

# FREQUENCY OF FACTORS AFFECTING MATERNAL HEALTH LITERACY AND THEIR ROLE IN UTILIZATION OF SKILLED BIRTH SERVICES IN PAKISTAN

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## ABSTRACT

**Background:** The choice of delivery place by the mothers depends on her health literacy. The maternal health literacy enables her to detect the risk factors and managing it by appropriate diet and healthier lifestyle which will give the healthy pregnancy outcome and reduce the maternal and infant mortality. **Objective:** To assess, relationship between maternal health literacy with choice of delivery place, and use of antenatal health services. **Methodology:** This cross-sectional study was conducted at Centre of Expanded Programme on Immunization at Sheikh Zayed Medical College/ Hospital Rahim Yar Khan, among pregnant women coming for the purpose of TT Vaccination. The inclusion criteria was the mothers who had already delivered one child in last five years. The study period was the month of January 2016. A total of 214 pregnant mothers were interviewed, who had given the consent. The variables were age, education, residence, husband education, occupation, antenatal visits and place of previous deliveries. The data was entered and analyzed by using SPSS version 15. **Results:** Among 214 pregnant women respondents, 105 (49.06%) were within age range 16-25 years 92 (43%) in age range of 26-35 years, and 17(8%) within age range of 36-45 years. Regarding residence 132 (61.68%) women were from rural and 82 (38.32%) were from urban area. Regarding literacy level of mothers 69(32.42%) were illiterate, 38 (17.75%) were primary, 57 (26.36%) were secondary and higher than secondary were 50 (23.20%). Husbands literacy level; 53 (24.76%) were illiterate, 83 (38.78%) were primary. Secondary level was 41(19.15%) and higher than secondary 37 (17.28%). This study revealed that among 214, 43 (20.09%) mothers has made more than two antenatal visits and 79 (36.91%) women delivered last baby at hospital and rest 135 (63.09%) deliver at home. **Conclusion:** There is need to address the maternal health literacy to mitigate some of the barriers cited for non utilization of skilled birth services and antenatal visits.

**Key Words:** Maternal Health literacy, Pregnancy, Health services utilization, Education, Antenatal visits.

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## INTRODUCTION

Health literacy is the capability of the individual, to get health information and understand the basic health needs and acting upon these to promote health.<sup>1</sup> It is more complex and includes individual empowerment, culture and community development as compare to simple literacy. The maternal health literacy is also described as; the capability of the mothers having knowledge about complications associated with pregnancy and managing it by specific actions by adopting healthy lifestyles and required nutrients intake during the pregnancy.<sup>2</sup> The action taken at appropriate time will promote the health of the fetus, and mother, so the maternal health literacy ensures healthy pregnancy and its outcomes.

Maternal health literacy prepares the women about making decision to manage pregnancy and child birth, and it empowers the women about selecting the options for any obstetric intervention

and pain management.<sup>1</sup> It is the poor literacy level of the woman that makes them unable to participate fully in making options about the use of antenatal care service. This lives to poor pregnancy management and outcome. The complications are enhanced only due to lack of health literacy. That ensures the safe pregnancy and delivery. It has been found that the antenatal visits are more frequent by those mothers who have health literacy.<sup>1</sup> These mothers have babies which have normal birth weight and these mothers also achieved normal pregnancy weight gain and use of ferrous and folic acid tablets. Additionally these women adopt breast feeding more often.<sup>3</sup>

The mothers having low health literacy, delivers low birth weight and premature babies that enhances the risk of death during infancy.<sup>4</sup> Maternal health literacy also empowers the mothers for the choice of place of delivery. There is positive correlation between educational level and level of care to the

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child during infancy.<sup>3</sup> The education level directs towards health literacy. It is the maternal health literacy that makes preparedness in gestational diabetes which is more significant in pregnancy outcome.<sup>5</sup> The unplanned pregnancy can be more effectively dealt by maternal health literacy. The maternal health literacy also promotes utilization of health services. The utilization of health services by the women during child bearing age can be improved by the maternal health literacy that will reduce the risks during pregnancy.<sup>6</sup> This study has been conducted to find the association of maternal health literacy with choice of place of delivery and visits of antenatal care.

## METHODOLOGY

This was a cross sectional study. This study was carried at the Centre of Expanded Programme on Immunization at Sheikh Zayed Medical College/Hospital Rahim Yar Khan. This study was conducted during the month of January 2016.

### Inclusion Criteria

The inclusion criteria were the mothers who had already delivered one child in last five years, and who has given informed verbal consent. During study period, according to inclusion criteria, 214 pregnant mothers were included in the study. A single questionnaire tagged was developed pretested and used for the study. It contained items measuring demographic variables level of maternal health literacy, healthy pregnancy and delivery place. The study was carried out after obtaining approval from the institutional Review Board, of Sheikh Zayed Medical College/Hospital Rahim Yar Khan. The consents of the participants were also obtained before they were considered for participation in the study. The data was entered and analyzed by using SPSS version 15.

## RESULTS

The study revealed the following characteristics of the 214 respondents. 105 (49.06%) of the respondents were within age range 16-25 years, 92(43%) were within age range 26-35 years, 17(7.94%) were within age range 36-45 years. Regarding literacy level of mothers; 69(32.42%) were primary 38(17.75%) were Secondary

57(26.36) and higher than secondary 50(23.20%) (Table I)

**Table I: Literacy level of mothers (N=214)**

	Frequency	Valid Percent
Illiterate	69	32.42
Primary	38	17.75
Secondary	57	26.63
Higher than secondary	50	23.20
Total	214	100.00

**Table II: Literacy level of Fathers (N=214)**

	Frequency	Percent
Illiterate	53	24.76
Primary	83	38.78
Secondary	41	19.15
higher than secondary	37	17.28
Total	214	100

Regarding literacy level of fathers 53 (24.76%) were primary 83 (38.78%) were Secondary, 41 (19.15%) were secondary and higher than secondary were 37 (17.28%)

**Table III: Residence of the Pregnant Mothers**

	Frequency	Percent
Rural	132	61.68
Urban	82	38.32
Total	214	100

Regarding residence; 132(61.68) women were from rural and 82(38.32%) were from urban area.

**Table IV: literacy of mothers using place of delivery**

Education of mothers	Place of delivery		Total
	Hospital	Home	
Literate	66 (49%)	32 (40%)	145 (67.6%)
	69 (51%)	47 (60%)	69 (32.4%)
Illiterate	135 (63%)	79 (37%)	214 (100%)

(P-value 0.4)

Table IV shows that 49% among literate have history of hospital delivery as compared to 51% among illiterate. (P value=0.4)

**Table V: Literacy of Mothers Versus Antenatal Visits**

Education of mothers	Antenatal visits		Total
	<2	≥ 2	
Literate	25 (58%)	120 (70%)	145 (67.7%)
Illiterate	18 (40%)	51 (30%)	69 (32.2%)
Total	43 (20%)	171 (80%)	214 (100%)

Table V shows that 70% among literate has  $\geq 2$  antenatal visits as compared to 30% among illiterate. (P value=0.11)

## DISCUSSION

Globally one third of a million women yearly are died. Due to pregnancy related conditions. Among these most deaths could be saved by managing the pregnancy and its outcomes. In several studies maternal education has been directly associated with maternal health literacy.<sup>7,8,9,10</sup> It has been proved that there is high maternal mortality among those mothers who are illiterate are low level of education. There is relationship between maternal education and their mortality among women who had given birth at health care situation.<sup>7</sup> 25% of the total deliveries are being held at public and private health facilities and rest of deliveries are conducted at home.<sup>10</sup> It is revealed in our study that one third of all the deliveries are being conducted at home and 63% women delivered last baby at hospital. The children born to health illiterate mothers had not completed school or whose highest level of education was secondary school.<sup>8</sup> There were statistically significant associations between choice of institutional or non-institutional deliveries and respondents' educational level as well as place of residence (urban /rural).<sup>9</sup> these findings are similar to our study.

Maternal health literacy is a life saving methodology for the pregnant mothers, as it has been supported by other studies.<sup>10</sup> Maternal health literacy helps mothers during gestation, natal and post natal period. It also gives basic baby care skills. For successful parenthood different

knowledge and skills are required by mothers.<sup>11</sup> In our study 2/3<sup>rd</sup> of the mothers who were literate had made two and above antenatal visits. In another study it has been found that nearly 24% of the mothers had inadequate or marginal health literacy.<sup>12</sup>

## CONCLUSION

Maternal health literacy is important with regard to decisions on skilled birth service utilization at hospital and antenatal visits. Their lack of involvement in health planning may contribute as a barrier to utilization of skilled care by pregnant women. There is a need to promote health education for betterment of health literacy, in an attempt to mitigate some of the barriers for non utilization of skilled birth services. This can be done by intensively involving the community members and particularly husbands in maternal health planning at the various levels, beginning from the community level (level one) to national planning forums.

### Conflict of interest:

There is no conflict of interest among all authors.

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