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RESEARCH PAPER

Cultural Determinants that Influence the Utilization of Maternal and Childcare Services in Punjab, Pakistan

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ABSTRACT

The current study focused on the cultural determinants that influence the utilization of maternal and childcare services in Punjab, Pakistan. Maternal healthcare-seeking behavior in Pakistan, particularly in rural areas, is deeply influenced and constrained by a series of religious and cultural factors. The present research was accompanied in Punjab province Pakistan. A multi-stage random sampling method was used in the sampling process. The sample consisted of 360 married women (15-49) with at least one child under five years of age. The interview Schedule was used as a research tool. Data were analyzed by using descriptive and inferential statistical techniques. It was concluded that access to phone, mobility level and access to information sources positively associated with usage of services for mother-child health care. However, transport problems had an inverse relation with the utilization of mother-child care services. Train and integrate TBAs into the formal healthcare system, providing them with the necessary skills and knowledge to work alongside professional healthcare providers.

KEYWORDS Child, Cultural Factors, Health Care Services, Mother, Utilization

Introduction

Lack of physical mobility, lower socioeconomic position, cultural values and attitudes, the low literacy level of mothers, and large family size have all been reported as the leading problem of low use of primary health care facilities. According to an analysis of the global literature, these considerations may be categorized as socio-demographic position, women's rights, cultural values, economic circumstances, physical and financial mobility, epidemic trend, and health care problems. Pakistan's Maternal and Child Health even though the Millennium Development studies reflect some success in women's and children's wellbeing, there is still much to be accomplished. This is a significant concern, as Pakistan has the world's sixth-largest population and a high rate of morbidity and mortality among mothers and children (Khan et al., 2013). The shortage of health infrastructure is at the heart of the problem, and policymakers have taken limited measures to build modern hospitals in new places. The already-existing hospitals become overburdened due to the large number of patients requiring treatment, resulting in inadequate or incomplete care. The medical staff's lack of knowledge regarding children and women's needs and conditions at this crucial stage is unclear (Khan et al., 2013). In Pakistan, women and children are expected to die 16,500 and 400,00 times a year, respectively. Unfortunately, most of these fatalities are affected by preventable diseases and health issues (Siddiqui *et al.*, 2005). The government's lack of reaction to the high number of fatalities has turned into a lack of commitment to developing policies and services to improve public health. The government cannot create practical and long-term developments due to a total absence of adequate record-keeping and reporting. Many health problems go unaddressed owing to the health sector's dysfunctional framework. The already-existing hospitals become overburdened due to the large number of patients requiring treatment, resulting in inadequate or incomplete care. The medical staff's lack of knowledge regarding children and women's needs and conditions at this crucial stage is unclear (Khan et al., 2013). In Pakistan, women

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According to Pandey and Karki (2014), the value of maternal health facilities in reducing maternal mortality and morbidity, and also neonatal deaths, has grown significantly in recent years. The absence of antenatal treatment has been linked to maternal mortality and other complications during birth. The aim of the research was to figure out what factors influence antenatal care attendance in Nepal. The findings revealed that more than half of the females were unaware of the dangers of not receiving antenatal treatment. Attendance at an antenatal care provider was closely linked to age, schooling, salary, and family form. It was assumed that maternal mortality and morbidity continue to pose threats to the healthcare delivery system in Nepal and other developing nations. The utilization of maternal health resources is influenced by a variety of variables such as socioeconomic, sociodemographic, cultural, and program accessibility, as well as usability. Khan *et al.* (2013) reported that people didn't go to the facility because of socio-cultural, socioeconomic, and demographic issues. Eighty-four percent of women gave birth at home to their children. A typical birth attendant (dai) or Lady Health Visitor (LHV) was present for both home births. Akram *et al.* (2019) reported that in developing countries the utilization of maternal health care services plays very vital role in reducing the maternal mortality. In Pakistan very limited research has been conducted to analyze the role of various socio-cultural aspects on utilization of maternal health care services. It is essential to investigate the impact of women's liberation in the home on reproductive health care facilities' usage at three stages: antenatal care, childbirth in a health care centre, and postnatal care. So, current study examines the socio-cultural factors influencing utilization of maternal health care services in Punjab, Pakistan.

Review of Literature

Khan *et al.* (2013) stated that cultural restrictions and norms are significant barriers on mobility to women's access to maternal health services. Most women are forbidden to be alone when in public and most are not allowed to move about freely. As shown in a survey conducted of females in rural Punjab between the ages of 15 and 40, only 28percent can go to the local health centre individually, and only 12percent can drive on their own to the nearby village. About two-thirds of the women surveyed said they required an escort to leave the house. In our research, 18 percent of very old women said they would go to a health care centre alone for an antenatal checkup, while 82 percent said they go with a member of the family (e.g. Mother in law, husband and mother).

According to Salami *et al.* (2013), maternal and child health conditions account for around a fifth of global death rates related to insufficient healthcare facilities. This research examines how recently pregnant mothers in Ubulu-Okiti, Delta State, Nigeria, use maternal and child health (MCH) facilities and conventional birth attendants (TBAs). Data was collected through 12 in-depth conversations, four focus group meetings, and 226 questionnaire surveys using a combination of qualitative and quantitative strategies. The studies found a correlation between socio-cultural influences and prenatal care, implicating service quality as a concrete factor in the choice of MCH providers, which is based on the husband's authority. While mothers thought TBA's medication helped them avoid delayed labour, TBAs' lack of understanding about the causes of complications was a major revelation.

Omer et al. (2021) investigated the socio-cultural variables that contribute to a delay in obtaining maternity healthcare in South Punjab, Pakistan. The study determined that the incidence of high maternal mortality in Pakistan is quite concerning. The challenge of reducing mortality rates among pregnant women is mostly focused on tackling certain socio-cultural practices that impose limitations on women seeking maternity healthcare. Emphasizing poverty alleviation and empowering women with decision-making authority is crucial in upholding women's entitlement to healthcare.

Wahab et al. (2023) examined the social and cultural factors that impact the use of child delivery services in the Buner area, KPK. The study specifically targeted a certain demographic cohort, namely pregnant women and their spouses who fall between the age range of 15 to 49 years. The research demonstrated a robust correlation between socio-cultural characteristics and the child birth system, which has clear implications for the framework of maternal health. The study emphasized the influence of socio-demographic variables, such as cultural obstacles, extended family arrangements, and economic inequalities, on the provision of maternal health services and its connection to the usage of prenatal care services. In order to enhance the current state of affairs, it is crucial to concentrate on enhancing education, increasing consciousness, advocating for women's empowerment, tackling socioeconomic inequalities, and altering traditional views that are widespread within the local community.

Hypotheses

1. Access to cell phone of mothers would influence usage of services for mother-child health care
2. Mothers' preference of TBA would influence usage of services for mother-child health care
3. Transportation problems of mothers would influence usage of services for mother-child health care
4. Mothers' mobility level influence usage of services for mother-child health care
5. Mothers' access to information sources influences usage of services for mother-child health care
6. Mothers' access to information sources influences usage of services for mother-child health care

Material and Methods

A research methodology is a systematic scientific way to resolve research problems. It is a method of systematic and theoretical analysis of the relevant fields of study. It involves principles, a body of methods and theoretical analysis associated with a branch of knowledge. The methodology not only provides solutions but also offers theoretical pinning applied to specific cases. It involves concepts such as qualitative, quantitative techniques, theoretical model and paradigms. The methodology is not a method, but a collection of procedures, typically a specific set of beliefs and laws. It is a method and producer which derived or interpret to resolve dissimilar difficulties within a specific discipline (Berg, 2001).

Population: The present research was accompanied in Punjab province Pakistan, all married women of age between (15-49) who had at least one child under five years of age were the population of the study.

Sampling procedure: A multi-stage random sampling method was used in a sampling process. Punjab Pakistan consisted of 36 districts and three zones Central, North and South Punjab. At the first stage three districts (Faisalabad Central Punjab, Chakwal North Punjab and Vehari South Punjab) one from each zone were selected randomly. At the second stage, three tehsils one from each district (Faisalabad, Talagang, and Burewala were

selected randomly. At the third stage, six rural union councils were selected randomly, at next 18 villages (3 from each UC) were selected randomly. At the fifth stage 360 (20 from each village) married women (15-49) who had at least one child under five years of age were selected randomly. Each district's number of selected respondents were the same in numbers.

Tool for data collection: Interview Schedule

Data analysis: Data were analyzed by using descriptive (frequency, percentage, mean etc.) and multiple linear regression model.

Ethical consideration: The study adhered to strict ethical guidelines to ensure the safety, dignity and rights of the participants. Informed consent was obtained from all participants, ensuring their voluntary participation without any pressure. Confidentiality and anonymity were maintained by securely storing data and removing personal identifiers. Participants were treated with respect, and their cultural values were honored throughout the research process. Efforts were made to minimize any potential physical or psychological harm, and participants had the right to withdraw at any time. The study was approved by an ethical review board, and the findings aimed to benefit the community by informing policies to improve maternal and childcare services in the region.

Results and Discussion

Table 1
Relation among respondents' access to cell phone and their usage of services for mother-child health care

Access to phone	Usage of services for mother-child health care			Total
	Low	Medium	High	
No	100	27	26	153
	65.4%	17.6%	17.0%	100.0%
Yes	93	58	56	207
	44.9%	28.0%	27.1%	100.0%
Total	193	85	82	360
	53.6%	23.6%	22.8%	100.0%

Chi-square = 14.76 d.f. = 2 P-value = .001** Gamma (λ) = 0.335 P-value = .000**

Table 1 demonstrations a significant ($\chi 2 = 14.76$, $p = .001$) association among respondents' access to cell phone and their usage of services for mother-child health care. Gamma statistic ($\lambda = 0.335$, $p = .000$) also show a significant and positive relation among the variables. It tells that if the mothers had access to cell phone then their level of utilization of mother-child health care serices were also high. This is evident from the above findings, if the mothers had no access to phone then they had low (65.4%), medium (17.6%) and high (17.0%) level usage of services for mother-child health care, on the other side, if the mothers had access to phone then they had low (44.9%), medium (28.0%) and high (27.1%) level utilization of these services. Consequently, the hypothesis is accepted that access to cell phone of mothers would influence usage of services for mother-child health care. According to Dar and Afzal (2015), Women's media consumption is used as an instrumental variable for their health awareness.

Table 2
Relation among respondents' preference of TBA and their usage of services for mother-child health care

Preference of TBA	Usage of services for mother-child health care			Total
	Low	Medium	High	
No	109	39	42	190

	57.4%	20.5%	22.1%	100.0%
Yes	84	46	40	170
	49.4%	27.1%	23.5%	100.0%
Total	193	85	82	360
	53.6%	23.6%	22.8%	100.0%

Chi-square = 2.76 d.f. = 2 P-value = .251^{NS} Gamma (λ) = 0.112 P-value= .217^{NS}

A traditional birth attendant is described as "an individual who supports the woman throughout pregnancy and formerly gained her expertise through delivering babies herself or by apprenticeship to other traditional birth attendants" by the World Health Organization (WHO) (Carlough and McCall, 2005). Above table demonstrations a non-significant ($\chi2$ = 2.76, p = .251) association among respondents' preference of TBA and their usage of services for mother-child health care. Gamma statistic (λ = 0.112, p = .217) also show a non-significant relation among the variables. It means, preference of TBA had no association with the mothers' utilization of mother-child health care services. So, the hypothesis is rejected. Adatara *et al.* (2018) stated that TBAs perform an important part in maternal health care in rural areas of emerging nations, including Ghana, according to Adatara *et al.* (2018). Despite their significant position in maternal health care, there is a scarcity of knowledge about traditional birth attendants' function in maternal health care in rural areas.

Table 3
Relation among respondents' transportation problem and their usage of services for mother-child health care

Transport problems	Usage of services for mother-child health care			Total
	Low	Medium	High	
No	23	45	37	105
	21.9%	42.9%	35.2%	100.0%
Yes	170	40	45	255
	66.7%	15.7%	17.6%	100.0%
Total	193	85	82	360
	53.6%	23.6%	22.8%	100.0%

Chi-square = 61.15 d.f. = 2 P-value = .000** Gamma (λ) = -0.590P-value = .000**

Above table demonstrations a significant ($\chi2$ = 61.15, *p* = .000) association among respondents' transportation problem and their usage of services for mother-child health care. Gamma statistic (λ = 0.590, p = .000) show a significant and negative relation among the variables. It tells that mothers' transportation problems are negatively associated with their utilization of mother-child health care services. This is evident from the above findings, if the women never facing transport problems, then they had low (21.9%), medium (42.9%) and high (35.2%) level usage of services for mother-child health care, on the other side if the women were facing transport problems, then they had low (66.7%), medium (15.7%) and high (17.6%) level utilization of these services. Consequently, the hypothesis is accepted that transportation problems of mothers would influence usage of services for mother-child health care. Akram et al. (2019) stated that the findings show that distance and transit to a health center have little impact on the use of antenatal and postnatal maternal health care facilities. However, the chances of giving birth in a health hospital are substantially smaller for women who believe that distance and transportation to a health facility are significant issues. However, Ali *et al.* (2020) stated that the gap between road networks has no discernible effect on ANC use among married couples in Pakistan.

Table 4
Relation among respondents' mobility level and their usage of services for mother-child health care

Mobility level	Usage of services for mother-child health care			Total
	Low	Medium	High	

Low	18	16	14	48
	37.5%	33.3%	29.2%	100.0%
Medium	133	30	26	189
	70.4%	15.9%	13.8%	100.0%
High	42	39	42	123
	34.1%	31.7%	34.1%	100.0%
Total	193	85	82	360
	53.6%	23.6%	22.8%	100.0%

Chi-square = 45.64 d.f. = 4 P-value = .000**Gamma (λ) = 0.239P-value = .002**

Above table demonstrations a significant (χ2 = 45.64, p = .000) association among respondents' mobility level and their usage of services for mother-child health care. Gamma statistic (λ = 0.239, p = .002) show a significant and positive relation among the variables. It tells that women's mobility level positively associated with the utilization of mother-child health care serices. This is evident from the above findings, if the women had low level mobility then they had low (37.5%), medium (33.3%) and high (29.2%) level usage of services for mother-child health care, on the other side if the women had high level mobility then they had low (34.1%), medium (31.7%) and high (34.1%) level utilization of these services. Consequently, the hypothesis is accepted that mothers' mobility level influence usage of services for mother-child health care. Khan *et al.* (2013) stated that cultural restrictions and norms are significant barriers on mobility to women's access to maternal health services. Most women are forbidden to be alone when in public and most are not allowed to move about freely. As shown in a survey conducted of females in rural Punjab between the ages of 15 and 40, only 28 percent can go to the local health centre individually, and only 12 percent can drive on their own to the nearby village. Ahmad and Hyder (2016) also reported that lack of physical mobility influenced the use of mother and child health care services.

Table 5
Relation among respondents' access of information sources and their usage of services for mother-child health care

Access to information sources	Usage of services for mother-child health care			Total
	Low	Medium	High	
Low	164	60	32	256
	64.1%	23.4%	12.5%	100.0%
Medium	16	14	30	60
	26.7%	23.3%	50.0%	100.0%
High	13	11	20	44
	29.5%	25.0%	45.5%	100.0%
Total	193	85	82	360
	53.6%	23.6%	22.8%	100.0%

Chi-square = 59.46 d.f. = 4 P-value = .000**Gamma (λ) = 0.573 P-value= .000**

Above table demonstrates a significant (χ2 = 59.46, p = .000) association among respondents' access of information sources and their usage of services for mother-child health care. Gamma statistic (λ = 0.573, p = .000) show a significant and positive relation among the variables. It tells that women's had more access to information sources then their utilization level were also high. This is evident from the above findings, if the women had low level access to information sources then they had low (64.1%), medium (23.4%) and high (12.5%) level usage of services for mother-child health care, on the other side if the women had high level access to information sources then they had low (29.5%), medium (25.0%) and high (45.5%) level utilization of these services. Consequently, the hypothesis is accepted that mothers' access to information sources influence usage of services for mother-child health care. Acharya *et al.* (2015) consistently suggested that widespread

exposure of women to mainstream media, such as tv and radio, increased women's risk of seeking maternal health services in all situations, including pregnancy and childbirth. Gosh (2006) previously found that, in addition to the usage and dependence on mass media alone, information technologies have a substantial effect on encouraging the use of maternity care.

Table 6
Socio-cultural factors affecting the utilization of mother-child health care services

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.147	.169		6.789	.000**
Access to phone	.327	.125	.197	2.607	.010*
Decision making	.499	.143	.424	3.504	.001**
Prefer TBA	-.270	.151	-.165	-1.782	.076NS
Transport Problem	-.280	.191	-.256	-2.464	.012*
Cost	-.753	.193	-.403	-3.894	.000**
Mobility	.455	.094	.365	4.840	.000**
Information sources	.223	.095	.190	2.348	.019*
Barriers	-.434	.089	-.432	-4.867	.000**

a. Dependent Variable: Utilization of mother-child health care services
R^2 = .49 Adjusted R^2 = .48 F-value = 42.37 P-value = .000**

Multiple regression analysis was carried out to investigate the impact of socio-cultural attributes of mothers on the utilization of mother-child health care services.

To check the overall significance of the model R^2, adjusted R^2 and F-test is used. The respective values of R^2, adjusted R^2 and F-test were calculated as 0.49, 0.48 and 42.37. The value of R^2 indicated that about 49 percent of the total variation in utilization of mother-child health care services is explained by the 8 explanatory variables included in the model. As the primary data is used in the analysis, the estimated value is very high and the overall model is considered as reliable. To check the reliability of model F-test was also used. The calculated value of 42.37 is statistically significant at less than one percent level of significance, this too indicated that all the independent variables included in the model are explaining the dependent variable.

The dependent variable in this regression model is 'utilization of mother-child health care services' and the continuous independent variables are access to phone, decision making, prefer TBA, transport problem, cost, mobility, information sources, barriers. The impacts of 4 explanatory variables such as access to phone, decision making, mobility and information sources are positive while that of three variables such cost, transport problem and barriers were negative. It means, if the mothers had access to phone, decision making power, mobility and information sources then their utilization level were also high. On the other cost of services, transport problem and barriers had negative impact on the utilization of mother-child health care services.

Previous studies also concluded that women' autonomy (Haque *et al.,* 2012), transport problem (Akram *et al.*, 2019 and Ali *et al.,* 2020), fee of the doctor/service provider on utilization of antenatal care services (Ye *et al.*, 2010), access to information sources (Acharya *et al.* 2015) were influencing on the utilization of mother and child health care services.

Conclusions

It was concluded that mothers' access to the phone, mobility level, and access to information sources positively associated with usage of services for mother-child health care. However, the barriers and transport problems were the major hurdles in the

utilization of mother-child care services. However, preference of TBAs was also some extent influenced the utilization of mother-child care services.

Recommendations

1. It was observed that TBAs had a significant role in providing basic health facilities to mothers. So, government should arrange training programs and provide licenses to trained TBAs.
2. It was noted that media can play an important part in improving maternal health care. Therefore, the government should promote small families via health care programming, encourage ANC and PNC use, and encourage hospital births while discouraging home births.
3. Invest in improving transportation infrastructure and provide dedicated transport services for pregnant women and mothers with young children in rural areas.

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