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Effect of maternal education on birth weight of tribal and non-tribal Newborns of Udaipur district

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Abstract
Introduction: The level of literacy among tribes of Rajasthan is extremely poor, particularly in case of females. As such, the infant & child mortality rate in tribes is comparatively much higher than the average mortality rate.
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 literacy, if any exists.
Conclusion: Weight of Newborns belongs to Illiterate mothers was significantly lower than the newborns belong to higher educated mothers.

Keywords: Birth weight and literacy

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.

The level of literacy among tribes of Rajasthan is extremely poor, particularly in case of females. As such, the infant & child mortality rate in tribes is comparatively much higher than the average mortality rate. Antenatal care is either not available or not availed by half of the tribal mothers during their pregnancy by the virtue of customary practices or their ignorance about importance of the same. Below average Body Mass Index in majority of tribal women, represents higher nutritional deficiency resulted in malnutrition infants and that's why this study is an attempt to focus on anthropometrical issues of tribal women and their newborns.

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

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- Intrauterine death & still born babies.
- 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.
- Newbornss 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

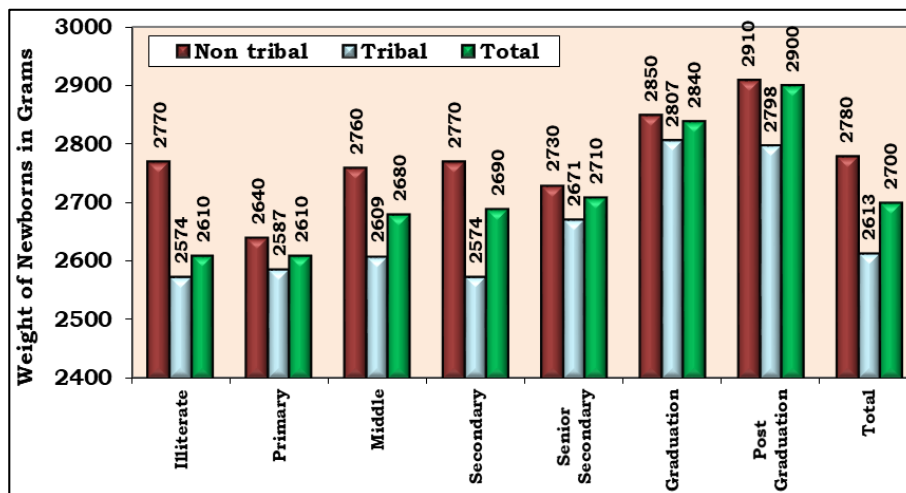Birth weight was taken from hospital record/ admission ticket.

Result & Discussion

Table 1: Relationship between Literacy of Mother and Weight of Newborn.

Literacy of Mother	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
Illiterate	49	2770	480	209	2574	374	258	2610	402
Primary	81	2640	504	114	2587	362	195	2610	426
Middle	116	2760	411	130	2609	373	246	2680	398
Secondary	136	2770	437	97	2574	407	233	2690	435
Senior Secondary	133	2730	422	69	2671	362	202	2710	403
Graduation	121	2850	387	43	2807	443	164	2840	402
Post Graduation	106	2910	439	18	2798	275	124	2900	421
Total	742	2780	439	680	2613	382	1422	2700	421

11.352, (6, 1421) p-value <0.001

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

In this study, the relationship was found statistically significant as weight of newborn was found increased as high as maternal literacy.

Graph 1: Relationship between Literacy of Mother and Weight of Newborn

Relationship between Literacy of Mother and Weight of Newborn

It is observed that Birth Weight variably increases with the high literacy level in mothers of all study subjects including non-tribal and tribal. Weight of Newborns belongs to Illiterate Mothers was significantly lower than the newborns belongs to higher educated mothers as shown in Table - 1.

This study is consistent with the study of Rafati S *et al* (2005), who observed that as the education increases, the chance of delivering LBW neonates' decreases. No doubt, educated mothers have a better reproductive behaviour. Matin A *et al* (2008) [4] also observed "most of the LBW 50% came from the mother without education but in NBW group 37% came from the mother completed primary education and 53% from mother who completed secondary level or above. These data showed significant relationship between LBW and poor educational status". Geeta *et al* (2014) [2] also observed linear trend with regard to maternal

education. Increasing education status was related to an increase in the Birth Weight. On the other hand Eltahir M *et al* (2008) [1] observed that the duration of maternal education does not significantly affect the risk of LBW. Kheir AEM *et al* (2013) [3] also observed the same.

Conclusion

The relationship between literacy of mother and weight of newborn in non-tribal and tribal subjects, was found statistically significant as weight of newborn was found increased as high as maternal literacy. Weight of Newborns belongs to Illiterate mothers was significantly lower than the newborns belong to higher educated mothers.

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