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The Effects of Self- Efficacy and Anxiety Levels of Mothers With Children Receiving Nebulized Inhalation Treatment on the Application of Nebulized Inhalation Practices*

Ayşe ŞAHİN[1], Duygu ARIKAN[2]

[1] Department of Child Care and Youth Services, Sabuncuoğlu Serefeddin Health Services Vocational School, Amasya University
[2] Department of Child Health and Diseases Nursing, Faculty of Nursing, Ataturk University
Ayşe Şahin: https://orcid.org/0000-0003-1240-0178
Duygu Arıkan: https://orcid.org/0000-0001-9451-8799

Abstract

Purpose: This study aimed to determine the application skills, self-efficacy and anxiety levels of the mothers whose children receive nebulized inhalation treatment and to examine the relationshipbetween them.

Method: This research was a descriptive clinical study. The study was conducted with 300 mother. Data were evaluated by Pearson correlation and nonparametric tests.

Results: Of the mothers, 78.3% were determined to get a moderate score on "The Nebulized Inhalation Application Checklist". The total Situational Anxiety score of the mothers was calculated to be 37.07±4.95 and the total mean Self-Efficacy score 79.60±15.23. No correlation was found between Self-Efficacy and Situational Anxiety levels of mothers (p>0.05).

Conclusion: Nurses cancontribute to treatment by supporting them to develop training programs to increase self-efficacy and reduce anxiety of mothers whose children receive inhalation treatment.

Keywords: anxiety, mother, nebulized inhalation, nurse, self-efficacy

Çocuğu Buhar İnhalasyon Tedavisi Alan Annelerin Öz Yeterlik ve Kaygı Durumlarının Buhar İnhalasyon Uygulamalarına Etkisi

Özet

Amaç: Çocukları buhar inhalasyon tedavisi alan annelerin uygulama becerileri, öz-yeterlik ve kaygı düzeylerini belirlemek ve aralarındaki ilişkiyi incelemektir.

Yöntem: Bu araştırma tanımlayıcı bir klinik çalışmadır. Araştırma 300 anne ile yapılmıştır. Veriler Pearson korelasyon ve parametrik olmayan testler ile değerlendirildi.

Bulgular: Annelerin %78,3'ünün "Nebulize İnhalasyon Uygulama Kontrol Listesi"nden orta düzeyde puan aldığı belirlendi. Annelerin Durumluk Kaygı Ölçeği puanı 37,07±4,95, Öz-Yeterlilik Ölçeği toplam puan ortalaması 79,60±15,23 olarak hesaplandı. Annelerin Öz-Yeterlilik ile Durumluk Kaygı düzeyleri arasında ilişki olmadığı saptanmıştır (p>0.05).

Sonuç: Hemşireler, çocukları buhar inhalasyon tedavisi alan annelerin öz yeterliklerini artıracak ve kaygılarını azaltacak eğitim programları geliştirmelerini destekleyerek tedaviye katkı sağlayabilirler.

Anahtar Kelimeler: kaygı, anne, buhar inhalasyonu, hemşire, öz-yeterlik

Yazışma Adresi/Addess for Correspondence:
Ayşe ŞAHİN
Department of Child Care and Youth Services, Sabuncuoğlu Serefeddin Health Services Vocational School, Amasya University, Amasya/Türkiye
Telefon/Phone: +90 358 211 5027 ***E-mail:*** sahinayse060@gmail.com

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INTRODUCTION

Nebulization (inhalation) treatment is to send the drugs in liquid form to the airways and lungs by means of the devices called nebulizers (1). Respiratory system diseases are common in children due to their anatomy and physiology. Considering the conditions that cause death in children under 5 years of age in the world, pneumonia is among the leading causes of death (2). Respiratory system diseases are the third leading cause of death with a rate of 12.5% according to the Turkey Statistical Institute (TSI) data (3). Family-centered care is a fundamental element of pediatric nursing, as it enhances the quality of care provided to the child, ensures parental involvement in the care during the hospital stay, and helps the healthcare professionals in supporting the child and family to make them feel safe. The quality of care provided to a child in the hospital can be said to be directly related to the presence of the child's family. Family-centered care ensures the continuity of the relationship between the parent and the child during the care process (4,5). Parental involvement in the care of the child reduces the anxiety experienced by the parent during the process (6). Hospitalized children between the ages of 0 and 4 do not have the requisite ability to effectively use an inhaler and face mask. In such cases, the primary caregiver would be responsible for administering and maintaining the treatment. The expertise of parents in the care of their children leads to the provision of individualized and advanced care for the hospitalized child (4,5). Therefore, the nurse should maintain contact with the primary caregiver when the child is hospitalized. Continuation of this relationship also provides emotional support for the child.

Self-efficacy, which is an important concept of Bandura's social cognitive theory refers to people's confidence in their capabilities to organize and implement actions and has been shown to effectively promote positive health behavior changes (7,8). Self-efficacy is the perception and judgment of individuals that they are able to successfully perform a particular action or to control events. Self-efficacy perception is the belief that an individual can successfully perform the necessary behavior to achieve the intended aim. The basic principle of Self-Efficacy Theory is that individuals are more likely to perform actions that they feel competent; the possibility of performing the actions they think is not enough is low (9). Self-efficacy is an important indicator of a woman's successful transition to her maternal role and an important predictor of a mother's child care behavior. (10). Mothers with higher self-efficacy are shown to be able to competently provide care for their infants and to be motivated to

achieve greater efficacious behaviors (11). Mothers of young patients can be involved in treatment and care practices within the hospital environment. Therefore, the self-efficacy perception of mothers is an important factor for them to have a perception of effective and adequate treatment and care practices.

Anxiety emerges as a natural reaction when a person feels insecure (12). The hospitalization of a child is quite understandably a stressful process for the child and their family (13). The quality of care provided to a child in the hospital can be said to be directly related to the presence of the child's family (4). The cooperation of parents and healthcare professionals has a positive impact on the individualized care of the child in the first place (14). It has been reported that family-centered care decreases parents' anxiety (15) and increases self-efficacy (16).

In Turkey, because of the nurses' excessive workload intensive working hours, and the inadequate number of healthcare personnel, inhaler drugs are administered in the clinics in cooperation with mothers (17). In this context, this study aimed to investigate the relationship between self-efficacy and anxiety levels of the mothers whose child receives nebulized inhalation treatment, as well as their competence and relevant factors. Research hypothesis; mothers' self-efficacy and anxiety states have an effect on steam inhalation applications or not.

METHODS

Study Design

The study was planned as descriptive to determine the application skills, self-efficacy and anxiety levels of the mothers whose children receive nebulized inhalation treatment and to examine their relationship with their children.

Participants

The population of the study consisted of mothers (N=376) whose children (0-4 years of age) received nebulized inhalation treatment between December 2015 and May 2016 in a training and research hospital in Turkey. The sample of the study was calculated as 191 using "Sample Size Formula for Known Population" (18). The study was conducted with 300 mothers who agreed to participate in the study. For inclusion in the study, the children had to be under their mother's active care at the time of the study.

Clinic Characteristics and Nebulized Inhalation Application Procedure

The child unit of the hospital where the study conducted had a capacity of 40 beds. There were 10 nurses and 10 specialists actively working in the unit. The child had to be accompanied by a companion

(preferably mothers) during the treatment. In the clinic, the child and the mother can stay in the same room throughout the treatment. The clinical nurse delivered a verbal and practical explanation of the nebulization process which lasted 3-5 min on average. Once a patient is admitted to the clinic in which the study was conducted, as part of the routine procedure, the clinical nurse prepares the inhaler and makes the necessary verbal explanations to the mother, as the primary caregiver of the patient, on how to use the inhaler and administer the drug to the patient, and performs the application on the mother according to the procedure stages. Later on, the mother applies the procedure on the child according to the training provided by the nurse to her.

Data Collection Tools

Sociodemographic Characteristics Form: This form includes questions regarding the age, educational status, working status, occupation of the mother, family type, socioeconomic status, social security of the family, number of children, the age and gender of the hospitalized child, the reason for the child's previous hospitalization in the clinic, the diagnosis process of the disease, the length of the hospital stay, whether there is any previous application of the nebulization treatment, the number of applications, and from whom the application was learned.

Nebulized Inhalation Application Checklist: The checklist was developed by the researchers on the basis of the literature to assess the mother's ability to apply nebulized inhalation (1,17). It includes 18 questions. The answers to these questions are in the form of "Yes-No." "Yes" means that the procedure has been correctly applied, and "No" means that it has been wrongly applied. The questions address every aspect of the application (see Table 3).

State-Trait Anxiety Inventory (STAI): The State-Trait Anxiety Inventory (STAI) was developed by Speilberger et al (19). This study employed the State Anxiety Inventory (SAI) to determine the level of anxiety of the mothers. There are a total of 20 items on the scale. The SAI is a 4-point Likert-type scale. The participant is asked to evaluate how they feel at a certain point in time and to select one of the following expressions to indicate their feelings: none=1, mildly=2, strongly=3, totally=4. The minimum score possible on the scale is 20 and the maximum is 80. A high score indicates a high level of anxiety, while a low score indicates a low level of anxiety. The adaptation of the scale to Turkish and its validity and reliability studies were carried out by Öner and Le Comte (20). The reliability coefficients determined by alpha

correlations for the Turkish version of the State-Trait Anxiety Inventory are between 0.94 and 0.96 (20). In this study, the Cronbach Alpha value of SAI was calculated as 0.87.

Self-Efficacy Scale (SES): This scale which was developed by Sherer et al. (21) and adapted to Turkish by Aksayan and Gözüm (22), measures the self-efficacy level of an individual. The scale is based on self-assessment. The SES consists of 23 items and is organized as a 5-point Likert-type scale. Answers given to the each item of the scale range from 1 (does not define me at all) to 5 (defines me very well), and respondents can only choose one of the options. The minimum score possible on the scale is 23, while the maximum score is 115. Higher scores indicate higher self-efficacy perception. For the validity and reliability of the Turkish version of the scale, the Cronbach alpha internal consistency coefficient was taken as 0.81 and the test-retest reliability as 0.92 (22). The Cronbach alpha internal consistency coefficient of this study is 0.89.

Statistical Analysis

Data were analyzed using IBM SPSS version 20.0. Data were analyzed using frequency distribution for categorical variables, and descriptive statistics (mean, standard deviation) for numerical variables. The normal distribution fit of the data was evaluated by the coefficient of kurtosis and skewness (+1.96, -1.96). Parametric tests (t-test, One-way ANOVA, and Pearson correlation test) were used for variables with normal distribution, and nonparametric tests (Kruskal Wallis variance analysis, Mann Whitney U test) were used for others. The level of statistical significance was accepted as $p<0.05$.

Ethical Considerations

The study was approved by the university Ethics Committee (no:98003106-605/1291) and verbal and written consents of the participants were obtained.

RESULTS

Of the mothers participating in the survey, 51.0% were determined to have less income than their expenses, 23.7% to be illiterate, 96.0% to be housewife, 57.0% to have 3 or more children .The mean age of the participants was determined to be 29.52±6.21 (Table 1).

Self-Efficacy And State Anxiety

The mean score obtained by the participants from the Self-Efficacy Scale was determined to be 79.60±15.23, and the total score obtained from the SAI to be 37.07±4.95. Considering the upper and lower limits of the scales, self-efficacy levels of the mothers were found to be moderate, and their state anxiety to be mild (Table 2).

Table 1: Sociodemographic characteristics of mothers

Variable	**x̄±σ (year)**	
Age	29.52±6.21	
	n	**%**
Educational Status		
Illiterate	71	23.7
Primary Education	169	56.3
High School	49	16.3
University	11	3.7
Occupation		
Housewife	288	96.0
Civil servant	12	4.0
Family type		
Extended Family	112	37.3
Nuclear Family	188	62.7
Perceived economic status		
Income less than expenses	153	51.0
Income equal to expenses	118	39.3
Income more than expenses	29	9.7
Health insurance		
Yes	265	88.3
No	35	11.7
Number of children		
1	58	19.3
2	71	23.7
3 and above	171	57.0
Total	**300**	**100**

x̄: Mean, σ: Standart Deviation

The mothers who had previously applied nebulization treatment obtained a significantly higher mean score from the SAI than those who had not (Table 3).

Table 2: Distribution of Self-Efficacy and State Anxiety Scores of Subjects Interviewed

	Range	**Min-Max**	**x̄±σ**
Self-Efficacy Scale	23-115	36-108	79.60±15.23
State Anxiety Inventory	20-80	26-59	37.07±4.95

x̄: Mean, σ: Standart Deviation

The difference between the total mean score obtained from the SAI was found to be significant according to whether the mother had received training on how to apply nebulized inhalation treatment from a doctor or a nurse. Those who had received it from a doctor (39.65±5.99) had significantly higher scores than those who had received it from a nurse (36.79±4.75) (Table 3).

Mother's Inhalation Application Skills

When the ability of the mothers to apply nebulized inhalation treatment was examined, the application stages correctly performed most were found to be the items 9, 10 and 15, and the application stages wrongly performed most to be the items 11, 17 and 18 (Table 4). The nebulized inhalation application checklist scores of the mothers were evaluated by giving 1 point to the correctly performed application stages and 0 points to the wrongly performed ones (Range: 0-18). The mean Nebulized Inhalation Application Checklist score of the mothers was determined to be 9,69±2,05 (min:4; max:17). Of the mothers, 2.7% (n:8) obtained a low score (0-5), 78.3% (n:235) a moderate score (6-11), and 19.0% (n:57) a high score (12-18).

Comparison of the SES and SAI Scores Based on the Nebulized Inhalation Application Checklist

In the assessment of the SES, the total mean scores obtained by the mothers who carried out the application correctly (Item 1, 2, 3, 4, 8, 15, 16, and 17) were found to

Table 3: Comparison of Mean Scores of Self-Efficacy and SAI According to Children's Intrinsic Characteristics and Inhalation Practices

	n	%	Self-Efficacy Scale		State Anxiety Inventory	
			x̄±σ	Test and p	x̄±σ	Test and p
Gender of the child						
Female	134	44.7	78.79±15.90	t=-0.825	36.83±4.47	t=-0.746
Male	166	55.3	80.25±14.68	p=0.410	37.26±5.30	p=0.456
Diagnosis for the child						
Pneumonia	92	30.7	79.48±14.27	F=1.459	37.64±5.18	F=2.467
Respiratory tract infection	70	23.3	77.10±17.48		36.08±3.98	
Tonsillitis	33	11.0	83.66±15.92	p=0.226	35.84±3.70	p=0.062
Bronchiolitis	105	35.0	80.10±14.07		37.61±5.51	
Previous hospitalization in the clinic						
Yes	71	23.7	78.92±15.19	t=-0.428	37.21±4.93	t=0.268
No	229	76.3	79.81±15.27	p=0.669	37.03±4.96	p=0.789
Previous inhalation treatment applications						
Yes	163	54.3	78.81±15.23	t=-0.981	38.11±5.44	t=4.194
No	137	45.7	80.54±15.23	p=0.328	35.83±3.96	**p=0.000**
Number of previous inhalation treatment applications						
1	22	7.3	75.31±14.18	KW=1.989	39.09±5.35	KW=0.603
2	18	6.0	79.44±13.24	p=0.370	37.22±4.94	p=0.740
3 and above	123	41.0	79.19±15.60		38.12±5.53	
The person teaching the nebulized application						
Doctor	29	9.7	83.58±14.05	U=3307.0	39.65±5.99	U=2688.5
Nurse	271	90.3	79.18±15.31	p=0.161	36.79±4.75	p=0.005

x̄: Mean, σ: Standart Deviation

be significantly higher than others (Table 4). The mothers who applied “Item 8” were found to have significantly lower scores statistically in the SAI compared to those who failed to apply this item (Table 4). The mothers who applied “Item 13” had a significantly higher total mean score than the mothers who did not report this (Table 4).

Relationship Between Self-Efficacy and SAI

When the self-efficacy and state anxiety levels of the mothers were examined, no statistically significant relationship was observed between them (r=0.064, p=0.269).

DISCUSSION

Hospitalization of the child is a stressful process both for the child and their family (13). Getting ill of a child and the consequent hospitalization involve inappropriate and unpleasant experiences for both the child and their family (4). In this study, the anxiety levels of the mothers were found to be at a moderate level. In the literature, anxiety levels of the mothers who stayed in the hospital with their hospitalized

children were reported to be moderate (23-25). Our findings are similar to these results. In this study, the self-efficacy of the mothers were found to be at a moderate level. In a similar study, the self-efficacy of the mothers was determined to be high (26). In the research by Ekim (2015) the increase in the education and income levels of mothers was reported to be effective on their self-efficacy levels (27). Moderate self-efficacy levels of the mothers in our study can be associated with the fact that 56.3% of them were primary school graduates and 51% had a low income.

Especially among the family-centered care research, there are studies showing that parents involved in care have lower anxiety levels (4,28). In our study, the higher state anxiety levels of mothers who applied nebulization treatment before may be associated with the fact that they have a general judgment about the application as a result of their past successful or unsuccessful experiences.

There was a significant difference between the state anxiety total mean scores of the mothers according to the person who taught the steam application to them, and the mean scores of the mothers who received training from a doctor were significantly higher than those of who received training from a nurse. Results of a study conducted with parents whose babies were hospitalized shows that the information and support provided by a doctor or nurse reduce anxiety and stress (29-31). During nursing care, the lack of information regarding the health and needs of the patient should be determined and eliminated. To protect and improve the health of the individual and society, and to bring the right health behaviors for healing in case of illness are the main educational roles of nursing (32). As a health educator, the nurse conveys information about the protection of health and the treatment of diseases both to the patient and the patient's family as well as the society (32,33). The educational role of nurses, who have a first degree of interaction with patients and their relatives in clinical practice, can be effective in reducing mothers' anxiety.

When nebulized inhalation application skills of mothers were examined, the application stages which were performed correctly most were determined to be the termination of the procedure (items 9 and 10) and the private use of the mask (item 15). And the application stages wrongly performed by mothers most were drug side effects (item 11), appropriate waste bin usage (item 17), and washing hands at the end of the procedure (item 18). Considering that most of the mothers are primary school graduates and housewives, the application stages performed either correctly or wrongly most can be stated to likely to be related to the socio-cultural and economic levels of the mothers.

To be successful in a job, only having the knowledge and skills required by the job is not enough. Along with the accumulation of knowledge, the belief in one's ability to use this knowledge is one of the factors affecting their success. Therefore, to achieve success, the individual's considerations and perceptions about their own capacity must be positive. These considerations and perceptions determine the 'self-efficacy' level of the individual (34). The fact that the scores obtained by 78.3% (n:235) of the mothers from the Nebulized Inhalation Application Checklist are on a moderate level supports the result that the mothers have a moderate level of self-efficacy. Accordingly, while educating mothers, who are responsible for patient care on the first degree, pediatric nurses should take into account their beliefs and perceptions concerning themselves.

Bandura defined self-efficacy as the "personal judgment about how well the behaviors required to cope with various situations can be exhibited." Having a positive self-efficacy belief prevents a person from being daunted in the face of difficult goals, tasks and negative situations, and encourages him to overcome this negativity by increasing his efforts (7). A parallel is observed between the inhaler application stages that mothers performed correctly most and the stages in which they obtained significantly higher scores in SES. Based on Bandura's definition of self-efficacy, the fact that mothers have high self-efficacy in the application stages described in items "1, 2, 3, 4, 8, 15, 16 and 17" suggests that their judgment regarding their ability to cope with these situations is high.

The mean SAI score of the mothers who could not perform the inhaler application stage, "to have the child breathe calmly until the medicine in the mask is exhausted" (item 8) was found to be significantly higher. Drugs to be inhaled should be used when the babies are calm and breathe slowly. Crying children almost never take the aerosol drug into their lungs, and most of the inhaled dose accumulates in the upper respiratory tract or pharynx and is then swallowed (35). The calmness of the child during inhalation practices is important for the drug to reach the lungs effectively, thus for the treatment of the child. In this context, the inability of the mothers in our study to calm their crying children and their thoughts that the children haven't been able to receive effective treatment consequently may have increased the state anxiety of the mothers.

In our study, the anxiety levels of the mothers who terminated the process and notified the doctor or nurse (item 13) when severe cough and tremor started in the child during inhalation applications were found to be high. This situation is a sign that

indicates that the general condition of the child has changed and there is a deviation from the normal state. Therefore, it is likely that the mothers who notice this situation have high anxiety levels. There are studies in the literature showing that the anxiety levels of the mothers increase when the general condition of children changes (36,37).

When the literature is viewed, a negative relationship is seen between the self-efficacy and anxiety level (26,38,39). Many studies in the literature show that individuals with a high self-efficacy perception are more successful in initiating positive health behaviors and overcoming obstacles (40-43). The lack of a statistically significant relationship between mothers' self-efficacy and anxiety levels in our study unlike the literature can be explained by their moderate self-efficacy and anxiety levels. Accordingly, the mothers of children who receive inhalation treatment can be said to be partially successful in initiating health behaviors and overcoming obstacles. The results of our study must be evaluated by taking into consideration certain limitations. The children of the mothers included in this study are partly in a narrow age range and constitute a relatively small sample. To verify the findings of this study, future studies should involve mothers of children of a wider age range. Another limitation is the lack of information regarding pre-existing anxiety and self-efficacy levels of the parents. Besides, certain causal relationships could not be revealed since the evaluation was carried out in the hospital environment. Therefore, future follow-up studies are needed to examine the different aspects of self-efficacy and anxiety status of mothers of children receiving inhalation treatment and different conditions that may affect the health of the children.

CONCLUSIONS AND RECOMMENDATIONS

Of the mothers, 78.3% were determined to obtain a moderate score on the "Nebulized Inhalation Application Checklist". The mothers can be said to experience moderate self-efficacy and state anxiety during inhalation. Besides, those who received information from nurses about inhalation practice were observed to have low anxiety levels. In light of these results, it is recommended that nurses develop training programs to increase the self-efficacy and reduce the anxiety of the mothers of children receiving inhalation treatment.

Table 4: Comparison of Mothers' Self-Efficacy and SAI Mean Scores According to Nebulized Inhalation Practices in Hospital

	n	%	Self-Efficacy Scale		State Anxiety Inventory	
			x̄±σ	Test and p	x̄±σ	Test and p
Item 1: Washing and drying of hands before the application						
Yes*	64	21.3	85.10±13.58	t=3.312	37.56±36.94	t=0.891
No	236	78.7	78.11±15.33	p=0.001	36.94±4.99	p=0.374
Item 2: Placement of tubing properly for inhalation						
Yes*	249	83.0	80.55±15.19	t=2.400	36.42±4.24	t=-3.938
No	51	17.0	74.98±14.68	p=0.017	40.25±6.68	p=0.000
Item 3: Proper positioning of the child for effective inhalation (Head and body are in the same direction for 0-1 years of age, sitting position for 1-4 years of age)						
Yes*	157	52.3	81.46±15.78	t=2.229	36.69±5.17	t=-1.392
No	143	47.7	77.56±14.37	p=0.027	37.48±4.67	p=0.165
Item 4: Pouring the correct dose into the chamber when the child begins to breathe						
Yes*	138	46.0	83.30±14.72	t=3.976	36.39±4.59	t=-2.193
No	162	54.0	76.45±14.98	p=0.000	37.64±5.17	p=0.029
Item 5: Adjusting the airflow rate (….....lt\min is recommended by the physician for each patient)						
Yes*	238	79.3	79.02±15.47	t=-1.306	36.90±4.69	t=-1.137
No	62	20.7	81.85±14.15	p=0.192	37.70±5.83	p=0.320
Item 6: Fitting the inhalation mask well to the face						
Yes*	215	71.7	80.44±15.37	t=1.514	36.94±5.21	t=-0.788
No	85	28.3	77.49±14.74	p=0.131	37.40±4.20	p=0.432
Item 7: Fitting the mask to the face in a way that eyes will remain outside						
Yes*	227	75.7	80.26±14.81	t=1.320	36.85±4.65	t=-1.351
No	73	24.3	77.56±16.40	p=0.188	37.75±5.74	p=0.178
Item 8: Having the child breathe calmly until the drug in the mask is finished (approximately 5-10 minutes)						
Yes*	227	75.7	81.28±14.74	t=3.428	36.57±4.72	t=-3.134
No	73	24.3	74.38±15.65	p=0.001	38.63±5.34	p=0.002
Item 9: Checking inside the chamber when steam does not come out						
Yes*	267	89.0	80.15±15.05	t=1.787	36.98±4.83	t=-0.841
No	33	11.0	75.15±16.15	p=0.071	37.75±5.82	p=0.401
Item 10: Checking the airflow and turning off the nebulizer after the application is finished						
Yes*	268	89.3	79.74±15.22	t=0.447	36.80±4.80	t=-2.736
No	32	10.7	78.46±15.49	p=0.656	39.31±5.67	p=0.007
Item 11: Washing the child's face or wiping their face gently with a damp cloth to prevent local side effects (skin redness, whitish fungal plaques on the mucous membranes)						
Yes*	9	3.0	86.77±19.55	U=917.5	39.88±4.45	U=810.5
No	291	97.0	79.38±15.06	p=0.126	36.98±4.94	p=0.051
Item 12: Having the child eat or drink after inhalation						
Yes*	115	38.3	79.75±16.31	t=0.134	36.73±4.97	t=-0.946
No	185	61.7	79.51±14.56	p=0.893	37.28±4.93	p=0.345
Item 13: Terminating the process and notifying the doctor or nurse when severe coughing and tremors start in the child during inhalation						
Yes*	58	80.7	78.34±14.86	t=-0.702	38.55±5.84	t=2.225
No	242	19.3	79.90±15.33	p=0.483	36.71±4.65	p=0.029
Item 14: If there are more than one inhaler drugs, using them without mixing						
Yes*	254	84.7	80.20±14,977	t=1.613	36.81±4.60	t=-1.676
No	46	15.3	76.28±16.37	p=0.108	38.47±6.42	p=0.099
Item 15: Knowing that the inhalation mask is personal and disposable						
Yes*	263	87.7	80.26±14.97	t=1.998	36.98±4.99	t=-0.825
No	37	12.3	74.94±16.42	p=0.047	37.70±4.62	p=0.410
Item 16: Protecting the nebules from direct sunlight and keeping them on shelves						
Yes*	101	33.7	83.66±14.58	t=3.342	36.45±5.21	t=-1.544
No	199	66.3	77.54±15.17	p=0.001	37.38±4.79	p=0.124

x̄: Mean, σ: Standart Deviation, *Correct Application

Table 4 (continued): Comparison of Mothers' Self-Efficacy and SAI Mean Scores According to Nebulized Inhalation Practices in Hospital

Item 17: When the application is over, throwing the mask into the appropriate waste box						
Yes*	18	6.0	89.22±10.69	U=1541.5	39.61±6.09	U=1831.5
No	282	94.0	78.99±15.28	p=0.005	36.91±4.83	p=0.047
Item 18: Washing and drying the hands when the application is over						
Yes*	38	12.7	84.71±15.01	t=2.225	38.02±5.64	t=1.271
No	262	87.3	78.86±15.15	p=0.027	36.93±4.83	p=0.205

x̄: Mean, σ: Standart Deviation, *Correct Application

Implications for Nursing Practice

In pediatrics clinics, mothers can sit up with their child who had treatment in the clinics. Active cooperation of mothers with nurses and with the other healthcare professionals positively affect the treatment process of the child. Children who are aged 0-4 years receiving medical treatment, can be agitated and may show behaviors such as crying and irritability during applications. In this situation, the mother who is responsible for the primary care of the child may experience anxiety. Depending on the anxiety, mothers may experience self-deficiency in practices. In this direction, the cooperation of pediatric nurses with the consultation liaison psychiatric nurse would be effective in reducing mothers' anxiety and increasing their self-efficacy. Consequently, this help to increase of the quality of treatment and care offered to the child.

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