



Factors affecting the accessibility of maternal healthcare facilities in Punjab province, Pakistan

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Abstract: The study was conducted to identify the hidden factors that influence maternal health services in the Punjab region. The study was conducted in Punjab province. A multistage sampling technique was used to cover the large area. The area was separated into three stages. In the first stage, one division of Gujranwala out of nine divisions was selected through a random sampling technique. In the second stage, two districts were selected Sialkot and Gujranwala through a random sampling technique. In the third stage, four hundred respondents were selected 200 from each district through a convenient sampling technique. A well-organized questionnaire was used to collect data that was analyzed using SPSS software. The findings of the research demonstrate that most of the respondents were living in rural areas. The majority of the respondents were high school pass and the respondent's husband's education was intermediate level. Most of the respondent's total household monthly income was 20001-30000. The majority of the respondents have less awareness about pregnancy problems and respondents faced complications during pregnancy. Most of the mothers faced difficult access to maternal health care services and had a long distance to health care center from home while most of the respondents hardly had access to transport. The majority of the respondents could not afford any maternal health care services and were waiting long hours for checkups at the maternal health centers. The majority of the respondents adopted a traditional method and they delivered the baby at home and most of the respondents agreed that patriarchy impacts maternal health care services. It is recommended that the government ensure basic education, particularly in rural areas of Punjab.

1. Introduction:

The term "maternal health" describes the health of a woman during pregnancy and labor as well as after delivery (Koblinsky et al., 2012). To create a healthy world, women's and children's health plays a crucial role, since maternal health is directly linked to the health of mothers and children. A woman dies every day as the sun rises because of preventable causes related to fertility and pregnancy (UNICEF., 2008). Maternal morbidity is a condition that adversely impacts the health and well-being of a woman during pregnancy and childbirth. Women suffering from severe maternal morbidity, also referred to as acute maternal morbidity, often suffer negative health outcomes after giving birth (Geller et al., 2018). When a qualified health professional works in a supportive environment, the majority of maternal deaths can be prevented. The global agenda must remain focused on ending preventable maternal deaths. Furthermore, the mere fact of surviving pregnancy and childbirth cannot be viewed as an indication of successful maternal healthcare. According to recent studies, hunger and malnutrition increase the incidence and mortality of conditions accounting for up to 80% of maternal deaths (Black et al., 2008).

Around the world, there are differences in access to reproductive health care and sex. The quality of care available to individuals is influenced by many factors, including age, economic status, and location, including urban versus rural (Henning-Smith et al., 2017). In recent research, it has been found that age group appears to be the most significant determinant of contraceptive access, as well as economic status and location in terms of urban versus rural (Achana et al., 2015). In developing countries, access to sexual and reproductive health services tends to be limited; however, even in developed nations, universal access to these services has not been achieved. In most countries, abortion rates, unintended pregnancies, and unintended births are racial and

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socioeconomic disparities. Pakistan has the third highest burden of maternal and child mortality across the globe. According to the literature, more than 30,000 Pakistani women die annually from pregnancy and childbirth-related complications (SIDDIQUI et al., 2010). Reducing maternal death and improving child health have been the major targets of the Millennium Development Goals (MDGs) of Pakistan, under the sustainable development program (Rizvi et al., 2015). The Government of Pakistan has arranged extended efforts and paid the huge attention to the issue since 1990, consequently a steady decline in maternal mortality rate (MMR) was observed in Pakistan (Belay et al., 2010). Approximately, 53% of pregnant women in Punjab have access (only once) to ANC services from medical staff during the pregnancy. However, only 41% can utilize the postnatal facilities. The study also reported that 25% of women in urban and rural areas of Punjab consulted medical professionals at the public sector health facility (Aziz et al., 2020).

Maternal health issues are more common in rural areas as compared to the urban areas. Several factors influence maternal health in Pakistan. It was observed that these factors have a crucial effect in providing better maternal health. These factors include individual, community, lack of awareness, long distance, socio and cultural factors, and psychological factors. This study has been conducted to explore the importance of maternal healthcare services, to analyze the effect of socio-economical factors on the accessibility of maternal health services, to determine the female status in the household and their visit to maternal healthcare facilities during pregnancy, and giving suggestion to the policymakers about issues facing by women in Punjab.

2. Methodology

2.1 Study population, study area, and data

This was a randomized cross-sectional study. Based on the data collected in 2020 from the province of Punjab, the respondents involved in this study were mothers (21-45 years) who have at least one live birth. The name Punjab means five waters or five rivers and signifies the land drained by the Jhelum, Chenab, Ravi, Beas, and Sutlej rivers, which are tributaries of the Indus River. Punjab is Pakistan's second-largest province, and the most densely populated area 79,284 square miles (205,345 square km), and the population estimated is 91,379,615.

2.2 Data

The study population from Punjab province was the main concern in this study. The current study survey respondents were mothers with one live birth. The survey population was the Punjab province which has nine divisions. The study was conducted in Punjab Province. To cover the large scale area a multistage sample technique step by step process from wide to narrow. The study area was divided into three stages. In the first stage, one division (Gujranwala) out of nine divisions was selected through a random sampling technique in the Punjab province. In the second stage, two districts (Sialkot & Gujranwala) were randomly selected from the selected division (Gujranwala). In the third stage, 400 respondents were selected 200 from each district through a convenient sampling technique.

In the present research, the interview schedule was constructed based on research objectives. The respondents' socio-demographic characteristics such as Age of respondents, respondents education, Monthly income, Number of births, family structure, and type of family, The interview schedule was prepared in English and the local language of respondents, Such as Urdu, and Punjabi.

2.3 Statistical Analysis

In the current study, various statistical analysis techniques were used to determine different parameters. Frequency distribution was determined using univariate analysis. The formula was given as: $P = f/n \times 100$ whereas, P = Percentage, f= Frequency, and n total number of respondents. In univariate analysis, only a single variable is used. Double-variate analysis was used to determine the relationship between two variables. In this, the gamma test is used to determine the strength and association between two variables. The following formula

was used to determine the relationship between two variables $\gamma = \frac{N_c - N_d}{N_c + N_d}$ Where: N_c = the total number of pairs and N_d the number of pairs that don't rank the same.

3. Results and Discussion

3.1 Data analysis

In this section, we present the results of our analyses in tabular form. This has been conducted to determine different parameters involved in the influence of maternal health.



3.1.1 Socio-demographic characteristics

We interviewed a total of 400 respondents; 200 each from the Sialkot and Gujranwala districts. Here, 38% of women's ages ranged between 31-35 years. Further, there 35% of women were living in the extended family. In our study, the majority of the women (66%) belonged to rural areas where there were fewer facilities for maternal health. There, we determined the household size of the respondents' family in which 35% of respondents belonged to the 7-9 household size families. Further, spouse education and respondents' education status were analyzed. The respondents' spouses had 19% of the highest ratio who passed intermediate education, while the education status of respondents was matric pass with 24%. Most of the respondents' spouses had the profession of agriculture and it is evident from the table. The highest percentage of respondents were housewives, and they didn't have any other profession. Some had private jobs and others were government employees. Different ranges of the monthly income of respondents' families were determined in 34% of families had monthly income ranges between 20001-30000Rs. The study discovered several socioeconomic variables that either support or impede the use of maternal health services. Socioeconomic status, education level, women's autonomy, living in an urban area, gender norms, proximity to other places, media access, high social capital, social support, media exposure, and a working health system are some of the factors that have been discovered. In sub-Saharan Africa, the use of maternal healthcare is still quite low, with differences observed based on socioeconomic class and whether a person lives in an urban or rural area. Social factors of inequality in society should be the focus of programs and initiatives aimed at improving maternal health (Musizvingoza, 2020).

Categorization of Respondents Concerning Their Age			
Categories		Frequency	Percent
	16-20	23	5.75
	21-25	78	19.5
	26-30	145	36.25
	31-35	154	38.5
	Total	400	100.0
Categorization of respondents concerning their Type of family			
Categories		Frequency	Percent
	Nuclear	125	31.25
	Joint	135	33.75
	Extended	140	35.0
	Total	400	100.0
Classification of respondents concerning their Living area			
Categories		Frequency	Percent
	Rural	265	66.25
	Urban	135	33.75
	Total	400	100.0
Categorization of respondents concerning their total household size			
Categories		Frequency	Percent
	1-3	63	15.75
	4-6	105	26.25
	7-9	135	33.75
	10 or above	97	24.75
	Total	400	100.0
Arrangement of respondents concerning their respondent's education			
Categories		Frequency	Percent
	Illiterate	57	14.25
	Primary pass	69	17.25
	Middle Pass	73	18.25

	High school pass	98	24.5
	Intermediate pass	70	17.5
	Graduation or above	33	8.25
	Total	400	100.0
Classification of respondents concerning their spouse's education			
Categories		Frequency	Percent
	Illiterate	42	10.5
	Primary pass	70	17.5
	Middle Pass	72	18.0
	High school pass	69	17.25
	Intermediate pass	79	19.75
	Graduation or above	68	17.0
	Total	400	100.0
Frequency distribution concerning their spouse's Occupation			
Categories		Frequency	Percent
	Agriculture	125	31.25
	Self-Employee	93	23.25
	Government employee	105	26.25
	Private employee	77	19.25
	Total	400	100.0
Categorization of respondents concerning their Respondents Occupation			
Categories		Frequency	Percent
	Agriculture	53	13.25
	Self-Employee	15	3.75
	Government employee	41	10.25
	Housewife	291	72.75
	Total	400	100.0
Arrangement of respondents concerning their Total household monthly income			
Categories		Frequency	Percent
	Up to 20000	66	16.5
	20001-30000	136	34.0
	30001-40000	70	17.5
	40001-50000	106	26.5
	Up to 50000	22	5.5
	Total	400	100.0

3.1.2 Services essential for maternal health care in the Punjab region

The current research also identified the years of marriage. Because the years of marriage also have close relation with complications during pregnancy and maternal mortality, the research shows that 25.75% of respondents' years of marriage were 1-6, 41% of respondents' marriage were 7 to 12 years, 27% of mothers years of marriage were 13-18, while 6.25% respondents years of marriage was 19-24. Most of the 41% of respondent's years of marriage was 7-12 years. Moreover, in this study, the previous no of births given by respondents was identified in which 43% of respondents have 1-2 total previous birth, 34.75% of respondents have 3-4 previous birth, whereas 22.5% of respondents have 5-6 previous birth. The research shows that most of the 43% of respondents have 1-2 previous births.

The data given in Table 2 showed the age of mothers at last birth. According to data, 6% of respondents' ages at last birth were 17 to 20 years, 15.75% of mothers' age at previous last birth was 21 to 24 years, while 31.25% of respondents' age at last birth were 25 to 28 years of age, whereas 32.75% respondents age were 29 to 32 years, whereas 14.25% mother age at the time of previous birth were 33 to 36 years. The current research indicated that the majority of the respondents were 29-32 years old. The table represents data regarding awareness related to pregnancy complications. It's a most important variable for maternal mothers to know about pregnancy problems, the current research tries to analyze the issues and factors that affect maternal health services. So the data shows that 35.75% of mothers have high awareness regarding pregnancy problems, 53.75% of respondents have less awareness about pregnancy complications, and 10.5% of mothers have no awareness regarding



pregnancy complications. So it's shown that most of the respondents have less awareness about pregnancy problems. Table 2 revealed data regarding complications faced during pregnancy. The table shows the number of women who faced complications during pregnancy 78.75% of respondents faced complications during the pregnancy period, while only 21.25% of respondents did not face any complications during pregnancy. So the research revealed that most of the 78.75% of respondents faced complications during pregnancy. Our study results are also in compliance with previous studies as Jordanian women are not very aware of the warning signs and symptoms of pregnancy complications. The Millennium Development Goals highlight the need for prenatal care that includes adequate information on pregnancy-related danger signs and symptoms to meet the demand for safe motherhood (Okour et al., 2012).

The data revealed that 90.75% of respondents discussed their pregnancy complications with their husbands, whereas only 9.25% of respondents did not converse about pregnancy problems with their partners. Research shows that the majority of the 90.75% of respondents discuss pregnancy problems with their spouse. Further, the data shows that 61.5% of respondents get social support from their husbands, while 38.5% of respondents are not happy with their husbands regarding social support. The research revealed that the majority of the 61.5% of respondents receive social support from their partner. It was discovered that there were communication gaps between husbands and spouses regarding reproductive health. Particularly, several husbands talked about their frustrations when trying to start health conversations with their spouses. It seems that women are more reluctant than men to start or participate in some of these conversations. Given the communication hurdles that some couples experience and the willingness of husbands to help, it seems possible that providing couples' services could offer a chance to "break the ice" and discuss these crucial subjects (Mullany, 2006).

Categorization of respondents concerning their Years of marriage			
Categories		Frequency	Percent
	1-6	103	25.75
	7-12	164	41.0
	13-18	108	27.0
	19-24	25	6.25
	Total	400	100.0
Arrangement of respondents concerning their Total number of previous birth			
Categories		Frequency	Percent
	1-2	172	43.0
	3-4	139	34.75
	5-6	90	22.5
	Total	400	100.0
Frequency distribution concerning the Age of respondent at last birth			
Categories		Frequency	Percent
	17-20	24	6.0
	21-24	63	15.75
	25-28	125	31.25
	29-32	131	32.75
	33-36	57	14.25
	Total	400	100.0
Categorization of respondents concerning their awareness related to pregnancy problem			
Categories		Frequency	Percent
	High awareness	143	35.75
	Less awareness	215	53.75
	No awareness	42	10.5
	Total	400	100.0
Arrangement of respondents concerning any complications faced during pregnancy			
Categories		Frequency	Percent
	Yes	315	78.75

	No	85	21.25
	Total	400	100.0
Categorization of respondents concerning their Do you discuss pregnancy problems with Spouse			
Categories		Frequency	Percent
	Yes	363	90.75
	No	37	9.25
	Total	400	100.0
Categorization of respondents to their social support from husband			
Categories		Frequency	Percent
	Yes	246	61.5
	No	154	38.5
	Total	400	100.0

3.1.3 Analysis of the socio-cultural factors that have an impact on the accessibility of maternal health services

Effect of the following factors on maternal health services

Statements	Agree		Strongly Agree		Disagree		Strongly Disagree	
	Freq	%	Freq	%	Freq	%	Freq	%
Patriarchy	195	48.75	165	41.25	25	6.25	15	3.75
Lack of Education	207	51.75	165	41.25	15	3.75	13	3.25
Limited Health Facilities	213	53.25	173	43.25	09	2.25	05	1.25
Early Marriages	123	30.75	115	28.75	83	20.75	79	19.75

The data present regarding sociocultural factors that have an impact on the accessibility of maternal health care services. Table 3 shows factors that influence maternal health services in the pattern of the Likert scale. The first factor patriarchy presents that most of the respondents 48.75% agreed with the statement, 41.25% of respondents strongly agreed and believed that patriarchy impacts maternal health services, while on the other side, 6.25% disagreed regarding the patriarchal impact on the accessibility of maternal health services, whereas 3.75% mothers strongly disagree regarding the statement.

From the previous studies, we know that Lack of education is one of the main factors that strongly impact maternal health care services. In the current research, we also would like to identify factors that impact maternal health services. The above table shows that lack of education is the core factor that impacts maternal health services. Table 4.34 shows that 51.75% of respondents agree 41.25% strongly agree and considered that lack of education is the key factor that impacts maternal health care services, 3.75% of mothers disagreed, and 3.25% strongly disagreed about lack of education.

Limited health facility is another factor that impacts maternal health care services. Table 3 shows data concerning limited health facilities. The data present that 53.25% of respondents agreed and believed that limited health facilities had a strong impact on maternal health services, 43.25% of mothers strongly agreed regarding the limited health facilities while only 2.25% and 1.25% respondents disagreed with the statement.

Table 3 revealed data concerning early marriages. The data present that 30.75% of respondents think that early marriages impact maternal health care services, and 28.75% strongly agree, whereas 20.75% disagree and 19.75% strongly disagree regarding early marriage.

4. Conclusion

Worldwide maternal health care is now a major concern, especially in developing countries. In developing countries, socio-cultural aspects conclude the maternal healthcare utilization. The key purpose of this research was to explain the relationship between socio-cultural factors and maternal care. Pakistan is an Asian country with high maternal mortality and the government has made a lot of efforts to reduce maternal and infant mortality. The present study found several socio-cultural factors that play a role as barriers to the utilization of maternal health care services. Family income also affects access to and utilization of maternal health care services. Long distances, high cost of private and public transport, and high cost of health care services make it difficult for families with low income and high birth rates to access health care services.

Lack of education is a major factor in understanding the importance of occupational health. Maternal education is very important because mothers with higher education are more aware of health problems and pay more



attention to the use of health services. A mother with higher education is more confident in her interactions with her doctor because there is no language barrier when communicating with health care providers. Misconceptions and taboos have also played a major role in acknowledging the importance of professional health care for both mother and child. The study found that less educated women were more likely to use traditional birthing techniques and home remedies for mother and newborn during antenatal care. Spouses' lack of interest in women's health care is also considered an obstacle to accessing maternal and child health care services. Husbands with less education are less active in seeking maternal and child health services.

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