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HEMŞİRELİKTE ARAŞTIRMA GELİŞTİRME DERGİSİ

The Effect of Nursing Support Given to The Siblings and Mothers of Children with Chronic Hematologic-Oncologic Disease on the Anxiety Levels of the Siblings and Mothers

Özgür ALPARSLAN*
Suzan YILDIZ**

Özgün Araştırma

Assist. Prof., Gaziosmanpaşa Üniversitesi Tokat Sağlık Yüksekokulu, Tokat.
e-mail: oalparslanbuse@gmail.com
İletişim yazarı
Prof. Dr., İstanbul Üniversitesi Florence Nightingale Hemşirelik Yüksekokulu, İstanbul.

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Abstract

Objective: *To determine the effect of nursing support given to the siblings and mothers of children with chronic hematologic-oncologic disease on the anxiety levels of the siblings and mothers.*

Method*: This research was a pre test-post test and descriptive study. The siblings (n=45) and mothers (n=45) of children with chronic disease who met the research criteria were included in the study. Data were collected by means of a "Socio-demographic Form" and "State-Trait Anxiety Inventory" (Pretest-Posttest) in three stages. First, the "State-Trait Anxiety Inventory" was applied as a pre-test. Then, the siblings and mothers were given nursing support and taught methods to cope with stress. Finally, the same inventory was given as a post-test. The data obtained were evaluated via computer software (Statistical Package for the Social Sciences, version 10.0) by using number and percentage, t-test independent samples, Mann Whitney-U test and Wilcoxon signed rank tests.*

Results: *Mean age of the siblings included in the study was 12.4±2.4. After nursing support, it was determined that state anxiety scores in sisters decreased significantly ($p<0.05$), whereas they remained unchanged in brothers. The difference between mean state anxiety scores of the mothers before and after nursing support was insignificant ($p>0.05$), while the difference between trait anxiety scores was significant ($p<0.05$).*

Conclusion: *In conclusion, it was established that nursing support given to healthy siblings and mothers of children with hematological-oncological disease was effective in reducing trait anxiety levels.*

Keywords: *Siblings, mothers, nursing, psychosocial support, anxiety, chronic disease.*

Kronik Hematolojik–Onkolojik Hastalığı Olan Çocukların Kardeşleri ve Annelerine Verilen Hemşirelik Desteğinin Kaygı Düzeylerine Etkisi

Özet

Amaç: *Kronik hematolojik-onkolojik hastalığı olan çocukların kardeşleri ve annelerine verilen hemşirelik desteğinin kaygı düzeylerine etkisini belirlemektir.*

Yöntem: *Bu çalışma ön test-son test düzenli tanımlayıcı tipte yapılmıştır. Çalışmaya araştırma kriterlerine uyan kronik hastalığı olan çocukların kardeşleri (n=45) ve anneleri (n=45) alındı. Araştırma verileri, "Sosyodemografik Soru Formu" ve "Durumluk Sürekli Kaygı Envanteri" (Ön test-Son test) kullanılarak üç aşamada toplanmıştır. Önce, ön test için "Durumluk Sürekli Kaygı Envanteri" uygulandı. Ardından, kardeşlere ve annelere hemşirelik desteği verildi, stres ile baş etme yöntemleri öğretildi ve son olarak, son test olarak aynı envanter uygulandı. Elde edilen veriler bilgisayar ortamında (SPSS 10.0) sayı, yüzdelik hesapları, bağımsız gruplarda iki ortalama arasındaki farkın önemlilik testi. Mann Whitney U testi ve Wilcoxon işareti sıra testi ile değerlendirildi.*

Bulgular: *Araştırma kapsamına alınan kardeşlerin yaş ortalamaları 12,4±2,4 yıl idi. Kızlarda hemşirelik desteği sonrasında durumluk kaygı puan ortalamaları anlamlı bir şekilde azalırken (p<0,05), erkek kardeşlerde durumluk kaygı puan ortalamaları değişmedi. Annelerin hemşirelik desteği öncesi ve sonrasında durumluk kaygı puan ortalamaları karşılaştırıldığında aralarındaki farkın istatistiksel olarak önemli olmadığı (p>0,05), ancak sürekli kaygı puan ortalamaları arasındaki farkın önemli olduğu (p<0,05) belirlendi.*

Sonuç: *Sonuç olarak, kronik hematolojik-onkolojik hastalığı olan çocukların sağlıklı kardeşleri ve annelerine verilen hemşirelik desteğinin sürekli kaygı düzeylerinin azaltılmasında etkili olduğu belirlendi.*

Anahtar Sözcükler: *Kardeşler, anneler, hemşirelik, psikososyal destek, kaygı, kronik hastalık.*

Introduction

Due to reflections of scientific and technological developments to the field of medicine, most of previously fatal childhood diseases are no longer fatal and some diseases have become chronic with the prolongation of their life time.[1,2] Chronic diseases of childhood are increasingly more common and they emerge as an important health problem in many countries around the world, especially in industrialized countries.[3,4] Many studies demonstrate that 15-40 % of all children under the age of 18 have chronic health problems, 10 % of them being severe .[3,4-6]

Chronic diseases in childhood range from congenital anomalies and genetic diseases to cancer. The prevalence of childhood cancers in children under 15 has been reported to be approximately 0.5 %. Although cancer is not the second cause of death in Turkey, unlike the United States and many other developed countries, it is among the top for (relative frequency 7.2%).[7]

One of the chronic childhood diseases is hematological disorders. Among hematological disorders, the rate of carriage of Thalassemia is 2.1 % in Turkey. This rate increases as high as 0.7-13.1 % in Mediterranean region and migrants from Thracia, and the risk of giving birth to children with disease increases further due to the frequency of consanguine marriages.[8-10] Another hematological disease, Idiopathic Thrombocytopenic Purpura, has prevalence comparable to that of leukemia and occurs in 5 children in per hundred thousand children, 15-30 % of them becoming chronic. Another chronic disease with genetic component is hemophilia. The incidence of Hemophilia A is 1:5000 in males and that of Hemophilia B is around one fifth of Hemophilia A .[10-11]

Chronic hematological and oncologic diseases exert economic, social, emotional, behavioral and cognitive effects on family members and family

life as in other chronic diseases (Either 2009). Studies demonstrate that family members giving care to the sick child experience fatigue, role conflict, social isolation, anxiety and depression[4,12,13] and run higher risks for various diseases and that healthy children with siblings having chronic diseases have difficulty in adjusting to the disease of their siblings, which leads to stress. [3,13-15] Emotions experienced by healthy siblings are various. The most important is separation from the sibling or parent, which can be perceived as a loss of love, being refused, negligence or punishment by the healthy sibling.[16-18]

The majority of previous studies focused on the impact on the child with illness and their parents and their responses and adaptation to the disease.[6,12,19-24] However, studies examining the responses of the healthy siblings to the disease and hospitalization of their siblings are few in number.[4,17,18,25-28] On the other hand, studies have also been carried out in Turkey to determine the responses of children with chronic diseases and cancer and their parents to disease and its management, but the feelings of siblings were taken into consideration neither in cancer nor in other diseases.[5,6,29,30] Recently, many investigators abroad have collected data mostly from the teachers and parents in order to investigate the influence of hospitalization for chronic disease on the siblings.[25,27,31] Only a few of these investigators collected data directly from the siblings themselves.[17,18,32]

In children with chronic diseases, one aim of nursing care is to evaluate the factors increasing or inducing the risk of maladaptation and determine the anxiety and problems of siblings at various age groups regarding the health/disease status of their siblings through interventions attempting to establish the needs of healthy siblings. [17,18,32] It is inevitable that the parents, siblings and grandparents of the sick child are influenced from the case and suffer for it. It was observed that parents experienced intense stress after learning the diagnosis and felt anxiety concerning the prognosis of the disease.[20] Again, in various studies, it was shown that chronic and fatal diseases had an adverse impact on psychological health of the parents and hence that of the family, and that those family members required psychological support.[6,20] Therefore, it will be useful to examine the status of siblings as well as parents influenced from chronic diseases.[4]

Objective

This study aimed to determine the influence of chronic disease of children admitted to hospital on their 9-18 year old siblings and mothers in the hospitals included in the study, provide training and nursing support regarding stress-anxiety management and reveal the effect of support on anxiety levels.

Method

Universe and Sample

This is a pre test-post test and descriptive research. The universe of the study comprised siblings (N=45) and mothers (N=45) of 86 children undergoing treatment in Hematology and Oncology clinics of A University in a province in Central Anatolia, Training and Research Hospital and B University in a province in Central Anatolia, Faculty of Medicine. The sample included 45 healthy siblings and 45 mothers meeting inclusion criteria and accepting to participate in the study.

Inclusion criteria of the study were as follows: 1) Duration of disease should be at least six months 2) Parents should be living in the province where the study is being carried out 3) Healthy siblings (siblings of Thalaseemia carriers were considered healthy). 4) With sick children having more than one sibling, the one closest in age to

the sick child is included 5) Siblings should be between 9-18 age groups.

Ethics of Research

Ethical approval was obtained from local ethics committee and permission for the study was obtained from hospitals involved.

Data Collection Tools Used in The Study

Data were collected using 'Information form for sibling' and 'Information form for parents', which included demographic information about the siblings and parents and 'State-Trait Anxiety Inventory for the children (STAI)' for the siblings at the age of 9-13 and 'STAI' for siblings between 14-18 and mothers.

Demographic information form for sibling, mother and sick child was developed in view of the information in the literature and opinions of experts. The questionnaire form was piloted with 10 siblings, 10 mother. Following the pilot study, the questions were found to be comprehensible and thus were administered. The form included overall 26 questions involving descriptive characteristics of siblings (11 questions) and mothers (15 questions).

STAI for children (9-13) was developed by Spielberger in 1973 and adapted to Turkish by Özusta in 1995 and its reliability and validity study was done. In the study conducted with 615 healthy children between the ages of 9-12, Cronbach alpha values were found to be .82 for state anxiety inventory and .81 for trait anxiety inventory. In this inventory, there were two different scales (state-trait anxiety scale), each of which had 20 questions. There were no inverted statements. Every item had three choices, one of which would be marked. The lowest score that could be obtained from the scale was 20 and the highest was 60. It can be administered individually or in groups.

State Anxiety Scale: Children were asked to rate how they felt at the moment.

Trait Anxiety Scale: Children were asked to rate how they generally felt and choose the most suitable option. STAI for 14-18 age group children and mothers was developed in 1994 by Spielberger and Gorsuch and adapted to Turkish by N.Öner and A. Le Compte (1985) and its reliability and validity study was done. It can be administered to literate individuals. Each inventory had two different scales with 20 items. Every item had four choices, one of which would be marked.

Scoring of The Scale: There were 'direct' and inverted statements in the scales. When scoring the statements expressing favorable conditions, items with weight value of one were transformed into four and those with weight value of four were transformed into one. In direct statements expressing unfavorable feeling, four indicated that anxiety level was high. There were ten inverted statements in state anxiety scale and seven points in trait anxiety scale. Overall score of inverted statements was deduced from overall score of direct statements and a constant value was added to the figure found. This constant value was 50 points in state anxiety scale and 35 points in trait anxiety scale. Overall score obtained from both scales ranged from 20 to 80. Higher scores indicated higher level of anxiety. Inner consistency and reliability of scales adapted to Turkish was found to be respectively .83 and .87 for trait anxiety scale and .94 and .96 for state anxiety scale using Kuder Richardson alpha reliability test.

Training Booklets: There were two booklets, namely 'Ways of Coping with anxiety' for mothers and 'How we can decrease our anxiety' for healthy siblings. Booklets included various practices teaching healthy siblings and mothers how to cope with stress. It was developed by consulting experts in view of the relevant nursing literature.

Implementation of the Study

Data Collection

Data collection was carried out in three stages.

First Stage: In the first stage, information forms for healthy siblings and mothers of sick children fulfilling the selection criteria were collected and state and trait anxiety inventory (STAI) commensurate with their age status was administered. Interviews were conducted in the form of face to face interview and subjects were asked to fill the forms by themselves as much as possible. Training booklets were handed to siblings and mother in order that they could read them until second interview.

Second Stage: In the second stage, in view of the data obtained from the siblings and mothers of sick children, relaxation exercises in the booklets were taught and the exercises were done for three times with 7-15 day intervals (mean 10 days) and information involving nursing support was given. Cases were grouped according to similar characteristics (thalassemia patients, same age group), and group training was performed. Before training, 15-20 minute interviews were made with the families and siblings, and mothers were asked to express their feelings. It was observed that some siblings did not feel comfortable during verbal expression. Therefore pen and paper was given to some siblings and they were asked to express their feelings in writing.

In later interviews, whether the training subjects were understood was checked with question-answer method and parts that were not understood were repeated. In each interview, the information and training needs of the family members regarding sick child were evaluated. In accordance with the needs of family members, training materials were prepared on subjects such as information on disease, treatment method, drugs used, and diet and then training was given.

Third Stage: 30 days after last training was given, as final test, mothers and healthy siblings were administered state and trait anxiety inventory for children or STAI according to their age group.

Within the framework of "nursing support", care giving, treating, supporting, implementing, rehabilitating, training, protecting, consultant, defending, cooperating, managing, investigating and economist roles and functions were used. In fulfilling supportive role and functions, a) each family member was treated as worthy human being, b) family was considered as a whole, c) expectations of sick child, parent and siblings were supported, d) attempts were made to relieve their anxiety, e) help was provided for the solution of the problem, f) mother and sibling were directed towards activities enabling self control, g) psychological, physical and emotional support was provided to mother and sibling and other family members, h) sibling and mother were helped to feel secure through environment control, ı) mother and child were both encouraged for both being individuals and fulfilling their roles in the family.

In order to make all of the above possible, through approaches involving friendly and warm interest, kindness, respect and understanding, a comforting and confidence inspiring relation and environment was formed (such as offering small things (tea, fruit, bubble gum, sugar and chocolate), offering handkerchief when they cried, comforting through touch). While fulfilling care giving and implementing roles and functions, all roles and functions were used.

In fulfilling training roles and functions, the aim was to prevent the probable future problems of the mother and sibling, improve present health status and help the individual to assume the responsibility for his/her own health. To this end, he-

althy sibling and mother were given training on issues such as ways of coping with anxiety, the impact of chronic disease on siblings and family, and on questions such as *"What is disease?", "What is carriage?", "How is it treated?", "How to live with such a disease?",* and information on the use of special devices, how drug would be administered, complications and their prevention.

In fulfilling defending roles and functions, mother and siblings who needed information were informed and encouraged to seek their rights in problems they experienced regarding disease. They were offered alternative information so that they could make their own choices, and they were supported.

In fulfilling managing roles and functions, family was helped to meet its needs by collaborating with the members of health care team, and utilizing sources and time in a planned manner (home visits, planning of the needs in clinical environment).

In fulfilling consultant roles and functions, healthy sibling and mother were supported to make their own decisions for solving problems and achieving success, and an environment suitable for discussion of problems was provided. Six steps of consultancy, namely functions of meeting and greeting, showing interest and asking questions, giving information on methods and options, helping to choose a method, teaching how to use that method with explanatory information, and determining the changes after this option was used through controls were fulfilled. When necessary, cooperation was made with experts to help the solution of problems.[35]

Evaluation of Data

Data were evaluated in computer environment. In statistical evaluation, significance test of the difference between two means (t-test), Mann-Whitney U test, Wilcoxon signed rank test and percentage calculations were used. A level of $p<0.05$ was considered statistically significant.

Results

Demographic data of the children and mothers are demonstrated in Table 1. Mean age of the siblings included in the study was 12.4±2.4. When demographic characteristics of the mothers included in the study were examined, it was seen that their mean age was 36±6. 57.8 % had primary/secondary school education. 98.8 % was not working and 40 % had three children. 98.8 % of the parents had social security (Table 1).

The question "does your family support what you do to support yourself and sick sibling?" was answered negatively by 66.7 % of the healthy siblings. It was established that 11.1% of healthy siblings did not know the disease of their sibling, 33.3% knew it correctly, and 55.6 % incorrectly (Table 1).

It was also established that parents of 95.6 % of healthy siblings stayed with the sick child when he/she was hospitalized. When the sick child was hospitalized, the cares of the healthy siblings were assumed by the father in 35.5%, by the older brother in 15.6% and by close relatives and others in 48.9%. It was also established 55.6% of the siblings in the study group were older than the sick child and 44.4% were younger.

All of the mothers in the study (100 %) knew the diagnosis of their children and were affected adversely from the disease of the child. 20 % of the mothers stated that the economic burden of the family increased due to disease, 15.1 % complained that their relations with the environment decreased, 19.5 % reported that their burden increased due to the care of the child, 16.7 % stated that they could not allow time for themselves, and 9.2 % expressed that interfamilial discord increased.

Table 1: Demographic Characteristics of Healthy Siblings and Mothers (n=45)

Demographic characteristics	n	%
Sibling age group*		
9-13	26	57.8
14-18	19	42.2
Sex		
Male	18	40.0
Female	27	60.0
Education status		
Attend school	39	86.7
Does not attend school	6	13.3
The birth order of child		
First child	17	37.8
Second child	17	37.8
Third child	5	11.1
Fourth child or more	6	13.3
Support status of the family		
Supports	15	33.3
Does not support	30	66.7
Status of information on the disease of the sibling		
Does not know	5	11.1
Knows correctly	15	33.3
Knows incorrectly	25	55.6
Mother's†		
34 or below	16	35.6
35 or above	29	64.4
Education status of the mother		
Literate/illiterate	9	20.0
Primary / Secondary school	26	57.8
High school/ University	10	22.2

*Mean age of siblings is X = 12.4 ± 2.4,

† Mean age of mothers is X =36 ± 6.

When mothers were asked about their needs for support during the disease of the child, 33.7% wanted economic support, 31.5 % psychological support, 12.0% information and care support, and 1% did not ask for any kind of support at all.

When the events that distressed the mother most during the disease of their child were inquired, it was found out that, for 41.8%, it was the diagnosis of the child and the feeling of loneliness they experienced, for 12.5%, the fear of recurrence of the disease and the development of complications, and for the rest, noncompliance of the child with the treatment, lack of change in the course of the disease after treatment, the anxiety

Table 2: Comparison of The Mean Scores of State and Trait Anxiety Scores Before and After Nursing Support in Healthy Siblings

State-trait anxiety inventory	Nursing support in healthy siblings		t p
	Pretest scores	Post-test scores	
	X ± SD	X ± SD	
State anxiety scale (n =45)	47.0 ± 15.2	39.0 ± 12.2	1.94 0.06
Trait anxiety scale (n = 45)	43.6 ± 15.1	34.2 ± 9.8	3.57 0.01

about who would care for the child if anything happened to them and being unable to show enough interest in the other children.

Mean state anxiety score of the healthy siblings are demonstrated in Table 2. There was statistically insignificant difference between state anxiety scores before and after nursing support (t=1.94, p=0.06) while there was a significant difference between trait anxiety scores. (t=3.57, p=0.01).

When mean sate anxiety scores of children before and after nursing support were compared for the children who were supported by parents and those who were not supported, it was established that there was insignificant difference in the supported group (t=1.42, p=0.18) and in the unsupported group (t=1.43, p=0.16).

When mean anxiety scores of the children before and after nursing support between the older siblings and younger siblings were examined, statistically insignificant difference was found between them (older siblings Z=-1.60,p=0.10; younger siblings Z=-1.04, p=0.29). When trait anxiety scores were compared, difference between scores before and after support was significant in younger siblings (Z=2.13, p=0.03).

When state and trait anxiety scores before and after nursing support were compared in different age groups, insignificant difference was found in state anxiety scores in both age groups (9-13 Z=-1.18, p=0.23);14-18 Z=-1.37, p=0.17) and in trait anxiety scores in 14-18 age group (Z=-1.80, p=0.07) whereas there was significant difference in trait anxiety scores of 14-18 age group (Z=-3.17, p=0.01).

When state and trait anxiety scores before and after nursing support were compared between healthy siblings from different genders, it was established that in brothers the difference in state anxiety score was insignificant (Z=-0.06, p=0.94) while in sisters it was significant (Z=-2.42, p=0.01). As to trait anxiety scores, the difference in brothers was significant (Z=-2.22, p=0.02) whilst it was insignificant in sisters (Z=-2.67, p=0.08).

The difference between mean state anxiety scores of mothers before and after nursing support was insignificant (t=0.62, p=0.53) while the difference between trait anxiety scores was significant (t=5.59, p=0.00) (Table 3).

When state anxieties scores before and after nursing support were compared between mothers at different education levels, no difference was found. However, there was significant difference in trait anxiety scores of mothers who were literate / illiterate and those who were educated at primary / secondary school level. (Illiterate / literate Z=-2.07, p=0.03; primary-secondary school Z=-4.03, p=0.00)

Table 3: Comparison of Mean State and Trait Anxiety Scores in Mothers Before and After Nursing Support

State-trait anxiety inventory	Nursing support in mothers		t p
	Pretest scores	Post-test scores	
	X ± SD	X ± SD	
State anxiety scale (n =45)	56.3 ± 10.1	55.0 ± 10.3	0.62 0.53
Trait anxiety scale (n = 45)	42.0 ± 17.4	27.7 ± 14.5	5.59 0.00

Discussion

The aim of the present study was to investigate the effect of nursing support given to the siblings and mothers of children with chronic hematological-oncological disease on their scores of anxiety. It may be stated that nursing support and training for coping with anxiety given to siblings decreased trait anxiety scores significantly, but was not influential on state anxiety scores. This partially supports the hypothesis that "nursing support given to the siblings of sick children decreases their state-trait anxiety scores". In addition, according to the norms stated by Özusta (1995), when state-trait anxiety scores rise over 20, anxiety increases markedly. The findings of the study showed that the children received scores over 20, which is congruent with the results reported in the literature.

When anxiety is at high levels, undue psychological problems may arise in the child and adaptation may be disrupted. If the anxiety influences the child for a long time, it attracts attention and warrants intervention. Otherwise, these anxiety findings and problems will become permanent and will be carried to adulthood. As reported in the literature, it may be suggested that children with high anxiety scores require professional help in order that their anxiety will not become permanent. In the studies of Craft (1993), and Özusta (1995), it was found that children at smaller age groups obtained lower anxiety scores than the children at higher age groups. As the age advances, cognitive development becomes stronger and negative self-development may become permanent, and adolescence is a period vulnerable to the development of psychological problems. Moreover, children get more sensitive to anger, depressive affect and intra familial conflicts with age, which may have caused the above findings.[15,36] The fact that older sibling is aware of the possible effect of the unknown factors on the smaller sibling may have led him/her to have higher anxiety scores.

60% of the healthy siblings who participated in this study were girls and 40% boys. That state anxiety scores remained unchanged in brothers after nursing support while scores in sisters decreased significantly ($p<0.05$) is significant, in that boys are more anxious than girls. The findings of the present study are discrepant with those of Özusta (1995), who found that girls experienced higher levels of anxiety. Our results may be related to higher impressionability of males in addition to the problems of adolescence.[14,37] Besides, socio-cultural factors may also be influential.

It may be stated that results of the present study demonstrated that nursing support and training for coping with anxiety reduced state anxiety in girls and trait anxiety in boys and increased the power of coping with stress/anxiety irrespective of sex and supported positive coping skills of the individuals, which is partially congruent with the literature. However, it is observed that findings of the present study contradict the finding of Özusta (1995), who found that girls experienced more anxiety than boys. This may be due to the higher impressionability of boys or the presence of adolescence problems as well as sociocultural factors.[5]

As stated in the literature, children living in discordant family environment, a positive relation between the parent and the child has a protective effect and even in marriages with severe discord, positive, supportive relations with a single parent may have a strongly protective effect on the children.[5]

As parents devote most of their energy and time to meet the needs of the sick child, they cannot show enough interest in their own emotional needs and those of the other children.[38] These cases cause the isolation of the healthy children, decrease in their support sources and enhancement of psychological problems. In addition, as mother cannot allow enough time for home, responsibilities of the healthy sibling at home increase. The findings of the investigation are similar to those of Erdem and Çavuşoğlu (1999). According to the literature, in periods when sick child is hospitalized, if healthy siblings are left with neighbors and friends, siblings may experience anger and lack of trust. Therefore, it is important for the parents, who are the most important source of support, to be honest with their children and keep communication channels open and provide emotional support, all of which should not be disregarded.[5] In stressful life events, positive personality, positive self respect, adequacy of social relations, sex, intelligence and the presence of supportive family environment and in environments with social deprivation, the presence of family members (siblings and parents) exert protective effects on the health of children. Besides, positive relation with the sibling and the presence of older sibling creates a protective atmosphere for the other children.[34] Baysal (1996) stated that children who grew up in healthy family environment, displayed positive behavior and coped better in the presence of chronic disease in the family.

Especially, mean state anxiety scores of mothers were at values which can be considered over the norms expected before and after nursing support. Öner and Le Compte (1985) stated that there was a direct relation between state and trait anxiety levels and that individuals whose trait anxiety levels were high had high level of state anxiety as well. Factors such as the continuation of the disease and attending hospital frequently for treatment may be suggested to influence state anxiety levels of the mothers.

Although all of the parents included in the study had social security, they experienced financial difficulty due to the economic burden of the disease and it was established that most of them demanded economic, psychological and equipment support. When these problems are not solved, it is inevitable that family will be influenced adversely, their anxiety will increase and conflicts will be experienced.[39,40]

There are studies mentioning a positive relation between coping with chronic diseases of childhood, emotional support and equipment support.[4] Murray (2000) carried out a study involving the nursing practice of pediatric nurses for providing social support to the siblings of child-

ren with cancer. In the study, types of social support (emotional support, equipment support, informational support, material support) were used. In view of these data, offering support to healthy siblings and families becomes more significant. It may be said that nursing support enhanced coping skills in mothers at both levels of education (illiterate/literate, primary-secondary school) and after support their trait anxiety levels were reduced, bringing them close to those of mothers with high school-university education. Support systems play an important part in protecting and maintaining the physical, emotional and social integrity of individuals experiencing stress. The most important component of professional support system of nurses may be providing the environment in which parents can express their emotions and encouraging and training them, which is necessary for the adaptation of parents.[2,4,6,28]

Conclusion

In conclusion, it was established that nursing support given to healthy siblings and mothers of children with hematological-oncological illness was influential in reducing trait anxiety levels. It was concluded that teaching methods of coping with stress to healthy siblings and mothers and giving nursing support enhanced individual coping power. It can be suggested that emphasis should be placed on such interventional studies directed towards improving health along with family centered care. In future investigations, considering other aspects of the issue will be illuminating for determining and solving the problems of the siblings and parents of the children with chronic illness.

Contributions

Study design: Ö A, S Y

Data collection and/or analysis: Ö A

Manuscript preparation: Ö A, S Y

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