Abstract

Objective: To synthesize scientific evidence about the factors associated with suicidal ideation in the puerperal period in the context of public health. Methods: Integrative review conducted by the guidelines of the Preferred Reporting Items for Systematic Reviews and Meta-Analyses protocol, carried out in July 2022, in the Medical Literature Analysis and Retrieval System Online, Web of Science, Latin American and Caribbean Literature in Health Sciences, Nursing Database, Spanish Bibliographic Index of Health Sciences, PsycINFO and Cumulative Index to Nursing and Allied Health Literature. Results: Seven studies were selected to compose this review. Factors associated with suicidal ideation in the puerperal period were younger, single, unemployed women, having an unemployed partner, having experienced intimate partner violence, having faced stressful events during pregnancy, previous experiences of abortion and marital dissatisfaction, depressive symptoms and other mental disorders (mood disorders, hypomanic symptoms, neuroticism and psychoticism). High self-esteem aimed to reduce ideas of suicide during the postpartum period. Being primigravid, having a harmonious relationship with the mother-in-law, and marital satisfaction were presented as protective factors. Conclusion: The synthesis of the studies showed the association of psychosocial, physiological and sociodemographic factors with suicidal ideation among puerperal women, as well as protective factors.

Descriptors: Postpartum Period; Suicidal Ideation; Public Health; Mental Health.

What is already known on this?
The current literature indicates that the risk factors for suicidal ideation in puerperal women include a history of depression, anxiety, domestic violence, lack of social support and others.

What this study adds?
The study identifies specific risk factors, providing information for health professionals, public managers and policy makers in the development of interventions that consider the particularities and risks associated with the mental health of puerperal women.
INTRODUCTION

The 1980s was a national milestone for attention focused on women, with the implementation of the Comprehensive Assistance Program for Women’s Health (PAISM). From then on, the female population began to be seen beyond its reproductive function. After the implementation of the Unified Health System (SUS), new policies for women were developed, including the National Policy for Integral Attention to Women’s Health (PNAISM), which addresses female diversity.\(^1\)

With PNAISM, there was a break in the paradigm that linked women’s health only to reproductive and sexual issues, expanding care beyond sociocultural factors.\(^2\) Among the various services offered by the SUS for women are consultations, examinations and monitoring. Among the most important are: mammography, Pap smear, vaccine against Human Papillomavirus (HPV), family planning and comprehensive care for pregnant women, from prenatal to puerperium.\(^1\)

Another important milestone was the implementation of the Stork Network, established through Ordinance number 1,459, of June 24, 2011, and amended by Ordinance number 2,351, of October 5, 2011, endorsing the effectiveness of the maternal and child care network.\(^3\) Care ranges from prenatal care, including specialized monitoring in maternity hospitals and/or reference centers, delivery, birth and puerperium.\(^4\)

The principles and concepts of reproductive health have been forming and amplifying their edges, and today represent a historical achievement for citizenship and human rights. Thus, from all these movements in favor of reproductive health, one can find, today, among reproductive rights: the right of women to decide, freely and responsibly, whether or not they want to have children, how many children they want to have and at what point in their lives; the right to access information, means, methods and techniques to have or not have children; and the right to exercise sexuality and reproduction free from discrimination, imposition and violence.\(^5\)

During pregnancy, there are several hormonal, emotional and social changes that may be intensified in the postpartum period and reported by women due to tiredness, crying and irritation, in
addition to the overload of social duties and demands.\(^{(6)}\) The transition from the role of "daughter" to the role of "mother", added to other factors, can favor the development of psychiatric disorders, such as: baby blues, puerperal psychoses, anxiety attacks and depression.\(^{(7)}\) In more severe cases, it can culminate in suicide.\(^{(8)}\)

Suicide is a complex and multifactorial phenomenon, which makes the current scenario worrying. The epidemiological profile of reported cases of self-inflicted violence, between 2011 and 2018, carried out by the Ministry of Health (MH), pointed out that women have a higher proportion of repetitive self-inflicted injuries when compared to the male public, and of the notifications of self-inflicted violence, 34% could be classified as attempted suicide.\(^{(9)}\)

It is also noteworthy that in the current context of the COVID-19 pandemic, maternal mental health must be monitored carefully, zealously and free from prejudice, since the impacts caused by this period of crisis can influence the period of delivery and postpartum. A recent study, carried out with 1,662 pregnant women, found the presence of moderate or severe maternal anxiety in 23.4% of the investigated women.\(^{(10)}\)

The absence of comprehensive data on prevalence and incidence, as well as on risk factors associated with suicidal ideation among postpartum women in various regions and cultural contexts, represents a significant gap in existing knowledge. In view of the context presented, the objective is to synthesize scientific evidence about the factors associated with suicidal ideation in the puerperal period in the context of public health.

**METHODS**

This is an integrative review, conducted from the guidelines of the *Preferred Reporting Items for Systematic Reviews and Meta-Analyses* (PRISMA) protocol.\(^{(11)}\) In this sense, the study was conducted in six stages: I) identification of the theme and formulation of the guiding question; II) establishment of the criteria for inclusion and exclusion of studies; III) delimitation of the information to be extracted from the selected studies; IV) analysis of the chosen studies; V) interpretation of the results; VI) presentation of the synthesis of knowledge.\(^{(12)}\)

The construction of the guiding question took place through the PICo strategy (P – participants; I – phenomenon of interest; Co - context of the study), in which (P): Puerperal women; (I) – Suicidal Ideation; (Co) – Public Health. Thus, the following question was asked: what are the factors associated with suicidal ideation in the puerperal period in the context of public health?

The search was conducted on July 1, 2022. Primary studies carried out with women in the puerperium, in the context of public health, without a defined time frame, were included. In addition, studies published in any language were considered. The exclusion criteria applied consisted of: literature reviews, editorials, case studies, letters to the reader, pilot projects and incomplete studies.

For the bibliographic search, the following databases were chosen: Medical Literature Analysis and Retrieval System Online/PUBMED (MEDLINE); Web Of Science (WOS); Latin American and Caribbean Literature in Health Sciences (LILACS), via Virtual Health Library (VHL); Nursing Database (BDENF), via VHL; Spanish Bibliographic Index of Health Sciences (IBECS), also through VHL; American Psychological Association (APA) PsycINFO and Cumulative Index to Nursing and Allied Health Literature (CINAHL).

In order to integrate the strategy for searching the studies, controlled descriptors (indexed in the respective databases) were selected, through the Descriptors in Health Sciences (DeCS) and Medical Subject Headings (MeSH Terms), and alternative terms, presented in Table 1. In order to expand the search strategy, the controlled and uncontrolled descriptors were combined through the boolean operators AND and OR.

<table>
<thead>
<tr>
<th>Database</th>
<th>Question</th>
<th>Descriptor</th>
<th>Alternative terms</th>
</tr>
</thead>
<tbody>
<tr>
<td>BVS (DeCS)</td>
<td>P</td>
<td>Puerpério</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Postnatal</td>
<td></td>
</tr>
<tr>
<td></td>
<td>I</td>
<td>Ideação Suicida</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Suicidal Ideation</td>
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<td></td>
<td></td>
<td>Ideação Suicida</td>
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<tr>
<td></td>
<td>Co</td>
<td>Saúde Pública</td>
<td>Saúde Coletiva</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Public Health</td>
<td>Saúde Comunitária</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Salud Pública</td>
<td>Saúde da Comunidade</td>
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</tbody>
</table>

*Box 1. Descriptors and alternative terms by Database. Teresina, PI – Brazil, 2022.*
The selection and identification of the studies was carried out by two reviewers independently during the month of July 2022. Any disagreements between the reviewers were resolved through discussion. Box 2 shows the syntax of the searches performed in the databases. To manage and facilitate the analysis of bibliographic references, and to exclude duplicates, the EndNote bibliographic software (https://www.myendnoteweb.com) was used.

**Box 2. Syntax of searches used in databases. Teresina, PI – Brazil, 2022.**

<table>
<thead>
<tr>
<th>Base</th>
<th>Strategy – JULY/2022</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MEDLINE/PubMed</strong></td>
<td>#1 (((Postpartum Period) OR (Postpartum)) OR (Puerperium)) OR (Postpartum Women)) OR (Postnatal Period) OR (Suicidal Ideation) #2 Suicidal Ideation #3 (Public Health) OR (Community Health) #4 = #1 AND #2 AND #3 (((Postpartum Period) OR (Postpartum)) OR (Puerperium)) OR (Postpartum Women) OR (Postnatal Period) AND (Suicidal Ideation) AND ((Public Health) OR (Community Health))</td>
</tr>
<tr>
<td><strong>WOS</strong></td>
<td>#1 TS=(Postpartum Period) OR TS=(Postpartum Women) OR TS=(Puerperium) OR TS=(Postnatal Period) #2 TS=(Suicidal Ideation) #3 TS=(Public Health) OR TS=(Community Health) #4 #3 AND #2 AND #1</td>
</tr>
<tr>
<td><strong>PsycINFO</strong></td>
<td>Any Field: Postnatal Period Any Field: Suicidal Ideation Any Field: Public Health OR Any Field: Community Health ((Any Field: (Postnatal Period)) AND ((Any Field: (Suicidal Ideation))) AND ((Any Field: (Public Health)) OR (Any Field: (Community Health)))</td>
</tr>
<tr>
<td><strong>CINAHL</strong></td>
<td>S1 postnatal period OR puerperium OR postpartum S2 suicidal ideation OR suicidal thoughts S3 public health OR community health S4 S1 AND S2 AND S3</td>
</tr>
<tr>
<td><strong>LILACS (BVS)</strong></td>
<td>((postpartum period) OR (período pós-parto) OR (período posparto) OR (puerpério) OR (postnatal)) AND ((suicidal ideation) OR (ideação suicida) OR (ideación suicida))</td>
</tr>
</tbody>
</table>
From the selected primary studies, data were extracted and compiled in an adapted instrument, based on a previous study\(^{(13)}\), in the Microsoft® Word program. The following information was extracted: authors, journal, and year of publication, country, study design, sample and main results.

The next stage was the evaluation of the methodological quality of the studies selected from an instrument considered more suitable for the methodological designs, the Methodological Index for Non-randomized Studies (MINORS). It is a tool composed of 12 items, and in each item, the score can vary from zero to two, consisting of an ideal score of 16 for non-comparative studies and 24 for comparative studies.\(^{(14)}\) Based on this information, the discussion was constituted in the light of the literature on the subject.

RESULTS

The survey in the databases resulted in 250 studies, of which 44 studies were identified as duplicates, and after their exclusion, 206 articles were selected for reading titles and abstracts. At the end of the selection process, 7 studies composed the final sample of this review. The study selection process is systematized in Figure 1.

The studies selected in the final sample were published between 2011 and 2020, with a predominance of cross-sectional studies, five of which were retrieved from MEDLINE/PubMed, one from PsycINFO and one from CINAHL. The countries of publication were: Bangladesh, Spain, United Kingdom,
Canada, China, Brazil and Zimbabwe. Box 3 summarizes the characteristics of the studies included in this integrative review.

**Box 3. Characteristics of the included studies Teresina, PI – Brazil, 2022.**

<table>
<thead>
<tr>
<th>Lead Author: Country (year)</th>
<th>Journal (base)</th>
<th>Sample/Designing</th>
<th>Main results</th>
<th>Methodologic al Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Islam Bangladesh (15)</td>
<td>Archives of Suicide Research CINAHL</td>
<td>426 women who were in the first 6 months postpartum • Cross-sectional study</td>
<td>The chances of postpartum suicidal ideation were significantly higher among women who reported experiencing physical intimate partner violence. Postpartum depression increased the chances of postpartum suicidal ideation. High self-esteem significantly reduced reports of suicidal ideation.</td>
<td>11</td>
</tr>
<tr>
<td>Gelabert Spain (2020)</td>
<td>Archives of Women's Mental Health (MEDLINE)</td>
<td>1,795 postpartum women • Cohort study</td>
<td>Neuroticism and psychoticism predicted suicidal ideation in the first two weeks after delivery. Early postpartum depressive symptoms, personal psychiatric history, and stressful events during pregnancy have emerged as predictors of postpartum suicidal ideation.</td>
<td>11</td>
</tr>
<tr>
<td>Howard United Kingdom (2011)</td>
<td>BMC Pregnancy Childbirth. MEDLINE</td>
<td>4,150 women initially answered the question about suicidal ideation; 254 women were selected for the randomized controlled trial; and of these, 253 participated in the analysis. • Prospective cohort study</td>
<td>Women were more likely to experience suicidal ideation at baseline if they were younger, single, unemployed, or had an unemployed partner.</td>
<td>11</td>
</tr>
<tr>
<td>Pope Canada (2013)</td>
<td>Archives of Women's Mental Health MEDLINE</td>
<td>147 women with major depressive disorder or postpartum bipolar II disorder. • Prospective study</td>
<td>Those who reported postpartum suicidal ideation also reported higher levels of depression and hypomanic symptoms. Several women in the sample with diagnosed mood disorder reported experiencing suicidal ideation during postpartum.</td>
<td>10</td>
</tr>
<tr>
<td>Shi China (2018)</td>
<td>Psychiatry Research MEDLINE</td>
<td>213 postpartum women • Longitudinal study</td>
<td>Women reported lower depression scores and a higher incidence of postpartum suicidal ideation. In the early postpartum stage, mothers with suicidal ideation had previous experiences of abortion and had marital dissatisfaction. Harmonious relationship with the mother-in-law, marital satisfaction and primiparous women were pointed out as protective factors for suicidal ideation in the postpartum period.</td>
<td>10</td>
</tr>
<tr>
<td>Tabb Brazil (2018)</td>
<td>Journal of Women's Health (MEDLINE)</td>
<td>701 postpartum women • Cross-sectional study</td>
<td>Postpartum women who reported intimate partner violence were at increased risk for suicidal ideation.</td>
<td>11</td>
</tr>
</tbody>
</table>
Overall methodological quality is moderate to good, ranging from 9 to 11 on a scale of 0 to 16 for non-comparative studies. Although no study reached the maximum score, some stand out for their methodological robustness, while others have limitations that affect the score. The results highlight the prevalence of suicidal ideation among postpartum women and its relationship with a number of risk and protective factors. Physical and emotional violence perpetrated by intimate partners has emerged as an important predictor of suicidal ideation, as evidenced in studies. In addition, the studies analyzed also identified other risk factors, such as early depressive symptoms, personal psychiatric history, stressful events during pregnancy, and unfavorable sociodemographic characteristics, including younger age, single status, and unemployment.

On the other hand, aspects such as high self-esteem, harmonious relationship with the mother-in-law and marital satisfaction were identified as protective factors against suicidal ideation in the postpartum period. It is important to note that there are variations in the results between the studies, reflecting the differences in cultural contexts, in the samples studied and in the methodological approaches. This diversity highlights the complexity of the phenomenon of postpartum suicidal ideation and the need for further research to ever more elucidate its determinants and clinical implications.

**DISCUSSION**

The evidence raised by this study adds to the scientific scenario, from the perspective of understanding the factors that can establish a relationship with suicidal ideation in the puerperal period. It was observed that ideas of suicide in postpartum women can be related to Intimate Partner Violence (IPV)\(^{(15,20,21)}\), stressful events during pregnancy\(^{(19)}\), previous experiences of abortion and marital dissatisfaction\(^{(19)}\), depressive symptoms\(^{(15,16,18)}\) and other mental disorders.\(^{(16,18)}\)

Postpartum women of younger age, higher parity, single, unemployed, with high levels of depressive symptoms or with an unemployed partner and with marital problems are more likely to have suicidal ideation.\(^{(17)}\) In contrast, high self-esteem has been shown to reduce ideas of taking one's own life during the postpartum period.\(^{(15)}\) In addition, being primigravid, having a harmonious relationship with the mother-in-law, and marital satisfaction were shown to be protective factors.\(^{(19)}\)

A factor highlighted in association with suicidal ideation in the puerperium was IPV, which is a public health problem with consequences of great magnitude on women's health. Alarming levels of IPV are reported during pregnancy, including emotional, physical and sexual violence, causing damage to mental health in the postpartum period. However, emotional violence has been shown to be more associated with postpartum suicidal ideation, as well as the combination of multiple forms of violence. Although there was no association between sexual violence and suicidal ideation \(^{(21)}\), it was observed that women exposed to IPV in the postpartum period had a higher risk of developing suicidal thoughts.\(^{(20)}\)

In addition, it is suggestive that self-esteem and depression are important factors that can be expressive in the relationship between IPV and ideas of suicide in the postpartum period. Suicidal ideation was significantly higher among postpartum women who suffered IPV and had above-mean levels of postpartum depression or below-mean levels of self-esteem.\(^{(15)}\)

A focus on mental disorders among puerperal women is highlighted, in order to prevent the development or exacerbation of suicidal symptomatology. Postpartum suicidal ideation has been reported by women diagnosed with mood disorder and by those who mentioned the presence of hypomanic symptoms and depression.\(^{(10)}\) Immediate screening for postpartum depression is an important factor, since it allows early diagnosis and treatment, as many puerperal women with this disease refer to ideals of attacking their own lives.\(^{(15,16,20)}\)

With the changes in the maternal organism, arising after delivery, the puerperal woman faces difficulties with greater proportions, thus, there are several manifestations in the face of this situation. Traits such as neuroticism and psychoticticism were shown to predict suicidal ideation over the first two

| Source: research data, 2022. |
weeks after delivery. In addition, early depressive symptoms in the postpartum period, personal psychiatric history, and stressful life events during pregnancy also signaled suicidal ideation in the postpartum period.\(^{(16)}\)

Just as the pregnant woman performs prenatal care focused on physiological care, and the puerperium to prevent complications and care for the baby, it is important that there is also psychological counseling, due to the ambivalent feelings and expectations that the woman may face. The literature points out that during these phases, there is an increased risk of mental health problems, thus highlighting the importance of continuous assessment of women's well-being during the prenatal and postpartum periods.\(^{(22)}\)

Assuming the responsibility of taking care, in a dedicated way of a new life totally dependent and fragile, in addition to the concern of how to deal with new emotions and to reconstitute the body, is an imminent challenge for the mother. A comparative study between prenatal and postpartum suicidal ideation indicated increased suicidal ideation after delivery, which may be related to increased responsibility for daily activities and baby care, which can cause feelings of exhaustion, hopelessness or helplessness.\(^{(19)}\)

For many women, the experience of motherhood can be challenging, especially when facing financial difficulties, relationship problems, lack of social support, or other stressful situations. The scientific literature highlights that being young, single, primiparous, unemployed, having marital dissatisfaction and an unemployed partner are risk factors for postpartum suicidal ideation.\(^{(17, 19, 23-25)}\) In addition, perinatal gestational loss can have a significant impact on the mother's mental health, leading to a series of negative emotions that can culminate in suicidal ideation or even suicide.\(^{(25-26)}\)

Having a satisfactory marital relationship was also presented as a protective factor for postpartum depression in a longitudinal survey with 198 pregnant women.\(^{(27)}\) In a study that investigated the main support figures reported by adolescent mothers with and without indicators of depression, the partner and mother-in-law emerged in the testimonies of participants as a source of support. For mothers with and without indicators of depression, the partner was related to physical and emotional support. The mother-in-law, in turn, was observed as a figure analogous to her own mother, being considered part of this support matrix by some interviewees.\(^{(28)}\)

This study presented as a limitation the scarcity of literature relating suicidal ideation in the postpartum period in women assisted in the public network, which reinforces the need to develop research in the field of public health on this theme.

The results made it possible to observe that puerperal women are vulnerable to several situations that can weaken their mental health, resulting in the development of suicidal ideation. Evoking how fundamental it is to continue the discussion and development of public health policies to assist this public, seeking greater comprehensiveness and effectiveness of the service offered.

**CONCLUSION**

Factors associated with suicidal ideation in the puerperal period were younger, single, unemployed women, having an unemployed partner, having experienced intimate partner violence, having faced stressful events during pregnancy, previous experiences of abortion and marital dissatisfaction, depressive symptoms and other mental disorders (mood disorders, hypomanic symptoms, neuroticism and psychoticism). High self-esteem aimed to reduce ideas of suicide during the postpartum period. Being primigravid, having a harmonious relationship with the mother-in-law and marital satisfaction were presented as protective factors.

According to the data compiled in this review, there is a need for new actions aimed at the mental health care of pregnant and postpartum women, with a view to offering multiprofessional monitoring that encompasses physical and mental health. It is imperative that mental health professionals accompany the woman during prenatal, delivery and postpartum in order to offer necessary counselling and support.

In addition, educational and awareness-raising programs are essential to empower health professionals, pregnant women, family members and the wider community to recognize warning signs and seek help when needed. Reducing stigma around maternal mental health is key to ensuring women feel comfortable sharing their experiences and seeking support.

Considering the scarcity of literature on the subject, it is suggested that future research should be carried out on the prevalence and factors associated with suicidal ideation in the puerperal period,
especially in the context of public health, and thus targeted actions should be developed to minimize this phenomenon and its consequences.

CONTRIBUTIONS
Contributed to the conception or design of the study/research: Silva Júnior FJG. Contributed to data collection: Santo GVAA, Costa APC. Contributed to the analysis and/or interpretation of data: Santo GVAA, Costa APC. Contributed to article writing or critical review: Santo GVAA, Costa APC, Silva Júnior FJG, Sales JCS. Final approval of the version to be published: Silva Júnior FJG, Sales JCS.

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Factors associated with suicidal ideation among puerperal...


