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Short Communication

The importance of community midwives in Pakistan: Looking at existing evidence and their need during the COVID-19 pandemic

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**ABSTRACT**

Concerns over the soaring number of COVID-19 cases has taken precedence within the healthcare community and overshadows the jarringly high rates of maternal mortality in developing countries. Pakistan is suffering from high maternal mortality, surges of COVID-19 cases, lack of integrated healthcare system, and rural poverty. Amidst fear and uncertainty, Community Midwives are stepping up as maternal healthcare leaders who are reaching out to neglected pregnant women in rural communities of Pakistan. They are responsible for rebuilding trust, delivering comprehensive and respectful maternal care and providing family planning counseling. To accomplish Sustainable Development Goal #3.1, Pakistan must support community midwives and diminish the barriers they face.

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According to a recent global statistic by United Nation’s Population Fund (UNFPA), it is estimated that a woman dies every two minutes as a result of pregnancy and childbirth related complications (UNFPA, 2019). A disproportionate amount of maternal deaths occur within the developing countries, and this includes Pakistan (National Institute of Population Studies, 2020). Currently, Pakistan’s Maternal Mortality Ratio (MMR)\(^1\) is at 186 deaths per 100,000 live births (National Institute of Population Studies, 2020). With 2030 fast approaching, Pakistan has less than a decade to lower this ratio down to 70 deaths per 100,000 live births and successfully accomplish the Sustainable Development Goal (SDG) # 3.1 (WHO, n.d.). Maternal deaths occur due to health conditions developed during pregnancy or exacerbation of pre-existing conditions that are not managed in a timely manner (WHO, 2019). These include severe bleeding and infections before or after childbirth, pre-eclampsia and eclampsia, high blood pressure, diabetes, sepsis, obstructed labor, cardiovascular diseases etc. (Mubeen et al., 2019).

Maternal mortality is also linked to poor outcomes for newborns and children under the age of 5 (WHO, 2019).

Apart from these biological determinants, maternal death is also a product of complex interactions between economic and socio-cultural factors (Omer et al., 2021). In Pakistan, pregnant women in rural areas continually exhibit delayed treatment seeking behaviour due to correlations between their poor socioeconomic status, early marriages and lack of maternal care knowledge (Omer et al., 2021). Pregnant women who live in poverty also suffer from poor nutrition, are generally less educated and also lack funds for transportation to far-away healthcare facilities and their services (Omer et al., 2021). This causes them to consult cheap and unskilled services from Traditional Birth Attendants (TBAs) and community healers (Omer et al., 2021). Consulting TBAs and healers encourages delayed treatment seeking behaviour as they associate pregnancy complications with evil forces and advise pregnant women to stay indoors (Omer et al., 2021). Lack of knowledge surrounding obstetric complications and low household income result in the ‘wait and see’ tactics that delay care until the situation becomes out of control and life threatening (Omer et al., 2021). In addition, pregnant women, especially young pregnant wives, have little to no decision making power over their own reproductive rights (Omer et al., 2021). Instead, the decisions are made by their husbands or their in-laws who might also lack maternal care knowledge (Omer et al., 2021). Some pregnant women are also exposed to domestic violence and have fears and stress surrounding giving

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\(^1\) Henceforth, MMR will always refer to Maternal Mortality Ratio which is calculated by diving total recorded (or estimated) maternal deaths by total recorded (or estimated) live births in the same period of time and then multiplying it by 100,000 (Chou, n.d.).

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birth to daughters (Omer et al., 2021). This disempowers them and further reduces health seeking behaviour (Omer et al., 2021). Low adherence to family planning strategies also result in multiple and closely spaced pregnancies, which is a risk factor for pregnancy related complications (Omer et al., 2021). Therefore, maternal mortality is as a human rights issue and efforts at all levels should be made to lower it (National Institute of Population Studies, 2020).

In Pakistan, Community Midwives (CMWs) were introduced to resolve these context specific issues faced by pregnant women in rural settings.

Over the years, Pakistan has introduced multiple healthcare interventions to overcome the high MMR. These include different cadres of healthcare professionals such as the Lady Health Visitors and Lady Health Workers (Sarfraz and Hamid, 2014). There are also healthcare facilities such as private for-profit clinics and public sector facilities such as district headquarters hospitals and tehsil headquarter hospitals (Agha et al., 2019). Clients can also seek health care services from rural health centers and NGOs (Agha et al., 2019).

In Pakistan, the MMR has declined from an estimated 423.9 deaths per 100,000 live births in 1990 (Kassebaum et al., 2014), to 350 deaths per 100,000 live births in 2000 (Khan et al., 2009), and 320 deaths per 100,000 live births in 2005 (Hill et al., 2007). However, this slow progress and the low skilled birth attendance in rural areas prompted more action (Sarfraz and Hamid, 2014). It has been identified that a key factor in lowering MMR is the presence of skilled birth attendants, such as CMWs, as they provide timely intervention for illnesses before they become life-threatening (Hoope et al., 2014). Therefore, in 2006, the Pakistani government introduced rural CMWs, who received midwifery training and were deployed back into their home villages to provide maternal care services and increase the skilled birth attendance to 90% (Muntaz et al., 2015; Mubeen et al., 2019).

Initially, within a gender-conservative rural community, many CMWs faced backlash due to working odd hours, conducting door to door visits, interacting with non-kim members, and pursing education which could delay marriages (Muntaz et al., 2015). They were also not trusted nor respected due to the community’s perception about their inexperience in delivering babies, when compared to TBAs (Sarfraz and Hamid, 2014). However, the CMW’s continued persistence, professionalism, skills, earnest attention and care earned them the community’s trust (Jaffer et al., 2017; Muntaz et al., 2015). Now, CMWs are highly entrusted to conduct deliveries at any time of the day, are serving women in remote areas, are administering low-cost and high-quality care and are assisting clients by financially covering the cost of their medicines (Muntaz et al., 2015; Jaffer et al., 2017). CMWs are also facilitating transportation to hospitals and often accompany their clients in cases of emergencies (Rehman et al., 2015). CMWs provide timely antenatal care by detecting, treating, and referring pregnancy complications while also educating pregnant women on symptoms of pregnancy complications (Agha et al., 2019; Jaffer et al., 2017). In comparison with the TBAs, who have been reported to use unclean equipment, CMWs use sterile equipment and practice good hygiene to avoid infections (Jaffer et al., 2017). In compliance with the WHO antenatal care model, CMWs also administer tetanus toxoid (TT) vaccines during gestational period as it prevents infections that can cause fetal abnormalities (Mubeen et al., 2019; Sarwer et al., 2020). As part of offering comprehensive maternal care services, they provide post-natal checkups, encourage breast feeding after birth, and advise pregnant women to maintain a balanced diet during and after pregnancy (Mubeen et al., 2019; Jaffer et al., 2017). A study has shown that the quality of care provided by CMWs is comparable to obstetricians and medical officers (Agha et al., 2019). Lastly CMWs are creating safe spaces for pregnant women to freely discuss topics of maternity, family planning and reproductive health (Mubeen et al., 2019). CMWs are resolving many of the issues faced by rural pregnant women by offering cheap and skilled maternal care services, which is a far better alternative than seeking care from unskilled TBAs (Mubee et al., 2019). By serving women from all socio-economic class, ages and geographical locations, they are providing equitable access to care (Jaffer et al., 2017). CMW’s commitment to delivering babies at the client’s home, even during night time, is part of providing accessible care, as many private healthcare facilities might be closed on certain days and at certain times (Agha et al., 2019).

Completing routine maternal checkups and initial assessments help to determine the overall health of the client, identify complications and take immediate action (Agha et al., 2019). In addition, by accompanying pregnant women to the hospital, CMWs are providing a sense of safety by reducing fears about navigating an unknown healthcare system (Tabatabaie et al., 2012). Having discussions about reproductive rights, maternal care and family planning are vital to increase awareness about symptoms of pregnancy complications, dangers of multiple pregnancies and can discourage the ‘wait and see’ tactics (Agha et al., 2019). CMWs can also involve husbands of pregnant women to ensure better maternal health outcomes through increased use of obstetric care by women, improved diet, lower workload and frequent visits to hospital (Midhet et al., 2019). There is no denying that CMWs are working tirelessly to reduce delayed treatment seeking behaviour and are making maternal services more accessible and affordable. Through this, they are fulfilling vital components of SDG # 3.7 and SDG #3.8 (WHO, n.d.).

Being a part of the community is a crucial component of comprehensive healthcare as services can be customized to fit local and cultural needs (Hoope-Bender et al., 2014). For example, CMWs try to dispel distrust surrounding healthcare professionals due to fears of mistreatment and unnecessary surgeries (Muntaz et al., 2015). To ease their worries, the CMWs explain to their clients about what is going on with their bodies, how medical equipment is used and offer massages to reduce labour pains (Muntaz et al., 2015). Some CMWs also allow their clients to practice religious and cultural traditions such as putting an amulet on the baby after delivery (Muntaz et al., 2015). By providing services which go beyond their biomedical training, CMWs are giving their clients holistic healthcare services (Muntaz et al., 2015). This shows how clear communication between healthcare providers and clients is vital to reduce fears, distrust, and abandonment of care that become barriers to accessing healthcare (Hoope et al., 2014). Establishing trust is of paramount importance, especially now, as fears of contracting COVID-19 from healthcare facilities is deterring pregnant women from seeking trained professional care (Sarwer et al., 2020; Ahmed et al., 2020).

COVID-19 lockdowns have severely limited the access to care for pregnant women and also made it difficult for CMWs to travel to far-flung rural areas (Sarwer et al., 2020; Ahmed et al., 2020). Travel restrictions also affected the supply and price of essential pregnancy related medicine, personal protective equipment (PPE) and sanitizers (Sarwer et al., 2020). The limited supplies of PPE also caused fear among healthcare professionals, resulting in delayed maternal care and fewer checkups (Sarwer et al., 2020). CMWs also saw the suspension of their maternal, reproductive and family planning services since they were unrelated to the COVID-19 efforts (Sarwer et al., 2020; Ahmed et al., 2020). Instead, the CMWs were being redeployed to COVID-19 testing, treatment and immunization centers (Sarwer et al., 2020; Ahmed et al., 2020). Lastly, fears surrounding COVID-19 and the decrease in household incomes, through work termination and halting of daily wages, resulted in economic hurdles to afford healthcare (Ahmed et al., 2020). This is highly concerning as it is pushing pregnant women to rely on home remedies and consult untrained TBAs (Ahmed et al., 2020; Sarwer et al., 2020). All these
factors are creating an environment that can foster an increase in maternal and natal mortality (Ahmed et al., 2020; Sarver et al., 2020). Despite this, CMWs are continuing to perform their duties with diligence, by ensuring safe and reliable care through the phone advise, consultations by appointments and in home visits (Ahmed at al., 2020; White Ribbon Alliance, 2020).

Despite their hard work, CMWs face many challenges such as insufficient pay, poor emergency referral systems and lack of medical supplies; which all contribute to the low retention (Sarfraz and Hamid, 2014). CMWs have also expressed flaws in their training and dissatisfaction due to lack clinical and refresher training and avenues to pursue further education (Mubeen et al., 2019). This is unacceptable, as CMWs are leaders who can contribute to reducing MMR, encourage family planning and improve maternal and neonatal health outcomes. To accomplish SDG#3, Pakistan must ensure improvements in referral systems and training provide CMWs with adequate pay, proper equipment, while avoiding any financial cuts to maternal and reproductive healthcare services as part of the austerity measures in the post-pandemic era (Agha et al., 2019; Singh et al., 2021).

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None.

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Deena Siddiqui: Conceptualization, Formal analysis, Investigation, Writing – original draft. Tazeen Saeed Ali: Conceptualization, Supervision, Writing – review & editing.

References

Agha, S., Firzgerald, L., Fareed, A., Rajbhandari, P., Rahim, S., Shahid, F., Williams, E., Javed, W., Currie, S., 2019. Quality of labor and birth care in Sindh Province, Pakistan: findings from direct observations at healthcare facilities. PLoS One 14. doi:10.1371/journal.pone.0223701.

Ahmed, SAKS, Ajisola, M., Azemm, K., et al., 2020. Impact of the societal response to COVID-19 on access to healthcare for non-COVID-19 health issues in slum communities of Bangladesh, Kenya, Nigeria and Pakistan: results of pre-COVID and COVID-19 lockdown stakeholder engagements. BMJ Global Health 5. doi:10.1136/bmjgh-2020-003042.

Chou, D., n.d. Maternal mortality ratio (per 100 000 live births). Available on https://www.who.int/data/gho/indicator-metadata-registry/imr-details?ref=26

Hill, K., Thomas, K., AbouZahr, C., et al., 2007. Estimates of maternal mortality worldwide between 1990 and 2005: an assessment of available data. Lancet 370. doi:10.1016/S0140-6736(07)61572-4.

Hoope-Bender, P., Bernis, L., Campbell, J., Downe, S., Fauveau, V., Fogstad, H., Homer, C.S., Kennedy, H.P., Matthews, Z., McFadden, A., Renfrew, M.J., Van Lerberghe, W., 2014. Improvement of maternal and newborn health through midwifery. Lancet 384, 1226–1235. doi:10.1016/S0140-6736(14)60993-0.

Jaffer, MQ, Jan, R., Kaufman, K., Lakhani, A., Shahid, S., 2017. Exploring community midwives’ perceptions of their work experience after deployment in the rural areas of Chitral, Pakistan. British J Midwifery 25. doi:10.12968/bjmid.2017.25.6.372.

Kassebaum, N.J., Bertozzi-Villa, A., Coggeshall, M.S., Shackelford, K.A., Steiner, C., Heuton, K.K., Gonzalez-Medina, D., Barber, R., Huynh, C., Dicker, D., Tempkin, T., et al., 2014. Global, regional, and national levels and causes of maternal mortality during 1990–2013: a systematic analysis for the Global Burden of Disease Study 2013. Lancet North Am. Ed. 384. doi:10.1016/S0140-6736(14)60096-6.

Khan, YF, Bhattu, SZ., Munirn, S., Bhattu, ZA., 2009. Maternal health and survival in pakistan: issues and options. J Obstetrics Gynecol. Canada 31. doi:10.1016/S0140-6736(16)34321-3.

Midhet, F., Becker, S., 2010. Impact of community-based interventions on maternal and neonatal health indicators: results from a community randomized trial in rural Balochistan, Pakistan. Reproduct. Health 7. doi:10.1016/j.rithutech.2019.102553.

Munteaz, Z., Levay, A.V,Bhatti, 2015. Successful community midwives in Pakistan: An Asset-Based Approach. PLoS One 10. doi:10.1371/journal.pone.0153530.

National Institute of Population Studies, 2020. Pakistan Maternal Mortality Survey 2019. Available on https://dhspogram.com/pubs/pdf/FR366/FR366.pdf (Accessed 1 October 2021).

Omer, S., Zakar, R., Zakar, M.Z., Fischer, F., 2021. The influence of social and cultural practices on maternal mortality: a qualitative study from South Punjab, Pakistan. Reproduct. Health 18. doi:10.1186/s12978-021-01151-6.

Rehman, S., Ahmed, J., Bahadur, S., Ferdoos, A., Shahab, M., Masud, N., 2015. Exploring operational barriers encountered by community midwives when delivering services in two provinces of Pakistan: a qualitative study. Midwifery 31. doi:10.1016/j.midw.2014.08.006.

Sarfraz, M., Hamid, S., 2014. Challenges in delivery of skilled maternal care – experiences of community midwives in Pakistan. BMC Pregnancy Childbirth 14. doi:10.1186/g1471-2393-14-59.

Sarver, A., Javed, B., Soto, EB., Mashwani, ZUR., 2020. Impact of COVID-19 pandemic on maternal health services in Pakistan. Int. J. Health Plann. Manage. 35. doi:10.1002/hpm.3048.

Singh, N., Asea, A., Driandici, D., Moctezuma, A. A. G., & Palgi-Hacker, H., 2021. Covid-19 shows how dangerous it is to neglect midwives and community care. openDemocracy. Available on https://www.opendemocracy.net/en/5050/covid-19-shows-how-dangerous-it-neglect-midwives-community-care/ (Accessed 1 October 2021).

Tabatabaei, MG., Mouzi, Z., Vedadhir, AA., 2012. Home birth and barriers to referring women with obstetric complications to hospitals: a mixed-methods study in Zahedan, southeastern Iran. Reproductive Health 9. doi:10.1186/1742-4755-9-5.

UNFPA, 2019. Maternal health. Available on https://www.unfpa.org/maternal-health#readmore-expand (Accessed 1 October 2021).

White Ribbon Alliance, 2020. Safer together: A Pakistani midwife’s story. Available on https://www.whiteribbonalliance.org/2020/05/04/safer-together-a-pakistani-midwives-story/ (Accessed 1 October 2021).

WHO, n.d. Sustainable Development Goals. Available on http://www.who.int/health-topics/sustainable-development-goals#tab=2 (Accessed 1 October 2021).

WHO, 2019. Maternal mortality. Available on https://www.who.int/news-room/fact-sheets/detail/maternal-mortality (Accessed 1 October 2021)