CHIP) among family caregivers of children with chronic diseases. *Health Qual Life Outcomes* 2020;18:1–14.
19. Javalkar K, Rak E, Phillips A, Haberman C, Ferris M, Van Tilburg M. Predictors of caregiver burden among mothers of children diagnosed with food allergy chronic conditions. *Children* 2017;4:39.
20. Bakırlıoğlu B, Çetinkaya B. Factors affecting sleep quality of mothers of children diagnosed with food allergy chronic illnesses. *J Pediatr Nurs* 2022;66:e160–5.
21. Gültepe KK. Sleep quality of women in the postpartum period and affecting factors. *JGEHES [Article in Turkish]* 2022;4:197–204.
22. Erçel Ö. Sleep quality and quality of life in postpartum woman. Master's thesis. Edirne: Trakya University; 2019.
23. Astbury L, Bennett C, Pinnington DM, Bei B. Does breastfeeding influence sleep? A longitudinal study across the first two postpartum years. *Birth* 2022;49:540–8.