Suicidal Ideation and the Role of Social Support Among Breast Cancer Patients in Syria

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Abstract

Background: Breast cancer patients often experience significant psychological distress, including suicidal ideation. Evidence from conflict-affected regions such as Syria is limited. This study assessed the prevalence of suicidal thoughts and identified associated factors among Syrian breast cancer patients.
Methods: A cross-sectional study was conducted at Al-Biruni University Hospital (April–August 2025) among 319 patients receiving chemotherapy. Data were collected through structured interviews and medical record reviews using PHQ-2, MSPSS, and C-SSRS. Statistical analyses identified predictors of suicidal ideation. **Results:** Suicidal ideation was reported by **8.2%** of participants. Significant psychological associations included depression (p=0.0014), anxiety (p<0.001), and low family support (p=0.0293). Clinical factors included advanced stage (p=0.0275), metastatic disease (p=0.0251), severe pain (p=0.0011), and lack of prior surgery (p=0.0057). Divorced status (p=0.0117) and residency (p=0.0039) were also associated. Among those with suicidal ideation, **5.2–5.6%** reported planning or intention. Religious (58%) and personal (46%) reasons were common deterrents. **Conclusion:** Suicidal ideation is a notable concern among Syrian breast cancer patients and is strongly linked to psychological distress, disease severity, and social vulnerability. Routine mental health screening and targeted psychosocial support are urgently needed in oncological care.

Introduction

Breast cancer is one of the most prevalent malignancies among women worldwide and is associated with substantial psychological distress, including depression, impaired body image, and reduced quality of life. Suicidal ideation is an important yet underrecognized concern in cancer care, with cancer patients demonstrating higher rates of suicidal thoughts and attempts compared to the general population, particularly in the context of advanced disease, unmanaged pain, and limited social support.

Social support serves as a key protective factor, positively influencing coping, emotional well-being, and overall adaptation to cancer. Despite global evidence, suicidality among breast cancer patients in Syria remains insufficiently studied. This study therefore aims to assess the prevalence and determinants of suicidal ideation and perceived social support among breast cancer patients at Al-Biruni University Hospital to inform the integration of mental health support into oncological care.

Methods and Materials

This institution-based **cross-sectional study** was conducted at Al-Biruni University Hospital in Damascus, Syria, the country's national cancer center. **Data collection** took place from April 1 to August 2, 2025. **Participants** were adults (≥18 years) diagnosed with breast cancer and receiving chemotherapy in the breast cancer unit during the study period. Individuals with known cognitive or psychiatric impairments that limited informed consent or communication were excluded. A total of 319 patients were included in the final analysis. Data were collected through **structured face-to-face interviews** conducted by the research team, supplemented by medical record review to obtain clinical and treatment-related information. **A pilot test** involving 27 participants was performed to ensure clarity of the translated instruments; no modifications were required, and pilot data were included. The questionnaire covered sociodemographic factors, clinical cancer characteristics, and behavioral history. **Standardized instruments** were used to assess key variables: the PHQ-2 for depressive symptoms, the MSPSS to measure perceived social support from family, friends, and significant others, and the suicidal ideation subscale of the C-SSRS to assess presence, severity, frequency, and deterrents of suicidal thoughts. **Ethical approval** was obtained from the Biomedical Research Ethics Committee at Damascus University (ID: MD-011024-317). Written informed consent was obtained from all participants, and confidentiality was maintained throughout. **Statistical analyses** included descriptive statistics and tests of association (chi-square and Fisher's exact tests). A p-value of <0.05 was considered statistically significant.

Table 1. Figure 1. Baseline Characteristics of the Study Population

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Characteristic	Value
Age, median (IQR)	49 years (42–57)
Sex	Female: 317 (99%)
	Male: 2 (0.6%)
Marital status	Married: 240 (75%)
	Single: 26 (8.2%)
	Divorced: 18 (5.6%)
	Widowed: 35 (11%)
Cancer stage (N=181)	Stage I: 27 (15%)
	Stage II: 47 (26%)
	Stage III: 27 (15%)
	Stage IV: 80 (44%)
Pain level (0–10) (N=312)	0–3: 53 (17%)
	4–6: 116 (37%)
	7–10: 143 (46%)

Results

A total of **319 breast cancer patients** were included in the analysis. The median age was **49.** Most participants were **female**, married, and resided primarily in Damascus and nearby regions. The majority had **secondary or university-level education**, and most were **unemployed**. Clinically, a substantial proportion presented with **advanced disease stages**, and **metastasis** was documented in a notable subset. Nearly all patients were currently receiving chemotherapy. Pain levels varied, with patients distributed across mild (0–3), moderate (4–6), and severe (7–10) categories. **Suicidal ideation (SI)** was reported by **8.2%** of participants. Most cases involved **passive ideation**, while **5.2–5.6%** of affected patients endorsed elements of **active ideation**, such as thinking about methods, planning, or intention to act. In bivariate analysis ($\chi^2 < 0.05$), SI was **significantly associated** with several factors. Psychological variables included **depression** (p = 0.0014), **anxiety** (p < 0.001), and **low family support** (p = 0.0293). Clinical factors associated with SI included **advanced stage** (p = 0.0275), **metastatic disease** (p = 0.0251), **severe pain** (p = 0.0011), and **absence of prior surgery** (p = 0.0057). Sociodemographic factors such as **divorced marital status** (p = 0.0117) and **residency location** (p = 0.0039) also showed significant associations. However, in the multivariable regression analysis, **none of these variables remained statistically significant**, indicating that although these factors are associated with suicidal ideation, they do not independently predict it when adjusted for other variables.

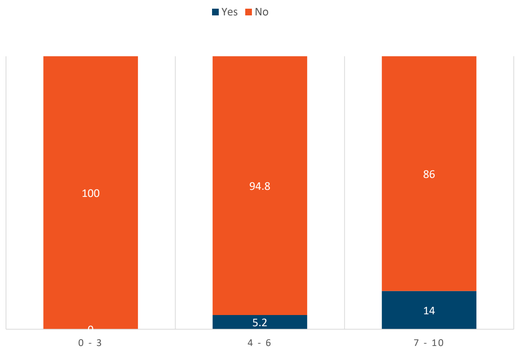


Chart 1. Association between Suicidal Ideation and Pain Level

Discussion

This study found that 8.2% of breast cancer patients reported suicidal ideation, consistent with global oncology data. Psychological factors—particularly depression, anxiety, and low family support—were key contributors, highlighting the need for routine mental health screening. Clinically, advanced stage, metastatic disease, severe pain, and lack of surgery were significant predictors, reflecting the heightened vulnerability of patients with greater disease burden. Sociodemographic factors such as divorced status and certain residency locations further increased risk. Although many patients identified religious or personal reasons as deterrents, a notable proportion exhibited planning or intention, underscoring the importance of early identification and intervention.

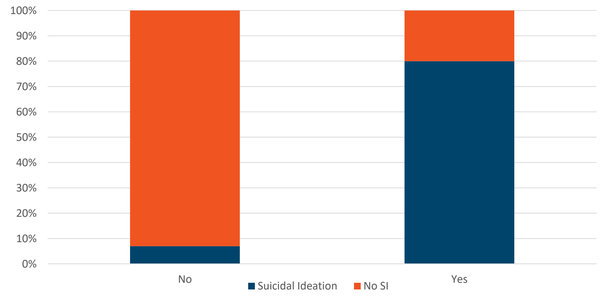


Chart 2. Association Between Suicidal Ideation and Anxiety

Conclusion

Suicidal ideation is a significant yet underrecognized concern among Syrian breast cancer patients. It is strongly associated with psychological distress, advanced disease, severe pain, and limited social or family support. Integrating routine mental health screening, psychosocial services, and targeted support for high-risk groups into oncology care is essential to improve patient well-being and reduce suicide risk in this vulnerable population.

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