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Stress and coping strategies adopted by mothers of children admitted in pediatric intensive care unit.

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Original Research

Stress and coping among mothers of children admitted to the paediatric intensive care unit (PICU).

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Abstract

Introduction: Planned or unplanned hospitalization increases the family's stress and anxiety level. Hospitalization creates stress, as it interrupts normal routines and places increased demands on parents who must further divide their time between normal responsibilities and their hospitalized child. Many parents feel a lack of control and a sense of powerlessness when their child is hospitalized. **Objectives:** The objectives of the study were to identify the level of stress and coping among mothers of children admitted to the paediatric intensive care unit (PICU) and to determine the correlation between stress and coping among mothers of children admitted to the PICU. **Methods:** The setting chosen for the present study was the Paediatric Intensive Care Unit of Sree Gokulam Medical College and Hospital. By employing techniques for consecutive sampling, 100 mothers were selected. The Modified Parental Stressor Scale (PSS) and Modified Coping Health Inventory for Parents (CHIP) were used to collect the data from mothers. **Results:** The present study found that most 94% of mothers had severe stress because of stressors, and only 6% had moderate stress. No one had mild stress. The present study found that 50% of mothers cope well with the stressors from their child's PICU admission, and the remaining 50% cope moderately with stressors. The results show that stressors had a significant association with the age of the mother, religion of the mother, mode of payment, development stage, history of previous admission, occupation of the mother and income. There was a weak positive correlation between stressors and coping strategies. **Conclusion:** Therefore, the study concluded that stressors influence the stress level of mothers of children admitted to the PICU.

Key words: children, coping strategies, mothers, PICU, stress, stressors.

Introduction

Parents act as primary agents, involving direct care, providing available health services and modelling attitudes and behaviours that influence children's well-being. "Stress is a nonspecific response of the body to any excessive environmental request". There are many stressors in the environment, and they cannot directly influence an individual's reaction to stress but depend on their emotional control (Hockenbbery et al., 2017). Hospitalization of children creates several psychological responses, such as anxiety, depression and tension, in parents and may interfere with a child's normal development. Having a child hospitalized is a stressful event for parents (Kumar & Avabratha, 2015). A longer hospitalization brings a high level of stress among parents and the need for family support, and comfort also increases depending on the duration of hospitalization (Baía et al., 2016). Eventually, parents may react with some degree of depression, especially mothers. It is always difficult for mothers to adjust, and they often have feelings of physical and mental exhaustion even though other family members have adapted to the crisis.

Other causes of anxiety and stress include fears about the child's future wellbeing, as well as adverse outcomes and financial difficulties brought on by hospitalization. (Golfenshtein et al., 2016). Sometimes severe illness

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in children requires critical care, and parent–child relationships may be affected if the child is admitted to the intensive care unit. The child becomes increasingly dependent on his parents and more demanding of their presence and attention at the same time that the parents are highly protective and indulgent. With unfamiliar doctors and nurses, there is a greater need for both parents and children to work together (Hong & Park, 2012).

Maternal stress and anxiety can also have an effect on the child in two ways: by making it harder for the mother to meet the child's requirements and by passing on the stress to the child. (Hasan Tehrani et al., 2012). Mothers perceived more stress related to the parental role than fathers. Mothers used problem-focused and emoting-focused coping in tandem, whereas fathers showed no relationship between coping methods (Patil et al., 2015). According to a study on the psychological stress of caregivers of hospitalized children, these caregivers perceived high levels of stress and anxiety due to loss of control and confusion, psychophysical changes, duration of hospitalization, the relationship between caregiver and child, and unpleasant experiences producing tension (Commodari, 2010).

Coping is one's ability to deal with new situations and stressful experiences. Coping strategies are the mechanisms a person uses to manage stressful situations. Many parents cope better with their child's hospitalization and actively participate in their care. Others stay with the child but assume a passive role, observing the hospital staff providing care. Coping is an ongoing process, and there isno right or wrong way to manage life. There are several different strategies that people use to help themselves and their families during this difficult time (Rajalakshmy & Kalavathi, 2017). There is suggestive evidence on the relationship between parenting stress in mothers of children with congenital heart disease at the paediatric cardiac outpatient clinic, and it was reported that parenting stress was significantly related to social support (p=0.01), ambiguity (p=0.01), lack of clarity (p=0.009), and lack of information (p=0.031) but was not related to unpredictability (p=0.273) (Lee et al., 2007).

Studies on the stressors and coping strategies adopted by mothers of children admitted to the PICU are scarce. To increase the quality of care, it is necessary to understand the stressors and coping strategies adopted by mothers of children admitted to the PICU in India. Therefore, a study regarding stressors and coping strategies should be done in our setting, which will help identify theparent's level of stress, stressors during PICU admission of their children, and coping strategies adopted by the mothers of children. It will help plan and provide supportive interventions for parents to reduce stress and emotional reactions.

Objectives

The objectives of the study were to identify the level of stress among mothers of children admitted to the PICU, to identify the level of coping among mothers of children admitted to the PICU and to determine the correlation between the level of stress and coping amongmothers of children admitted to the PICU.

Materials and methods

A descriptive correlational design was adopted for this study. The setting chosen for the present study was the Paediatric Intensive Care Unit of Sree Gokulam Medical College and Hospital, Venjaramoodu, Kerala. In this study, the population comprises mothers of children admitted to the paediatric intensive care unit. By employing techniques for consecutive sampling, 100 mothers were selected. Administrative permission was obtained from institutional authorities, and ethical clearance was obtained from the Institutional Ethical Committee of Sree gokulam Medical college (IEC No: 21/229/06/2016/N). Written informed consent was obtained from all subjects. A modified parental stressor scale and modified coping health inventory for parents (CHIP) were administered to the mothers, and doubts related to some statements were clarified. The investigator collected data from 100 mothers over a period of one month from 04 January 2017 to 04 February 2017.

The sample size was calculated from the findings of a previous study on the prevalence of PICU procedure-related stress and the calculated sample size was 87.5.

However, 100 participants are planned to be recruited to avoid dropouts.

Tools

Sociodemographic proforma. This tool was developed by the researcher. Section An includes education, occupation, and family income, and Section B includes sociodemographic data of mother and child.

Parental stressor scale. This is a standardized scale consisting of seven domains to assess the reasons for parental stress during their child's PICU admission. It was based on a four-point scale. Mothers were asked to rate the stressors they experienced while their child was in the hospital in the appropriate column. The items were given a score ranging from 0 to 3; 0=normal, 1=mild stress, 2=moderate stress, and 3=severe stress. The total score was calculated, and the grand score was taken for interpretation.

Coping health inventory for parents (CHIP). This is a standardized scale consisting of 20 items. The items are coping behaviours. It was based on a four-point scale. Mothers were asked to rate the effectiveness of their coping mechanisms while their children were in the hospital in the appropriate column. The items were given a score of 0=Not helpful, 1=Minimally helpful, 2=Moderately helpful, and 3=Extremely helpful. The total score was calculated, and the grand score was taken for interpretation.

Validity and reliability

The content validity of the tools was assessed by seven experts from paediatric medicine and nursing. There was agreement among the experts regarding the item coverage, and selected modifications were made. The reliability of the tools were determined by Cronbach's alpha, and the obtained values for the Parental Stressor Scale and Coping Health Inventory for Parents were 0.6 and 0.7, respectively.

Results

The data collected were categorized and analysed based on the study objectives using descriptive and inferential statistics. The study findings were categorized as follows:

Description of the sample characteristics

Most mothers (48%) were 31-40 years old. The majority of mothers (72%) belonged to the Hindu religion, 74% of mothers belonged to panchayat, 89% were from nuclear families, 46% had insurance from private agencies, and others were paid directly. In hospitalized children, 35% were infants, and only 10% were adolescents. Forty-three percent of the children were males, and 57% were females. Fifty-five percent of children were the first child, and 45% of children (43%) were the second child. Out of the subjects, 35% of mothers had a monthly income below 1,600 INR.

Description of stress among mothers of hospitalized children.

Table 1

Frequency and percentage distribution of level of stress among mothers based on stressors.

N=100

Stressors	Normal		Mild		Moderate		Severe	
	F	%	F	%	F	%	F	%
Child's appearance	16	16%	12	12%	33	33%	39	39%
Sights and sounds	21	21%	29	29%	32	32%	18	18%
Procedures	12	12%	24	24%	34	34%	30	30%
Behaviours of staff	14	14%	18	18%	42	42%	26	26%
Parental roles	12	12%	17	17%	23	23%	48	48%
Communication of staff	17	17%	23	23%	32	32%	28	28%
Behaviour of child	23	23%	23	23%	26	26%	28	28%

Table 1 shows that 39% of the mothers had severe stress due to the child's appearance, 48% of the mothers had stress because of parental roles, and 28% of the mothers had stress due to the child's behaviour. While 32% of the mothers had moderate stress due to sights and sounds, 34% of the mothers had procedure-related stress, 42% of the mothers had moderate stress due to the behaviour of staff, and 32% of the mothers had moderate stress related to the communication of staff.

Table 2

Frequency, percentage, mean and standard deviation of mothersaccording to the level of stress.

N=100

Stress	Frequency	Percentage	Mean	SD
Mild (0-20)	0	0		
Moderate (21-40)	06	06%	58.7	6.1
Severe (41-60)	94	94%		

Table 1 shows that the majority (94%) of mothers had severe stress because of stressors, and the mean score of stress among mothers was 58.7.

Description of the level of coping among mothers of children admitted to the PICU.

N=100

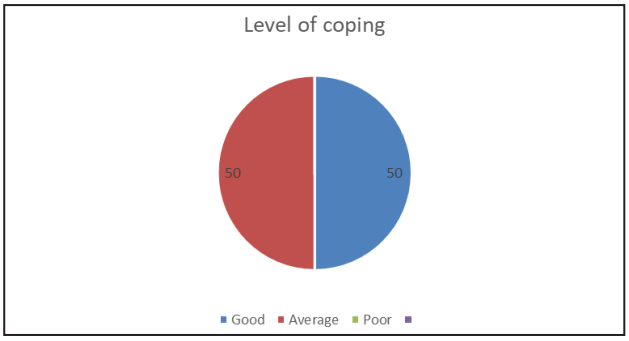

Figure 1. Frequency and percentage distribution of mothers coping.

Figure 1 shows that 50% of mothers had good coping. The mean score of coping among mothers was 41.3.

Relationship between stress and coping among mothers of hospitalized children.

The relationship between stress and coping was analysed using the Pearson correlation coefficient in inferential statistics, as the data were not normally distributed.

Table 4

Correlation between stress and coping among mothers of children admitted to the PICU.

N=100

Variables	Correlation coefficient(r)	*p* value
Stress		
	0.253*	0.011
Coping		

Note. *-Significant at $p<0.05$

The data presented in Table 4 reveal that there is a weak positive correlation (r=0.253, *p<0.05)* between stress and coping strategies, which infer that coping strategies adopted by mothers have less influence in reducing stress among mothers.

Discussion

This study determined the relationship between stress and coping among mothers of children admitted to the PICU. The results of this study indicate that there is a weak positive correlation between the stress and coping of mothers, which suggests deviations in the stress level of mothers due to their child's admission to the PICU which are somehow related to their coping strategies. Hence, interventions to improve coping strategies can reduce parental stress.

The present study found that the majority (94%) of mothers had severe stress because of stressors, and only 6% of mothers had moderate stress. No one had mild stress. Out of 100 mothers, 39% were having severe stress due to the child's appearance, 48% were having severe stress because of parental roles, and 28% were having severe stress due to the behaviour of the child. Most of the mothers have moderate stress due to sights and sounds, procedures, the behaviour of staff, and communication of the staff. This finding aligns with a previous study examining how adolescent mothers perceived the stressors encountered in the neonatal intensive care unit (NICU) setting. Parents' stress levels have been proven to be significantly higher in the NICU environment. The NICU parental stress scale and a demographic data form were used to gather the data. These 46 mothers found that changes in parental roles and the infant's look and temperament were the most distressing NICU experiences. The noises and sights of the NICU and interacting with personnel were less stressful (Bell, 1997). Another study reported on parents' fear and distress during child

inpatient care at the paediatric centre of Tehran Medical Sciences University and found that seven factors were the source of stress for parents during their child's inpatient care. They were environment adjustment (10.50%), lack of prehospitalization program (9.22%), lack of communication skills of caregiver (8.77%), parental skills (8.46%), hospitalization expenses (8.46), loss of independence (8.42%), and lack of information (7.81%) (Meshkani & Bavarian, 2005).

The present study found that 50% of mothers coped well with the stressors of their child's PICU admission, and the remaining 50% coped moderately with the stressors. The findings of this study are consistent with other studies, which showed that 28% had moderate stress, 38% had severe stress, 34% had mild stress, 25% had mild coping, 50% had moderate coping, and 25 % had good coping. In terms of coping, no mother was found to be poor at coping, but 35 (87.50%) mothers were coping on average, and 5 (12.50%) motherswere good at coping (Patil et al., 2015).

The present study found that there was a weak positive correlation between stress and coping strategies, with a correlation coefficient of 0.253 at $p<0.05$. The result is supported by another study conducted in the Neonatal Intensive Care Unit atGovernment Hospital, Bengaluru, to correlate the level of stress and coping strategies among mothers of neonates. Among 100 mothers,34% had mild stress, 28% had moderate stress, and 38% had severe stress. Regarding coping mechanisms, 25% of them had poor coping, 50% had moderate coping, and 25% had good coping. There was a significantcorrelation between stress and coping strategies at the $p< 0.05$ level (Shanmugam & Ramachandra, 2015).

Conclusion

The study found that mothers experienced significantly higher stress because of the child's appearance, parental role alteration, and the behaviour of the child. The present study found that the majority of mothers had severe stress because of stressors, and only a few mothers had moderate stress. The present study reported that 50% of mothers coped well with the stressors of their child's PICU admission, and the remaining 50% coped moderately with stressors. There was a weak positive correlation found between stressors and coping strategies.

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