Level of Stress among Mothers of Children Admitted in Paediatric Intensive Care Unit of Indira Gandhi Medical College and Hospital, Shimla (Himachal Pradesh)

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Abstract:

The paediatric intensive care unit (PICU) is a multi-disciplinary unit that provides care for infants, children and adolescents who become critically ill or injured. Admission of a child to the Paediatric intensive care unit is a stressful situation for the mothers who are accompanying the min PICU. It is very difficult to explain the devastating stress experienced by mothers. The aim of the study was to assess was the level of stress and its association with selected demographic variables. The study adopted a descriptive research design and was conducted in PICU of IGMC & Hospital, Shimla. A total of 32 (total enumeration) mothers were selected. A semi-structured interview schedule and perceived stress scales were used for data collection. Data analysis was done by using the descriptive, and inferential statistics. The study results revealed that 6 (18.8%) of mothers had high and 26 (81.3%) had severe level of stress. The type of family, family budget altered due to the illness of child that were found to have a strong association at 0.05 level of significance. To conclude mothers are highly stressed due to the child's admission in PICU. So there is emphasis on the use of coping strategies, grievance and counselling cells in the hospital.

The Paediatric intensive care unit (PICU) is a multi-disciplinary unit that provides care for infants, children and adolescents who become critically ill or injured. Admission in a PICU is often a transitional phase in the child's recovery from a critical illness. When the child is critically ill, parents may also experience overwhelming shock, helplessness, and guilt. These can include family stressors such as perceived changes to the parental role, feelings of helplessness, education level, other life stressors, and personality factors (e.g., propensity for anxiety). Environmental stresses such as technical equipment, atmosphere of tension, and the parent's perception of the nurse's competence are factors which arise from the physical and psychosocial aspects of the PICU environment (Gallegos, 2011).

Most parents experience a PICU admission with a certain emotional impact. In addressing parental stress, many studies have documented the psychological impact of a PICU admission (Shudy et al, 2006).

The present study was under taken to assess the stress of mothers while being with there children in the PICU. It helps in exploring the hidden feelings of the mothers with their child's illness. This helps in changing the mechanical attitude of the health care professionals towards parents of the ill child. This also changes our focus of patient-centred care to family-centred care.

Advances in technology have resulted in a decreasing paediatric mortality, while increasing morbidity. Many of the studies surrounding parental stress and coping have been performed in homogenous samples. There is paucity of literature exists regarding parental coping in response to a child's acute and chronic critical illness. It is extremely important to completely understand the stresses experienced by mothers as well as the coping strategies useful during a child's critical illness.

Objectives

The objective of this study was to assess the level of stress and its association with selected demographic variables.

Review of Literature

A study was conducted to check the effect of nursing interventions on stressors of parents of premature infants in neonatal intensive care unit. Randomised intervention was done. The difference between the intervention group and the control group mothers' mean stress score was found to be statistically significant ($t=4.05$, $p<0.05$). It was determined that the stress scores for the fathers in the treatment group in this research were lower,

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but the difference between the two groups was not found to be statistically significant (p>0.05) (Oxley, 2018).

A descriptive study with purpose of description of sources of stress and stress symptoms over time for mothers with a child in the PICU and a comparison with mothers with a child in a general care unit (GCU). The sample contained 31 PICU and 32 GCU mothers who were studied during four time periods over 6 months using the Parental Stressor Scale: PICU and the Symptom Checklist 90-Revised. Results showed that PICU mothers were stressed from the total intensive care experience and the use of monitors. PICU mothers experienced more stress symptoms than the GCU mothers did during all four time periods (Miles et al, 1992).

Research Methodology

Pilot study: Pilot study was done in month of January 2018. The pilot study sample for quantitative research was 10. The reliability established from pilot study was 0.78.

Sample size calculation

n = NZ 2p (1 − p)/d 2(N − 1) + Z 2p (1 − p)

n = Sample size

N= Total population 30 (previous month population)

Z = Standards normal variable with 95 percent confidence interval i.e. 1.96 d= (allowable error) = 5% = 0.05

p= Population proportion = 0.8 (80%)

The calculated sample size was found to be 27. But considering the non-response rate the sample size was considered upto 32.

Data Collection Instruments

Tool 1: Semi structured interview schedule

Tool 2: Perceived stress scale

Ethical considerations: Ethical approval for the study was taken from the Ethical Committee of Eternal University. The researcher explained the study to the participants and a written informed consent was obtained from each subject.

Results and Interpretation

In the present study, 26 (81.3%) mothers had very high level of stress and 6 (18.8%) had high level of stress and no mother fell in the category of very low, low and average stress.

It also reveals that type of family and family budget alter due to illness of child; it has a very strong association with stress levels at 0.05 level of association. Among type of families the nuclear families 20 (87.0%) had very high stress as compared to the joint (n=5, 100.0%) and extended families (n=1, 25.0%). Twenty (100.0%) mothers believed that family budget alters due to child's admission in PICU whereas 6 (60.0%) mothers disagreed on the same.

Background information of the mothers

Table 1 depicts that 22 (68.8%) of mothers belonged to the age group of 19-29 years, another 7 (21.9%) belonged to the age group of 30-39 years and remaining 1 (3.1%) were in the age group of more than 40. It was found out that 29 (90.6%)

Table 1: Association between level of stress with selected demographic variables (N=32)

S. No.	Variables		f	%		df	p value
1	Age (in years)	Less than 18 19-29 30-39 More than 40	2 22 7 1	6.3 68.8 21.9 3.1	3.357	3	0.340
2	Religion	Hindu Muslim	29 3	90.6 9.4	0.492	1	0.483
3	Total family members	0-2 2-4 5 & more than 5	1 12 19	3.1 37.5 59.4	5.254	2	0.072
4	Type of family	Nuclear Joint Extended	23 5 4	71.9 15.6 12.5	**9.953**	**2**	**0.007***
5	Type of marriage	Married	32	100	00	00	00
6	Total no of children	1 2 3	11 11 10	34.4 34.4 31.3	4.550	2	0.103
7	Education status	No formal education Primary Secondary/Higher secondary Graduate & above	8 4 10 10	25 12.5 31.5 31.5	3.556	2	0.169
8	Occupation	Government Private Labourer Housewife	4 3 1 24	12.5 9.4 3.1 75.0	3.556	3	0.314
9	Monthly income (in Rupees)	Less than 10000 10000-20000 20000-30000 More than 30000	9 8 6 9	28.1 25.0 18.8 28.1	6.199	3	0.102
10	Fathers education	No formal education Primary Secondary/Higher secondary Graduate & above	1 7 22 2	3.1 21.9 68.8 6.3	1.368	2	0.505
11	Fathers occupation	Government Private Labourer	12 16 4	37.5 50.0 12.5	1.055	3	0.788

Table 2: Degree of association of stress of the mothers with associated demographic variables (N=32)

S. No.	Variable		Stress		Total
			16-20 HIGH	21 & over	
1	Type of family	Nuclear	3 (13.0%)	20 (87.0%)	23 (71.8%)
		Joint & Extended	3 (75.0%)	6 (25.0%)	9 (28.1%)
		Total	6 (18.75%)	26 (81.25%)	32 (100%)
2	Family budget alters due to PICU admission	Yes	2 (9.1%)	20 (90.9%)	22 (68.75%)
		No	4 (40.0%)	6 (60.0%)	10 (31.25%)
		Total	6 (18.75%)	26 (81.25%)	32 (100%)

of them were Hindu and 3 (9.4%) were Muslim. The 19 (59.4%) had 5 and more than 5 as total family members whereas only 1 (3.1%) of mothers had family members between 0-2. Majority of the mothers, i.e. 23 (71.8%) were from nuclear families whereas 4 (12.5%) belonged to the joint families. All the mothers i.e. 32 (100%) were married. The 11 (34.4%) of the mothers had 1 and 2 children and 10 (31.3%) had 3 children. The 10 (31.5%) of them were having education level of secondary/ higher secondary, graduate and above whereas 4 (12.5%) had primary level of education. Majority of them i.e. 24 (75%) were housewife and 1 (3.1%) was working as labourer. The 9 (28.1%) mothers has family income less than 10,000 & more than Rs. 30,000 followed by 6 (18.8%) with family income between Rs. 20,000-30,000. It was also revealed that 22 (68.8%) of fathers had secondary/ higher secondary level of education and 1 (3.1%) had no formal education. In occupation 16 (50%) of the fathers were doing private jobs and 4 (12.5%) were labourer. The type of family and family budget alter due to illness of child which has a very strong association with stress levels at 0.05 level of significance.

Table 2 depicts that the nuclear families (n=20, 87.0%) had very high stress as compared to the joint (n=5, 100.0%) and extended families (n=1, 25.0%); 20 (100.0%) mothers believed that family budget alters due to child's admission in PICU whereas 6 (60.0%) of mothers disagreed on the same.

Table 3 shows that 26 (81.3%) mothers had very high level of stress and 6 (18.8%) had high level of stress and no mother falls in the category of very low, low, and average stress.

Figure 1 depicts the distribution of mothers with minimum 16 and 33 as perceived stress scores as well as mean, mode and median values.

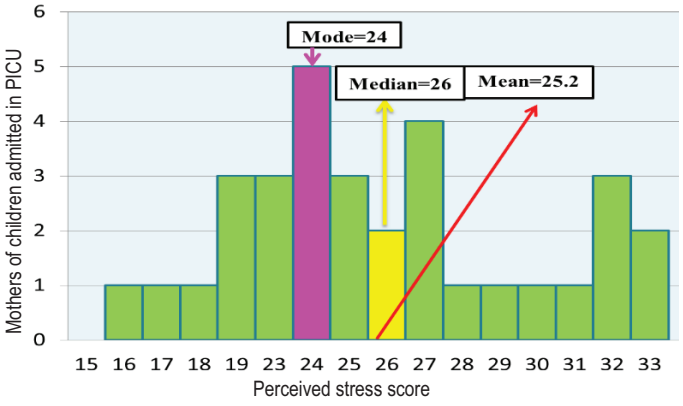

Figure 1: Distribution of mothers with minimum and maximum perceived stress scores, mean, mode & median (N=32).

Discussion

The study results reveal that 6 (18.8) of mothers had high and 26 (81.3%) had severe level of stress. The type of family and family budget which alter due to illness of child were found to have strong association at 0.05 level of significance. As for financial stress, 22 (68.8%) of mothers agreed that due to child's admission in PICU the family budget alters whereas 10 (31.3%) disagreed on the same concept. Quantitative part also highlighted that 8 (25%) of families took loan for treatment of child during PICU stay. It signifies the impact of financial stress on mothers during the period of PICU stay. Similar results were shown in a descriptive study (Patil, 2014) to assess level of stress and coping strategies among parents of neonates. Descriptive approaches with 40 samples were selected with convenient sampling technique. Majority belonged to age group 18-23 years (57.50%) and 57.50 percent were secondary pass 28 (70%) of mothers had moderate stress and 12 (30%) had severe stress. While 35 (87.50%) mothers of neonates were average in coping and 5(12.5%) were good in coping.

The study concluded that the mothers are always in stress because of babies admission in NICU. So, any interventional programmes on stress were helpful to mother to minimise the stress who could develop certain coping strategies. Most of the parents were satisfied with communication with staff who should teach them stress management technique.

Nursing Implications

Nursing practice

- Interventions that improve communication between healthcare providers and parental needs are to be identified and examined like workshops on coping strategies. Other interventions, such as on-sight support groups and activities for the parents may improve psychological functioning of mothers.

- Parents should participate in daily rounds of their child.
- The important instructions to be followed inside PICU are to be briefed to the parents before entering the PICU (like switch off mobile phone, visiting hours for parents, universal precautions, information details specially contact numbers of residents).
- Counselling session for all family members.
- Spiritual quotations on the walls of hospitals wards.

Nursing education

- Based upon the study findings nurse educators can conduct workshops, seminars and conferences on the prevention and management of the symptoms and other problems faced by parents in hospital environment.

Nursing research

- Similar studies can be conducted on stress assessment of the medical professionals dealing with patients and parents in PICU.
- The study can be replicated on larger number of samples.
- The findings could be used to inform the development of a PICU parental satisfaction instrument for the sample group.

Nursing administration

- Nurse administrator can plan and organise the in-service education programme for the staff nurses to update and renew their knowledge.
- Nurse administrator can also communicate the various schemes run by government to reduce the financial burden of the patients.
- Counselling room and grievance cell for the parents.

Recommendations

- The PSS: PICU and CHIPS, other scales can be used for the assessment of parental stress in in-depth way.
- The result of this study could be used as a basis for a post-paediatric intensive care follow-up service for the children and their families.
- Research should be aimed at understanding stress and coping in mothers and fathers from diverse backgrounds to examine the role of race/ethnicity, income, education, and so forth.
- More studies on both mothers and fathers are needed to understand whether the identification of stress and coping differences exist for partnered couples.
- Further research on the impact of parental uncertainty on stress and coping and also whether improved communication and/or informational programmes has any effect on stress and coping 'needs to be performed'.

Conclusion

The findings of this study provide insight into the complexity of the parental experiences of a PICU admission. The subthemes may provide groundwork for the development of items for an instrument measuring parental experiences and satisfaction with care. The clinical implications of the findings might be transferable to other PICUs to gain insight into understanding and collaboration between parents and health care professionals. Then, the momentous transitional PICU period might be less stressful both for the child and the parents.

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