

Research Article

Stress Decrease in Mothers of Children, Discharged from Pediatric Surgical Units: A Four-staged Follow up Care Program Implementation

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Received: 13 June 2019; **Accepted:** 25 June 2019; **Published:** 28 June 2019

Abstract

Objective: Children are damage-prone population whose illness is stressful for their parents. Family stress may endure long after discharge and proper remedies need to be employed. The present study was conducted to determine the level of mother's stress whose children were discharged from pediatric surgical units and to assess the effects of a four-staged follow up care program on the level of this stress.

Method: This is a quasi-experimental research, conducted in pre and post interventions on 64 mothers whose children were hospitalized in the surgical units of selective hospitals of the Isfahan university of medical sciences. Participants were randomly classified into 2 control and experimental groups. Demographic data questionnaire and stress measurement scale (SRI) were the data collection tools. The interventions were done by a four-staged follow up program. The data were analyzed using descriptive statistics, independent t test, and variant analysis with repeated observations.

Results: The result of the study indicates that the maximum scores of stress were 115 and 103 in experimental and control groups respectively. Stress mean score of the experimental group was meaningfully less than that of control group straightaway, one week, and one month after the intervention ($P < 0.0001$).

Conclusion: We can conclude that, with the implementation of a four-staged follow up program, there would be a meaningful difference in the stress level of the mothers of operated children after discharge, in such a way that the

family members, especially the mothers, would be more efficacious.

Keywords: Follow-up care; Mothers; Stress; Discharge; Pediatrics; Iran

1. Introduction

Hospitalization is a stressful event for both the hospitalized person and the family. Should the hospitalized person be a child, the family needs more support to adopt the situation [1]. Parents experience stress during hospitalization [2]. The stress may endure after discharge resulting from lack of knowledge and insufficient care information about the child's illness. It may make the mother unable to adopt the hospital situation and to support her child [3]. Family stress may also persist long after the treatment period. Some studies, conducted on such families, have indicated that mothers may find some physical, psychological, and emotional problems with the patient [4-5]. Some other studies have indicated that mothers may adopt hospital situations and care-giving behaviors, if supported by care providers during their children's hospitalization; but they regain their stress within the last days of hospitalization. In other words, child's discharge and to home transfer is stressful for the family. This stress is even more severe when the child has been operated [6-9]. With the daily increase of child outpatient surgeries and transfer of care role to the parents, especially to the mothers, and aiming stress alleviation, we recommend parents proper preparation through different methods of correct pre and post surgery care [10].

Normally, the parents are not trained sufficiently for such cares that cause them stress and long term behavioral disorders [11, 12]. Therefore, the treatment staff, especially the nurses, should participate in the preparation process at the discharge occasion [13]. Even though the training and development of training pamphlets and process specifications are the first basic step toward preparing the patient and the family during hospitalization and discharge but a follow up plan is still inevitable [1]. No matter how we follow up the patient's treatment, a low cost and more convenient method like leading the patient to the care-giving centers, home visits by the care providers, and use of telecommunication media is preferred [14]. The follow up plan is a nursing intervention, developed to specify patients' needs, problems, to sensitize them to adopt health behaviors, and to help promote their health. There would be a continuous and effective care relationship with the patient in the plan that fully conform to his/her characteristics and severity of the problems [15-16].

Despite the importance of follow up care plan on the patient's health and the family, patients are currently trained shortly and the parents are given a training pamphlet in the hospital throughout the country at the discharge. As far as we understand, the effect of follow-up care of child's surgery has not been evaluated so far. Regarding some evidence-based results, nurses knowledge may affect their responsible in playing different roles. The present study was conducted to determine the level of mother's stress whose children are discharged from pediatric surgical units and to assess the effect of a four-staged follow up program.

2. Method

In a quasi-experimental study, 64 mothers of hospitalized children participated based on the inclusion criteria of having been hospitalized at least 3 days before inclusion and aging from 6 months to 5 years old. The participants were required to sign a written consent and then sampling was done in convenient method. They were randomly divided into two groups. The study was done in surgical pediatric units of educational hospitals of Isfahan University of Medical Sciences. The data was collected in before, one week, and one month after the intervention using SRI scale (the minimum score is zero and the maximum score is 156) in self-reporting manner. The follow up program was used for the intervention. The program includes four stages of familiarization, sensitizing, follow up, and evaluation. In familiarization stage, the mothers were oriented with the program before discharge.

The second stage (sensitization) took one hour with the presence of mother and other family members at home. In this stage, the disease treatment, nursing care and surgery side effects were described to those who would take care of the child. One week after discharge, the third stage of the program was done through three phone calls. The researcher called up mothers, asking some questions about the child's diet, pain alleviation, visiting the physician, and dress changing. In specific cases, she referred them to a sergeant for the issues out of her specialty. Mother's stress was measured on the seventh day after intervention in the fourth stage. Those who were included in the control group received discharge routine care trainings. The study was approved by ethics committee of Isfahan university of Medical Sciences. All participants signed informed consent before enrolling to the study.

3. Results

The results of the study indicate that the maximum scores of stress were 115 and 103 in experimental and control groups respectively before the intervention. The scores decreased after the intervention. Table 1 shows mothers stress in before, one week and one month after the intervention. Based on the independent t-test, stress mean scores of the both groups were not meaningfully different ($p=0.6$) but significantly less in experimental group in one week ($p<0.001$) and one month ($p<0.001$) after the intervention than that of control group. As indicated by variant analysis test with repeated observations, the scores were different in three times ($p<0.001$) in experimental group. Inferential test LSD indicated that the mean score of the experimental group in one week after the intervention ($p<0.001$) was significantly less when compared with that in before the intervention and even less in one month after the intervention ($p<0.001$) in comparison with that in one week after the intervention. The test also indicated that the mean stress score of the group was not significantly different in before and one week after the intervention ($p=0.34$) but it meaningfully decreased in one month after the intervention ($p<0.001$) (Table 2).

Time	Experimental group		Control group	
	Minimum score of stress	Maximum score of stress	Minimum score of stress	Maximum score of stress
Before intervention	8	115	15	103

One week after intervention	3	51	21	135
One month after intervention	2	30	13	91

Table 1: The comparative of stress level in two groups.

Time	Case group		Control group		Independent samples test	
	Mean	Std deviation	Mean	Std deviation	t	p
Before intervention	64.1	28.8	61.2	29.2	0.40	0.69
One week after intervention	20.4	12.4	59.9	25.5	7.88	<0.001
One month after intervention	11.6	7.5	46.7	19.1	9.67	<0.001
ANOVA						
F	65.09	17.80				
P	<0.001	<0.001				

Table 2: Comparison of mean score of mothers’ stress at different times.

4. Discussion

Mothers experience a high stress while their children are hospitalized and even after discharge. This study revealed the stress level and assessed the effects of the four-staged follow up program on their stress after the discharge of their operated children. The mean stress score of the mothers in one week and one month after the intervention was significantly less in experimental group than in the control group. Some studies have showed that the surgery is an important event in the lives of families. Around 234 million of operational procedures are done in the world annually. It is the most stressful event for the family [17-18]. Those parents who take their children to hospital for surgery feel guilty when they find themselves unable to protect them against pain and suffer. Moreover, wound, dressing, pain, and side effects of the surgery persist long after the surgery that cause stress for the parents [1].

Jackson et al. conducted a qualitative study in Australia on parents. Parents’ confidence in treatment and care-giving staff and receiving support and training were the conventional sources of conformity with stress [19]. In another study, treatment staff support and consulting family members were required for family conformity with the stress, resulting from patient’s illness [20]. Kain et al. classified the interventions in three categories, resulting in stress alleviation for parents of the children who were operated. Suitable informing plan and family preparation, prior to the operation, up to the child’s complete improvement was the most important category. It is the responsibility of treatment staff, especially the nurses, to find an effective, cost efficient, and suitable way [21]. Evidences prove that preparing information given to the parents on the discharge day can greatly reduce their stress Therefore, the results of the above studies are based on the effect of the method of follow up care and rendering information.

It is recognized in the present study that a follow up care plan, conducted after discharge through training pamphlets and follow up phone calls, can greatly reduce the mother's stress whose child is operated. Similarly, the effect of follow up telenursing on stress management among the families of the patients with heart diseases was indicated in another study where the stress decreased with once a week follow up phone calls after 30 days of discharge [22]. From previous studies, we find out that the implementation of pro-discharge care result in a better life for the patient and the family after discharge. The researcher insists that follow up phone call and a generalized care plan is possibly needed; however, we can realize loneliness and lack of support that the parents experience while the child is discharged [21-22]. The child will face with acute problems, especially a delay in diagnosis of surgery side effects, if not followed up after surgery. Mothers' need for support and care were issues of other studies and accordingly implementation of follow up care plan was noticed. In addition to the low quantity of participants, there were some limitation in the present study. Normally, Iranian mothers are reluctant to inform the other family members about their child's illness and consequently we had some difficulties in scheduling, making phone calls, and convincing them for participation.

5. Conclusion

Stress will persist long after discharge and may cause parents unable to play their role, giving care to their ill child. The results of the present study suggest that mothers post discharge stress may be decreased considerably with the follow up care plan. It is evident that routine in discharge trainings are not sufficient to decrease the stress. Also, more accurate on site trainings together with follow up care plan can be more helpful.

Acknowledgement

We frankly thank all the staff of Alzahra and Imam Hossein hospitals. We also find ourselves committed to thank patient and uncomplaining nurses of surgical units, all mothers and family members of the operated children, Nursing and Midwifery Faculty of Isfahan, and those who honestly helped us to conduct the present study.

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Citation: Mahboobeh Namnabati, Zahra Abdeyazdan, Forogh Okhovat. Stress Decrease in Mothers of Children, Discharged from Pediatric Surgical Units: A Four-staged Follow up Care Program Implementation. *Journal of Pediatrics, Perinatology and Child Health* 3 (2019): 083-089.



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