FEMALE LITERACY AND ANEMIA IN PREGNANCY: EXPLORING RELATIONSHIP

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ABSTRACT

While anemia remains prevalent in all sexes yet pregnant females have higher prevalence which leads to complications and increases morbidity as well as mortality. The study aimed at exploring effect of female literacy in anemia in pregnancy so as to identify risk in illiterate women to enhance preventive strategies to high risk group as well as improving maternal education. Methodology: 60 anemic and 60 non anemic women from poor socioeconomic background were assessed for literacy. Results: Among the study participants mean age was 26 +/-1.7yrs in anemic and 32+/-3yrs in non-anemic. Mean income in study group was 12000rs +/-1000, in anemic women 42 had moderate anemia with mean Hb at 9.2g/dl +/- 0.6gg/dl while 18 had severe anemia with Hb at 6.1 g/dl +/-0.3g/dl, mean Hb in non-anemic women was 12.3g/dl +/-0.4gm/dl. In anemic group mean parity was at 3 while it was 2 in non anemic group. Out of 60 anemic women 14 were literate and 46 were not while among non anemic 33 were literate and 27 were not, p at 0.0004. Conclusion: Illiteracy is associated with anemia in pregnancy and require multi sectorial approach for educating and counseling females to reduces maternal and child morbidity and mortality.

Keywords: Anemia in pregnancy, female literacy

INTRODUCTION

Anemia, decrease hemoglobin in blood, is amongst the commonest disease due to deficiency of nutrients and in case of anemia its usually due to lack of iron and folate. While anemia remains prevalent in all sexes yet pregnant females have higher prevalence which leads to complications and increases morbidity as well as mortality. Its affects not only female but also the developing fetus and may results in low birth weight etc. [1] It affects two third of pregnant women from developing world during pregnancy while in Pakistan 47 % ever married women in child bearing age belonging to rural areas are anemic while 26% of urban women are anemic. [2]While in pregnant females the prevalence reached 50% in urban women attending antenatal clinics in Karachi.[3,4,5] According to the development indicators collected by World bank, the prevalence of anemia in pregnant females is 51.3% in 2016.[6]

In India anemia in pregnancy is second major maternal killer and in south east Asia it contributes to 80% pregnancy related deaths.[7,8,9,10]

Sustainable Development Goals emphasize on quality education, gender equality and good health which all are directly and indirectly related to health of mother to be, as for her child's health is dependent on her health status and education has a reflection on both. [11] Siddique et al, found a strong relationship between female illetracy and anemia in pregnancy. [12] Permonanda et al while studying determinants of anemia in pregnant and non pregnant women found that urban, well-nourished and educated women had less anemia. [13]

This study aimed at exploring effect of female literacy in anemia in pregnancy so as to identify risk in illiterate women to enhance preventive strategies to high risk group as well as improving maternal education.

METHODOLOGY

120 Women, 60 anemic(Hb<11.0g/dl) [14] and 60 non anemic, in second trimester of pregnancy attending a tertiary care hospital in Lahore with family income less than Rs. 15000 and living in any urban slum were enrolled in study through consecutive sampling. These restriction were enforced to ensure poor socioeconomic status to avoid confounding by socioeconomic status in over study group. Women were assessed and interveiwed after seeking consent about their literacy. Women who could affectively read consent form and write that they agree to participate in research in urdu were considered literate.[15]

RESULTS

Among the study participants mean age was was 26 +/- 1.7yrs in anemic and 32+/-3yrs in non anemic. Mean income in study group was 12000rs +/-1000, in anemic women 42 had moderate anemia with mean Hb at 9.2 +/- 0.6g/dl while 18 had severe anemia with Hb at 6.1 g/dl +/-0.3g/dl mean Hb in non Anemic women was 12.3g/dl +/-0.4gm/dl. In anemic group mean parity was at 3 while it was 2 in non anemic group. Table 1

Out of 60 anemic women 14(23%) were literate and 46(77%) were not while among non anemic 33(55%) were literate and 27(45%) were not. The difference was highly significant with p at 0.0004. Table 2

Table 1: Socio-demographic characteristic and Hemoglobin Concentration n = 120 *n=60

Variables	Categories		Mean+/- SD or frequency(percentage)
age	anemic		26+/-1.7yrs*
	Non anemic		32+/-3yrs*
income	Anemic and non-anemic both		12000+/-1000 pkr
Heamoglobin concentration	anemic	Moderate anemia	9.2+/-0.6g/dl*
		Severe anemic	6.1+/-0.3g/dl*
	Non anemic		12.3+/-0.4g/dl*
Literacy	anemic		14(23%)*
	Non anemic		33(55%)*

Table 2: Effect of female literacy on anemia in pregnancy n=120

	anemic	Non anemic	total
literate	14(23%)	33(55%)	47(39%)
illeterate	46(77%)	27(45%)	73(41%)
	60	60	120

P value=0.0004

DISCUSSION

Anemia in pregnancy remains second major killer in pregnancy also contributing to adverse fetal outcome requiring medical, nutritional and social intervention to reduce its disastrous effects on women and children at individual level and impact on country's development at community level.

Out of 60 anemic women 14 were literate and 46 were not while among non anemic 33 were literate and 27 were not. The difference was highly significant with p at 0.0004. Our study results strongly suggest impact of literacy on anemia in pregnancy denoting that women who are illiterate are more prone to be anemic. Literacy turned out to be a significant determinant of anemia in pregnancy. These finding are also endorsed by results from the study of Rehana Siddique et al which also suggest strong relationshio.[12]

Literacy is a well known indicator of social development with wide effects of health of individual. Literacy has been strongly endorsed for all socioeconomic strata as it directly and indirectly brings positivity in all sectors pertaining to life and progress. Thus stakeholders from policy making, sociology, education and health should take into account its role as a preventer of second major killer in pregnancy and can heavily improve maternal and child health indicators.

RECOMMENDATIONS AND CONCLUSIONS

Illiteracy in females is highly associated with anemia in pregnancy thus it is recommended to have health education plans targeting illiterate females including robust prenatal, antenatal and nutritional counseling to prevent anemia in pregnancy. Education should be made necessary for all.

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