

“Effect of socioeconomic status and literacy rate on pregnancy outcome with reference to Ujjain city“

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I. INTRODUCTION:

The period of intrauterine growth and development is one of the most vulnerable periods in the human life cycle. Low birth weight infant is a major public health problem in the Indian states, contributing substantially both to infant mortality and to childhood disability. Preterm delivery or pregnancy complications are also very common in the India.

The birth weight of an infant is the single most important determinant of its chances of survival and healthy growth and development. The proportion of infants born with low birth weights (LBW) closely reflects the health status of the communities into which they are born.. A recent survey of WHO showed that only about one-third of births in the developing world take place in institutions; in some countries, the proportion is lower than one-fifth.

Low-birth weight babies are new born weighing less than 2,500 grams or born before 37 weeks of gestation, with the measurement taken within the first hours of life, before significant postnatal weight loss has occurred.

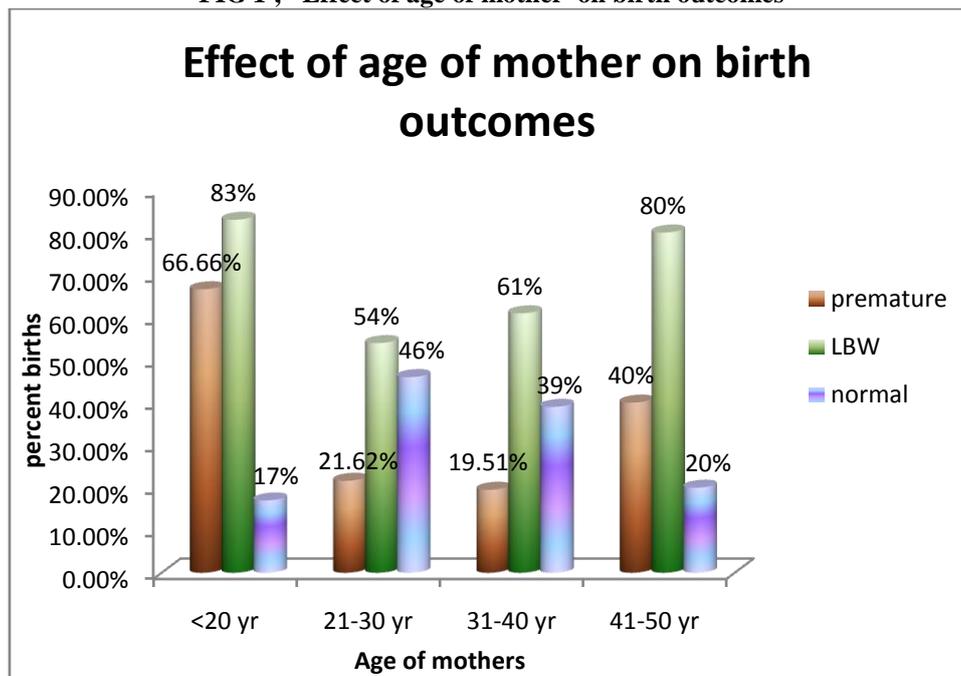
II. METHODOLOGY:

The present study was carried out in Ujjain city of M.P. The study area was carried out in five hospitals of Ujjain city (CHL Medical center, G.D. Birla hospital , J.K Hospital, Saharsh hospital , Charitable hospital). The chosen hospital covered total area of the city, where pregnant women visited for antenatal checkup. It is based on survey cum observational study, where during the data collection by structured questionnaire was used for the tenure of research work. Total 200 respondents were selected from five hospitals, 40 respondents from each hospital were randomly selected who are most regular in checkups and given their consent. Respondents were monitored throughout pregnancy , dietary counseling was done with all pregnant women who came for pre-natal check-ups and who delivered the child at the obstetrics and gynecology facility in the hospital during the period December 2015 to December 2016 were included in the analysis.

III. RESULTS AND DISCUSSION:

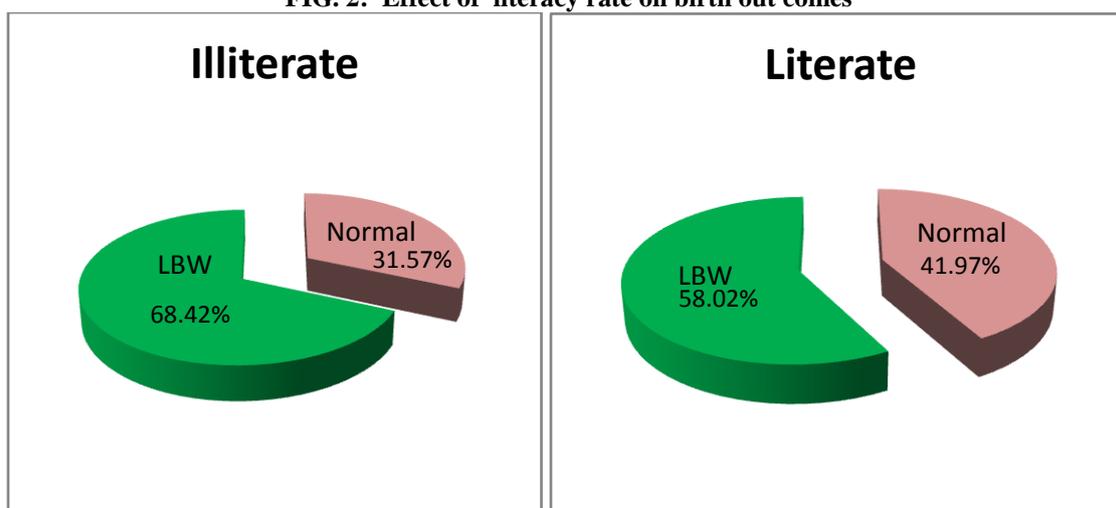
The following results were drawn from the study

FIG 1 ; Effect of age of mother on birth outcomes



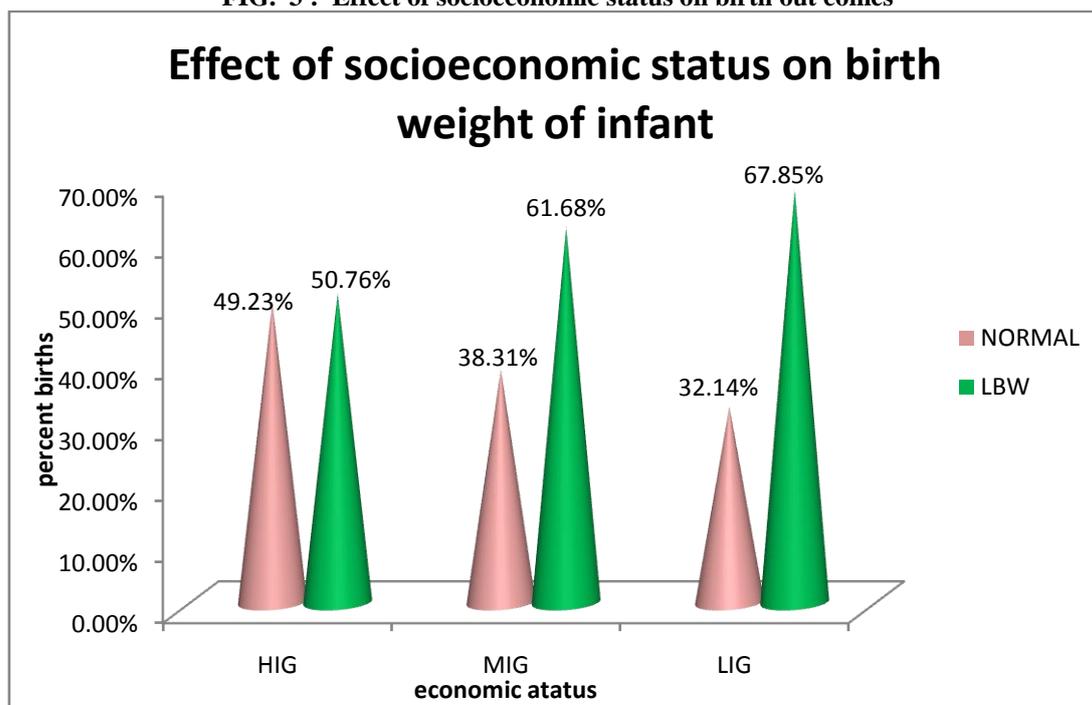
Maximum Low birth Weight i.e. 83% was recorded in age group below 20 years. Maximum normal births were recorded in 21-30 years age group. Out of total low birth weights premature births were recorded maximum i.e.66.66% in age below 20 years group and minimum premature i.e.19.51% were recorded in 31-40 years age group out of total low births.

FIG. 2: Effect of literacy rate on birth out comes



Literate mothers deliver 58.02% and illiterate mothers have 68.42 % Low birth weight infants. Chi square test was applied. The calculated value (cal = 1.38) is less than table value (tab = 3.85) so there is no significant difference was recorded statistically.

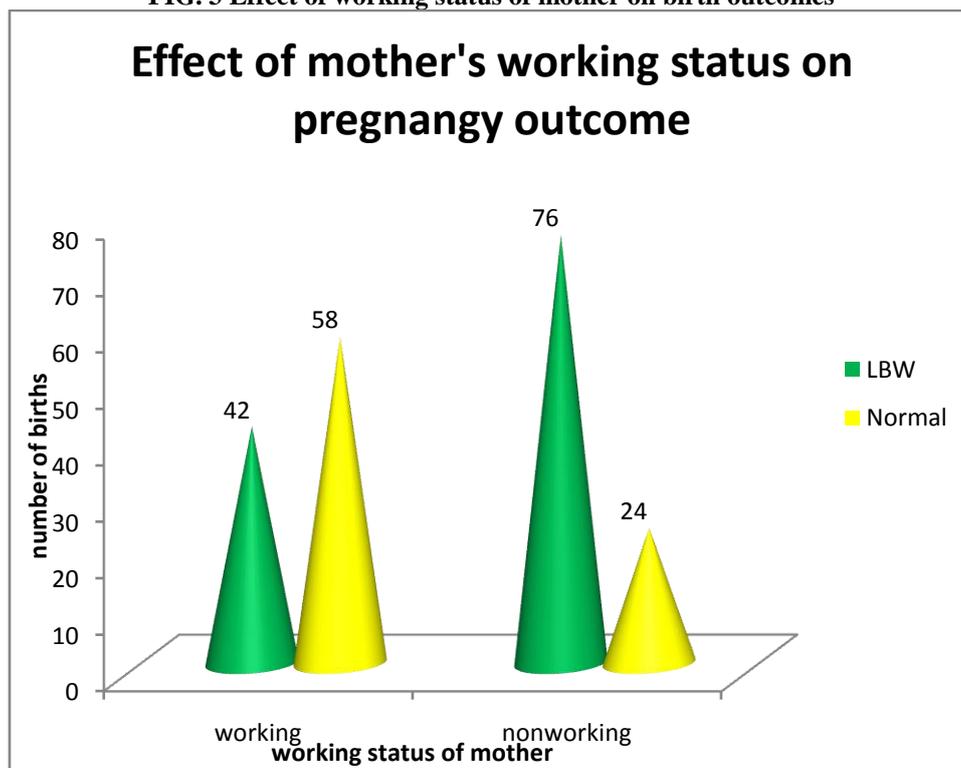
FIG. 3 : Effect of socioeconomic status on birth out comes



Maximum LBW were recorded in Low income category i.e. 67.85%. Maximum Normal birth out comes were recorded among High income group i.e. 49.23 %.

Chi square test was applied. The calculated value (cal = 3.046646) is less than table value (tab = 5.99) so there is no significant difference was recorded statistically.

FIG. 3 Effect of working status of mother on birth outcomes



The working status of respondents was recorded and it was found that 53% respondents worked under different occupations and 47% were only housewife or not working. Maximum Low birth weight i.e. 76 was recorded in non working women while maximum Normal births i.e. 58 were recorded in working mothers.

TABLE 1: comparison of per day requirement of nutrient to the total

MAJOR NUTRIENTS OF DIET OF RESPONDENT MOTHERS							
	CATEGO- RIES	NO.OF RESPON- DENTS %	MEAN VALUE		CATEGO- RIES	NO.OF RESPON- DENTS %	MEA N VAL UE
CALORIE	≤1500 kcal /day	3 (1.5%)	1200	CALCIUM	<500 mg/day	42 (21%)	300
	1500-2000 kcal /day	107 (53.5%)	1835		500-1000 mg /day	127 (63.5%)	764
	2000-2500 kcal /day	85 (42.5%)	2133		1000-1500 mg/day	26 (13%)	900
	Not studied	05 (2.5%)			Not studied	05(2.5 %)	
	TOTAL	200 (100%)			TOTAL	200 (100%)	
PROTIEN	30-50 gm/day	08 (4%)	46	IRON	20-30 mg/day	68(34)	27
	50-70 gm/day	166 (83%)	61		30-40 mg/day	127(63.5)	30
	≥70 gm/day	21 (10.5%)	70		Not studied	05(2.5)	05
	Not studied	05 (2.5%)	05				
	TOTAL	200			TOTAL	200	
FAT	20-30 gm/day	57(28.5%)	27				
	30-40gm/day	135(67.5%)	32				
	≥ 40 gm/day	03(1.5%)	40				
	Not studied	05 (2.5%)					
	TOTAL	200 (100)					

According to RDA 2010 a sedentary pregnant women required 2250 kcal/day ±200. Maximum 53.5 % respondents were taking calorie 1500-2000 kcal per day. Only 42.5% respondents were taking 200-2500 kcal per day.

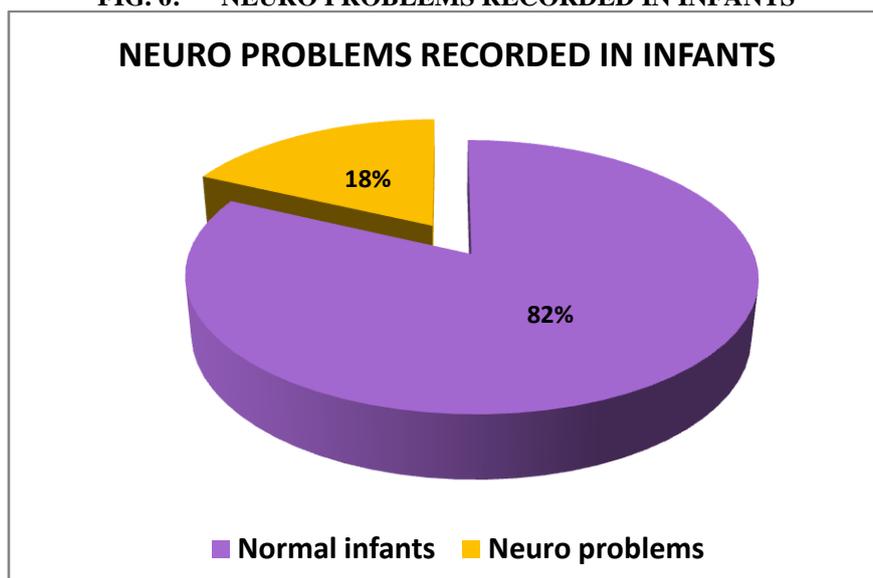
According to RDA a sedentary pregnant women required 50-60 gm protein per day. Maximum respondents i.e. 83% were taking 50-70 gm per day, only 4% were recorded taking 30 -40 gm per day.

Per day requirement of fat for sedentary women is 25 gm. .Fat intake 30-40 gram per day recorded in maximum respondents i.e.67.5%.

The calcium requirement of sedentary pregnant women was prescribed 1200 mg per day. Only 13 % respondents were taking calcium according to RDA through diet.

35m gm iron per day prescribed in RDA. 63.5 % respondents were taking 30-40 mg iron per day and 34% were taking below requirement through diet

FIG. 6: NEURO PROBLEMS RECORDED IN INFANTS



Accordinging the analysis 18 % infants recorded with neuro problems, while 82 % infants belong to normal category.

IV. CONCLUSION:

Among 200 respondents, 86 delivered normal birth weight infants and **114** births were recorded low birth weight. Among 114 low birth weight infants 32.4 % recorded premature births and 67.5 % are normal term infants. Age has a significant effect on birth weight. Maximum premature as well as Low birth weight were recorded in age below twenty years. Socioeconomic status and literacy has also affect birth weight , but statistically it was not found significant.18% infants recorded with neuro problems but it needed further other investigations.

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