



**Share-Net  
Jordan**

The Knowledge Platform on  
Sexual and Reproductive Health  
and Reproductive Rights



## Pregnancy Loss in Jordan – Levels and Disparities

2025

## 1. Introduction

This paper presents scientific evidence on the prevalence and disparities of pregnancy loss in Jordan across demographic, social, and economic variables. The study aims to inform policy programs and initiatives seeking to enhance the quality of maternal healthcare services during antenatal, intrapartum, and postnatal periods. Furthermore, it seeks to guide efforts in improving care management for pregnancy loss outcomes, enhance stillbirth reporting through comprehensive and accurate data collection systems, and raise awareness about the critical importance of quality antenatal care in preventing pregnancy loss.

This paper is not a medical or biological study on pregnancy outcomes, as pregnancy loss one of the possible pregnancy outcomes a complex process influenced by multiple biological, medical care-related, and health behavioral factors. This study relied on statistical evidence regarding pregnancy outcomes in Jordan, as reported by women of reproductive age (15-49 years) in response to several questions included in the two most recent Population and Family Health Surveys (2017-2018 and 2023) concerning their pregnancy outcomes. Additionally, it draws on the findings of numerous published Jordanian and international scientific papers that have addressed the issue of pregnancy loss.

Pregnancy loss is one potential outcome of high-risk pregnancies, which include closely spaced consecutive pregnancies, pregnancies in women under 18 years old, and advanced maternal age pregnancies. Therefore, identifying women at risk of high-risk pregnancies, managing medical care for those with confirmed high-risk diagnoses, and improving access to family planning services for older mothers can mitigate pregnancy loss risks. Although Jordan's miscarriage and stillbirth rates are lower than other regional countries, opportunities remain to prevent such outcomes through early identification of high-risk pregnancies and ensuring adequate prenatal obstetric interventions especially since most stillbirths occur during the antenatal period. Notably, pregnancy loss is a risk factor for maternal anxiety and depression, underscoring the medical recommendation for appropriate psychological counseling to reduce post-loss mental health consequences.

This paper aligns with the Higher Population Council's objectives to advance sexual and reproductive health (SRH) standards in Jordan. It directly supports the goals of the Jordan National Strategy for Sexual and Reproductive Health (2020-2030) by promoting universal access to integrated SRH services and information, thereby contributing to individual and family well-being. Furthermore, it endorses Sustainable Development Goal 2030 – ensuring healthy lives and promoting well-being for all at all ages – through its focus on preventing pregnancy loss as a critical health outcome.

## 2. Global and Regional Trends in Pregnancy Loss Rates

The 2021<sup>1</sup> Global Burden of Disease study findings regarding stillbirth cases globally, regionally, and nationally after 20 weeks of gestation across 204+ countries and territories (1990–2021) indicated that stillbirth remains a traumatic yet often preventable pregnancy outcome. Analyzing stillbirth rates and trends is crucial for sustaining progress in reducing pregnancy loss. Key findings from this study include:

- The global stillbirth rate for pregnancies at  $\geq 20$  weeks gestation was 23 stillbirths per 1,000 total births (including both stillbirths and live births), compared to 16.1 per 1,000 at  $\geq 28$  weeks gestation.
- The global neonatal mortality rate in 2021 stood at 17.1 deaths per 1,000 live births, equating to approximately 2.19 million (1.90–2.55 million) newborn deaths annually.
- Estimated stillbirths ( $\geq 20$  weeks gestation) declined from 5.08 million in 1990 to 3.04 million in 2021, reflecting a 39.8% reduction. Notably, South Asia and sub-Saharan Africa accounted for 77.4% of global cases (2.35 million of 3.04 million) in 2021 – representing a 60.3% proportional increase compared to 1990 (3.07 million of 5.08 million).
- In 2021, an estimated 0.926 million (uncertainty interval: 0.792–1.10 million) stillbirths occurred between 20–28 weeks gestation, accounting for 30.5% of the global total (3.04 million).

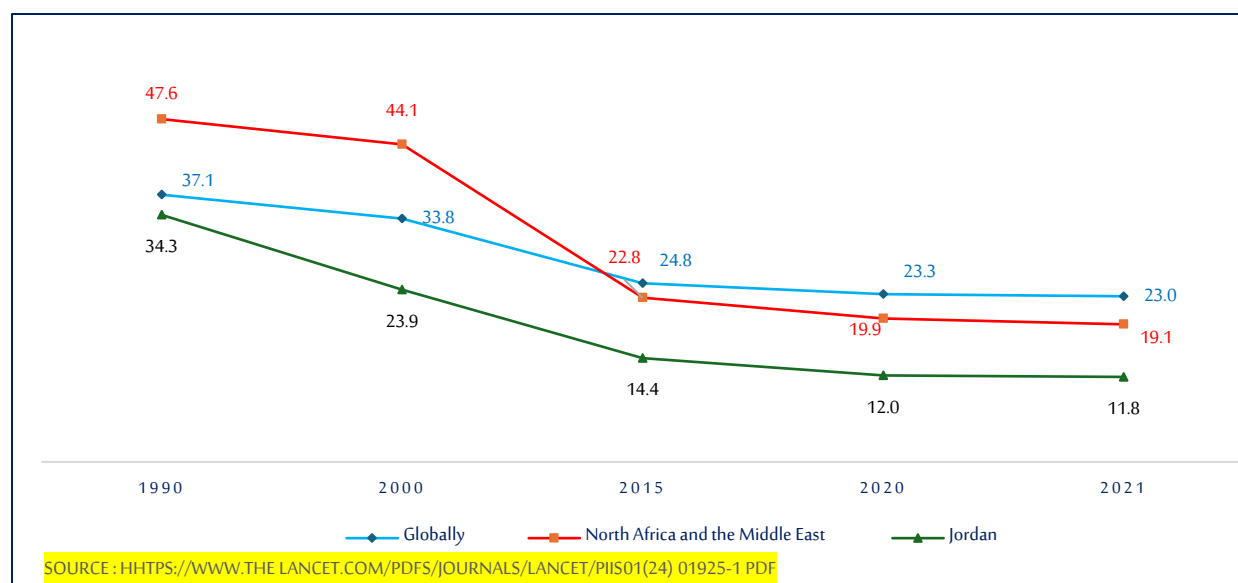
The study indicated that despite the gradual global decline in stillbirths between 1990 and 2021, the total number of stillbirths remains alarmingly high. It highlighted the critical importance of counting all stillbirths to track progress, as nearly one-third of stillbirths—approximately one million cases—were uncounted at the threshold of 28 weeks or more. The study revealed uneven progress in reducing stillbirths, with the highest burden concentrated in low-development settings. Scarcity of data and poor data quality limited accurate stillbirth estimation in many locations. There is an urgent need to address inequities in universal maternal health coverage, enhance maternal healthcare quality, and strengthen data systems to reduce the global stillbirth burden.

Figure (1) displays the stillbirth rate (per 1,000 total births) at the global level, for North Africa and the Middle East region, and for Jordan. It shows that Jordan had the most favorable situation, with its stillbirth rate declining from 34.3 per 1,000 births in 1990 to 14.4 deaths per 1,000 births in 2015, then to 11.8 deaths per 1,000 births in 2021. This compares favorably with the series of stillbirth rates at both the global level and the North Africa/Middle East regional level.

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<sup>1</sup> [https://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736\(24\)01925-1.pdf](https://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736(24)01925-1.pdf)

**Figure (1): Stillbirth rates at the global level, in North Africa and the Middle East, and in Jordan (1990-2021)**



Joint estimates on stillbirths published in a study by UNICEF, WHO, the World Bank Group, and the UN Department of Economic and Social Affairs Population Division reveal<sup>2</sup> that one stillbirth occurs every 16 seconds worldwide, equating to approximately two million cases annually. The study indicated that pregnant women in low-income countries, those belonging to minority groups, or with lower education levels face significantly higher risks of stillbirth compared to more advantaged women. Developing countries account for over 80% of global stillbirths. In industrialized nations, one in 335 pregnancies results in stillbirth, while in low-income countries the ratio rises to one in 44 according to the study. The study warned of a substantial increase in stillbirth rates due to disrupted health services during the COVID-19 pandemic. Most stillbirths are attributed to poor quality care during pregnancy and childbirth. The study highlighted that lack of investment in antenatal and intrapartum services, along with insufficient midwifery and nursing workforce development, represent major challenges.

### 3. National Trends and Disparities in Pregnancy Loss Levels

#### ▪ Levels and Timing

Although Jordan's stillbirth rate is lower than other countries in the region, opportunities remain to prevent these deaths through early identification of high-risk pregnancies and ensuring adequate obstetric interventions before delivery—particularly since most stillbirths occurred during the antenatal period. A study<sup>3</sup> titled 'The Rate, Determinants, and Causes of Stillbirths in Jordan' analyzed data on births, stillbirths, contributing conditions, and other demographic and clinical characteristics between

<sup>2</sup> [https://healthynewbornnetwork.org/hnn-content/uploads/A-neglected-tragedy-stillbirths-IGME-report-English\\_2020.pdf](https://healthynewbornnetwork.org/hnn-content/uploads/A-neglected-tragedy-stillbirths-IGME-report-English_2020.pdf)

<sup>3</sup> Khulood K. Shattawi and others, Rate, determinants, and causes of stillbirth in Jordan: Findings from the Jordan Stillbirth and Neonatal Deaths Surveillance (JSANDS) system, BMC Pregnancy and Childbirth (2020) 20:571, <https://doi.org/10.1186/s12884-020-03267-2>

August 2019 and January 2020, extracted from Jordan's Electronic Stillbirth and Neonatal Death Surveillance System (JSANDS<sup>4</sup>). In this study, stillbirth was defined as any fetal death occurring at or after 24 weeks of gestation, classified as antepartum (deaths before labor) or intrapartum (deaths after labor onset but before delivery).

The study found a total of 10,328 births during the research period, including 102 stillbirths (88 antepartum and 14 intrapartum), with a rate of 9.9 per 1,000 total births. The main causes of antepartum stillbirths were fetal-related, including unspecified causes (33.7%), hypoxia (33.7%), congenital and chromosomal abnormalities (13.3%), disorders of growth and gestational age (10.8%), infection (2.4%), and other prenatal conditions (6%). Maternal-related causes included complications of the umbilical cord, placenta, and membranes (48.7%), pregnancy complications (23.1%), and maternal medical/surgical conditions (23.1%).

Regarding intrapartum stillbirths related to fetal conditions, the causes were distributed as follows: congenital malformations and chromosomal abnormalities (33.3%), other specified intrapartum disorders (33.3%), and unspecified intrapartum death (33.3%). For intrapartum stillbirths linked to maternal conditions, the distribution was: complications of the placental cord and membranes (33.3%), and no maternal-related causes (66.7%). The stillbirth rate did not vary significantly by health sector, maternal age, educational level, income, or employment status. However, it showed significant variation based on fetal plurality, birth weight, and gestational age. The rate per 1,000 births was markedly higher in multiple deliveries compared to singletons (8.7 in singletons, 24.1 in twins, 69.8 in triplets, and 375.0 in quadruplets). Additionally, the stillbirth rate was significantly higher among small-for-gestational-age (SGA) births compared to appropriate-for-gestational-age (AGA) births.

#### ■ High-risk pregnancies (high-risk reproductive behavior)

Pregnancy outcomes depend on several risk factors, including maternal age, previous interpregnancy interval, and birth order. Pregnancy loss is likely to be higher among mothers with one or more of these risk factors.

According to the Jordan Population and Family Health Survey 2023, approximately 26.2% of births in the five years preceding the survey were not exposed to any high risk, while 18.1% of births fell into the unavoidable risk category (first births to women aged 18-34 years). The survey revealed that 34.8% of births occurred in the single high-risk category (maternal age <18 years, maternal age >34 years, interpregnancy intervals <24 months, or birth order >3). Additionally, 20.9% of births were in the multiple high-risk categories.

Approximately 81% of currently married women could belong to any avoidable high-risk category if they were pregnant at the time of the survey. Of these, 54% might fall into the multiple high-risk categories, 27% into the single high-risk category, and 14% of currently married women do not belong to the unavoidable risk category.

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<sup>4</sup> تم إنشاء هذا النظام عام 2019 لجمع وتنظيم وتحليل ونشر البيانات عن حالات الإملاص ووفيات الأطفال حديثي الولادة والظروف المساهمة فيها في خمسة مستشفيات كبيرة تقع في ثلاث من أكبر المدن في الأردن.

## ■ Risk Factors

Identifying women at risk of pregnancy loss, managing pre-existing high-risk conditions, and improving access to family planning services for women of advanced maternal age can mitigate miscarriage risk. A 2023 study<sup>5</sup> titled 'Risk Factors for Miscarriage Among Syrian Refugees in Non-Camp Settings in Jordan' analyzed 307 Syrian refugee women (aged ≥18) attending four NGO clinics across Al-Mafraq, Amman, Zarqa, and Irbid, all with singleton pregnancies ending in live birth (85%) or miscarriage (15%). Findings revealed that 96.4% received reproductive health services post-displacement, while 3.6% (11 women, including 6 needing care) received none. Miscarriage cases showed significantly higher rates of thyroid disorders (22.2% vs. 6.1%), advanced maternal age (30.2% vs. 11.1%), and lower prenatal care uptake (54.5% vs. 97.7%). Multivariate analysis confirmed elevated miscarriage odds among women with thyroid disease, advanced age, or no prenatal care

## ■ Psychological Consequences of Pregnancy Loss and Required Support

Fetal loss is a significant risk factor for maternal anxiety and depression, underscoring the importance of proper medical and psychological counseling to alleviate post-miscarriage distress. A study<sup>6</sup> titled "Anxiety and Depression in Women Following Miscarriage at Jordan University Hospital" involving 200 women who experienced early pregnancy loss (up to 13 weeks gestation) between June 2018 and November 2019 assessed anxiety and depression levels within 12 hours using validated Arabic versions of the Anxiety Disorder Questionnaire and Patient Health Questionnaire for Depression. The results revealed that immediately after pregnancy termination, 19.5% of women suffered from severe anxiety while 22.5% exhibited moderate-to-severe depressive symptoms. Comparative analysis of subgroups showed that among women with more than two miscarriages, 21.7% experienced severe anxiety and 20.7% had moderate-to-severe depression, whereas among nulliparous women (those with no prior live births), these figures were 18.5% and 22.2% respectively. These findings highlight the critical need for targeted psychological support and mental health interventions for women following pregnancy loss, particularly for those with recurrent miscarriages or without previous successful pregnancies.

Emotional support from healthcare providers, friends, and family is crucial in helping women cope with their loss and move forward, with lack of such support being associated with increased negative emotions among women who experience miscarriage. A study<sup>7</sup> titled "Coping with Miscarriage in Jordan: Understanding Emotional Responses and Coping Strategies" utilized an online questionnaire to collect data from 355 married women living in Jordan who had experienced

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<sup>5</sup> Maysa M. Khadra, Haya H. Suradi<sup>2</sup>, Justin Z. Amarin, Nabila El-Bassel<sup>3</sup>, Neeraj Kaushal<sup>3</sup>, Ruba M. Jaber, Raeda Al-Qutob<sup>4</sup> and Anindita Dasgupta, Risk factors for miscarriage in Syrian refugee women living in non-camp settings in Jordan: results from the Women ASPIRE cross-sectional study, Khadra et al. *Conflict and Health* (2022) 16:32, <https://conflictandhealth.biomedcentral.com/articles/10.1186/s13031-022-00464-y>

<sup>6</sup> Asma Sa'd Basha and others, Anxiety and Depression among Women after Miscarriage at Jordan University Hospital, *J Med J* 2020; Vol. 45 (3):137-144, <https://archives.ju.edu.jo/index.php/jmj/article/view/106236/11401>

<sup>7</sup> Esra' Taybeh, Shereen Hamadneh, Zina Al-Alami & Rana Abu-Huwaij, Navigating miscarriage in Jordan: understanding emotional responses and coping strategies, *BMC Pregnancy and Childbirth* (2023) 23:757 -<https://doi.org/10.1186/s12884-023-06075-6>

pregnancy loss. The findings revealed that all participants had suffered miscarriages, with 53.8% experiencing one loss, 27.0% two losses, and 19.2% three or more losses. Treatment approaches varied among participants: 48.7% underwent surgical procedures, 36.1% opted for expectant management (waiting for spontaneous miscarriage), and 15.2% used medication to help expel uterine tissue. The study underscores how the absence of adequate emotional support exacerbates psychological distress following pregnancy loss, while highlighting the diverse medical approaches employed in managing miscarriage cases within Jordan's healthcare context.

Regarding the emotional impact following miscarriage, nearly half of participants (48.7%) felt they had lost a child, while 23.1% experienced feelings of loneliness. Additionally, 19.7% reported guilt, and 12.1% felt mildly distressed. In contrast, 48.5% of participants believed their miscarriage was fate and were able to accept it.

The majority of participants reported receiving adequate emotional support from their husbands (63.7%), family (62.3%), friends (19.7%), and medical staff (14.4%), while 10.4% reported receiving no social support whatsoever. Notably, women who lacked social support were more likely to feel they had lost a child. Regarding coping strategies to reduce negative emotions post-miscarriage, seeking social support was most common (53.5%), followed by using vitamins (16.9%) and spiritual rituals (15.2%). However, 33.2% reported doing nothing to alleviate their distress. The study further revealed that 40.3% of participants decided to delay another pregnancy, 20.0% planned a subsequent pregnancy, while 39.7% remained uncertain about future pregnancies.

#### ■ Variables Related to Pregnancy Loss

A Jordanian study<sup>8</sup> on fetal mortality variations examined the association between socioeconomic/demographic factors and fetal death rates (including miscarriage, induced abortion, and perinatal mortality) using data from the 2002 Family Health and Population Survey. Employing descriptive statistical models, mean comparison analysis, and chi-square tests, the study revealed that 38% of sampled women had experienced fetal death during their reproductive years, with most cases occurring under medical supervision. Key findings demonstrated statistically significant relationships between fetal mortality and these independent variables: maternal education level, age at marriage, current age, family size, and prior contraceptive use. Conversely, variables including husband's education level, spousal consanguinity, maternal employment status, premarital medical screening, and religion showed only marginal or statistically weak associations with fetal mortality rates.

#### ■ Population and Family Health Surveys and Pregnancy Loss Data

The 2023 Population and Family Health Survey included a set of questions about maternal healthcare for women who gave birth to a live or stillborn child in the two years preceding the survey, focusing on their most recent live birth or stillbirth. The questions covered whether they received healthcare during pregnancy, whether they were administered a tetanus vaccine, who assisted

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<sup>8</sup> كرادشة، منير، تباينات ومحددات وفيات الأجنة في الأردن ، مجلة المنارة-المجلد 12-العدد 1- 18-4-2005 ص 345-383

during delivery, the place of delivery, as well as postnatal care for the most recent birth. Providing prenatal care by a qualified healthcare provider is essential for monitoring pregnancy and reducing the risks of morbidity and mortality for both mother and child during pregnancy, delivery, and the postpartum period (i.e., within 42 days after birth).

Prenatal care in Jordan is comprehensive and widely accessible, with 97% of women receiving care from a qualified health professional (doctor, nurse, or licensed midwife) for their most recent live birth or stillbirth in the two years preceding the 2023 survey. Notably, 63.8% of women attended 8 or more prenatal visits during their last pregnancy. Among those who did not receive prenatal care, the primary reasons were: high costs (50%), closure of health facilities (21%), needing to care for other children (12.7%), and lack of transportation (8%). The proportion of women receiving skilled prenatal care has shown remarkable progress, rising from 84% in 1990 to 99% in 2007, and stabilizing at 97% in 2023.

#### **(A) Pregnancy Loss: Timing, Variation by Maternal Age and Nationality**

A study<sup>9</sup> analyzing data from the 2017-2018 Jordan Population and Family Health Survey revealed that pregnancy loss risk was highest among mothers under 20 and over 40 years old. Nationally, there were 159 pregnancy losses per 1,000 live births in the five years preceding the survey, with Irbid governorate recording the highest rate at 211 losses per 1,000 live births. The study found that approximately one quarter of women (25.3%) had experienced at least one pregnancy loss over the past four decades (1975-2018), with 40.8% (1,319 out of 3,236 cases) occurring in just the five years before the survey (2012-2017). Notably, 60% of these recent cases were concentrated in the final three years of that period (2015-2017), indicating a concerning acceleration in pregnancy loss rates<sup>10</sup>.

The study findings regarding the timing of pregnancy loss revealed that most losses (77.3%) occurred during the first trimester (months 2-3), though cases were reported across all gestational months up to delivery. Notably, pregnancy loss was frequently followed by rapid subsequent conception due to: (1) the biological drive to compensate for the lost pregnancy, (2) absence of lactation (since no live birth occurred to trigger breastfeeding), and (3) inadequate post-miscarriage family planning counseling services. This pattern highlights critical gaps in reproductive healthcare, particularly the need for improved postpartum support and contraception guidance following pregnancy loss<sup>11</sup>.

The 2017/2018 Population and Family Health Survey revealed significant disparities in perinatal mortality rates across Jordan, with a national average of 13 deaths per 1,000 pregnancies. This rate increased substantially among high-risk groups, reaching 20 per 1,000 for pregnant adolescents (under 20 years) and Syrian refugee mothers, and spiking to 35 per 1,000 for women aged 40-49. More recent data from the 2023 survey shows a slight national improvement to 11 perinatal deaths per 1,000 pregnancies, though concerning elevations persist among vulnerable populations: 12 deaths per 1,000 for women aged 20-39 and Syrian

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<sup>9</sup> The DHS Program. 2020. Jordan Family Planning Questions. DHS Other Documents No. 79. Rockville, Maryland, USA: ICF.

<sup>10</sup> Ibid.

<sup>11</sup> Ibid.



mothers, 19 per 1,000 for women in the second wealth quintile, and 20 per 1,000 for pregnancies occurring within 15 months of a previous birth.

## (B) Twin Pregnancy and Pregnancy Loss

A multinational study of 29 countries including Jordan found significantly higher risk of fetal death (after 28 weeks) in twin pregnancies compared to singletons<sup>12</sup> - 1.8 times greater for the first twin and 2.9 times for the second twin<sup>13</sup>. The Jordan Stillbirth and Neonatal Death Surveillance System (JSANDS) study<sup>14</sup> (August 2019-January 2020) analyzed all births across five major hospitals (three public, one private, one teaching) in Jordan's largest cities, achieving 100% completion. Defining stillbirth as fetal death  $\geq 24$  weeks and calculating rates per 1,000 total births, the study recorded 10,328 births including 102 stillbirths (88 antepartum, 14 intrapartum), yielding a 9.9/1,000 rate. Stillbirth rates varied dramatically by plurality: 8.7/1,000 for singletons, 24.1 for twins, 69.8 for triplets, and 375.0 for quadruplets. New 2024 regulations<sup>15</sup> under Jordan's Private Hospitals System now limit embryo transfers in private IVF units to  $\leq 2$  embryos ( $\leq 3$  for women  $\geq 40$  years) with penalties for non-compliance, aiming to reduce pregnancy losses associated with multiple gestations.

## (C) Levels and Disparities of Pregnancy Loss in Jordan: Evidence from the 2023 Population and Family Health Survey

According to the 2023 Population and Family Health Survey results, not all pregnancies in the past three years resulted in live births (Figure 2). The data showed that 86.4% of pregnancies ended in live births, while 13.6% resulted in pregnancy loss. These losses comprised: spontaneous abortions (pregnancy loss before 28 weeks) accounting for 12.4%, stillbirths (fetal death after 28 weeks of gestation) representing 0.3%, and induced abortions making up 0.9% of cases. This distribution highlights that spontaneous early pregnancy loss constitutes the vast majority (91.2%) of all pregnancy losses in Jordan, with intentional terminations and late fetal deaths being relatively rare occurrences.

<sup>12</sup> موت الجنين بعد 28 أسبوعاً من الحمل، ولكن قبل الولادة أو أثناءها

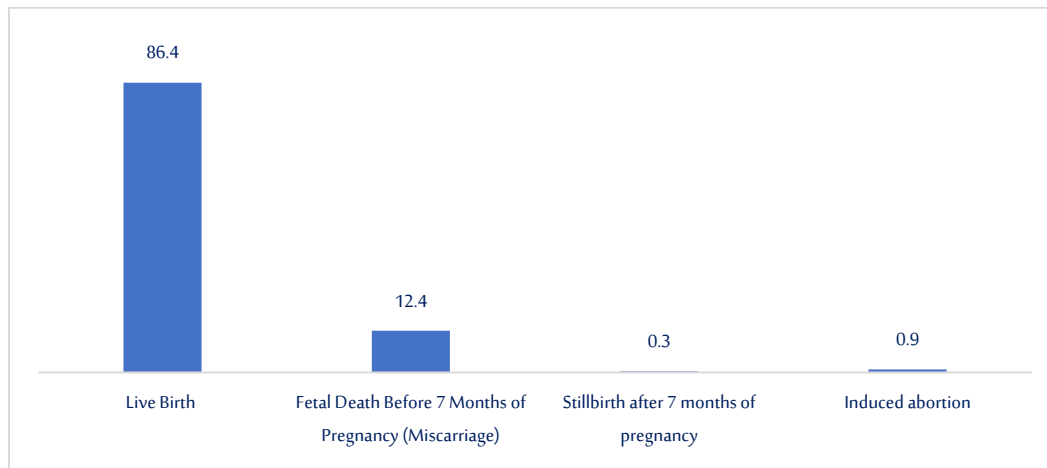
<sup>13</sup> موت الجنين بعد 28 أسبوعاً من الحمل، ولكن قبل الولادة أو أثناءها

<sup>14</sup> Khulood K. Shattnawi, and others, Rate, determinants, and causes of stillbirth in Jordan: Findings from the Jordan Stillbirth and Neonatal Deaths Surveillance (JSANDS) system, BMC Pregnancy and Childbirth (2020) 20:571,

<https://bmcpregnancychildbirth.biomedcentral.com/articles/10.1186/s12884-020-03267-2>

<sup>15</sup> الجريدة الرسمية، العدد 5028، تعليمات إنشاء وحدات الإخصاب/ وحدات أطفال الأنابيب لدى المستشفيات الخاصة لسنة 2024، والصادرة بمقتضى المواد (9/ق) و (19/ج) و (22/و) من نظام المستشفيات الخاصة رقم (54) لسنة 2014 وتعديلاته.

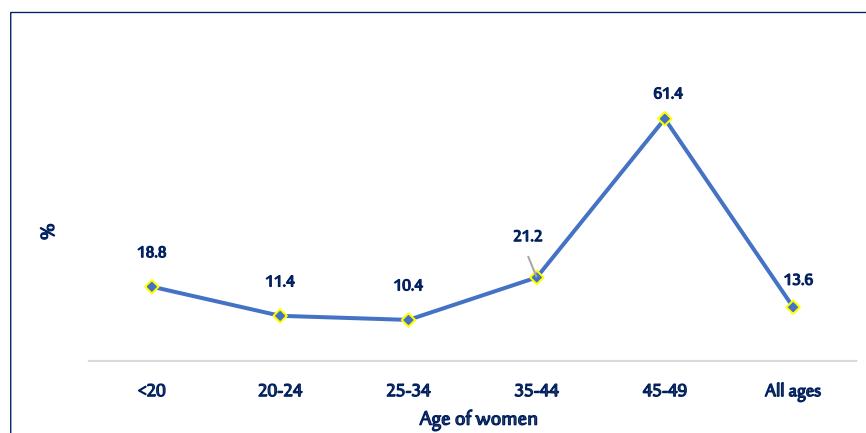
**Figure (2): Percentage Distribution of Pregnancy Outcomes Among Women in the Past Three Years**  
(2023 Survey Data)



- The likelihood of pregnancy loss is significantly higher among both older women and those under twenty years of age.

National data reveals that 13.6% of pregnancies among women aged 15-49 ended in loss over the past three years, with striking age-based disparities: adolescents (<20 years) showed the highest rate (18.8%), followed by a decline for women aged 20-29, and a progressive increase among those ≥35 years—peaking again after age 40. This U-shaped trend (Figure 3), consistent with the 2017-2018 Population and Family Health Survey analysis<sup>16</sup>, underscores the dual vulnerability of very young and older mothers, attributed to biological immaturity in teens and rising chromosomal risks with advanced age.

**Figure (3): Percentage of Pregnancies Among Women in the Past Three Years That Did Not Result in a Live Birth, by Age Group (2023)**

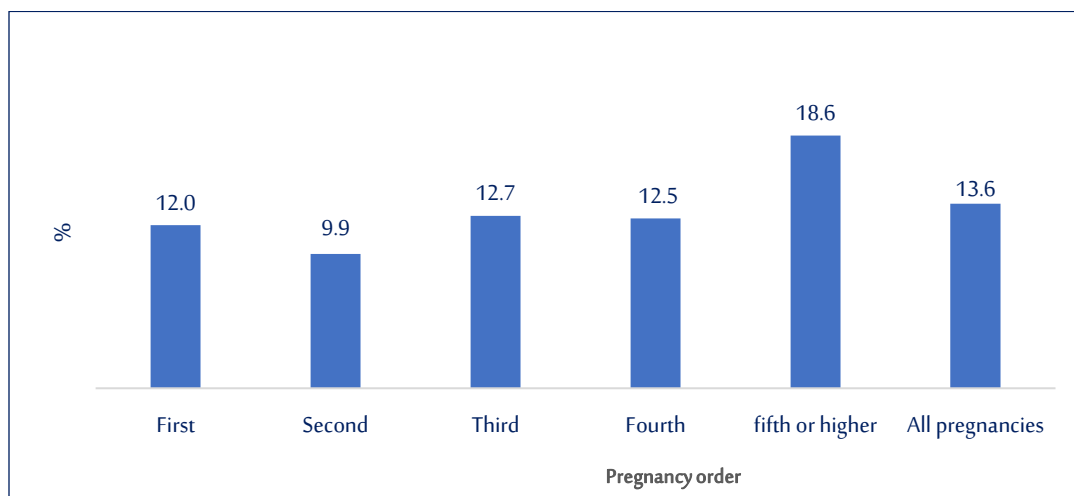


<sup>16</sup> The DHS Program. 2020. Jordan Family Planning Questions. DHS Other Documents No. 79. Rockville, Maryland, USA: ICF.

- **Pregnancy Loss Risk Increases with Higher Parity (Number of Previous Pregnancies)**

Findings from the 2023 Jordan Population and Family Health Survey reveal a significant association between pregnancy order and loss risk (Figure 4). The data demonstrate that 18.6% of pregnancy losses occurred in fifth or higher-order pregnancies, indicating progressively elevated risk with increasing parity. Comparative rates for lower-order pregnancies show: first pregnancies (12.0%), third (12.7%), and fourth (12.5%) had similar loss percentages, while second pregnancies recorded the lowest risk (9.9%).

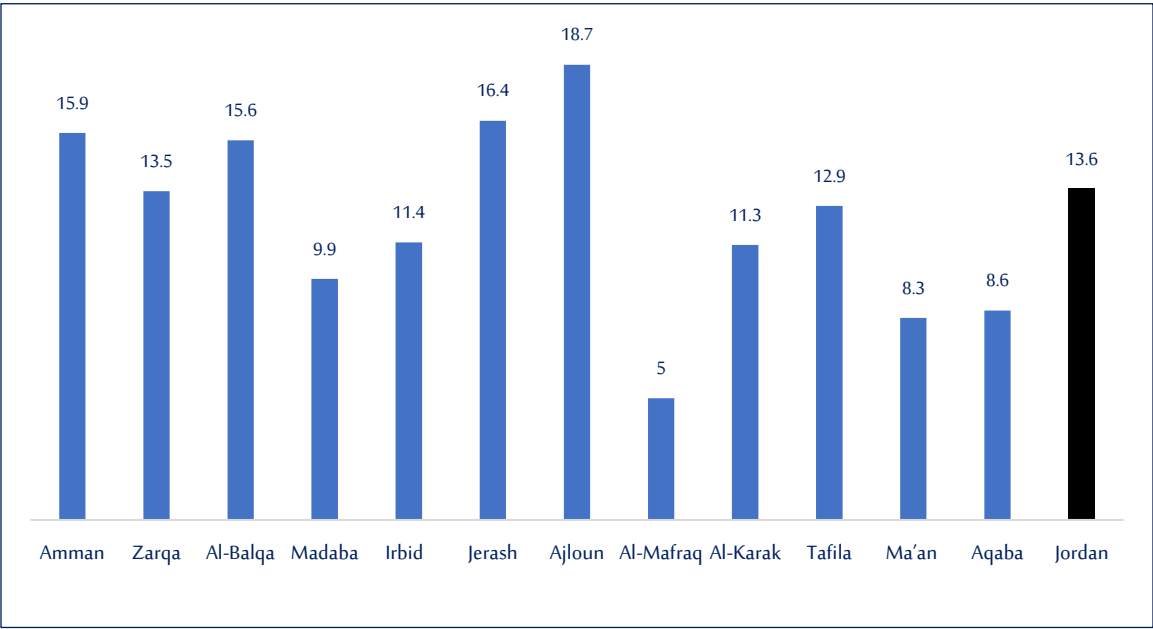
**Figure (4): Percentage of Pregnancies in the Past Three Years That Did Not Result in Live Births by Pregnancy Order (2023)**



- **The rate of pregnancy loss differs across governorates.**

When comparing pregnancies that did not result in a live birth over the past three years by governorate (Figure 5), significant variations are observed. Ajloun Governorate ranked first, with a pregnancy loss rate of 18.7%, followed by Jerash, the Capital Governorate (Amman), and Al-Balqa at (16.4%, 15.9%, and 15.6%) respectively. In contrast, Al-Mafraq recorded the lowest rate, with only 5% of pregnancies lost, compared to the national average of 13.6%.

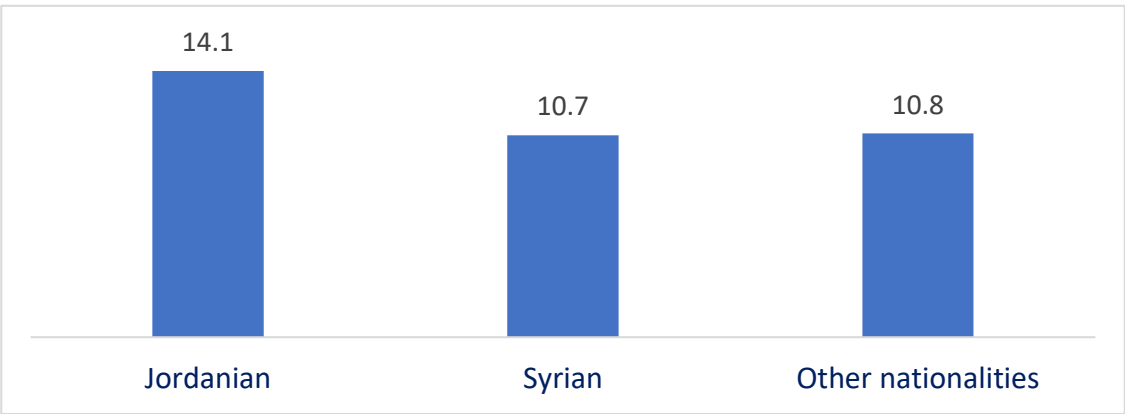
**Figure (5): Percentage (%) of pregnancies that did not result in a live birth in the last three years by governorate (2023).**



▪ **Pregnancy loss rates vary by nationality**

The rate of pregnancy loss is higher among Jordanian women compared to women of other nationalities. Over the past three years, 14.1% of Jordanian women experienced pregnancy loss, compared to 10.7% among Syrian women and 10.8% among women of other nationalities.

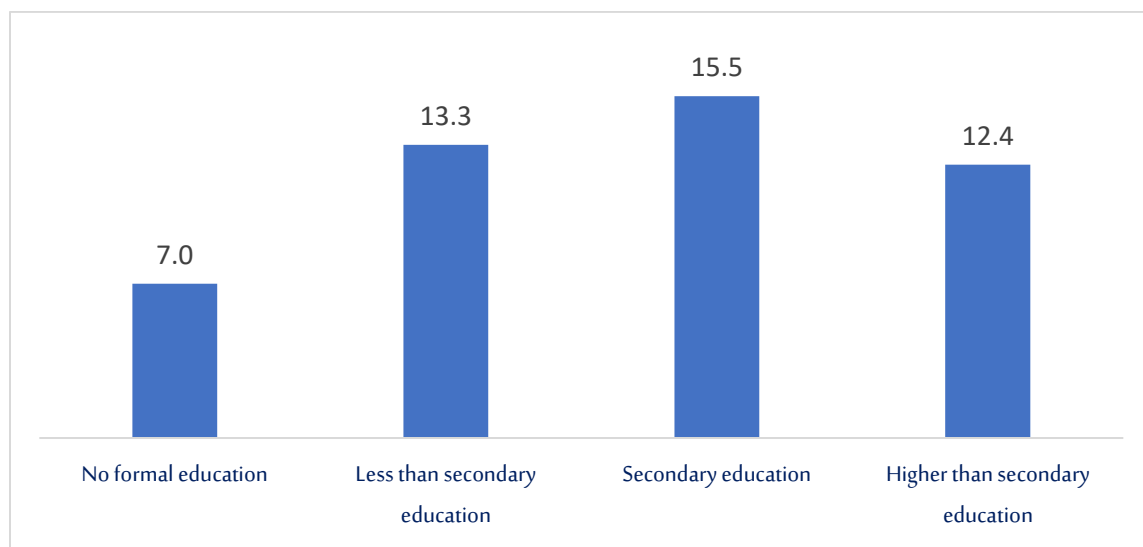
**Figure (6): Percentage (%) of pregnancies that did not result in a live birth in the past three years, by nationality (2023).**



- **Pregnancy loss rates vary by women's educational level**

Education is one of the non-biological variables influencing pregnancy outcomes. However, no clear relationship was observed between educational attainment and pregnancy loss risk. Contrary to expectations, the lowest risk of pregnancy loss occurred among women with the lowest education levels compared to other groups. The rate was only 7% among illiterate women, versus 13.3% and 15.5% for those with less-than-secondary and secondary education, respectively. Notably, illiterate women had the lowest proportion (7.0%) (Figure 7).

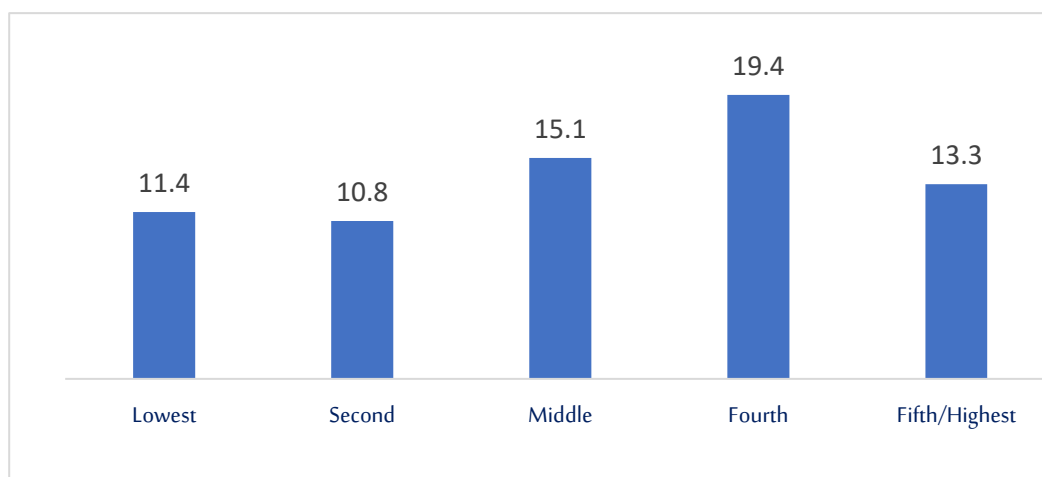
**Figure (7): Percentage (%) of pregnancies not resulting in live birth by maternal educational attainment (2021-2023)**



- **Pregnancy loss rates vary by household welfare level**

The 2023 Population and Family Health Survey results revealed that women in the fourth welfare quintile (19.4%) and middle welfare level (15.1%) were at significantly higher risk of pregnancy loss over the past three years compared to other welfare groups (see Figure 8). This disparity may be attributed to welfare level's role in women's utilization of assisted reproductive technologies (ART) such as IVF and ICSI.

**Figure 8: Percentage (%) of pregnancies not resulting in live birth by household wealth quintile (2021–2023)**



### Recommendations

- Early identification of high-risk pregnancies and ensuring rigorous antenatal care throughout gestation.
- Fetal loss is a risk factor for maternal anxiety and depression. Appropriate medical and psychological counseling is strongly recommended to mitigate post-pregnancy loss psychological distress.
- Improve stillbirth reporting by collecting comprehensive and accurate information on stillbirth cases, as this would help assess the effectiveness of efforts to prevent stillbirths.
- Enhance the quality of maternal healthcare services (antenatal, intrapartum, and postpartum care) through increased investment in prenatal and delivery services, while strengthening the role of nurses and midwives in managing high-risk pregnancies.
- Increase public awareness about the risks of high-risk pregnancies and ways to avoid them, particularly those related to pregnancy under the age of 18 or over 35, short birth intervals, multiple births, and the potential risks associated with assisted reproductive technologies.
- Raise awareness about the risks of multiple pregnancies for both the mother and the newborn.
- Conduct further research on the causes related to stillbirth.
- Reduce the number of embryos transferred in IVF procedures by implementing a Single Embryo Transfer (SET) policy, focusing on achieving successful singleton live births as globally recommended. This recommendation comes despite Jordan's newly issued 2024 regulations governing private IVF clinics, which impose penalties for transferring more than two embryos as a general rule, with a maximum of three embryos permitted only for women aged 40 years and above.

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