

A STUDY ON MATERNAL STRESS AND MATERNAL AND FOETAL OUTCOME

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INTRODUCTION

Motherhood is a distinct bio-psychosocial process that transforms and broadens the role of a woman into that of a mother. This period is filled with many intense and diverse feelings. Pregnancy is a period of excitement, expectancy, anxiety and even fear. It causes alteration in body and mind. To cope up with those changes, re-ordering of a sound relationship with family members is necessitated. Any small untoward incident in the family may cause stress which may result in a composite effect on the foetal outcome. The way a particular woman reacts to the stresses of pregnancy is often influenced by her emotional make-up, her sociological and cultural background and even her willingness to accept or reject pregnancy.

In developing countries like India where the maternal and perinatal mortality rates are still high, it is of great concern to suggest mothers to improve the health status of mother and child. It is well accepted that only a healthy mother can give birth to a healthy baby. So, a study of social, economical and familial background of pregnant women, to see if there are any stress factors that influence the health of newborn, is appropriate.

REVIEW OF LITERATURE

Selye defines stress as the non-specific response of the body on any demand made on it. Beland says "whatever the specific source of psychological stress in illness, it leads to unpleasant feelings such as anxiety, anger, helplessness, hopelessness, guilt, shame and disgust stressors can be:

1. Intrapersonal - Forces occurring within individual
2. Interpersonal - Forces occurring

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between one or more individuals

3. Extrapersonal - Forces occurring outside the individual

According to Elezabeth B. Hurlok, unfavourable attitudes towards an unborn child, are not wanting the child at this time, preference for a child of particular sex, dream-child concept and wanting to have miscarriage or an abortion. According to Dr. Latha P.M. and Dr. Krishna Prasad Sridhar who conducted a study on psychological factors related to abnormalities in child birth, the women grouped in abnormal labour group reported anxiety about forthcoming delivery and fears regarding one's own life and that of the yet-to-be born child.

Craig (1976) has found widows to indicate that mother's attitude, her level of fears, her expectations, her feelings about children and about sex and over all level of stability did affect both her emotional health during pregnancy and her psychological adjustment during labour.

Lancy co-relate maternal stress and attitudes with abnormalities of pregnancy and the delivery of premature infants in 1980.

Reece S.M. conducted a study on "stress and maternal adaptation in first time mothers more than 35 years old" and found that maternal stress was high in primi paras older than 35 years and the transition to early parenthood were associated with greater confidence and supporting in mothering at 1 year.

Rothberg A.D. and Lits B. in their study, psychosocial support for maternal stress during pregnancy, effect on birth weight, showed that moderate to severe stress during pregnancy was inversely related to infant birth weight.

Brunker R.P. et al in their study on relationship among maternal stress, cognitive development and early intervention in middle and low socio-economic status, infants with development disabilities says that there is a definite relationship between maternal stress in

low economic families and poor development of their infants.

According to Headermon R.P. in his study, Anxiety and Stress in pregnancy, significance and nursing assessment, the cumulative effect of multiple sources of anxiety and the relevance of early state anxiety and prenatal personality dimensions such as maternal role identifications and conjugal relationship contribute to bad foetal outcome.

The most comprehensive review of parent's relation to child bearing is provided by Colemans in the book "The Psychological experience pregnancy". Women are quoted as saying that they had not been prepared for the emotional turmoil they experienced during pregnancy - the identity crisis, their preoccupation, the birth of baby, their dislike of their bodies, and the periods of re-evaluation of their relationship with their partners.

Uncontrolled studies by Zoman (1960) and Davids and Lessan describes a situation where the wife breaks down with lack of maternal feeling, while the passive, habitually dominated husband cannot give the strong support needed.

MATERIAL AND METHODS

A case comparative study on Maternal Stress and Maternal Foetal Outcome was taken up in SAT Hospital, Trivandrum from 15.10.1999-23.10.1999. The labour room and post natal wards of SAT Hospital formed the setting of the study. The population studied were the cases recorded in labour room of SAT, Trivandrum during the year 1999. The population size is estimated as 12000. A convenient sampling technique is followed for selection of cases into the study. The sample size is estimated to be 120 (60+60).

For the purpose of study those cases directly admitted to septic labour room and antenatal mokers with EDC more than two weeks were excluded from the study and all



others are included. The technique and methods used were :

1. Direct personal interviewing of antenatal women
2. Direct personal interviewing of postnatal women
3. Assessment of new born
4. Data from records
5. Filling up of pre-designed pre-tested proforma

Important maternal risk factors included were, marital status, age, parity, history of abortion, loss of babies, pregnancy after treatment of infertility, foetal growth, apprehensions about sex, financial difficulties, bad habits of husband, family atmosphere etc. Risk factors were scored according to the importance and total scores were taken into account for the stress classification and maximum score was 34.

Cases with score less than or equal to 7 was not considered as stress group and cases with score more than 7 were considered as stress group.

Data collected were enclosed into mastersheet for analysis and interpretation. Necessary statistical tables were constructed and supplemented by charts and diagrams wherever necessary. In order to test hypothesis, appropriate tests were maternal stress defined as; "A persistent form of heightened emotionality involving unpleasantness like, not wanting the child, feeling of inadequacy about performing the maternal role successfully or dreams and fantasies about having a defective child, poor maternal health, concern about family finances, over work at home, previous pregnancy or strained husband wife relationship.

RESULTS

Maternal stress factors are often associated with maternal and prenatal outcome. So a comparative study was taken up in SAT Hospital, Trivandrum.

A sample of 120 cases were taken in this study at random. They were classified into stress group and non stress group according to scoring. Samples were almost comparable with respect to age, place of residence, education of mothers and their husbands, per capita income, type of family and marital sta-

tus. According to religion wise distribution the Christians were slightly less in no. compared to population break up in Trivandrum district. A statistically significant increase in the percentage (54%) of SC/ST communities was noted in the rest of the group as compared to non stress group (23.3%). It is suggestive that, this increase may be due to their environment and up-bringing.

Educational status of mother and husband did not show any significance in causing stress. But regarding occupation of mother, working women were more in stress group number of family members had a great significance in causing maternal stress. It is found that as number of children increases, the maternal stress also increases. Considering the parity of mothers, primis were more in stress group, i.e. 43% and the relation was found to be significant statistically also.

Mother with history of abortion, history of loss of babies was found to be more in stress group. Complications in pregnancy contributed a lot in causing maternal stress and the association was highly significant. Antenatal mothers with abnormal foetal growth and those having apprehension about congenital anomalies were more in stress group.

60% of mothers in stress group did not have prior knowledge about pregnancy and their score was found to be increased. It was found that a pleasant family atmosphere helps to allay stress.

In the present study statistical association between maternal stress and maternal outcome i.e., type of labour and complication in labour is established.

It was seen in this study that there was need for resuscitation in babies of mothers with high score. Nature of labour was almost same in both groups. Period of gestation was also of non significance in both groups. Regarding status of new born 88% were born alive in case of stress group, but in non stress group 96.7% were born alive. Still birth were 5 times more in stress group.

Birth weight of new born had a negative correlation with stress score. In other words, while maternal score in-

creases the weight to new born decreases. Apgar score was also very much associated with maternal risk factors. Percentage of babies with Apgar less than 7 at 1 minute was 20% in stress group while in non-stress group, it was only 8%. Perinatal death was found to be 5 times more in stress group.

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