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ANXIETY LEVEL BETWEEN MOTHERS OF PREMATURE-BORN BABIES AND THOSE OF NORMAL BORN BABIES

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ABSTRACT

This study was designed to find out the anxiety levels of the mothers in relation to birth status of the babies and anxiety in relation to age of the mothers. The sample consisted mothers of 25 premature born babies and mothers of 25 normal born babies. They were given by the Bengali version of “Dutt Personality Inventory” to answer. Data were analyzed by t-test, chi-square and product moment correlation. The results revealed that t-ratio (-3.101, $df = 48$, $p < 0.05$) was significant, i.e. the mothers of premature born babies were more anxious than the mothers of normal born babies. The results also indicated that the value of chi-square (chi-square = 6.894, $df = 2$, $p < 0.05$) was also significant. The significant correlation ($r = -0.335$ at the 0.05 level) was found between the age of mothers and the anxiety score of mothers. Nevertheless, the child status of mothers was a dominating factor or component to influence the correlation. The results manifested that significant difference was found between mothers of premature born babies and mothers of normal born babies regarding their anxiety level. Mothers of premature born babies had possessed more anxiety compare to mothers of normal born babies.

Keywords: Anxiety, Premature-born Babies, Normal-born Babies.

INTRODUCTION

Anxiety may be thought of as an unpleasant emotional state or a condition marked by apprehension, which is characterized by subjective feelings of tension, apprehension and worry by activation or arousal of autonomic nervous system (Spiegelberger 1972). More specifically, anxiety may be defined as a cognitive affective response characterized by physiological arousal (inductive of sympathetic nervous system action) and apprehension regarding a potentially negative outcome that the individual perceiver as impending. Nearly everyone experiences anxiety from time to time.

Freud (1959) described anxiety as a drive like hunger or sex. But instead of arising from internal tissue conditions, it is produced originally by external

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causes. The three recognized types of anxiety are -reality anxiety, neurotic anxiety, and moral anxiety. The basic type is reality anxiety or fear of real dangers in the external world. Neurotic anxiety is the fear that the instincts will get out of control and cause the person to do something for which s/he will be punished. Moral anxiety is fear of the conscience. Spiegelberger (1972) has used the term anxiety to refer to both a trait of personality and a state. Psychologists use the term in its trait sense when they refer to high-anxiety or low-anxiety of the individuals. A high anxiety individual is one who is consistently keyed up, who tends to be in a relatively high state of tension and arousal. A low anxiety individual conversely, is one who is characteristically slow to react, is relaxed and is not easily aroused.

Many psychologists and theorists have related different causes of anxiety from different viewpoints. Psychoanalytic theory regards the source of anxiety as an unconscious conflict between the ego and the id impulses (Wolpe 1958). Learning theorists look to anxiety with greater persistence for external causes. Experimental psychologists have also showed interests in anxiety related phenomena. Some causes of anxiety are threat to object and status; fear of expression of repressed motives and aggression; fear of guilt and punishment; recent bad experiences or faults. It is also associated with the feelings of inferiority and indecency, especially in the presence of more powerful others. Self-concept plays a role in creating anxiety. In a study on children, Coopersmith (1959) found that children with high anxiety have poor self-concept. It is also applicable for adults. In a study Ali (1975) found that threat to economic security and failure in competition were mainly associated with the development of anxiety reactions among the males between the age of 21 and 40 years. Complexity of task has a negative impact on anxiety. In an experiment O'Neil, Spiegelberger and Mansen (1969) found that the highest level of anxiety reached during the complex task period and the lowest level was attained during the easy task period. Anderson (1950) found that it is directly or indirectly associated with everyday behavior. Any situation that threatens the well-being of the organism is assumed to produce a state of anxiety. Conflicts and other types of frustration that block the individual's progress toward a goal provide one source of anxiety. Threat of physical harm, threat to one's self-esteem and pressure to perform beyond one's capabilities also produces anxiety (Bonnar 1995).

The present study was designed to investigate the degree of anxiety of the mother of premature born babies and the mother of normal born babies. In an attempt to rationalize the definition the World Health Organization (WHO 2006)

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has recommended to replace the term “premature” in preference to “low birth weight” and defined it as one whose birth weight is 2.5 kg or less irrespective of the gestational age. By international agreement the low birth weight has been defined as a birth weight of less than 2.5 kg. The measurement being taken preferable within the first hour of life, before significant postnatal weight loss has occurred. Apart from birth weight, babies can also be classified into three groups according to gestational age, using the word- “**Pre-Term Babies**”, born before the end of 37 weeks gestation; “**Term Babies**”, born from 37 completed weeks to less than 42 completed weeks; and “**Post-term Babies**”, born at 42 completed weeks or any time thereafter of gestation (Park 2000). A low birth weight infant then is any infant with a birth weight of less than 2.5 kg regardless of gestational age (Park 2000). *Small-for-date Babies (SFD)*

They may be born at term or pre-term. They weigh of such babies are less than the 10 percentile for the gestational age. These babies are clearly the result of retarded intrauterine fetal growth (Park 2000). The factors associated with intrauterine growth retardation are multiple and interrelated to mother, the placenta or to the fetus. The maternal factors include malnutrition, severe anemia, heavy physical work during pregnancy, hypertension, malaria, toxemia, smoking, low economic status, short maternal stature, very young age, high parity, and close birth spacing, low education status, etc. The placental causes include placental insufficiency and placental abnormalities, intrauterine infection, chromosomal abnormality, and multiple gestations. SFD babies have a high risk of dying not only during the neonatal period but also during their infancy, thus significantly raising the rate of infant and parental mortality and contribute greatly to immediate and long-term health problems (Park 2000).

WHO (2006) estimates that globally about 25 million low birth weight babies are born each year, consisting 17% of all live births nearly 95% of them in developing countries. The incidence of low birth weight varies widely between regions of the world, with levels of 32% in Southern Asia, 9% in Eastern Asia, 11% to 16% in Africa, and 10% to 12% in Latin America and Caribbean's (Clement 2006). In a longitudinal study Kersting (2001) found increased levels of traumatic distress for mothers of infants with a very low birth weight compared to mothers of healthy infants. Premature birth has to be considered as a severe traumatic event. Parenting of pre-mature infant can be difficult and usually deal with their own issues of separation, guilt, feelings of anxiety, fear and powerlessness (Humphrey 1998). In addition to dealing with their own crisis, they have been thrown into an environment that is stressful to them as it is to their baby. Maroney (2004) found that the emotional feelings of the mothers of

premature born babies include fear, shock, guilt, anxiety, loneliness, anger, sadness, and even depression. Their grieving process does not end once their preemie comes home, in fact, it may be just the beginning and it often comes back time and time again and their child grows.

Logical Consistency of the Study

The present study was conducted to investigate whether the degrees of anxiety differ according to child status of mothers and age of mothers. For many years a woman dreams about her life as a mother; suddenly those dreams are washed away and replaced by a frightening place called “Neonatal Intensive Care Unit” (NICU). NICU is a place where confusing terminology, unknown machineries exist, therefore, so fear and anxiety is common in mother’s mind. In the present study, very high or low levels of anxiety of mothers were not expected, because it jeopardizes their daily activities. If a mother is highly anxious she could not do her duty well. On the other hand, if the mother does not feel any anxiety, she will reduce her attention to childcare and her daily tasks. Such anxiety levels of Bangladeshi mothers were not studied earlier. Therefore, this study will help professionals to provide appropriate counseling to the concerned mothers.

Objectives of the Study

The present study has two objectives:

- To investigate whether any difference exist between mothers of premature born babies and mothers of normal born babies in terms of their degree of anxiety.
- To investigate whether the levels of anxiety differ in relation to mothers’ age and child status (premature and normal born babies).

MATERIALS AND METHOD

Sample

The sample of this study comprised of 50 respondents. Among them 25 were mother of premature born babies and 25 were mother of normal born babies. The respondents of both groups were purposively selected from among the available mothers of premature born babies in the Department of Pediatrics and mothers of normal born babies in the Department Obstetrics and Gynecology of

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different hospitals.. Their age ranged from 17 to 35 years. These mothers belonged to different age group, socioeconomic status and educational background.

Measuring Instrument

A modified Bengali version of Dutt Personality Inventory (DPI) developed by Dutt (1966) was used for measuring the degree of anxiety. There are 40 items in DPI. The items were answered in a 3-point response format (often, some times, and never). For scoring, weights of 2, 1, and 0 were respectively assigned for 'often', 'sometimes', and 'never'. Total score were obtained by summing. The highest score of a respondent could be 80 and the lowest score could be 0. The Median of the score is 40; it indicates that the respondent is more anxious than the middle level of anxiety. If the score is below 40, it indicates that the respondent is less anxious than the middle level of anxiety. The original scale was translated into Bengali language and it was shown to the judges who had competence both in Bengali and English. The reliability was studied on a group of 20 university students. The test-retest reliability was done over a period of two weeks. The reliability coefficient was found at 0.82 level.

Procedure

The questionnaire was administered to each subject individually. At first, out of many hospitals two hospitals (Dhaka Shishu Hospital and Azimpur Maternity Hospital) were purposefully chosen. After taking permission from the concerned authorities of these two hospitals, mothers were purposively selected from among the normal born babies and mothers of pre-mature born babies. These mothers were supplied with the questionnaires through building of a rapport with detailed explanation about the questionnaires. Then the respondents went through each of the statements and indicated their personal preference by giving a tick (✓) mark for each of the alternatives. There was no time limit. The respondents took about 25 to 40 minutes to complete the questionnaire. The respondents were given complete freedom to indicate their preference relating to a statement in the scale. The mothers who had educational qualification below class ten and who were severely ill were requested for an appointment by the researcher to fill up the questionnaire at their convenient time. The respondents were assured that the information given by them would be kept confidential.

RESULTS AND DISCUSSION

In order to find out whether anxiety level varies as a function of child birth status of the mothers (premature born babies and normal born babies); their obtained scores were analyzed by t-test, chi-square and product moment correlation.

TABLE 1: ANXIETY LEVEL VARIED AS A FUNCTION OF CHILD STATUS OF MOTHERS.

Child Status of Mother	No. of Cases	M	SD	Standard Error Mean(δ)	df	t
Normal Born Babies	25	28.24	6.42	1.28		
Premature Born Babies	25	35.00	8.81	1.76	48	-3.101*

* $p < 0.05$

The above table indicates that significant differences exist in the anxiety levels between mothers of premature born babies and the mothers of normal born babies. Figures appearing in the table 1 also suggest that the anxiety scores of mothers of normal born babies are lower than the mother of premature born babies. In other words, the mothers of premature born babies possess significantly higher anxiety level than the mothers of normal born babies.

Another purpose of the present study was to investigate whether the levels of anxiety differ according to mothers' age and child status of mothers (premature and normal born babies). Obtained scores and their Mean scores are shown in the table 2 below.

TABLE 2: ANXIETY LEVEL IN RELATION TO AGE AND CHILD STATUS OF THE MOTHERS.

Description Issue	N	Anxiety scores of mother		
		Average	SD	Coefficient of Variation(CV)
Pre-Standard mother's age				
Normal born babies	8	25.75	4.29	16.68
Premature born babies	15	38.93	7.70	19.77
Total	23	34.35	9.19	26.76
Standard mother's age				

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Normal born babies	14	30.79	6.47	21.02
Premature born babies	5	29.40	6.74	22.93
Total	19	30.42	6.57	21.60
Over-Standard mother's age				
Normal born babies	3	23.00	3.27	14.20
Premature born babies	5	28.80	5.74	19.93
Total	8	26.63	5.70	21.41

Findings shown in table 2 indicates that the mother's anxiety score of the normal born babies are lower than that of the premature born babies of "Pre-standard age group mother". Table 2 also shows that the mother's anxiety score of the normal born babies are higher than that of the premature born babies of "Standard age group of mother". Again table 2 indicates that the mother's anxiety score of the normal born babies are lower than that of the premature born babies of "Pre-standard age group mother". In the other words, the mothers of the "Pre-standard age group" possess the highest anxiety level compared to "Pre-standard age group (65.22%)" and "Over-standard age groups (62.50%)".

TABLE 3: RESPONDENT MOTHERS BY THEIR AGE GROUP AND CHILD STATUS.

Mothers Age Group	No. of Mother	Normal issues		Pre-mature issues	
		Number	Percentage	Number	Percentage
Pre-Standard	23	8	34.78	15	65.22
Standard	19	14	73.68	5	26.32
Over-Standard	8	3	37.50	5	62.50

Chi-square=6.894, $p < 0.05$, $df = 2$

Person's Product Moment Correlation were computed to examine the relationship between the age of mothers and the anxiety score of mothers and it was found as 0.335. This finding is significant at the 0.05 level (2-tailed).

The correlation was not simple, because when child status of mother was used as a controlling variable then the correlation between the age of mothers and the anxiety score of mothers was not significant (-0.2730). On the other hand the factors of the child status of mothers (premature and normal born babies) to be influenced to the correlation among the age of mothers and the anxiety scores of mothers.

The results revealed that there are significant differences in anxiety level between the mothers of pre-mature born babies and the mothers of normal born babies. It is also evident that the mother's age groups are significantly related to child birth status of mothers. The results show that there is a significant difference between the mothers of pre-mature born babies and the mothers of normal born babies in their level of anxiety (table 1). The mothers of pre-mature born babies are more anxious than the mothers of normal born babies ($t = -3.101$, $df = 48$, $p < 0.05$). This difference in the anxiety level may be interpreted in several ways. Mothers of pre-mature born babies feel more anxiety. Because they are to face many adjustment problems, such as a traumatic event of pre-mature infant birth that place tremendous stress and anxiety on any parent or mother. There were high neonatal death rates and even in the intensive neonatal care unit. The death rate is high due to complications and increased incidences of congenital malformations. Most of the deaths (two-third) occur within 48 hours. The survivors many suffer from rickets, mental or intellectual deficiency and various sequel neurological or other complications. So they were always in different kinds of stress, which occur different kinds of anxiety. On the other hand, mothers of normal born babies were free from those kinds of problems. They were not so worried about their baby's health, or chance of survival. Another important finding of the study that was consistent with anxiety is directly or indirectly associated with every day behavior (Anderson 1950). Any situation that threatens the well-being of the organism is assumed to produce a state of anxiety. Other finding of the study was consistent with the findings of Kersting (2001); who showed that the level of traumatic distress increase for mothers of infants with a very low birth weight compared to mothers of healthy infants. Dianne (2002) and Khanam (2002) also found that the level of emotional feelings of the mothers of pre-mature born babies (included fear, shock, guilt, anxiety, loneliness, anger, sadness, and even depression) are more compared to the mothers normal born babies.

Another purpose of the present study was to find out whether the degree of anxiety differs due to differences in the child status and the age groups of mother. The result (table 2) shows that the mothers of the "Pre-standard age group" have the highest anxiety level compared to "Standard age group" and "Over-standard age group". Table 3 shows that the age group of mothers were significantly related to child status of the mothers ($\chi^2 = 6.894$, $p < 0.05$, $df = 2$). The table also revealed that pre-standard age group mothers bear more premature born babies rather than the mothers of the standard and over standard age group. It must be noted that as they were the mothers of pre-standard age group, they lacked enough experiences of those threatening situation.

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Another important finding of this study was the significant correlation ($r = -0.333$ at the 0.05 level, 2 tailed) between the mother's age and the anxiety score of mothers. But the correlation was complex because child birth status of mothers was an important factor to influence the correlation among the mother's age and the anxiety score of mothers. However, it should be mentioned here that most of the mothers of pre-mature born babies belonged to the middle socioeconomic class and their educational qualification were not adequate. For these reasons they can't overcome the anxiety related problems.

The main limitation of the study was that the sample size. It was not sufficient to represent the population and controlling techniques of external variables. To understand the anxiety of the mothers of different child status thoroughly intensive and extensive research on the national level is needed. The present study indicates that it should be done on a priority basis. The present study also suggests that it is necessary to give counseling to anxious mothers.

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