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Original Research Article

Socioeconomic status on pregnancy outcomes in Indian scenario

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ABSTRACT

Background: Socioeconomic status (SES) is one of the main components related with clinical outcomes. At the point when SES is low, clinical consideration is lacking and this has been credited to unfriendly results include anemia and pregnancy-induced hypertension.
Methods: The study was conducted in the Department of obstetrics and gynecology and the Department of Community Medicine of a private Hospital, for one year. Data was collected using a questionnaire by interview. Study variables included monthly income (i.e. <Rs. 6000, 6000-12000 and >Rs. 12000) lifestyle, eating habits and type and amount of food consumed, a pattern of health care utilization, chronic illness, history of illicit and employment status of husband and women.
Results: In the current study, the majority of 83 (67.4%) participants were between 18 and 19 years of age, with their mean age being 18.1±2.3 years, and 108 (87.8%) were Hindus by religion. As many as 113 (91.8%) teens were housewives and 42 (34.1%) of their husbands were factory workers. Most 59 (47.9%) of the teens belonged to class IV socioeconomic status as per modified BG Prasad classification and 93 (75.6%) were living in a joint family.
Conclusions: The mean age of participants was 18.1 years, and that of marriage was 17 years and this occurrence of pregnancy in teenagers leads to adverse outcomes. Thus, periodic information, education and communication activities have to be held, and the child marriage act has to be strictly enforced to improve their health.

Keywords: Healthcare, Pregnant women, Socioeconomic status

INTRODUCTION

Socioeconomic status (SES) is one of the main components related with clinical outcomes. At the point when SES is low, clinical consideration is lacking and this has been credited to unfriendly results.[1] In pregnant female, low SES can build the risk of adverse pregnancy results. Previous analysis has stated that low SES is related with pregnancy barriers, for example, gestational diabetes, premature birth, preterm delivery, eclampsia and preeclampsia.[2] According to insights from the Korean government, the MA work covered 2.9% of individuals in 2014, providing access to medical care at "a least expense" to poor people. Numerous maternal practices and encounters previously, during, and after pregnancy are related with adverse health outcomes for both the baby and the mother.[3] The most possible happening complexities consists of pregnancy-induced hypertension, anemias, hemorrhage and disease. Preterm labour and gestational diabetes are common complications.[4]

Insufficient prenatal care is related with poor obstetric outcomes, including preterm delivery, preeclampsia and stillbirth, and female with low SES are less likely to receive prenatal care.[5,6] The risk of preterm delivery, gestational diabetes and preeclampsia, rises with both

lacking prenatal care and low SES.[7] A nutritious diet is related with an effective pregnancy. Malnourished moms are at expanded risk for complications and death during labour and pregnancy. Likewise, their youngsters are probably likely to have low birth weight, fail to develop at a normal rate, and have higher rate of illness and early demise.[8-11] Anemia can be because of the failure to purchase adequate and good quality food or because of poor dietary patterns.[12] These pregnancy-related problems influence numerous ladies and babies yet they are most likely to influence those ladies and newborn children with unfavourable ailments and lower socioeconomic status.[13]

METHODS

Study design

This was a prospective and observational study.

The study was conducted in the Department of obstetrics and gynecology and Department of Community Medicine of a private Hospital, for a period of one year. This was a tertiary care teaching hospital. 123 married women whose ages ranged between 18-45 years and who were attending obstetric OPD or were admitted in the ward were included in the study after taking informed consent. Data was collected using a questionnaire by interview. Study variables included monthly income (i.e. <Rs. 6000, 6000-12000 and >Rs. 12000) lifestyle, eating habits and type and amount of food consumed.

Pattern of health care utilization, literacy level, chronic illness, history of illicit drug use by women or husband, and employment status of husband and women. Violence (verbal, physical, sexual and psychological) was categorized. Psychological abuse was undermining her sense of self-esteem or self-worth, insulted or talked down to her. Medical risk factors in pregnancies i.e. anemia (WHO definition of hemoglobin <11.0 g/dl), pregnancy-induced hypertension, pre-eclampsia, eclampsia, chronic hypertension; gestational diabetes and chronic diabetes were studied. Reproductive history variables included age, parity, still-births, low birth weight babies (birth weight below 2,500 gm), preterm or small-for gestational-age babies and cesarean sections.

Statistical analysis

Data was entered and analyzed using SPSS version 20. Descriptive statistics were used to describe the data frequencies along with percentages. The chi-square test for significance was used for comparing categorical variables. The level of significance was taken as $p<0.05$. Monthly income was taken as the dependent variable.

RESULTS

In the current study, the majority of 83 (67.4%) participants were between 18 and 25 years age, with their mean age being 18.1±2.3 years, and 108 (87.8%) were Hindus by religion. As many as 113 (91.8%) teens were housewives and 42 (34.1%) of their husbands were factory workers. A large number of teenagers and their husbands had studied up to high school and above (55.2% and 51.2% respectively). Most 59 (47.9%) of the teens belonged to class IV socioeconomic status as per modified BG Prasad classification and 93 (75.6%) were living in a joint family in Table 1.

Table 1: Sociodemographic profile of teenage mothers (n=123).

Characteristics	Number	Percentage
Age in years		
18-25	83	67.4
26-35	40	32.5
Religion		
Hindu	108	87.8
Non-Hindus	15	12.1
Participant's occupation		
Homemaker	113	91.8
Employed	10	8.1
Husband's occupation		
Agriculturist	38	30.8
Laborer	33	26.8
Factory worker	42	34.1
Others	10	8.1
Education		
Illiterate	26	21.3
Primary school	29	23.5
High school and above	68	55.2
Husband's education		
Illiterate	28	23.5
Primary school	32	26.0
High school and above	63	51.2
Family type		
Joint family	93	75.6
Nuclear family	30	24.3
Socioeconomic status (modified BG Prasad classification)		
Class I	0	0
Class II	12	9.7
Class III	31	25.2
Class IV	59	47.9
Class V	21	18.6

However, there were no statistically significant associations observed between educational level, occupation and socioeconomic status with pregnancy outcome.

A great number of study participants, 89.4% had married in the age group of 15-19 years and the mean age of marriage was 17.3±1.0 years. A total of 32.5% had consanguineous marriage and traditional practices (69.1%) were the commonest reason for early marriage

and family pressure (46.3%) was the often-cited reason for early pregnancy (Table 2).

Table 2: Distribution of participants according to marriage-related events (n=123).

Characteristics	Number	Percentage
Age at marriage (years)		
<10	6	4.8
10-14	7	5.6
15-19	110	89.4
Consanguineous marriage		
Yes	40	32.5
No	83	67.4
Reasons for early marriage		
Consanguineous	19	15.4
Traditional practices	85	69.1
Unable to pay for education	1	0.8
Other siblings to be married	18	14.6

Table 3: Distribution of participants according to pregnancy-related events (n=123).

Characteristics	Number	Percentage
Reasons for early pregnancy		
Family pressure	56	46.3
Tradition	39	31.7
Lack of awareness about contraception	27	21.9
Previous pregnancies		
0 (primigravidae)	97	78.8
1	25	20.3
2	1	0.8
Pregnancy registration		
<12 weeks	101	82.1
>12 weeks	22	17.8
ANC visits		
Adequate	97	78.8
Inadequate	26	21.1

About 78.8% of them were primigravidae, and 82.1% of the participants had registered their pregnancy within 12 weeks of gestation. A total of 78.8% had taken adequate antenatal care (ANC) visits, and all of the teenagers in the study had taken iron and folic acid and tetanus toxoid injections as necessary in Table 3.

Table 4: Distribution of participants according to pregnancy outcome (n=123).

Characteristics	Number	Percentage
Normal delivery	87	70.7
Preterm	29	23.5
Abortion	0	0
Still birth	6	4.8
Neonatal death	1	0.8

Pregnancy outcome

A majority of teens, 87 (70.7%) had full-term normal delivery followed by 29 (23.5%) had preterm delivery, 6 (4.8%) had a stillbirth, no abortion, and there were only 1 (0.8%) neonatal deaths in Table 4.

DISCUSSION

In this cross-sectional population-based study, we used concentration indexes to examine SES gradients for adverse birth outcomes and related maternal behavioural. The results revealed that adverse birth outcomes and related maternal factors are unequally distributed across the socioeconomic gradient in the urban-rural divide, with the majority of them concentrating in lower SES groups. Specifically, the concentration indexes of PTB and related maternal factors demonstrated the existence of a gradient of perinatal inequalities in both urban and rural areas that affected the lowest SES groups

In the present study, the mean age among the study population was 18.1±2.3 years, 87.8% were Hindus by religion, a majority, 91.8% were housewives and 34.1% of husbands of participants were factory workers. A major number of teenagers and their husbands had studied up to high school and beyond (55.2%) and most of them belonged to Class IV socioeconomic status. These findings were consistent with the studies conducted by Mishra et al.[14] Also, lower SES, unhealthier maternal behaviours and more limited access to healthcare resources and adequate prenatal care have been described among rural residents compared with those in urban areas.[15]

In this study, 89.4% of girls got married between 18 and 25 years and the mean age of marriage was 17.3±1.0 years and 79.2% of adolescents were primigravidae while 20.3% had previous 1 pregnancy. As a consequence of early marriage, there was early pregnancy and lower education status and accordingly lower socioeconomic status among the teens. The most common reason for early marriage in this study was its traditional practice that was seen in 69.1% of participants and the commonest reason for early pregnancy was family pressure (46.3%) followed by tradition (31.7%). Probably, good education and knowledge about the hazards of adolescent pregnancy in the community would have resulted in alteration in traditional practices and thereby decreasing early marriages and by this means early pregnancies. Although, pregnancy registration and ANC took was high, it can be improved with proper awareness regarding pregnancy complications.

The existence of synergistic deleterious influences of area-level determinants and individual factors may account for these differences. Other potential explanations may be linked to low health literacy in rural populations about the effects of lifestyle behaviours in childbearing age and the impact on birth outcomes, and

shortages in resources to stay better informed than women living in more urbanized areas.[16] Systemic and structural influences such as food security, health services access may also account for the socioeconomic gradient in the urban-rural divide. Finally, the 'healthy migration' effect can contribute to our study results.[17] Healthy women living in rural and remote areas may be most likely to migrate to more urbanized areas, leaving behind their counterparts at a higher risk of experiencing adverse birth outcomes.

Pregnancy outcomes in the majority were live births (70.7% were full-term and 23.5% were preterm birth), 4.8% delivered stillborn babies and 0.8% had neonatal death that was similar to the studies done by Parasuramalu et al.[18]

To our knowledge, few studies have evaluated SES gradients in adverse birth outcomes and related maternal factors in India. One study evaluated socioeconomic inequality in health across the provinces in India over time suggesting that those inequalities have widened over time, especially among women.[19] A few studies have evaluated the influence of area-level SES on adverse birth outcomes in rural and urban areas using other epidemiological approaches and yielding conflicting results.[20,21]

We used a well-known and robust method, the concentration index, to compare socioeconomic status on pregnancy outcomes. Compared with other approaches to the study of health inequalities, the concentration index has some advantages. For example, results are not biased by the sample size of the SES strata in the study population. The graphical display of the concentration index allows a visual representation of the dominance relationships in the distribution of the outcomes across SES strata and between urban and rural groups.

The limitation of the study is that the SES measure incorporates area-level census information about income in the calculation. In rural areas, where farming and informal economic sectors are highly prevalent, income may not be precisely estimated and this may introduce some misclassification of the SES in the calculations. Despite this, area-level SES indicators have been used in health research as a good proxy for individual level measures and our analyses were disaggregated by SES quintiles in urban and rural areas separately. This approach allowed the identification of subgroups where special attention is needed in both urban and rural areas.

Future perspectives

Studies about socioeconomic gradients in health provide a way to identify gaps that characterize the health (or ill health) of socioeconomic groups, helping health authorities to evaluate the performance of healthcare systems, policies and interventions. Our evaluation of inequalities in perinatal health and influential factors across urban and rural areas has important implications. First, improving accessibility and adequate and high-quality prenatal care, especially for the lower SES groups, may reduce socioeconomic-related inequalities in maternal and perinatal health in both rural and urban areas. Particularly, the most disadvantaged groups are concentrated in rural areas in terms of their perinatal outcomes. Interventions targeting these rural populations in terms of increasing perinatal health and income can be a cost-effective tool to tackle these health inequalities.

CONCLUSION

The current study revealed that teen pregnant women were more between 18 and 19 years of age, were housewives, married early due to traditional practices and got pregnant early due to family pressure. Various factors like age, education, occupation, socioeconomic status, previous pregnancies influenced the outcome of teenage pregnancy. Hence, the present study recommends that to improve the health of the adolescents, periodic Information, Education and Communication activities have to be held at villages and people, principally elders, need to be told about complications and ill effects of teenage pregnancy. Child marriage act must be stringently imposed to restrain child marriages.

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