

**RESEARCH PAPER****Maternal Mortality in Pakistan: The Potential Role of Community Midwives****<sup>1</sup>Shaista Naz\*, <sup>2</sup>Humera Amin and <sup>3</sup>Aniqa Sayed**

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**\*Corresponding Author:** shaista@aup.edu.pk**ABSTRACT**

Current study explored the potential role of Community Midwives (CMWs) in maternal mortality in Pakistan. For this, qualitative research method was employed and data were collected through key informant interviews from 384 respondents including CMWs, healthcare providers like doctors, and expectant mothers. Data were analyzed through thematic analysis. It was found that CMWs are playing pivotal role in five main categories including antenatal care services, postnatal care services, skilled birth assistance, family planning counselling and services, and health promotion and education. CMWs potential role resulted in increased maternal healthcare utilization and improved health outcomes for expectant mothers in their respective communities. However, the issue of maternal mortality is still prevailing in the country. Therefore, there is a need for more comprehensive role of CMWs which may be attained through more specific research towards identification and address of the constraints of the midwifery program.

**KEYWORDS** Antenatal Care, Community Midwives, Maternal Mortality, Pakistan, Postnatal Care, Skilled Birth Attendants**Introduction**

Maternal mortality is a global concern due to the fact that every two minutes, a woman dies due to the pregnancy and childbirth related complications (UNFPA, 2019). However, it has been reported that the issue is more prominent in the developing countries accounted for 94% of maternal deaths (Naz et al., 2022; WHO, 2019; WHO, 2015). Among the developing countries, Asian countries and especially the South Asian countries are ranked high in terms of maternal deaths (Omar et al., 2021).

Pakistan, being a south Asian country is also subjected to the issue and it has been reported that the country is facing high maternal mortality rate with 186 deaths per 1000 live births (Pakistan Maternal Mortality Survey, 2019). An independent study even reported for a much higher rate of maternal mortality in the country as 340 deaths per 1000 live births (Ashraf et al., 2021; National Institute of Population Studies, 2020). According to the Sustainable Development Goal (SDG) 3, Pakistan has to reduce the maternal mortality ratio to 70 deaths per 100,000 live births by 2030 (WHO, 2019).

To lower the maternal mortality ratio, skilled birth attendants especially at the rural areas of the country is required. For this, the government of Pakistan has launched the Community Midwife Workers (CMWs) program in 2006 (Mubeen et al., 2019). Under the program, rural women with ten years of education were employed and imparted with one and a half year of midwifery training. After their training, these women were arrayed in their native villages and were expected to establish private practices and provide domiciliary maternity care to a population of 10,000, in geographically defined catchment areas (GoP, 2006). Up till now, a total of 8,000 CMWs have been trained and providing services in their

areas (Siddiqui and Ali, 2022). However, to document comprehensive role of CMWs in maternal mortality is required as the literature has focused only to the swot analysis of the program and individual services (Bakhtawar et al., 2022; Siddiqui and Ali, 2022; Ahmed et al., 2017; Mumtaz et al., 2015; Noorani et al., 2013). Thus, the current study addressed the gap by identifying the potential role of CMWs in maternal mortality in Pakistan.

### **Literature Review**

CMWs came into picture to tackle the issue of maternal mortality in Pakistan in 2006 where they have been trained and equipped with the required skills to provide services to the neglected pregnant rural women (Hoope et al., 2014). The main purpose of their deployment in their respective rural areas was to combat the issue of maternal mortality (Siddiqui and Ali, 2022). For the first three years, CMWs were provided with a salary package, however the aim of the program was to equip them with the required skills so that in future they set up their clinics in their respective areas and provide services to address the issue of maternal mortality (Mumtaz et al., 2015).

A study conducted in Layyah and Jhelum, Punjab provided with the fact that most of the child births were attended by skill birth attendants which showed the performance of CMWs in the study area (Mumtaz et al., 2014). A study conducted in the Sindh province of the country reported that most of the childbirths were not attended by CMWs or skilled birth attendants (Agha et al., 2019).

According to Siddiqui and Ali (2022), Covid-19 has added fuel to the existing high rates of maternal mortality rates. However, the existing set up of CMWs have played an important role in the provision of maternal healthcare services to the neglected pregnant women in rural communities of the country. They have built their trust, provided family counseling services along with the comprehensive delivery of maternal care.

A study conducted in the Baluchistan province provided evidence that maternal mortality in the area has not been reduced to the insignificant role of the CMWs in terms of childbirths (Mumtaz et al., 2015). Several researchers in the field had highlighted the role of CMWs in the various parts of the country like Khyber Pakhtunkhwa, Punjab, Sindh, Baluchistan etc. (Noorani et al., 2013, Sarfraz & Hamid, 2014, Ahmed et al., 2017).

The SWOT (Strengths, Weaknesses, Opportunities, Threats) analysis of CMW program in the country was conducted by Bakhtawar et al., (2022) and reported that strengths of the program included enrollment criterion of community midwives, extensive coverage of midwifery services, management and supervision of the program, healthcare delivery, and positive effect of the program on health indicators. In terms of weaknesses of the program, weak management of the program at district levels, problems in funding, job insecurities of community midwives, weak supplies and equipment provided to midwives, weak referral systems, poor quality care, and progress in meeting targets were identified. Opportunities included the community's acceptability, health system research, and support for the referral system. Threats included financial affordability, social and cultural norms, funding problems, political and sociocultural environment, and non-acceptance by established medical professions.

Mumtaz et al., (2015) by applying an asset based approach observed the CMWs clinics and practices in the country. Researchers reported that small number of CMWs were actually the active health care providers in their areas where they have established their clinics and practiced. Due to the prevailing poverty as a push factor, there CMWs have achieved their family support to provide healthcare services in their areas and became the bread earners.

## **Material and Methods**

Various research methods exist to achieve the study objectives like quantitative (Naz et al., 2021; Zaidi et al., 2018), qualitative (Afridi et al., 2022), and mixed (Naz et al., 2022b; Naz et al., 2023c). However, the current research study adopted qualitative methodology to explore the potential role of community midwives in addressing maternal mortality in Pakistan. This research approach has been extensively used in the relevant literature (Bakhtawar et al., 2022; Naz et al., 2022a; Naz et al., 2023a; Naz et al., 2023b), therefore providing ample justification to be employed in the current study. Qualitative research approach allows researchers to gain in-depth insights into the experiences, perceptions, and perspectives of the various relevant stakeholders involved in maternal healthcare (i.e. community midwives, expectant mothers, and healthcare providers). The current research study adopted purposive sampling technique of the non-probability sampling and a sample size of 384 respondents (i.e. community midwives, expectant mothers, and healthcare providers) was selected through Sekaran Table. From the four provinces of the country, a total of 96 respondents including 28 from each category of community midwives, expectant mothers, and healthcare providers were selected. Thus, reaching a sample size of 384. For data collection interviews were conducted. The collected data were then coded and categorized into various themes through thematic analysis. This analytical technique has been widely used in the literature especially in qualitative research approach thus providing ample justification to be used in the current research study (Afridi et al., 2022; Naz et al., 2022; Naz et al., 2023). The results were then interpreted and discussed as follow.

## **Results and Discussion**

The results obtained from the collected data through key informant interviews were subjected to analytical technique like thematic analysis which has resulted in to various themes. These themes are discussed in the context of the available literature. These themes include antenatal care services, skilled delivery assistance, postnatal care services, family planning counseling and services, and health promotion and education. CMWs play active role in these services to combat maternal mortality in the respective rural areas where maternal mortality ration is high. The various identified themes are presented as follow.

### **Antenatal Care Services**

Community midwives play a crucial role in providing comprehensive antenatal care services to pregnant women in their communities. The provision of these services are important for the reduction of maternal mortality rates (WHO, 2016). In this regard, the healthcare providers pointed out that “rural women have restricted mobility therefore they do not regularly did their checkups and screening during their pregnancies. However, the government initiative of CMWs is now a great support for them in terms of antenatal care service provision”.

An expectant mother in this regard said that “due to the financial issues and transport issues along with the restricted or limited mobility, it is not common for us to visit a healthcare facility regularly. CMWs in our area is now a great help for us. Me and my neighbors (expectant mother as well) regularly visit her established clinic for check-up and screening”.

In the rural areas, women’ mobility is restricted and their access to antenatal care is limited (Khowaja et al., 2022; Naz et al., 2022a). Therefore, the provision of antenatal care services within the area in the form of CMWs has played significant role for these rural women (Siddiqui and Ali, 2022).

CMWs pointed out that “access to antenatal care is now not a problem for rural women in our areas because we provide a range of services including regular check-ups to

monitor the health status of pregnant women, assess the fetal growth and development, and do screening for complications such as hypertension and gestational diabetes, and providing essential health education on nutrition, hygiene, and pregnancy-related concerns”.

CMWs in their respective areas do early detection and management of high-risk pregnancies and thus playing an important role in reducing maternal mortality by ensuring timely referrals to higher-level healthcare facilities for specialized care and interventions.

### **Skilled Delivery Assistance**

Literature indicates that skilled birth attendance is a pre-requisite for the reduction of maternal mortality rates (Mumtaz et al., 2015a). In this regard the CMWs program of the country is a right initiative where CMWs are trained to provide skilled delivery assistance. Healthcare providers of the country were of the view that “CMWs have been trained in skilled birth attendance so that the delivery services may be provided to rural women who are facing the challenges of restricted mobility and poverty etc.”

Pregnant women were of the view that “in case of emergencies CMWs are of great help as they can be approached any time easily even during nights. Moreover, if there are some kind of emergencies arise then CMWs guide us and provide information about the right place to deliver”.

CMWs further explained that they have been trained in high level of skilled birth attendance which includes conducting safe and hygienic deliveries at home or in birthing centers, managing labor complications, and performing essential newborn care practices such as immediate drying, breastfeeding initiation, and cord care. Due to their training in the respective areas made them skilled in managing deliveries and even they have saved the lives of many expectants and their newborns.

Furthermore, healthcare providers shed light on the important role of CMWs and indicated that CMWs through the facilitation of safe deliveries and prevention of delays in accessing emergency obstetric care, contribute towards the reduction of maternal mortality associated with childbirth-related complications, such as postpartum hemorrhage, obstructed labor, and eclampsia.

Literature in this regard shows that the midwifery program is effective in terms of providing skilled birth attendance in the rural and remote areas and thus contributing towards the reduction of maternal mortality in the various developing countries like Sri Lanka, Thailand, Bangladesh etc. (NIPS, 2007-08; Alam 2011; Chowdhry et al., 2007).

### **Postnatal Care Services**

The role of CMWs is not only limited to the neonatal care and skilled birth attendance even it continues afterword's as well in the form of postnatal care services after the birth (Mumtaz et al., 2015b). The postnatal care service is provided to both mothers and newborns which includes monitoring maternal recovery, newborn health assessment, promotion of early initiation of breastfeeding, identification of any signs of postpartum complications, and offering counseling on newborn care, immunizations, and family planning (Khowaja et al., 2022 Noh et al., 2019).

Healthcare providers endorsed that CMWs are playing an important role in terms of postnatal care provision with a wide range of services which are very crucial in reduction of maternal mortality rates in the rural areas.

The expectant mothers also provided their views that CMWs also provide services after child birth. They monitor women and newborns and in case of any emergency situation they provide treatments and guidance.

CMWs were of the view that due to the nature of their service in their own home areas allows them to bond with their patients and thus monitor them even after their childbirths. Mothers trust them in terms of postnatal care services.

It shows that CMWs ensure adequate postnatal follow-up and support and thus contribute towards the reduction of maternal mortality associated with postpartum complications, infections, and inadequate post-delivery care.

### **Family Planning Counselling and Services**

Community midwives play a pivotal role in promoting family planning and reproductive health services in their respective communities throughout the country (Khowaja et al., 2022). CMWs pointed out that they offer a range of services including counseling on contraceptive methods, addressing misconceptions, and providing access to a range of family planning services, including contraception provision, insertion of intrauterine devices (IUDs), and referrals for long-acting reversible contraceptives (LARCs). Literature in this regard also shows that CMWs play an important role (Corluka et al., 2009; Lipp, 2011; Omer et al., 2008).

Healthcare providers were of the view that “CMWs empower rural women with informed choices regarding family planning and birth spacing, thus playing an important role in preventing unintended pregnancies, unsafe abortions, and maternal deaths associated with high-risk pregnancies and closely spaced births”.

Literature in this regard also endorsed the point of views of the healthcare providers (Khowaja et al., 2022). The expectant mothers also endorsed the contribution of CMWs.

### **Health Promotion and Education**

Community midwives serve as advocates and educators within their communities, raising awareness about maternal health issues (Musaddiq et al., 2023), promoting healthy behaviors during pregnancy (Khowaja et al., 2022) and childbirth (Musaddiq et al., 2023; Khowaja et al., 2022), and dispelling myths and misconceptions related to traditional practices and beliefs (Mumtaz et al., 2015; Khowaja et al., 2022).

CMWs involve in community-level health promotion activities, such as conducting awareness campaigns and engaging with local leaders and influencers. Through the involvement of CMWs in these activities they foster a culture of maternal health-seeking behavior and encourage timely utilization of maternal healthcare services (Patel et al., 2021; Jan et al., 2019).

Healthcare providers were of the view that “in their respective communities, CMWs are playing an important role in terms of provision of health education which has certainly resulted in the increased use of maternal health care utilization”.

Similarly, expectant mothers further added that “CMWs providing them education about breastfeeding, family planning and importance of deliveries at a health center”.

### **Conclusion**

The current study was conducted to identify the potential role of CMWs in maternal mortality in Pakistan. From the findings of the study it was concluded that CMWs are playing a pivotal role in decreasing maternal mortality in Pakistan. Their role is multifaceted role encompassing a continuum of care from pregnancy to the postpartum period, with a focus on providing skilled, respectful, and culturally sensitive maternal and child health services. CMWs potential role is discussed in five main categories including antenatal care services, postnatal care services, skilled birth assistance, family planning counselling and services, and health promotion and education. Due to the CMWs contributions maternal healthcare

utilization has been increased in the remote rural areas. It resulted in more antenatal checkups, skilled birth deliveries, and postnatal care utilization as well. Furthermore, CMWs are also playing significant role in terms of family planning and reproductive health care services. Additionally, CMWs serves as the advocates and educators to bring awareness about maternal health issues, promoting healthy behaviors during pregnancy and childbirth, and dispelling myths and misconceptions related to traditional practices and beliefs. Looking into all these contributions, it is concluded that CMWs are playing potential role towards the reduction of maternal mortality.

### **Recommendations**

On the basis of the findings of the study various recommendations are made. First, such studies should be replicated using quantitative and mixed meho approach to receive a broader and in-depth picture of the reality. Secondly, there is a need to further reduce maternal mortality rates in the country which requires the more comprehensive role of midwifery program in the country. In this regard, the challenges and issues to the program may be identified and address accordingly. Additionally, the determinants of maternal mortality at the community level may be identified along with the strengthening capacity of frontline healthcare providers, so that the CMWs may significantly contribute towards reducing maternal mortality and improving maternal health outcomes in the country.

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