

# Primiparity at an Advanced Age: Emerging Pattern Needing Courtesy to Achieve SDG Maternal Health Targets

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**Abstract:** Primiparity at an advanced age, which means having a first birth at age 35 years and beyond, is a recent emerging phenomenon in low- and middle-income countries that significantly affects maternal and child health. However, this evolving phenomenon has not been given due attention as many countries still deal with health-related issues during early-age pregnancies. This paper describes the emerging trend of primiparity during advanced age, focusing on low- and middle-income countries, elaborates on the linked adverse fetomaternal outcomes, and outlines potential interventions to bring the scenario to policymakers' and practitioners' attention.

**Keywords:** primiparity, maternal, child, advanced age, birthing, SDG, complications, adverse

Maternal mortality reduction was one of the many targets of the past Millennium Development Goals (MDG) target, during which many countries made notable gains. Despite gains, maternal mortality remains a serious matter beyond MDG global initiatives, especially in low- and middle-income countries.<sup>1-3</sup> In observance of this, the Sustainable Development Goals (SDG)—2015–2030 considered it one priority area of intervention to continue the positive gains obtained during the MDG implementation. In this aspect, averting birth-related mortalities during the continuum of the reproductive period has been the primary focus area of interventions. Thus far, primiparity at an early age of the reproductive period has received substantial attention. Unlike that, primiparity during advanced age has not been emphasized well. Here, primiparity at an advanced age implies giving first birth after 35 years of age, which has become a common occurrence along with the affirmative progress in women's schooling, employment, urbanization, and increased desire for individual autonomy.<sup>4-6</sup> This commentary highlights patterns and risks associated with these emerging patterns and outlines future suggestions emphasizing low- and middle-income countries.

A finding obtained by Catherine L Dunlop through analysis of data from 34 sub-Saharan countries indicated the average to have first birth order at the age of 35 and above was found to be about 0.7%, reaching up to about 2.7% in Cameroon, 1.89% in Ghana, 1.77% in Senegal and 1.35% in Benin stressing the pressures these have on the ongoing healthcare delivery system.<sup>7</sup> A study reported by Muhoza on Fertility transition in Rwanda revealed that the proportion of never-married women in the age range of 35–39 years increased from 4.9% to 7.1% between 2005 and 2015, those in the age range of 40–44 years increased from 2.7% to 4.2%, and those in the age range of 45–49 years increased from 1.8% to 4.1%.<sup>8</sup> The change was prominent among women who were urban, educated at the secondary and above level, and well-to-do in their economic status. Similarly, in Ethiopia, the number of women who have never given birth in the age range of 35–49 years rose from 6.0% to 8.6% between 2005 and 2019, most likely waiting to have their first child during this period.<sup>9,10</sup> The acceleration factor for time to first childbirth among women with secondary and above education level was 1.154 compared with those uneducated women.<sup>11</sup> These emerging patterns have been more appreciated in middle-income countries. For instance, in Brazil, the percentage of first births among advanced maternal-age women doubled between 1994 and 2018, from 7.6% to 15.5%.<sup>12</sup> Likewise, births to women above 45 in Israel rose by more than 230%

between 1998 and 2008 alone.<sup>13</sup> This cumulative evidence showed the progressive emergence of such fertility patterns over recent years, which have significant implications for the health system.

Despite the positive attributions, such progression is linked with certain reproductive health challenges requiring distinct service packages despite the paramount advantages.<sup>14,15</sup> Compared to births at an early age, late-age deliveries happen when the women undergo various physiological dynamics that contribute adversely.<sup>16</sup> The longer the eggs have been around, the more likely they have a pregnancy with a chromosome problem, potentially leading to a condition like Down syndrome and other complications. It is indicated that 1 in 1480 at age 20, 1 in 940 at age 30, 1 in 353 at age 35, 1 in 85 at age 40, and 1 in 35 at age 45 could experience one or more chromosomal-related dawn syndrome—indicating the need for distinct packages of services as there are more complications like diabetes, hypertensive disorders, and other pregnancy-related problems.<sup>17–20</sup> In general, evidence indicated that those who gave their first birth at 30 years and above were at 33% higher risk of mortality than those who gave their first birth at 20–24 years.<sup>21</sup> It was revealed that those primiparous patients were at higher risk of hypertension disorders than the multiparous patients at an advanced age (15.3% vs 9.8%,  $P = 0.001$ ).<sup>22</sup>

Unlike early-age primiparity, late-age primiparity complications largely co-exist with various non-communicable diseases, making the efforts heavy in managing the outcomes and dealing with the financial burdens. Such co-occurring challenges could put the region under multiple workloads in addressing maternal health-related targets. Especially those countries making public financing through free maternity services (like Ethiopia) could face financial pressures in dealing with these multiple comorbidities as they are so cost-intensive by nature.<sup>7</sup> In light of this, a report from northern Ethiopia indicated the need to design proactive interventions to address this evolving challenge.<sup>23</sup>

Planning to address co-occurring challenges is needed in the context of such emerging trends/patterns. This is especially important for countries still loaded with early-age pregnancy-related problems. Potential interventions include helping the women have information/knowledge on maintaining their health and well-being during the pre-conception and conception periods.<sup>24</sup> This can be done through nuanced counseling, depending on specific age and comorbidities, and covering the risk factor for adverse maternal, fetal, and neonatal outcomes. A more detailed fetal anatomic ultrasonogram, given this population's increased risk of congenital anomalies as indicated. Due to the increased risk of large-for-gestational-age and small-for-gestational-age neonates, a standard ultrasonogram for growth assessment in the third trimester of pregnancy and providing antenatal fetal surveillance for pregnant individuals are essential. Moreover, expanding quality caesarian section services expansion is important as the need or the demand also rises together. These health service approaches and types need service re-orientation to accommodate the needed services in access and quality, as they are more likely to utilize services with high expenditures.<sup>7</sup> For example, the need for assisted reproductive technology (ART) pregnancies could grow with the age rise to first birth.<sup>25</sup> For these, the instituting of robust integrative networks within the facilities mandated to work on these issues at the national, sub-national, facility, and community levels is essential.

## Disclosure

The author reports no conflicts of interest in this work.

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