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**PSYCHOLOGICAL OUTCOMES IN PARENTS OF CRITICALLY  
ILL HOSPITALIZED INFANTS**

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**ABSTRACT**

**Aims:** To assess the anxiety, stress, depression level in parents of critically ill hospitalized infants.

**Design:** A cross-sectional design was used to examine of anxiety, stress and depression in parents of infants admitted in NICU/PICU.

**Setting:** We conducted the study in Dhiraj general Hospital, vadodara. The total number of sample collected are 50 parents of critically ill hospitalized infant.

**Result:** We found that in the observation check list on parents anxiety score was normal 0%, mild 0%, modrate 24%, severe 46%, extremely severe 30%.parents stress score was normal 10%, mild 14%, modrate 22%, severe 48%, extremely severe 6% and parents depression was normal 28%, mild 22%, modrate 38%,severe 10%, extremely severe 2%.

**Conclusion:** The focus of this study was to assess the anxiety, stress and depression in parents of admitted infant in NICU/PICU.

**Keywords: Psychological, outcomes, parents, critically ill, infant**

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## INTRODUCTION

Admission of a sick infant (PICU/NICU) can be a very stressful experience for the parents. Parents strive to deal with stress, anxiety, and depressive symptoms in this potentially threatening environment. Research on parental uncertainty in the neonatal population is limited. Moreover, very few studies examined predictors of stress, anxiety and depressive symptoms in parents of infant (NICU /PICU ). The purpose of this study was to identify predictors of uncertainty stress, anxiety, and depressive symptoms in parents of infants . The purpose of this study was to identify predictors of uncertainty, stress, anxiety, and depressive symptoms in parents of preterm infants in the NICU. A cross sectional explorative design was used to recruit a convenience sample of 50 parents of preterm infants from NICU in one Hospitals in DHIRAJ HOSPITAL, PIPRIA. Parents completed the Parental Perception of Uncertainty in Illness Scale (PPUS), the Parental Stressor Scale: NICU (PSS: NICU), the State Anxiety Inventory (SAI), and the Center for Epidemiologic Studies-Depression (CES-D) scale. Descriptive statistics and co-relational analysis were conducted. Multiple linear regressions were used to identify predictors of

uncertainty, stress, anxiety, and depressive symptoms followed by path analysis for the significant predictors. The results showed that NICU\PICU parents experienced moderate to high levels of uncertainty, stress, and state anxiety and low levels of depressive symptoms. Statistically significant differences were found between parents in level of stress and state anxiety and depressive symptoms. Parents of children in pediatric intensive care units (PICUs) are subjected to significant psychological stress. The purpose of this study was to determine the prevalence of, and factors associated with anxiety, depressive symptoms and decision conflicts in parents of children hospitalized in the PICU.

## REVIEW OF LITERATURE

### I . Anxiety in parents of critically ill hospitalized infant.

Amandeep Singh (2015) The parents undergo psychologic stress when their infant is admitted in neonatal intensive care unit (NICU), mainly due to ambience and practices of NICUs. On the other hand, they become pacified when the infant's condition is discussed clearly and they are allowed to care for their infant. This study was planned to examine the prevalence and predictors of

anxiety in the parents (mother and father) of neonates admitted to NICU and to compare it with the parents of neonates not admitted to NICU. A higher percentage of parents with their neonates admitted to NICU showed clinically relevant anxiety than control parents. Overall anxiety scores were directly related to prematurity, no previous NICU admission, and female gender. Parents of the premature neonates admitted in the NICU showed high levels of anxiety.

## **II. Stress in parents of critically ill hospitalized infant**

(Annu Rev Clin Psychol. Author manuscript; available in PMC 2008 Oct 16.) Stressors have a major influence upon mood, our sense of well-being, behavior, and health. Acute stress responses in young, healthy individuals may be adaptive and typically do not impose a health burden. However, if the threat is unremitting, particularly in older or unhealthy individuals, the long-term effects of stressors can damage health. The relationship between psychosocial stressors and disease is affected by the nature, number, and persistence of the stressors as well as by the individual's biological vulnerability (i.e., genetics, constitutional factors), psychosocial resources, and learned patterns of coping. Psychosocial interventions have

proven useful for treating stress-related disorders and may influence the course of chronic diseases.

## **III. Depression in parents of critically ill hospitalized infant**

Lamprini Psychogiou (2017) This longitudinal study examined whether mothers' and fathers' depressive symptoms predict, independently and interactively, children's emotional and behavioural problems. It also examined bi-directional associations between parents' expressed emotion constituents (parents' child-directed positive and critical comments) and children's emotional and behavioural problems. At time 1, the sample consisted of 160 families in which 50 mothers and 40 fathers had depression according to the Structured Clinical Interview for DSM-IV. Children's mean age at Time 1 was 3.9 years ( $SD = 0.8$ ). Families ( $n = 106$ ) were followed up approximately 16 months later (Time 2). Expressed emotion constituents were assessed using the Preschool Five Minute Speech Sample. In total, 144 mothers and 158 fathers at Time 1 and 93 mothers and 105 fathers at Time 2 provided speech samples. Fathers' depressive symptoms were concurrently associated with more child emotional problems when mothers had higher levels of depressive

symptoms. When controlling for important confounders (children's gender, baseline problems, mothers' depressive symptoms and parents' education and age), fathers' depressive symptoms independently predicted higher levels of emotional and behavioural problems in their children over time. There was limited evidence for a bi-directional relationship between fathers' positive comments and change in children's behavioural problems over time. Unexpectedly, there were no bi-directional associations between parents' critical comments and children's outcomes. We conclude that the study provides evidence to support a whole family approach to prevention and intervention strategies for children's mental health and parental depression.

#### **Statement of the Problem:**

“PSYCHOLOGICAL OUTCOMES IN PARENTS OF CRITICALLY ILL HOSPITALIZED INFANTS”

#### **Objectives of the study**

1. To assess the anxiety level in parents of critically ill hospitalized infant.
2. To assess the stress level in parents of critically ill hospitalized infant.

3. To assess the depressions level in parents of critically ill hospitalized infant.

#### **Hypothesis**

H<sub>1</sub>: There will be significant association of prevalence of anxiety, stress and depression status with demographic variables and other factors.

#### **METHODOLOGY**

**Research Approach:** Quantitative research approach will be used to assess the psychological factors affected parents of critically ill hospitalized infants.

**Research Design:** A cross-sectional design will be used to examine predictors of stress, anxiety and depression in parents of preterm and critically infants admitted to the NICU/PICU.

**Place of Study:** The study will be conducted in Dhiraj General Hospital.

**Source of Data:** Parents of NICU\PICU admitted children.

**Target population:** All the parents those children admitted Dhiraj General Hospital in NICU/PICU.

**Accessible population:** Parents of infants admitted in NICU\PICU who are eligible for sample as per considering sampling criteria.

**Sample size:** 50 parents of NICU/PICU admitted infants.

**Sampling Technique:** In this study, Non- Probability purposive sampling technique will be used.

### Selection Criteria

#### Inclusion criteria

- Parents of preterm infants admitted in NICU/PICU.
- Parents of critically ill infants admitted in NICU/PICU at least one week of hospitalization experience.
- Parents of infants, who can read, write, speak and understand Gujarati and English language.

#### Exclusion criteria

- Parents of infants in NICU/PICU who will refuse or deny to participate in the study

#### Description of Tools

This tool (structured interview schedule) is designed to collect psychological outcomes in parents of critically hospitalized infants regarding demographic variable, factors affecting on parents.

Structured interview schedule on associated factors and assess the factor affected in parents.

The tool is described in following parts.

Part I: Information of the study parents (Parental Demographic questionnaire)

Part II: Parental stressor scale (PSS)

Part III: Parental Anxiety Questions (SAI scale)

Part IV: Centre for Epidemiologic Studies Depression Scale

#### Development of tool:

Tool will be developed by using some standardized tool, then it will be modified as per suitable for geographical area, setting and population. Tool validation will be given to experts in the particular field.

#### Variables

##### Demographic variables:

**A. Parents:** Age, gender, religion, marital status, income, insurance status, education, occupation.

**B. Child:** Age, gender, ever breast feeding of the child, diseases condition.

#### Plan for Data Collection

The data for main study will be collected from parents who fulfill the sampling criteria by purposive sampling technique and structured interview schedule will be used to collect information on demographic variables of parents and child and also on associated factors. Consent will be taken from participants prior to data collection. The data for main study will be collected for the period of two months from 01/04/2020 to 31/05/2020.

#### Plan for the Data Analysis

Descriptive analysis will be computed where by proportion/percentages and frequency will be calculated to describe the demographic variables and associated factors. Pearson's chi-square test and odds ratio with corresponding 95% confidence interval will be computed to establish the association between the variables. P value <0.05 was considered as statistically significant.

### Pilot Study

Pilot study was done to find the practicability and feasibility of the study. Pilot study was conducted in the 18-1-2021 to 23-1-2021 for the selected DHIRAJ HOSPITAL, PIPARIYA, VADODARA, GUJARAT . Formal permission was obtained from the HEAD

OF DEPARTMENT OF DHIRAJ HOSPITAL. 5 parents as a sample.

### ANALYSIS AND INTERPRETATION

SECTION A:- FREQUENCY AND PERCENTAGE OF DEMOGRAPHIC VARIABLES OF PARENTS (**Table 1**).

SECTION B:- (A) ASSOCIATION BETWEEN DEMOGRAPHIC VARIABLE AND ANXIETY OF PARENTS (**Table 2**).

(B) ASSOCIATION BETWEEN DEMOGRAPHIC VARIABLE AND STRESS OF PARENTS (**Table 3**)

(C) ASSOCIATION BETWEEN DEMOGRAPHIC VARIABLE AND DEPRESSION OF PARENTS (**Table 4**).

Table 1

SR. NO	VARIABLE		FREQUENCY	PERCENTAGE
1	Relationship of the respondent to the child.	1. Mother 2. Father	28 22	56 % 44 %
2	Age	1. 18 - 30 Years 2. 31 – 45 Years	37 13	74 % 26 %
3	Marital status	1. Married 2. Divorced	50 0	100 % 0
4	Religion	1. Hindu 2. Muslim 3. Jain 4. Christian	40 6 3 1	80 % 12 % 6 % 2 %
5	Education	1. Primary 2. Secondary 3. Graduation	19 21 7 3	38 % 42 % 14 % 6 %
6	Occupation	1. House wife 2. Government employee 3. Private employee 4. Other	36 1 12 1	72 % 2 % 24 % 2 %
7	Monthly family income	1. Less than 2000 rupees 2. 2001 – 5000 rupees 3. 5001 – 10,000 rupees 4. More than 10,000 rupees	4 14 27	8 % 28 % 54 %

			5	10 %
8	What type of medical health coverage do you have ?.	1. Private 2. Medical 3. Self pay	21 12 17	42 % 24 % 34 %
9	How many children do you have ?.	1. 1 – 2 2. 3 – 4	46 4	92 % 8 %
10	Have you had another premature infant ?.	1. Yes 2. No	17 33	34 % 66 %
11	If so, was your baby admitted to neonatal care? .	1. Yes 2. No	17 33	34 % 66 %

Table 2

VARIABLE		NOR MAL	MIL D	MODRA TE	SEVE RE	EXTREM LY SEVERE	X <sup>2</sup>	D. F	LEVEL OF SIGNIFICAN T
Relationship of the respondent to the child.	Mother Father	0 0	0 0	8 4	14 9	6 9	2.334 <sup>a</sup>	2	2.33>2 S
Age	18 - 30 Years 31 – 45 Years	0 0	0 0	10 2	16 7	11 4	0.782 <sup>a</sup>	2	0.782<2 NS
Marital status	Married Divorced	0 0	0 0	12 0	23 0	15 0	. <sup>a</sup>		
Religion	Hindu Muslim Jain Christian	0 0 0 0	0 0 0 0	10 2 0 0	19 2 1 1	11 2 2 0	3.912 <sup>a</sup>	6	3.912<6 NS
Education	Primary Secondary Graduation Illiterate	0 0 0 0	0 0 0 0	5 6 1 0	8 9 5 1	6 6 1 2	4.368 <sup>a</sup>	6	4.368<6 NS
Occupation	House wife Government employee Private employee Other	0 0 0 0	0 0 0 0	10 0 2 0	17 0 6 0	9 1 4 1	5.548 <sup>a</sup>	6	5.548<6 NS
Monthly family income	Less than 2000 rupees 2001 – 5000 rupees 5001–10,000 rupees More than 10,000 rupees	0 0 0 0	0 0 0 0	1 4 6 1	3 5 14 1	0 5 7 3	5.183 <sup>a</sup>	6	5.183<6 NS
What type of medical health coverage do you have ?.	Private Medical Self pay	0 0 0	0 0 0	5 6 1	12 4 7	4 22 9	11.310 <sup>a</sup>	4	11.310>4 S
How many children do you have ?.	1 – 2 3 – 4	0 0	0 0	11 1	22 1	13 2	.998 <sup>a</sup>	2	.998 <2 NS

Have you had another premature infant ?.	Yes No	0 0	0 0	2 10	11 12	4 11	3.925 <sup>a</sup>	2	3.925 > 2 S
If so, was your baby admitted to neonatal care? .	3. Yes 4. No 1	0 0	0 0	2 10	7 16	8 7	4.235 <sup>a</sup>	2	4.235 > 2 S

Table 3

VARIABLE		NOR MAL	MIL D	MODRAT E	SEVER E	EXTREM LY SEVERE	X <sup>2</sup>	D.F	LEVEL OF SIGNIFIC ANT
Relationship of the respondent to the child.	Mother Father	3 2	3 4	6 5	14 10	2 1	.72 4 <sup>a</sup>	2	0.724 < 2 NS
Age	18 - 30 Years 31 - 45 Years	3 2	5 2	6 5	20 4	3 0	4.8 38 <sup>a</sup>	4	4.838 > 4 S
Marital status	Married Divorced	5 0	7 0	11 0	24 0	3 0	<sup>a</sup>		
Religion	Hindu Muslim Jain Christian	4 1 0 0	6 1 0 0	9 1 1 0	19 2 2 1	2 1 0 0	4.2 60 <sup>a</sup>	12	4.260 < 12 NS
Education	Primary Secondary Graduation Illiterate	1 2 0 2	3 3 1 0	4 4 3 0	9 11 3 1	2 1 0 0	14. 96 <sup>a</sup>	12	14.96 > 12 S
Occupation	House wife Government employee Private employee Other	4 0 1 0	6 0 1 0	6 0 4 1	17 1 6 0	3 0 0 0	7.3 92 <sup>a</sup>	12	7.392 < 12 NS
Monthly family income	Less than 2000 rupees 2001 - 5000 rupees 5001-10,000 rupees More than 10,000 rupees Total	0 2 2 1	2 0 5 0	2 2 5 2	0 10 12 2	0 0 3 0	16. 999 <sup>a</sup>	12	16.999 > 12 S
What type of medical health coverage do you have ?.	Private Medical Self pay	3 0 2	6 0 1	4 3 4	7 7 10	1 2 0	12. 426 <sup>a</sup>	8	12.426 > 8 S
How many children do you have ?.	1 - 2 3 - 4	4 1	6 1	10 1	23 1	3 0	2.1 12 <sup>a</sup>	4	2.112 < 4 NS
Have you had another premature infant ?.	Yes No	1 4	2 5	5 6	8 16	1 2	1.1 77 <sup>a</sup>	4	1.177 < 4 NS
If so, was your baby admitted to neonatal care? .	5. Yes 6. No	1 4	2 5	4 7	10 14	0 3	2.7 30 <sup>a</sup>	4	2.730 < 4 NS

Table 4

VARIABLE		NORM AL	MIL D	MODR ATE	SEV ERE	EXTREML Y SEVERE	X <sup>2</sup>	D.F	LEVEL OF SIGNIFIC ANT
Relationship of the respondent to the child.	Mother Father	9 5	2 9	12 7	4 1	1 0	9.125 <sup>a</sup>	4	9.125 >4 S
Age	18 - 30 Years 31 – 45 Years	9 5	9 2	14 5	4 1	1 0	1.482 <sup>a</sup>	4	1.482 <4 NS
Marital status	Married Divorced	14 0	11 0	19 0	5 0	1 0	<sup>a</sup>		
Religion	Hindu Muslim Jain Christian	11 3 0 0	8 1 2 0	15 2 1 1	5 0 0 0	1 0 0 0	7.817 <sup>a</sup>	12	7.817 <12 NS
Education	Primary Secondary Graduation Illiterate	4 6 3 1	1 8 1 1	10 6 3 0	3 1 0 1	1 0 0 0	14.092 <sup>a</sup>	12	14.092 >12 S
Occupation	House wife Government employee Private employee Other	13 0 1 0	6 1 4 0	12 0 6 1	4 0 1 0	1 0 0 0	9.934 <sup>a</sup>	12	9.934 >12 S
Monthly family income	Less than 2000 rupees 2001 – 5000 rupees 5001–10,000 rupees More than 10,000 rupees Total	3 4 6 1	1 3 5 2	0 3 14 2	0 3 2 0	0 1 0 0	13.879 <sup>a</sup>	12	13.879 >12 S
What type of medical health coverage do you have ?.	Private Medical Self pay	11 1 2	3 5 3	5 5 9	2 1 2	0 0 1	14.727 <sup>a</sup>	8	14.727 >8 S
How many children do you have ?.	1 – 2 3 – 4	12 2	11 0	17 2	5 0	1 0	2.395 <sup>a</sup>	4	2.395 <4 NS
Have you had another premature infant ?.	Yes No	3 11	3 8	7 12	3 2	1 0	4.724 <sup>a</sup>	4	4.724 >4 S
If so, was your baby admitted to neonatal care? .	7. Yes 8. No	4 10	3 8	6 13	3 2	1 0	3.903 <sup>a</sup>	4	3.903 <4 NS

Table 5

Sr.no		SCORE	FREQUENCY	PERCENTAGE
1	ANXIETY	NORMAL (0-14)	00	0
		MILD (15-18)	00	0
		MODRATE (19-25)	12	24
		SEVERE (26-33)	23	46
		EXTREMELY SEVERE (34+)	15	30
2	STRESS	NORMAL (0-14)	5	10
		MILD (15-18)	7	14
		MODRATE (19-25)	11	22
		SEVERE (26-33)	24	48
		EXTREMELY SEVERE (34+)	3	6
3	DEPRESSION	NORMAL (0-9)	14	28
		MILD (10-13)	11	22
		MODRATE (14-20)	19	38
		SEVERE (21-27)	5	10
		EXTREMELY SEVERE (28+)	1	2

### CONCLUSION

We found that in the observation check list on parents anxiety score was normal 0%, mild 0%, moderate 24%, severe 46%, extremely severe 30%. parents stress score was normal 10%, mild 14%, moderate 22%, severe 48%, extremely severe 6% and parents depression was normal 28%, mild 22%, moderate 38%, severe 10%, extremely severe 2%.

### SUMMARY

In the current study, around all the parents of hospitalized infant are almost equally distributed in each age group. The majority of parents 100% are married. The parents belong to Hindu, Muslim, Jain, Christian religion. Education qualification majority of parents 38% is primary, 42% secondary education and graduation parents is 14%, illiterate 6%. The majority of parents (mother) 72% is house wife. The majority of parents had their monthly

family income between the 5001 to 10,000 28%. the majority of medical coverage was private 42%. the majority of parents have 1 to 2 children (92%).

We found that in the observation check list on parents anxiety score was normal 0%, mild 0%, moderate 24%, severe 46%, extremely severe 30%. parents stress score was normal 10%, mild 14%, moderate 22%, severe 48%, extremely severe 6% and parents depression was normal 28%, mild 22%, moderate 38%, severe 10%, extremely severe 2%.

### CONCENT

Informed consent has been obtained from the samples.

### ETHICAL APPROVAL

Ethical approval was obtained prior to the conduction of study. The study was approved from ethical committee, ethical approval number is SVIEC/ ON/ NURS/ SRP/20049

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