

Are we ignoring the Importance of Sanitation while Mourning the Adverse Pregnancy Outcomes?

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ABSTRACT

There is enough literature available in the public domain in defining risk factors for the prediction of adverse pregnancy outcomes; hardly a few discuss sanitation as a risk factor. Sanitation is under-researched to adverse pregnancy outcomes. The consequences of maternal sanitation behavior during the period of pregnancy has never received the required attention. With the revelation of Swachh Bharat Mission in 2014, India would unquestionably outsource one of its stickiest blemishes of open defecation by providing individual latrines to every household, what remains is the need to promote the usage of those latrines by bringing a change in people's behavior and understanding the cultural barriers.

We tried to shed some light on the importance of sanitation in the follow up of adverse pregnancy outcomes in India. The result found that sanitation is one of the crucial facets for women who are either planning to have a baby or are about to deliver a baby as findings suggest evidence between sanitation and adverse pregnancy outcome.

There is a need to study this aspect more rigorously as this is still an under-researched area. Further studies in this dimension will help policymakers in designing the appropriate interventions to reduce the adverse pregnancy outcomes associated with poor sanitation.

Keywords: Sanitation; Adverse Pregnancy Outcomes; Open Defecation

MINI REVIEW

Pregnancy outcomes refer to those life events eventuate to the new-born infant from the age of viability (28 weeks) to the first week of life. Thus pregnancy outcomes as an umbrella term include normal live birth and adverse pregnancy outcomes. Adverse pregnancy outcomes include early neonatal deaths, stillbirth, low birth weight, and preterm birth. Worldwide, nearly 3 million third trimester stillbirths occur annually, and a similar number of children die within the first 28 days of life [1,2]. These deaths account for approximately 7% of the global burden of disease, which is higher than that of HIV/AIDS [3].

The adverse pregnancy outcomes are still not documented in a seminal manner as there are many reasons for the onset of adverse pregnancy outcomes. Various available literature in the public domain have reported not one but numerous risk factors for Adverse Pregnancy Outcomes such as Obesity [4,5], anemia

[6,7], diabetes [8], antenatal care [9], maternal tobacco consumption [10], history of abortion [11], environmental pollution [12], hypertension [13] and many others. Exposure to unsafe water, poor sanitation, and poor waste management during pregnancy is associated with the increased risk of infection in the mother, which may lead to low birth weight and preterm deliveries [14,15].

The consequences of poor sanitation to ill-health is well-known [16]. What is not known is the contributions of sanitation to adverse pregnancy outcomes, and it remains a run-down dimension [17,18]. Despite persistent endeavours at every level, access to sanitation is limited in many developing countries, including India. House-listing and housing census of India, 2011, let drop that approximately 53 percent of the households in India lack a proper drainage facility within their premises. Open defecation is still a noteworthy problem. Why open

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Received: December 15, 2020; **Accepted:** April 8, 2020; **Published:** April 15, 2020

Citation: Chauhan S, Patel R, Bansod DW (2020) Are we ignoring the Importance of Sanitation while Mourning the Adverse Pregnancy Outcomes? Clinics Mother Child Health. 17:164. DOI: 10.35248/2090-7214.20.17.346.

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defecation seems never-ending is not only due to the unavailability of latrines but also due to cultural and behavioral vindications attached to open defecation. Thus there arises a need to escort a change in behavior of people as regardless of having IHL (Individual Household Latrines), people prefer to go out for defecation. SQUAT (Sanitation Quality, Use, Access, and Trends) survey, undertaken in the five states of India, raised the concern that people defecate in the open by their own choice, even after having access to latrines [19]. Various other studies in public domain recapitulated that people are unwilling to embrace latrine use practices rather continue to defecate in the open due to unquestionable socio-cultural and behavioral factors [20]. In India, open defecation is practised to great lengths without any attached stigma [21], and this is one of the reasons why people prefer to choose open defecation even with having access to latrines.

The data from National Family Health Survey-IV (2015-16), India, unveil that around one in every five women in India, without any access to latrines or having access to shared toilets, had gone through the adverse pregnancy outcomes. The advance analysis upon the same dataset found that the mothers who had access to the toilet within their household premises had consequential lower chances of Adverse Pregnancy Outcome contrast to the mothers who did not have access to toilets. The outcomes of the unadjusted odds ratio instituted that undesirable after-effects of pregnancy were remarkably higher among the mothers lacking the availability of water and hand wash near the toilets in their households. There were substantially fewer likelihoods (0.78, p -value<0.01) of adverse pregnancy outcomes among mothers having toilets in-house as compared with mothers not having access to a toilet within their household premises. After adjusting the effect of all the required confounder variables in the model of multivariability, the availability of hand wash did not seem to affect adverse pregnancy outcomes as the knowledge and practice of handwashing is low among mothers [22]. Women in Indian set up rely on the traditional methods of handwashing. In India, states like Odisha, Madhya Pradesh, Uttar Pradesh, and Rajasthan had poor sanitation coverage, and also these states had a higher number of adverse pregnancy outcomes, thus confirming the prominence of sanitation in the follow up of adverse pregnancy outcomes.

Sanitation is the sine qua non in controlling the adverse pregnancy outcomes, and for improving sanitation coverage increasing political will and administrative commitment is required. Since the districts having inadequate sanitation coverage also have higher cases of adverse pregnancy outcomes, there is a pressing need to provide technical support to those selected districts in a sustainable manner. The Government of India has launched Swachh Bharat Mission in 2014, with a purpose to speed up the endeavors to achieve universal sanitation coverage and to put the focus on sanitation. This program includes the elimination of open defecation by building toilets in every household. Five years have passed since this program was implemented, and it is high time that the government shall look beyond individual toilets. As of now, India is heading towards providing individual toilets to every

household. Now, what is more important is to bring behavioral and cultural changes.

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