

Suicidal Ideations: Prevalence And Risk Factors During Pregnancy in Windhoek/ Namibia

Ms. Matride Tulela Amwaalanga¹, Dr. Saara Kerthu Hatupopi²,
Dr. Tuwilika n/a Endjala³, Dr. Petrus Iiyambo⁴

¹Lecturer, Midwifery, University of Namibia

²Senior Lecturer, Midwifery Department, University of Namibia

³Senior Lecturer, Community and Mental Health, University of Namibia

⁴Senior Lecturer, 2Department of Statistics, University of Namibia

Abstract

Background: Suicidal ideation indicates a significant risk of suicide, a leading cause of death during pregnancy. A research gap exists concerning suicidal ideation among pregnant women, especially in low- and middle-income countries like Namibia. This underscores the importance of identifying risk factors for policy development.

Aim: This study aimed to estimate the prevalence of suicidal ideation and its associated risk factors during pregnancy.

Methods: A cross-sectional study included 202 women aged 16-41 (mean age=28.51 years). The study used the Edinburgh Postnatal Depression Scale (EPDS), focusing on question 10 to assess suicidal thoughts, the Antenatal Risk Questionnaire (ANRQ), and a sociodemographic survey. Data were analysed using SPSS software. Bivariate analysis and cross-tabulation were used to examine links between suicidal ideation and risk factors.

Findings: Results indicate that 21.8% of the pregnant women experienced suicidal ideation, which was closely associated with antenatal depression (62.4%). Risk factors for suicidal ideation included sociodemographic factors such as marital status (Cramér's $V=0.193$, $p=0.023$). Additional risk factors included gender-based violence, job loss, bereavement, lack of partner support, and pregnancy denial.

Conclusion: The findings highlight the urgent need to integrate mental health screening into routine antenatal care. Addressing perinatal depression and its risk factors could help reduce suicidal ideation and improve maternal well-being. Future research should investigate the impact of suicidal ideation on birth outcomes and postpartum depression.

Keywords: Antenatal depression, Suicidal ideation, Suicidal thoughts, Suicide attempts, Risk factors

Introduction and Background

Suicide is a leading cause of maternal death worldwide (Gelaye et al., 2016), with higher risks of suicidal ideation among pregnant women in some regions (Rodriguez et al., 2018; Ehlman et al., 2022). A significant proportion of women who die by suicide will have had previous ideation or attempts. A recent meta-analysis found that the global incidence of suicide attempts is 680 per 100,000 during pregnancy and

210 per 1000,000 postpartum (Rao et al., 2021). This is an even greater health concern among pregnant women.

Wasserman (2016) defines suicide ideation (SI) or suicide attempts (SA) as thoughts of harming oneself or attempting to take one's own life. SI involves intentional self-harm to end one's life, regardless of the outcome (Dowie, 2020). Dowie (2020) recommends viewing suicide as self-killing, highlighting its psychological and sociological dimensions.

Most data on antepartum suicidality come from developed countries, such as China and the USA, with prevalences of 6.7% and 8.8%, respectively (Zhong et al., 2016; Knettel et al., 2020). Data from LMICs is slowly emerging, with African rates ranging from 12.8% during pregnancy to 3.9% postpartum (Anbesaw et al., 2021). Prevalence rates are 13.3% in Ethiopia, 17.6% in South Africa, and 25% in Sri Lanka (Palfreyman, 2021; Mebrahtu et al., 2020).

Pregnant women experiencing suicidal ideation SI or SA face complex challenges that require psychological and spiritual support (WHO, 2020). Univariable analyses associate suicidal SI with depression, anxiety, HIV stigma, being single, unknown paternal HIV status, negative perceptions of antiretroviral medications, and low social support (Anbesaw et al., 2021). One study reported a 29.3% antepartum suicidality rate influenced by factors such as income, violence, reproductive history, depression, and family history of suicide (Moustafa et al., 2019). Legazpi et al. (2017) found that 2.6% of pregnant women experienced suicidal thoughts, linked to sociodemographic and biomedical factors like previous depression and abortions. Literature indicates that socioeconomic status, mental health awareness, and healthcare access impact these rates, highlighting the need for a comprehensive approach to reduce SI among pregnant women (Abrahams et al., 2018).

In Namibia, most research focuses on suicide in the general population. The World Health Organization reports Namibia has Africa's highest suicide rate at 9.7 per 100,000. According to a 2018 report by the Ministry of Health and Social Services [MoHSS], Namibia's suicide rate in 2015 was 22.1 per 100,000, which exceeds the global average of 11.4. This high rate in the general population may increase the risk of SI in pregnant women, potentially leading to complete suicide if unaddressed.

Limited research has explored the factors linked to SI among pregnant women in Namibia. Only one qualitative study was identified, involving 21 women with depressive symptoms, four of whom reported suicidal thoughts (Hatupopi, 2023). Factors contributing to these SI included financial difficulties, unemployment, poverty, lack of social support, gender-based violence, paternity denial, partner rejection, unplanned adolescent pregnancies, and HIV-positive status. The participants believed their social challenges contributed to their burdens, which in turn led to SI. Some also believed that ending their life would free them from all their problems. These societal challenges led to feelings of despair and hopelessness, driving some women to think about suicide (Hatupopi, 2023). Such factors influence SI during pregnancy, highlighting a crucial mental health issue that requires specific intervention (Hatupopi, 2023; WHO, 2016). Addressing these problems is essential for the health of pregnant women. Suicidality impacts mental health, quality of life, and both maternal and fetal health (Wie et al., 2019; Rao et al., 2021). This study aims to close this knowledge gap by improving early detection of at-risk pregnant women to facilitate timely psychosocial support. It will assess the prevalence and factors associated with suicidal ideation among pregnant women in Namibia.

Methods

Study area, design.

A cross-sectional study was conducted at Katutura Hospital and Windhoek Central State Hospital in Windhoek, Namibia, both of which serve as perinatal clinics. Approximately 5,000 women seek care at these clinics annually. The study was conducted from June 1 to October 1, 2024, and included all pregnant women attending these clinics. Admitted patients, women with chronic mental illness, and those with communication difficulties were excluded.

Sample size determination and sampling technique.

A sample of 202 participants was selected from a list of 425 pregnant women who attended perinatal care at the two clinics, using a 1-in-k systematic random sampling (where $k=2$). Systematic random sampling was used because the sampling frame was available, and it ensures an even distribution across the population. Participants were proportionally allocated based on each hospital's average attendance. Hospital records indicate that approximately 100 women seek antenatal care each month. The sample size of $n=202$ is required to achieve a 95% confidence level and a 5% margin of error for a population size of size N was calculated as follows:

$$n = \frac{0.5(1 - 0.5)N}{0.5(1 - 0.5) + (N - 1)(\alpha/Z_{\alpha/2})^2}$$

where a distribution of the respondents 0.5 gives a conservation sample size, α = margin of error, and hence for $\alpha = 0.05$, $Z_{\alpha/2} = 1.96$ according to the standard normal distribution table.

Data collection instruments and procedures

Data were gathered through in-person screening using the Edinburgh Postnatal Depression Scale (EPDS) and the Antenatal Risk Questionnaire (ANRQ). EPDS is a widely used screening tool for detecting depressive symptoms. Originally designed for use during the postnatal period, it has also been validated for the treatment of antenatal depression in various countries and settings (Faisal-Cury et al., 2022; Molla et al., 2022). The questionnaire comprises 10 items that evaluate emotional state over the past week, with each item offering four answer choices scored from 0 to 3. The highest possible score is 30. Items include depression, self-blame, anxiety, fear, coping skills, sleep issues, sadness, tearfulness, and self-harm thoughts. In the EPDS, question 10, which addresses thoughts of self-harm, is scored with 0 for "No, never," 1 for "Only occasionally," 2 for "Yes, sometimes," and 3 for "Yes, quite often." Higher scores on this question reflect more frequent self-harm thoughts over the past week, serving as a key indicator of potential risk. Suicidal ideation was evaluated through question 10 of the EPDS. To further explore the underlying causes of these SI, the women who participated were screened using the ANRQ.

The questionnaire included information on sociodemographic characteristics, obstetric-related factors (such as trimester of pregnancy), behavioral characteristics, and mental health. Recruitment was conducted after obtaining written informed consent. Mothers were enrolled until a convenience sample of 202 was reached. Researchers explained the study's purpose, benefits, and risks to participants before obtaining their consent. Eligible participants signed the consent form and received a study number. Before data collection, the questionnaire was pretested on 5% of pregnant women at a separate facility to validate it. Originally in English, the questionnaire was not translated. The psychosocial risk factors data were collected via in-person interviews by two researchers in a private room. All women were referred to a social worker within the health facilities for additional support.

Data quality control

Midwifery lecturers collected the data, with the team leader providing training on data collection, tool use,

and ethics. Face-to-face interviews were conducted in a welcoming environment.

Ethics statement

All procedures followed ethical standards and the Declaration of Helsinki. Ethical approval was obtained from the Research Grant Committee and the Ministry of Health. Written consent was secured from hospital heads and participants. Confidentiality was maintained, and women with suicidal thoughts were referred to psychiatric services. Interviewers were trained to connect at-risk participants with mental health professionals.

Results

Socio-demographic characteristics of participants

Table 1: Frequency distribution of socio-economic and demographic characteristics, level of pregnancy, suicidal behaviour, depression status, and other psychosocial risk factors (n=202).

<i>Characteristic</i>	<i>Number of respondents</i>	<i>Percentage (%)</i>
<i>Marital status</i>		
<i>Married</i>	76	37.6
<i>Single</i>	118	58.4
<i>Cohabiting</i>	8	4.0
<i>Highest level of education</i>		
<i>Tertiary</i>	71	35.1
<i>Secondary</i>	103	51.0
<i>Primary</i>	22	10.9
<i>None</i>	6	3.0
<i>Employment status</i>		
<i>Unemployed</i>	63	31.2
<i>Employed</i>	100	49.5
<i>Self-Employed</i>	39	19.3
<i>Pregnancy period</i>		
<i>Less than 3 months</i>	11	5.4
<i>3 - 6 months</i>	79	39.1
<i>7 - 9 months</i>	105	52.0
<i>Above 9 months</i>	7	3.5
<i>Depression status</i>		
<i>No depression</i>	78	38.6
<i>Depression</i>	124	61.4
<i>Thought of harming myself (Suicidal Ideation)</i>		
<i>Yes, quite often</i>	7	3.5
<i>Sometimes</i>	27	13.4
<i>Hardly ever</i>	10	5.0
<i>Never</i>	158	78.2
<i>Psychosocial risk factors</i>		
<i>Lack of social support</i>	118	58.4
<i>Separation</i>	20	9.9

<i>Loss of a loved one or bereavement</i>	36	17.8
<i>Domestic violence</i>	82	40.5
<i>Job losses</i>	15	7.4

Most respondents were single (58.4%) or married (37.6%); 97% had some education. Nearly half (49.5%) were employed, and 31.2% were unemployed. About 95% were at least three months pregnant. A total of 21.8% experienced suicidal thoughts. Data showed that 62.4% of the 202 pregnant women had depression during pregnancy. Concerning antenatal risk factors, 88.9% felt worried, miserable, or depressed for two weeks or more, which disrupted work and relationships (99% reported some level of disruption). Despite this, 95.4% did not seek professional help, though 66.7% of those who did seek help consulted a general practitioner. Most participants (58.4%) reported a lack of support from their partners. However, 76% experienced stress or losses like separation, domestic violence, and job loss.

Table 2: Descriptive statistics for the age of respondents (n=202)

Characteristic	Range	Minimum	Maximum	Mean	Std. Error	Std. Deviation
Age (years)	25	16	41	28.51	0.406	5.775

The average age was 28.51 years. There was no significant relationship between age and suicidal behaviours (Wald Chi-Square=1.509, df=1, p=0.219).

Table 3: Bivariate analysis between suicidal ideation and selected characteristics.

Characteristic	Pearson Chi-Square	Degrees of freedom	p-value
Marital status	7.650	2	0.023
Would you generally consider yourself a worrier?	10.814	3	0.013
In general, do you become upset if you do not have order in your life?	13.985	3	0.003

Only three traits, marital status, self-identification as a worrier, and distress over lack of order, were statistically significant (all $p < 0.05$). Overall, 21.8% considered self-harm, with higher rates among single (27.1%) and cohabiting (37.5%) individuals compared to married (11.8%) individuals. The association with marital status had a Cramer's V of 0.193 ($p = 0.023$).

A respondent who considered herself a worrier had a 41.9% chance of having self-harming thoughts. The association's strength was indicated by a Cramér's V of 0.297 ($p = 0.013$). The likelihood of experiencing self-harm thoughts increased with the severity of distress over a lack of order in life, with probabilities ranging from 7.1% to 48.4%. The Cramér's V value here was 0.343 ($p = 0.003$).

Discussion

This study investigated SI during pregnancy in Namibia. It highlights a significant gap in maternal mental health services. Although 98.6% of women have access to antenatal care, most have never been screened for depression or SI. This implies that access alone does not encourage help-seeking, potentially increasing the risk of SI and of maternal suicide. Perinatal mental health remains outside standard care. Few studies in Namibia have indicated that factors such as inadequate training, limited time, and referral difficulties

hinder screening (Hatupopi, 2023; Hatupopi et al., 2024). This analysis provides a foundational pattern for future studies.

This study found that the risk of SI during pregnancy rises with higher EPDS depression scores. Namibia's findings align with research from high-income nations, though prevalence rates vary. US studies using the EPDS have found prevalences of 4.6% (Tabb et al., 2019) and 3.8% (Kim et al., 2015), which are lower than the estimate of 21.8% in this study. Our findings are more consistent with studies from Brazil (25.7%) and Sri Lanka (23%) (Legazpi et al., 2022; Palfreyman et al., 2021) but higher than those from Ethiopia (Anbesaw et al., 2021). Variations may stem from differences in assessment methods, varying stages of pregnancy, and socioeconomic factors.

This study found that single and cohabiting women had significantly higher rates of SI than married women. The elevated levels of suicidal ideation might be influenced by the study setting. The government facilities serve many women facing gender-based violence, financial hardship, unemployment, and poverty, and most of the participants were single. These results align with a systematic review from Ethiopia, which indicated that nearly one in seven pregnant women experience suicidal thoughts, with key factors being marital status, depression, intimate partner violence, and limited social support (Yetwale et al., 2025). Research shows that suicidal thoughts are strongly linked to socioeconomic factors that lead to hopelessness. Additional contributors include intimate partner violence, chronic illnesses like HIV/AIDS, and social isolation (Govender et al., 2020; Elrefaay et al., 2023; Quarshie et al., 2025).

Among those affected, 88.3% felt quite a lot or very distressed by recent stressors, and 88.9% experienced prolonged episodes of worry or sadness. These feelings had a significant impact on their lives, with 99% reporting disruptions. These findings are consistent with a qualitative study in Namibia where participants reported feeling overwhelmed and struggling with daily functioning (Hatupopi, 2023). Depression notably increases suicide risk; mothers experiencing it often feel hopeless and may struggle with thoughts of ending their lives (O'Connor et al., 2020). Neurobiological factors, such as imbalances in neurotransmitters and cortisol levels, may also be involved (O'Connor et al., 2020). This study found the risk of SI was highest in the third trimester (52.0%), indicating increasing mental health issues as pregnancy progresses. This aligns with research showing that SI can peak late in pregnancy (Xiao et al., 2022).

In this study, 76% of participants faced stressors like separation, gender-based violence, job loss, or bereavement. Among those with SI, 58.4% lacked social support, mostly from their partner. These issues worsen mental health and increase SI and suicide risk. A review shows pregnant women are more likely to have SI than the general population, especially when facing risks like intimate partner violence (Rodriguez et al., 2018).

Implications of the Findings

The study highlights the importance of incorporating routine mental health screenings into prenatal care. Incorporating assessments can enable early diagnosis and prompt intervention. Targeted interventions should address risk factors, including socioeconomic challenges and gender-based violence. Policy changes are necessary to prioritize the integration of maternal mental health.

The high SI rates among single mothers and the unemployed indicate a need for community support programs. The connection between socioeconomic factors and SI calls for further research to inform policies addressing social determinants, such as poverty. Improving access to mental health care in

government clinics through expanded services and trained staff is crucial. Raising awareness about perinatal mental health can foster a supportive environment and reduce stigma.

Continuous monitoring and evaluation of mental health interventions are crucial for assessing their effectiveness.

Strengths and limitations

The study's strengths include a large sample size and the use of standardized assessment tools. However, its cross-sectional design limits the ability to make causal inferences. Face-to-face interviews may introduce recall and social desirability biases. To mitigate this, an anonymous, confidential, self-administered questionnaire with openly phrased questions was used. Another limitation of the study is that it was solely conducted in urban areas and in English, which may have excluded important information.

Conclusion and recommendations

This study shows that suicidal ideation is common among pregnant women in Windhoek, driven by factors like depression, being single, unemployment, lack of partner support, abuse, and gender-based violence. The findings highlight the need for increased awareness and better mental health support during prenatal visits, especially for vulnerable women. Supporting these women can improve mental health and reduce suicidal thoughts.

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