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"Enhancing Maternal and Fetal Well-being: Exploring the Determinants of Preconception Care"

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Abstract:

Preconception care is the delivery of biomedical, behavioral, and social health interventions to women and couples of reproductive ages. The significance of care is emphasized by the World Health Organization (WHO), as it greatly affects the quality of life of the mother and child. However, the uptake of pre-conception care services in Low and Middle-income countries (LMIC) such as Pakistan is low due to several factors. This discussion paper will identify some of the contextual factors related to the quality of health care services, acceptability due to cultural value beliefs, and affordability that largely influence the utilization of preconception care services. The paper also proposes some practical interventions to overcome these limitations.

Keywords: Pre-conception care, maternal health, recurrent miscarriages, determinants, Pakistan

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Case

On November 23, 2023, a 29-year-old female was electively admitted to a secondary maternity care hospital, in Pakistan for surgical management of miscarriage. The woman had a history of recurrent miscarriages and had been under the care of several health care providers in primary and secondary care hospitals. The couple was unaware of pre-conception care services and sadly, the woman was being

discharged once again without receiving guidance for preconception care increasing the risk of poor pregnancy outcomes in future pregnancies as well. The woman shared that she has been experiencing insomnia and feelings of sadness due to her obstetrical history.

Background

According to WHO, 2014 [12], "preconception care is a set of interventions that are to be provided before pregnancy, to promote the health

and well-being of women and couples, as well as to improve the pregnancy and child-health outcome". According to the WHO Report, 2020 [7] pre-conception care aims to improve health status and reduce risk factors associated with individual couples' health and environmental factors that lead to poor maternal health and negative pregnancy outcomes.

There is scientific evidence that along with the health of women, their lifestyle practices before pregnancy contribute to the outcome of pregnancy. Preconception care has a positive impact on child mortality and prevents birth defects such as neonatal hypoglycemia, and infections. In addition to this, it also prevents maternal mortality by identifying and managing existing medical conditions, promoting healthy behavior, optimizing nutrition, and working on healthy lifestyle practices [7].

According to a WHO report published in 2021 [9], each year, between 5.7 and 8.4 million people die due to poor quality care in low- and middle-income countries. Over 80% of deaths are in children under the age of five and 86% of maternal deaths are concentrated in sub-Saharan Africa and South Asia where resources are more constrained [9]. Therefore, it is pivotal to improve the quality of maternal and childcare. The care that can influence the outcome of maternal, newborn, and child health is preconception care. However, in Pakistan's

context, there is no concrete data and evidence-based literature available on the uptake of preconception care services. A cross-sectional study conducted in one of the low-middle-income country, of Africa, suggested that among 194 participants only 25.8 % of women acquired pre-conception care from which rural (16.5%) women were from rural settings and (35.1%) women were from urban settings [5]. Several determinants can affect the utilization of preconception care. Thus, this paper will examine the contextual factors that hinder the preconception care service uptake among women, proposing some of the relevant interventions from evidence-based literature that can be implemented in the Pakistani context. By addressing this issue, we would be able to study deeply the relations of factors that lead to the inability of women to acquire pre-conception care.

Feelings

As the authors were caring for the woman in the obstetric unit, the authors felt that this was a case of the missed opportunity to improve maternal outcomes. The woman was suffering from the continuous loss of pregnancies, but the healthcare providers failed to seize the opportunity to provide adequate knowledge about the risk factors associated with her and its management. A comprehensive preconception

care would have prevented her from the risk factors and may have improved the outcome of pregnancy. Sadly, the woman was suffering not only physically but her mental well-being was also affected, we felt a greater need to bring attention to the need for preconception care.

Determinants

1. Quality of Health Care services

The quality of services provided to women is significantly affected by the competency of staff to identify the needs of patients and the workload of the health care providers. Healthcare providers tend to miss the opportunity to educate women about preconception care and its significance. Healthcare provider competency in the identification of risk factors and initiation of early referral for preconception care is critical to prevent obstetric complications. This leads the patient to miss essential information about optimizing their health before pregnancy and the healthy life choices they should opt for. However, competent healthcare providers may also miss the opportunity to provide health education regarding seeking care before conception due to the increased stress of work with limited staffing [15]. The care provider may not be able to manage time for active listening to the women and responding therapeutically to their concerns

and needs, leading to poor rapport between healthcare professionals and women in many instances. Women tend to feel neglected and may feel hesitant to ask questions that they otherwise would ask.

Similar to the factors mentioned in the literature, the competency of the care provider and shortage of clinical staff was observed due to which the healthcare provider failed to provide customized information according to the woman's need. As the health care provider had an excessive workload, they were unable to develop rapport with the patient resulting in a woman not finding herself comfortable in inquiring about information from the health care team. The lack of identification of the need for preconception care led to the woman's knowledge deficiency and failure to recognize the need for preconception care.

2. Acceptability of the Services

The sociocultural factors also play a major role as extensive pressure stems from socio-cultural expectations along with limited women empowerment creating a barrier for women in seeking care for themselves. Studies have identified that women are forced into consecutive conceptions regardless of risk factors [3]. The demands of in-laws and husbands in traditionalist society result in women conceiving repeatedly

without any pre-conception interventions [3]. Many perceive the ability to produce offspring as a measure of a woman's worth, ignoring women's health condition or readiness to conceive again moreover, the rights of women are not explicitly shared and accepted in a society that is dominated by males. Due to this, women are not empowered enough to make decisions on their own and prioritize their health above the demands of in-laws. The women are not able to refuse repeated conceiving.

In the mentioned case, the woman was not able to explicitly express her relationship with in-laws or her role in decision-making. However, power dynamics with her mother-in-law were evident as she was following all the instructions from her mother-in-law. Moreover, she expressed agitation through nonverbal cues and shared that she struggled with feelings of helplessness and anxiousness due to her past obstetric experiences. Hence, women may have an unmet need for preconception care due to their inability to make decisions for themselves.

3. Affordability of the Service

The factor that plays the most significant role in decision-making for seeking health care is the financial burden. The literature also highlights that the cost of pre-conception care services influences the decision to opt for the care. [8]. A third of pregnant women think of pre-conception

care as unnecessary and too expensive. According to the Pakistan, Demographics Health Survey, 2017-18, although women do choose for antenatal visits, however, only half (51%) make it to four or more visits [17]. Similarly, a study conducted in Nepal reported, that 81% of women completed more than 4 antenatal visits out of 9. The odds of seeking 4 or more ANC visits were 9 times higher among those women whose husbands' monthly income was more than 25,000 as compared to those who had income less than 25,000 NRS/Month [1]. Hence, when women determine antenatal care is a financial burden, preconception care may be considered unnecessary or even a luxury.

The woman under the author's care had not visited a health care provider for recommended antenatal contacts. On inquiring, she said (translated) "Why would I waste my money on 15 minutes of teaching." Therefore, the expense of care can be a major factor that influences the prevalence of pre-conception care.

Interventions

Several interventions could be taken on each level of healthcare which would help in enhancing the coverage and quality of pre-conception care. Firstly, on the institutional level, there could be specialized staff training about how to provide preconception knowledge. Atrash and Jack (2020) suggest that the first step is to

assess the risk factors associated with the woman, her family history as well as her lifestyle practice because they affect pregnancy outcomes [2]. Thus, all women should have a screening history and healthcare workers should check it before providing care. The second step is to *counsel* about the risk factors identified so that they can treat them before planning for pregnancy. While counseling, an individual healthcare provider could use soft skills. Communication, critical thinking, compassion, professionalism, teamwork, and accountability are some of the soft skills a healthcare worker should consider [11]. This helps in the rapport building with the patient. The last step is *prevention and management*. If their lifestyle practice could harm their pregnancy, they should drop it. Manage any risk factors the mother may have before going ahead with the next pregnancy.

Following that, Michie et al. (2011) COM B model intervention could be implemented at the administration level [11]. The COM-B model is a behavior change framework that identifies three key components influencing behavior, Capability, Opportunity, and Motivation. It helps to understand why individuals engage in certain behaviors and provides a structured approach for designing interventions to promote behavior change. Through these models, healthcare workers can enhance coordination and improve

efficiency, individualized care, and patient engagement. We could work on the *compatibility* of the staff by providing them with adequate training as suggested by the 3-step model of Atrash and Jack (2020). Women who are near the childbearing age could be made self-sufficient by providing easily understandable pamphlets. There could be a workflow redesign in which every healthcare professional is given the *opportunity* to work on preconception and antenatal care, respectively. This intervention could also help reduce the workload on the healthcare worker. Lastly and most importantly, the praised healthcare professionals could be given incentives to *motivate* them further and work better. The process of motivation could be ensured by making user-friendly feedback systems.

Lastly, as a community health nurse, we could arrange health screenings and awareness campaigns for women who are of childbearing age. The health screening could be for nutritional deficiency and non-communicable diseases. This can be done by their thorough health assessment and some blood tests. Non-communicable diseases such as pre-existing hypertension and cholesterol levels play an important role in adverse pregnancy outcomes [16]. These conditions play a significant role in affecting maternal and childcare. Awareness sessions

regarding how their nutrition and lifestyles could change the lives of their newborn child could be conducted. Some additional activities could be introduced to reduce the chances of developing the conditions. These sessions could help in early diagnosis and the couple would feel the service is a necessity rather than a burden [9]. For the above interventions to workout, the whole family including the couple must understand the importance of preconception care. In the Pakistani culture, family plays a key role in decision-making. They enable women to have a nurturing environment by providing emotional and physical care to women.

Conclusion

To conclude, the above case highlighted the importance of pre-conception care, that it is essential and can prevent many unwanted pregnancy outcomes. It carries many benefits for newborns as well as maternal well-being and quality of life. However, some of the contextual determinants, related to Pakistan, like staff competency and shortage of healthcare workers hinder the patients from having complete healthcare. Also, the financial burden and the family support play an important role in women and couples acquiring the necessary health care. If a healthcare professional starts to follow Atrash and Jack's model for approaching women of reproductive age and start using therapeutic

ways of communication, they can save many negative pregnancy outcomes. Along with the above model, Michie's COM B model can also be used to ensure comprehensive pre-conception care.

At the community level, healthcare workers could start to inform family members about the importance of preconception care which helps to identify and manage risk factors. Encouraging families to prioritize the management of risk factors over immediate conception is essential for maintaining optimal maternal health. When people know its importance, then they will find this service a blessing rather than a burden. By providing comprehensive health care services, as well as adequate family support, a healthcare professional, can not only remove maternal risk factors but also empower women to have a good pregnancy journey as well as positive pregnancy outcomes.

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