



Assessment of Socio Demographic Factors and Maternal Characteristics Associated with Low Birth Weight among New Born in Central Hospital, Arar, Saudi Arabia

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Abstract

A nonexperimental descriptive correlational study was undertaken on purposely selected low birth weight newborn in central hospital Arar with an objective to assess the sociodemographic and maternal characteristics associated with low birth weight among newborn by assessing the percentage of low birth weight newborn in relation to their sociodemographic and maternal characteristics.

Introduction

Children's health is tomorrow's wealth is one of World Health Organization (WHO)'s slogans of recent years. At birth, fetal weight is accepted as the single parameter that is directly related to the health and nutrition of the mother and on the other hand is an important determinant of the newborn to survive and experience healthy growth and development. This is because low birth weight (LBW) has been shown to be directly related to immediate, long-term and very long-term development and well-being. This study was planned to find out the socio demographic factors and maternal characteristics associated with low birth weight.

Statement of the Problem

A study to assess the socio demographic factors and maternal characteristics associated with low birth weight among new born in central hospital, Arar, Saudi Arabia.

Objectives

- To find out the association between sociodemographic factors, maternal characteristics and low birth weight newborn.

Research Design and Approach

Research approach selected for this study was non experimental approach
Decriptive correlational design.

Setting of the study

The study was conducted in labour ward of Central Hospital, Arar, Saudi Arabia.

Population

The populations of this study were all mothers admitted in labour ward of Central Hospital, Arar, Saudi Arabia

Sampling Technique

Purposive sampling technique was used for this study.

Sample size

60 mothers of low birth weight newborn

Tools used

Part I: This tool consists of demographic variables age, education, occupation, income, area of residence, type of family.

Part 11: This tool consists of maternal characteristics such as weight, height, parity, sex of baby, hemoglobin level, blood pressure, day time rest, consanguinity, gestational age, consanguinity, birth interval, previous birth of LBW and previous preterm labour.

Results and Discussion

Part 3:- Table 1: Association between socio demographic factors and low birth weight:

Socio demographic factors		LBW	LBW (%)	VLBW	VLBW (%)	ELBW	ELBW (%)	Total LBW (%)
Maternal age	15-20 yrs	6	10%	2	3.3%	2	3.3%	16.7%
	20 -25yrs	15	25%	2	3.3%	0	0%	28.4%
	25-30 yrs	17	28.3%	2	3.3%	0	0%	31.7%
	>30 yrs	10	16.6%	2	3.3%	2	3.3%	23.2%
Education	Non formal	9	15%	2	3.3%	2	3.3%	21.6%
	Primary school	7	11.7%	1	1.6%	0	0%	13.3%
	Middle school	10	16.7%	2	3.3%	2	3.3%	23.3%
	High school	10	16.7%	0	0%	0	0%	16.8%
	Graduate	12	20%	3	5%	0	0%	25%
Occupation	Working women	12	20%	1	1.7%	1	1.7%	23.4%
	House wife	36	60%	7	11.7%	3	5	76.6%
of Residence	Urban	37	61.6%	6	10%	2	3.3%	75%
	Rural	11	18.3%	2	3.3%	2	3.3%	25%
Type of family	Nuclear	22	36.6%	4	6.6%	1	1.6%	45.2%
	Joint	26	43.3%	4	6.6%	3	5%	54.8%
Family income	More than 5000	4	6.6%	1	1.6%	1	1.6%	9.9%
	1000 – 5000	26	43.3%	4	6.6%	2	3.3%	53.4%
	Less than 1000	18	30%	3	5%	1	1.6%	36.7%

Chi square test shows that the maternal age calculated value 9.02 is less than the p value 12.5 at the degree of freedom 6 ,education calculated value 7.32 is less than the p value 15.5 at the degree of freedom 8,occupation calculated value 0.05 is less than the p value 5.99 at the degree of freedom 2,residence calculated value 1.43 is less than the p value 5.99 at the degree of freedom

2,type of family calculated value 0.72 is less than the p value 5.99 at the degree of freedom 2, family income calculated value 1.23 is less than the p value 9.48 at the degree of freedom 8. All of the above values show that there is no association between sociodemographic factors and low birth weight, it was tested under 0.05 level of significance.

Part 3:- Table 2: Association between maternal characteristics and low birth weight:

Maternal characteristics		LBW	LBW (%)	VLBW	VLBW (%)	ELBW	ELBW (%)	Total LBW (%)
w weight	< 45kg	7	11.6%	4	6.6%	0	0%	18.4%
	45 – 55 kg	21	35%	3	5%	1	1.6%	41.7%
	>55 kg	20	33.3%	1	1.6%	3	5%	39.9%
Height	< 145 cm	10	16.6%	0	0%	0	0%	16.6%
	145 cm – 155 cm	28	46.6%	6	10%	3	5%	61.7%
	155 cm – 165 cm	10	16.6%	2	3.3%	1	1.6%	21.6%
offParity	Primipara	8	13.3%	3	5%	2	3.3%	21.8%
	Multi para	31	51.6%	5	8.3%	0	0%	59.9%
	Grand multi para	8	13.3%	0	0%	2	3.3%	16.7%
	Grand grand multi para	1	1.6%	0	0%	0	0%	1.6%
Sex baby	Male	16	26.6%	4	6.6%	2	3.3%	36.7%
	Female	32	53.3%	4	6.6%	2	3.3%	63.3%
Hb	<10g/dl	23	38.3%	2	3.3%	3	5%	46.6%
	>10g/dl	25	41.6%	6	10%	1	1.6%	53.4%
BP	<120/80 mmHg	21	35%	6	10%	0	0%	45%
	120/80 mmhg -140/90 mmhg	27	45%	2	3.4%	4	6.6%	55%
Day time rest	30 mts – 60 mts	10	16.6%	0	0%	2	3.3%	19.9%
	60 mts – 90 mts	21	35%	4	6.6%	1	1.6%	43.4%
	90 mts – 120 mts	15	25%	3	5%	1	1.6%	31.8%
	> 120 mts	2	3.3%	1	1.6%	0	0%	4.9%
Consanguinity	Yes	14	23.3%	3	5%	0	0%	28.4%
	No	34	56.6%	5	8.3%	4	6.6%	71.6%
Gestational age	Greater than or equals to 37 weeks	18	30%	5	8.4%	4	6.6%	45%
	Less than 37 weeks	30	50%	3	5%	0	0%	55%
Birth interval	Less than 2yrs	20	33.3%	5	8.3%	0	0%	41.6%
	More than 2yrs	17	28.3%	2	3.3%	0	0%	31.6%
	Primi	11	18.3%	1	1.6%	4	6.6%	26.6%
Previous Lbw	Yes	14	23.3%	3	5%	0	%	28.4%
	No	34	56.6%	5	8.3%	4	6.6%	71.6%
Previous pretem	Yes	6	10%	5	8.3%	0	%	18.4%
	No	42	70%	3	5%	4	6.6%	81.6%

Chi square test shows that the maternal weight calculated value 9.8 is greater than the p value 9.4 at the degree of freedom 4, maternal height calculated value 3.15 is less than the p value 9.48 at the degree of freedom 4, parity calculated value 12.9 is greater than the p value 12.5 at the degree of freedom 2, sex of the baby calculated value 1.25 is less than the p value 5.94 at the degree of

freedom 2, hemoglobin calculated value 2.63 is less than the p value 5.99 at the degree of freedom 2, blood pressure calculated value 6.2 is greater than the p value 5.99 at the degree of freedom 2, day time rest calculated value 5.12 is less than the p value 12.5 at the degree of freedom 6, consanguinity calculated value 1.93 is less than the p value 5.99 at the degree of freedom 2

,gestational age calculated value 7.5 is less than the p value 5.99 at the degree of freedom 2, birth interval calculated value 14.06 is less than the p value 9.48 at the degree of freedom 4, previous low birth weight calculated value 1.9 is less than the p value 5.99 at the degree of freedom 2, previous preterm calculated value 12.04 is less than the p value 5.99 at the degree of freedom 2.

All of the above values shows that there is no association between height, sex of baby, hemoglobin, day time rest, consanguinity, previous low birth weight and low birth weight. There is association between maternal weight, parity, blood pressure, gestational age, birth interval, previous preterm and low birth weight, this all was tested under 0.05 level of significance.

Conclusion

The findings of the study shows that there is no association between the socio demographic factors and low birth weight and association between maternal characteristics such as maternal weight, parity, blood pressure, gestational age, birth interval, previous preterm and low birth weight.

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