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## Relationship between maternal socioeconomic status and birth weight of tribal and non-tribal Newborns in Udaipur district

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### Abstract

**Introduction:** Mothers, deprived from ideal socioeconomic conditions, frequently have growth retarded infant. Poor nutrition and bad health during pregnancy, due to ignorance, poverty etc, may reversely affect both – mother as well as newborn <sup>[1]</sup>.

**Material & Methods:** 1422 Newborns (680 tribal and 742 Non- Tribal) were included in this study, delivered at Government health institutes of Udaipur district”, at Pannadhay Ward of Maharana Bhopal Government Hospital of RNT Medical College and Hospitals.

**Aims and Objectives:** To find out the relationship between the Newborn’s Birth Weight and Maternal Parameters, if any exists.

**Conclusion:** Lower socio-economic status of mothers reversely affects Birth Weight of their newborns.

**Keywords:** Birth weight and socioeconomic status

### Introduction

Foetus not only spends its time but also gets nourished in mother’s womb; as such Anatomical and Physiological changes occur in the body of a mother during pregnancy to create a suitable environment for the growth of foetus.

Mothers, deprived from ideal socioeconomic conditions, frequently have growth retarded infant. A healthy balanced diet in pregnancy is essential to provide sufficient energy and nutrients to meet the mother's usual requirements for optimal health, to support the growing foetus and to develop stores for use during lactation. Poor nutrition and bad health during pregnancy, due to ignorance, poverty etc, may reversely affect both – mother as well as newborn <sup>[1]</sup>.

### Material & Methods

Cross sectional study was conducted in the Department of Anatomy, RNT Medical College and Hospitals, Udaipur, Rajasthan, India. 1422 Newborns (680 tribal and 742 Non- Tribal) were included in this study, delivered at Government health institutes of Udaipur district”, at Pannadhay Ward of Maharana Bhopal Government Hospital of RNT Medical College and Hospitals.

### Incl Incusion/ Exclusion Criteria

#### A. Inclusion criteria

- All the singleton pregnancy without any maternal comorbidity affecting newborns anthropometry.
- Mother should be native resident of Udaipur district willing to participate in this study.
- Patient who was able to cooperate for the study
- Patient who was able to communicate and understand the nature of question
- Booked patient along with antenatal card.

#### B. Exclusion criteria

- All twin babies
- Intrauterine death & still born babies

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- Newborns with gross congenital anomalies.
- Newborns born to mother with condition likely to influence fetal growth i.e. hypertensive disorder of pregnancy, gestational diabetes mellitus, chronic infections and illness will be excluded.
- Newborns whose gestational age would not be assessed i.e. greater than 2 weeks difference between obstetrical and clinical assessed Gestational Age.
- Mother taking treatment which is likely to affect fetal growth

Birth weight was taken from hospital record/ admission ticket.

**Socioeconomic status of mother**

In present study socioeconomic status is determined by using modified Kuppuswamy’s socio-economic status scale (2007) [6].

**Result & discussion**

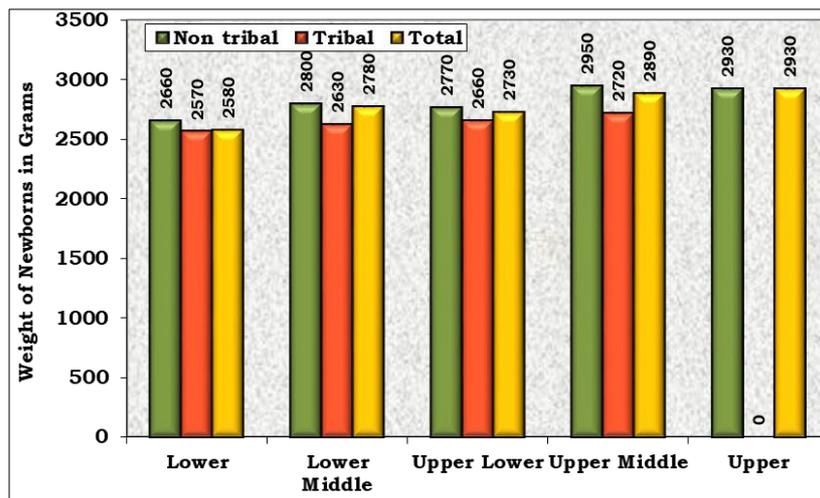
**Table 1:** Relationship between Socio-economic Status of Mother and Weight of Newborn

Socio-economic Status	Weight of Newborn in Non-tribal subjects			Weight of Newborn in Tribal subjects			Weight of Newborn in All Study subjects		
	No.	Mean	SD	No.	Mean	SD	No.	Mean	SD
Lower	42	2660	394	338	2570	359	380	2580	364
Lower Middle	133	2800	478	18	2630	141	151	2780	454
Upper Lower	534	2770	429	309	2660	414	833	2730	493
Upper Middle	40	2950	443	15	2720	288	55	2890	426
Upper	3	2930	493	0	0	0	3	2930	417

13.885, (4, 1421) p-value <0.001

Above table shows relationship between Socio-economic Status of Mother and Weight of Newborn in Tribal and Non-tribal subjects.

In this study, the relationship was found statistically significant as socio-economic status of a mother positively affects weight of newborn. High socio-economic status of a mother resulted in increased weight of newborn.



**Graph 1:** Relationship between Socio-economic Status of Mother and Weight of Newborn

**Relationship between Socio-economic Status of Mother and Weight of Newborn**

In this study, it is observed that Birth Weight variably increases with the High Socio-economic Status of mothers in all study subjects including non-tribal and tribal.

Weight of newborns, belongs to mothers having Lower Socio-economic Status is significantly lower (2580 grams) than the mothers having Higher Socio-economic Status (2930 grams) as shown in table - 1.

The study is consistent with the studies of Rowshon N *et al.* (1978) [7], Eltahir M *et al.* (2008) [2] and Kheir AEM *et al.* (2013) [4], who found a significant association between Socio-economic Status and Birth Weight. Matin A *et al.* (2008) [5] also observed “Majority of the mother came from poor economical class but it was more in LBW 79.2% in comparison to mother of NBW 67.40%, showing association between LBW and poor socio-economic status”. Geeta *et al.* (2014) [3] also observed that Birth Weights of newborns of upper income group were consistently higher

than that of lower income group. They further observed that the mean Birth Weight of newborns for poor & lower middle class was 2.5 to 2.7 kg and for middle & upper middle class was between 2.7 to 3.0 kg.

**Conclusion**

It was observed that lower socio-economic status of mothers reversely affects Birth Weight of their newborns.

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