

Level of Stress and Coping Strategies Seen Among Parents of Neonates

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Abstract: *Nearly 27 million babies are born in India each year; this accounts for 20% of global births. Of these, 1.0 million die before completing the first four weeks of life. Parents whose lives have been disrupted by an unexpected admission into neonatal intensive care unit. Aim of study was to assess the level of stress among and coping strategies parents of neonates and to co-relate stress and coping strategies among parents of neonates. Methods-Descriptive approaches with 40 samples were selected with convenient sampling technique. Results majority belonged to age group 18-23 years (57.50%), and (57.50%) were found in secondary education. 28(70%) majority of mothers had moderate stress and 12 (30%) had severe stress Assessing the stress level of mothers in neonates. While 35 (87.50%) mothers of neonates were in average coping and 5(12.5%) were in good coping. Conclusion: The main outcome of the study that mother always in stress because of babies admission in NICU. So any interventional programmes on stress were help the mother to minimize the stress and she will develop certain coping strategies. Most of Parent was satisfied with communication with staff so she must teach them stress management technique.*

Keywords: Intensive Care Unit, communication, parents, stress, coping strategies

1. Introduction

Nearly 27 million babies are born in India each year; this accounts for 20% of global births. Of these, 1.0 million die before completing the first four weeks of life. This accounts for nearly 25% of the total 3.9 million neonatal deaths worldwide. The current neonatal mortality rate of 39 per 1000 live births (NFHS-3; 2005-06) Accounts for nearly two-thirds of infant mortality and half of under-five mortality rates. About 40% of neonatal deaths occur on the first day of life, almost half within three days and nearly three-fourth in the first week [1].

In 1960, the idea of having a special intensive care unit for newborns—a neonatal intensive care unit (NICU)—represented a developmental milestone for the field of neonatology. With the increased sophistication developed since then, doctors now are able to save the lives of many premature or desperately ill newborns that in the past would have died soon after birth. Over the years, survival of neonates born on the margin of viability has been continuously pushed back to younger and younger ages. Neonates as young as 25 weeks and as small as 750 g are routinely being saved. However, survivors often have significant physical and mental impairments, including cerebral palsy, blindness, and learning disabilities [2].

The environment of the neonatal intensive care unit (NICU) serves as a significant source of Stress for parents. Neonatal units are often burdened with loud sounds, unpleasant sights and procedures, and crowds of health care professionals. Other sources of stress for parents of NICU infants have been found to be alterations in the parental role, uncertainty of the infant's outcome, and ineffective patterns of communication among health care providers and parents Stressful experiences can lead to barriers in parents-infant interactions that appear to have a long-term impact on parenting [25].

During the hospitalization of the infant, parents may spend much of their time in the NICU, suffering the strain of

distance, travel, and separation from supportive family members. When they are at home, they worry about the unanticipated crises that may occur in their absence. In addition to the stress of a hospitalized infant, the parents must continue with realities of life relationships, employment, and nurturing other children.

All mothers are susceptible to postnatal emotional distress and this can be compounded in mothers of preterm babies resulting in implications for a mother's psychological wellbeing and ability to parent and the infant's cognitive and emotional development. Admission of a baby to the NICU can further exacerbate the mother's distress as the environment is alien to the layperson. Nurses who work daily with very sick infants can sometimes lose their sensitivity as to how this environment appears [4]

Considerable advances in technology and care for the high-risk infant have brought both burdens and blessings to families. Improved obstetrics and neonatal interventions and aggressive resuscitations have gradually improved the survival of preterm infants and lowered the limits of viability, although the quality of life for the extremely low – birth-weight infant survivors remains priority on aggressive infants care [26].

2. Need for the Study

Neonatal mortality rate of India reported in 2009 is 34 per 1000 live births as per the UNICEF. The principal causes of neonatal mortality in India are sepsis, prenatal asphyxia, and prematurity. About 40% of neonatal deaths occur on the first day of life, almost half within three days and nearly three-fourth in the first week [6].

November 12, 2010 in state level Neonatal mortality is disproportionately common among infants with very low birth weight (VLBW) (<1,500 g [3.3 lbs]). In 2006, the mortality rate among infants with VLBW was 240. 4 per 1, 000 live births. Parents find it very stressful when their baby is admitted to the neonatal unit for any reason. Different

sources of stress have been identified and certain occasions are particularly difficult. These experiences impact on families in positive and negative ways, and people adopt a range of coping mechanisms [7].

Shinde M concluded that 57% women have mild psychological problems and 78% women are adopting coping strategies to overcome these problems. Association between the psychological problems and coping strategies shows that there is a strong significant association between the psychological problems and coping strategies. Score of both psychological problems and coping strategies are observed to be lying between 21-60 [3].

3. Literature Review

Learning is the addition of new knowledge and experience interpreted in the light of past knowledge and experience. Teaching and learning is an integral part of nursing. Nurses have the responsibility to educate patients related to various aspects and keep themselves updated. Various teaching strategies are used to increase knowledge, such as lecturing, demonstration, discussion and self-education. These methods of self-education has an advantage over the others as the learner can educate himself at his own pace and it also stresses on rereading [5].

Overall, levels of anxiety and depression were low in both parent groups. Compared with control parents, a higher percentage of NICU parents had clinically relevant anxiety and were more likely to have had a previous NICU admission and be in a lower family income bracket. Infant prematurity was associated with higher levels of symptomatology in both NICU mothers and fathers. Specific interventions are not needed for most parents who have an infant admitted to the NICU as they appear to adapt relatively successfully. Infant prematurity impacts negatively on the father as well as the mother. Consequently these parents may benefit from increased clinical attention. 2004 [8].

Shinde M(2014),concluded About 97% patients undergoing hemodialysis had severe stress In that 50% of patients undergoing hemodialysis always adopt emotion focused and problem orientation as their coping strategies, while 90% of patient sometimes used avoidance oriented coping strategy, while the others 56% sometime use the coping strategy of seeking support and isolated thoughts[9].

The analysis verified the presences of six major stress sources 1) pre-existing family factors2) prenatal and Perinatal experiences3) infant illness, treatment and appearances in the NICU.4) infant outcome5) loss of parental role 6) health care providers. The study indicates the health care providers, nurses plays a major role to minimize the stress. By maintaining ongoing communication with their parents and competent care to their infants. [10].

Parents in both units experienced the most stress from alteration in their parenting role and in their infants' behavior and appearance. Parents of children in PICU found assistance with parenting role more helpful than parents of children in NICU. Parents with children in the PICU perceived problem-focused coping more helpful than parents

with children in the NICU; parents of children in NICU found emotion-focused coping more helpful than parents of children in PICU. Parents in both units considered problem-focused coping more helpful than appraisal- or emotion-focused coping [11].

Perception about Nicu Environment 46 mothers were found that stressful about NICU environment were parental role alteration and infant's appearances and behaviors'. Less stressful were the sight and sound of NICU and communication with staff members [12].

Alteration in parental role caused by generated anxiety and stress. The highest cause for stress is infant's behavior and appearances state anxiety level is higher than normative means and significantly related to stress scores.[13]. Descriptions of effective and ineffective communication differed in terms of the strategies mentioned with effective communication about shared management of the interaction and appropriate support and reassurance by nurses. Ineffective communication was more about the interpretability strategy, particularly for fathers, and these interactions were seen as more intergroup. Mothers emphasized more being encouraged as equal partners in the care of their infant. Effective communication by nurses was accommodative and more interpersonal while ineffective communication was generally under-accommodative and more intergroup [14].

Qualitative study aimed at understanding the experiences of fathers of very ill neonates in the NICU. Father reported that relationship with friends/ health care team, receiving information consistently, and receiving short written materials on common conditions were ways of giving them support. The fathers said that speaking to a male physician was a positive and useful experience. Father's experiences a sense of lack of control when they have an extremely ill infant in the NICU .Specific activities help fathers regain a sense of control and help them fulfill their various roles of protectors, fathers, partners, and breadwinners. Understanding these experiences helps the health care team offer targeted supports for fathers in the NICU [15].

It is unnecessary to provide all parents with intervention further to what is already being practiced in the unit, as overall low level of stress were reported. Some parents, however, did find the unit more stressful, and they may benefit from increased intervention. [16].

Mothers perceived more stress related to the parental role than did fathers. Mothers used problem focused and emoting focused coping in tandem whereas fathers showed no relationship between coping methods .for mothers increased used of problem focused coping was associated with increased hostility, and increased use of problem focused coping in the context of higher levels of controllability was associated with increased overall negative effect [17].

Parents reported that their infants had experienced moderate to severe pain that was greater than they had expected (p, 0.001). Few parents (4%) received written information, although 58% reported that they received verbal information about infant pain or pain management. Only 18% of parents reported that they were shown signs of infant pain, but 55%

were shown how to comfort their infant. Parental stress was independently predicted by parents' estimation of their infant's worst pain, worries about pain and its treatment, and dissatisfaction with pain information received, after controlling for state anxiety and satisfaction with overall care. The findings were similar across sites, despite Differences in infant characteristics. Parent concerns about infant pain may contribute to parental stress [18].

The highest levels of stress experienced were in the relationship with baby-parental role area, and regarding how the baby looked and behaved. Identifying the stressors parents experience can assist NICU therapists in intervention planning. Family-centered care that addresses stressors concerning their roles and their understanding of their infant should be emphasized [19].

The strongest relationship were among appraisal and both psychological distress and parental efficacy with post discharge psychological distress and parental efficiency related most strongly to appraising the situation as challenging with potential for growth pre-discharge. The results suggest identifying the way parents appraise the situation may be useful for identifying at risk families and informing interventions to assist families experiencing difficulties [20].

4. Methodology

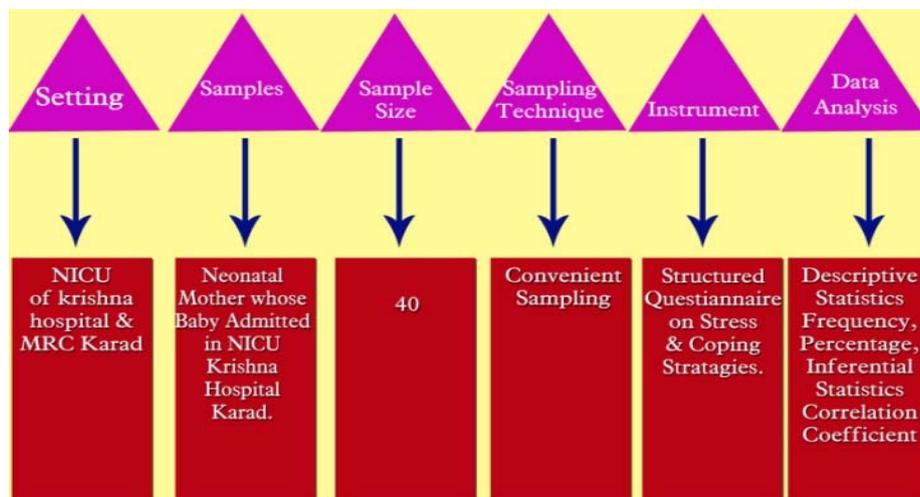


Figure 1: Schematic representation of research design

- Research design:** descriptive cross sectional study design
- Setting of the study:** The present study was conducted Krishna hospital, Karad.
- Population:** in present study population consisted of mothers of neonates admitted in NICU at Krishna hospital of Karad.
- Samples:** samples were neonatal mother whose baby's were admitted in NICU.
- Sample size:** Total samples size was 40 who met the inclusion criteria. The age of mother is between 18-42 years of age in Krishna hospital Karad.
- Sampling technique**
In the study convenient sampling technique was used.

Parents used both emotion- and problem focused coping strategies to deal with the stressful events. A follow up telephone interview of these parents a year after the birth of their premature infant found that most parents expressed the experiences positive. A few parents were concerned over the neurodevelopment and cognitive outcomes of their infant's [21].

Parents wanted more input in life-support decisions than they reported being given. Counseling is not consistently provided in public-sector hospitals in Johannesburg. Parents of premature infants want a larger share in NICU decision making than they currently experience. Most parents were satisfied with communication later during their infant's hospitalization. [22].

Mother utilized more strategies than fathers in the categories of acquiring social support, seeking spiritual support, mobilizing family to acquire and accept help and passive appraisal. The results of this study confirmed those from previous research that the experience of having an infant in the NICU is stressful for parents and it is more stressful for mothers than for fathers [23]. The intervention program for parents after premature birth, combining early crisis intervention, psychological aid throughout the infant's hospitalization, and intense support at critical times, reduced the symptoms of traumatization relating to premature birth [24].

Inclusion criteria

- Mother of neonates admitted in NICU at Krishna hospital, Karad.
- Mother age of 18 years to 42 years.
- Normal delivery mother and L.S.C.S. Mother.

Exclusion criteria

- Not willing to participate in the study
- Mother is having medical illness at the time of data collection.
- Mothers who have significant life event can happen the time incidence and data collection.
- Not available at the time of data collection.

5. Findings

Table 1: Distribution of subjects according to socio-demographic variables

Sr. No.	Variables	Frequency (F) n=40	Percentage (%)
1	Age of mother in years		
	a) 18-23	23	57.50%
	b) 24-29	13	32.50%
	C) 30-35	04	10.0%
	d) 36-41	-	-
2	Education of mother		
	a) No formal education	04	10.0%
	b) Primary	03	07.50%
	C) Secondary	23	57.50%
	d) Higher Secondary	10	25.0%
	e) Graduate	-	-
3	Occupation of mother		
	a) Farmer	04	10.0%
	b) Private Service	01	02.50%
	c) Government	-	-
	D) Housewife	35	87.50%
4	Monthly income		
	a) Below 5000	25	62.50%
	b) 5001-10,000	12	30.0%
	C) 10,001-15,000	-	-
	d) 15,000 and above	03	07.50%
5	Religion		
	a) Hindu	37	92.50%
	b) Muslim	03	07.50%
	c) Christen	00	00%
	d) Others	00	00%
6	Birth order of the admitted neonates		
	a) First	21	52.50%
	b) Second	12	30.0%
	c) Third	06	15.0%
	d) Fourth	01	02.50%
7	Types of family		
	a) Nuclear Family	04	10.0%
	b) Joint Family	36	90.0%
	c) Extended Family	-	00%
8	Residential area		
	a) Urban	02	5.0%
	b) Rural	37	92.50%
	c) Sub urban	01	02.50%

Majority 57.50% of mother with the age group of 18-23 and in education 57.50% of in secondary, while 87.50% of mother was housewife and 62.50% of mother in is below 5000Rs monthly income of family. And 92.50% of mother from Hindu and 52.50% of first time admitted, 90% of mother from joint family and 92.50% of mother from rural area.

Table 2: Frequency and percentage distribution of mothers stress with physical facilities in the hospital and physiological factors.

	Strongly disagree.	Disagree Freq. %	Undecided Freq. %	Agree Freq. %	Strongly agree Freq. %
Physical facilities in the hospital					
Presence of too many health professional around baby worry me.	-	(2) 5.0	-	(04) 10	(34) 85
There is restriction of visiting time.	-	(10) 25.0	-	(15) 37.50	(15) 37.50
There is lack of facilities for food and drinking water near Hospital\NICU area.	-	(38) 95.0	-	(2) 5.0	-
Physiological Factors					
I get palpitation.	-	(02) 5.0	(1) 2.5	(16) 40	(21) 52.50
I feel tired\ weak.	-	(05) 12.5	-	(17) 42.50	(18) 45.0
I feel nauseated.	-	(36) 90.0	-	(04) 10	-
Psychological Factors					
I always feel mentally exhausted and frustrated.	-	(08) 20	(03) 7.50	(13) 32.50	(16) 40
I am constantly feared of my child's recovery.	-	-	-	(06) 15.0	(34) 85.0
I feel irritable and aggressive.	-	(20) 50.0	(02) 5.0	(09) 22.50	(09) 22.50
I always feel lonely and helpless.	-	(14) 35.0%	-	(09) 22.50%	(17) 42.50%
I crave for sympathy and affection.	-	-	-	(35) 87.50%	(05) 12.50%
I feel the guilt over the condition of my baby.	-	-	-	(14) 35.0%	(26) 65.0%

In this above table shows the 85% of stress with presence of too many health professional around baby and 52.50% of where get palpitation when baby admitted in NICU. 45% of mother was tired while 37.50% of mother will have stress with restriction for visiting time in NICU. From this above table 85% of mothers were constantly feared of child and 65% were feel guilt over the condition of their baby and 42% were feel lonely and helpless. 22.50% was always feel irritable and aggressive

Majority 85% of mothers were constantly feared of child and 65% were feel guilt over the condition of their baby and 42% were feel lonely and helpless. 22.50% was always feel irritable and aggressive.

Table 3 Frequency and percentage distribution of mothers stress with cognitive factors and communication

	Strongly disagree	Disagree Freq. %	Undecided Freq. %	Agree Freq. %	Strongly agree Freq. %				
Cognitive Factors									
I am unable to take initiative in any activity.	12	30	05	12.50	16	40	07	17.50	
I can't concentrate on my work.	12	30	02	05	12	30	14	35	
Communication with staff.									
I am asked to participate in the care of my baby.	-	01	2.50	01	2.50	24	60	14	35
I have been explained about my baby's condition in language to understand.	-	06	15	-	23	57.50	11	22.50	

In this above table 35% of mother not able to concentrate on their work and 35% of mother asked to participate in care of their baby. 22.50% of mother have been explained about condition in language to understand.

Table 4: Frequency and percentage distribution of mothers stress with parental role alteration and socioeconomic factors

	Strongly disagree	Disagree Freq. %	Undecided Freq. %	Agree Freq. %	Strongly agree Freq. %				
Parental role alteration									
The major source of stress in my life is my child.	-	09	22.50	02	5	06	15	23	57.50
I am helpless to help my child.	-	04	10	-	14	35	22	40.0	
Socioeconomic Factor									
Having children has been a financial burden for me.	-	33	82.50	01	2.5	02	5.0	04	10
I loss my income due to absence from work due to my child is admitted in NICU.	-	31	77.50	01	2.5	02	5.0	06	15

In this above table 57.50% of mothers having stress because of child admitted in NICU 40% were helpless to help their child and 15% of mother loss their income due to child admitted in NICU.

Table 5: Distribution of mothers according to their stress level

Sr. No.	Stress Score	No	Category
1	Mild Stress	0	0%
2	Moderate Stress	28	70%
3	Severe Stress	12	30%

The graph mothers undergoing stress which was severe in communication with staff and moderate in physical facilities in NICU and physiological stress.

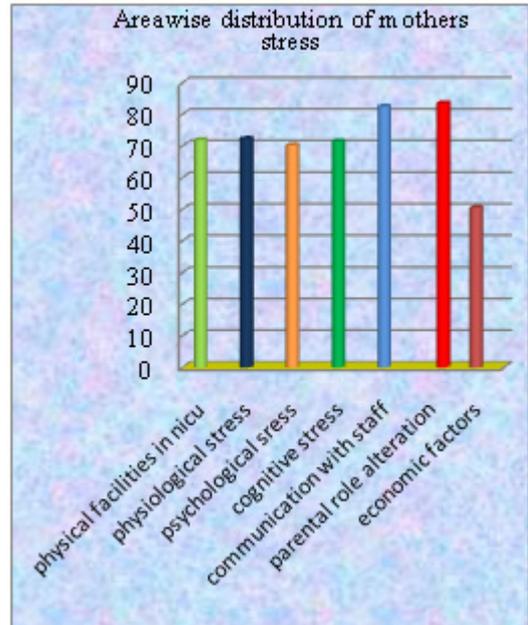


Figure 9: Cylindrical diagram showing percentage distribution of subjects according to area wise stress level.

Table 6: Distribution of mothers according to their coping strategies

Sr No	Coping Score	No	Category
1	Poor coping	0	0%
2	Average coping	35	87.5%
3	Good coping	5	12.5%

The above table shows 87.5% of mothers were in average coping and 12.5% of mothers were in good coping.

6. Discussion

In present study majority of (57.50%) of mothers in the age of 18-23 years and 32.50% of mothers in age of 24-29 years. In education (37.50%) of secondary education and (25%) of in higher education. (87.50%) of mothers as house wife's and (62.50%) of mothers in low socio economic conditions. In present study (92.50%) of mothers are Hindu and (52.50%) of mothers are Primi Para and (90%) of in joint families and most of mothers are from rural area (92.50%). Contradictory findings are found in study conducted by ERDEM Y on anxiety levels of mothers whose infants have been cared for in neonatal intensive care unit Turkey. (33.8%) were between the age 25-29, (41.7%) of mothers were primary education, (89.4%) were housewife's, (58.9%) of mothers with low income of family, (41.7%) were primiparas.

It was determined that age of mothers, education, occupation, monthly incomes of family birth order of child and types of family can affect on mothers stress. Stress of mother was significantly higher if their child was a boy. This finding can be a result of mother's cultural and religious values.

The investigator assessed the level of stress and coping strategies of mothers whose baby admitted in NICU. After analysis finds revealed that out of 40 mothers 28 (70%) of mothers had moderate stress and 12 (30%) of mothers were having severe stress and nobody was in mild stress. In area wise distribution of stress of mother in that physical facilities available in NICU on that mothers found (71.50%), in

physiological stress (72.33%), in psychological stress (70.24%), and in cognitive stress (71.50%), on communication with staff (82.50%) and on parental role alteration (83.50%) and on economic factors (50.50%).

In similar study of R. PADMAVATHI and A. PADMAJA.⁴ Assessing the mothers stress they found (28%) had moderate stress and (38%) had severe stress and mild stress (34%). and in coping (25%) had mild coping and (50%) had moderate coping and (25%) had good coping. On coping no mother was found in poor coping but 35 (87.50%) of mothers in average coping, 5 (12.50%) of mothers were in good coping.

In area wise distribution of coping strategies of mothers in that cognitive factors (84.50%), and in emotional factors (68.20%), in spiritual factors (80.97%), in social factors (74.33%), in Diversional activity (49.83%), and in physiological factors (71%). In this study one contradicts study by BERNADETTEE, NANCY, et al; found that coping programme were more positive in interaction with their infant mother and father also reported stronger belief about their parental role.²⁴

Finding related to relationship between level of stress and the coping strategies of mothers whose baby admitted in NICU.

In present study assessment of stress and coping strategies of mothers seen but there was no any significant relationship between stress and coping strategies seen by using correlation coefficient. Two tailed P value is 0.9681 considered not significant. But similar study by R. PADMAVATHI AND A. PADMAJA found that there is significant relationship between the stress and coping strategies at $P < 0.05$ level. There is no significant relationship between the stress and coping strategies with demographic characteristics.⁴

7. Future Scope

7.1 Nursing Services

Nurse's play a vital role in helping parents thought the stressful, challenging experiences of the NICU by developing therapeutic relationship providing emotional support providing parents with accurate, clear information, involving parents in providing care for their infants. These approaches enable parents to feel more supported more involved, confident and more effective as parents of their vulnerable newborn. The experience of parents in the NICU occurs during an emotionally intense period fraught with anxiety, stress, depression, and feeling of hopelessness. Intervention may include orientation about NICU, clear information about baby's condition that will help to reduce the stress and anxiety. Nurses should have the education about the concept of stress and certain coping strategies on that basis they have to provide information to the mothers of neonates. Most of the parents do not like hospital because they dislike outcome of the baby sometimes which is not good one study found that rooming-in to be an extremely positive experience to minimize the stress.

7.2 Nursing Education

Nurse is the person who is working with the baby twenty four hours so she knows about babies' condition. Parents

were worried about babies condition and they were not able express their feeling in front of anybody. But always they feel anxiety, depression, loneliness, and frustration nurse educator has to manage the stress and how to develop certain coping strategies **Nurse** educator must upgrade their concept in nursing curriculum about stress and its management. Arrangement of workshop, conferences and that will help the nurse to adopt new technique to minimize the stress of mothers of neonates.

7.3 Nursing Administration

Finding of the study reveals that mothers of neonates always have stressful so we must do some plan and policies that will include all nursing staff to be effectively involved in health education programme in their respective hospital. The nurse administrator can utilize these types of teaching programme on stress and its management to enhance the knowledge of student. Nurse administrator can educate nurses for various workshops and health awareness programme in community as well as hospital set up. The finding of this study used as a basis for in-service education programme for nurses as they should aware about stress and its related health problem and how to do its management to cope with stress.

7.4 Nursing Research

Nursing research can be done on stress and coping strategies those baby admitted in NICU. Other researcher may utilize the suggestion and recommendation for conducting further study. The tool and technique used has added to the body of knowledge and can be used for further references. Increasing the capability and advance technology, health care expertise had lead to greater number of very small baby alive surviving. Nurse should know about advanced technology, while care to the child. Newer technique are used reduce the stress and its benefits. Stress management technique. There is need to development in knowledge while she is in antenatal mother how to take care explained about diet, exercise, stress management technique, proper follow up early detection of high risk progenies that will affect to reduce the premature birth. This will help to minimize the neonatal admission. Any experimental study can be done to see the effectiveness of relaxation programme in reducing the stress level and enhancing coping strategies among the mothers of neonates.

8. Limitations

- 1) No broad generalization could be made due to small size of sample and limited area of setting.
- 2) The study dimensions are limited for stress and coping strategies for mother admitted their neonates in NICU.
- 3) The Sampling technique convenient sampling do not give a representative sample. Randomization could not do due to limited numbers of mothers of neonates.

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