

Study protocol

Women's reasons for continuing with an unwanted pregnancy: a systematic review protocol

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ABSTRACT

Objective: This study (PROSPERO CRD42024515910) explores the issue of unwanted pregnancy in a broad context, to show current data on women's reasons for continuing with an unwanted pregnancy, even if they live where abortion is legal.

Method: We will use the following databases: PubMed, Scopus, Web of Science, CINAHL, and LILACS, from 2019, combining controlled descriptors in natural and indexed language. We will consider qualitative and quantitative data. For qualitative analysis, we will use thematic categories, and for quantitative analysis, we will analyze two perspectives: the decision, separating those who want to continue the pregnancy and those who want to terminate the pregnancy, and the access, analyzing what happened to those who did not have the abortion and what happened to those who terminated the pregnancy. Finally, we will combine the results through a convergent synthesis and identify the determinants of the decision to continue with an unwanted pregnancy.

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Razones de las mujeres para continuar con un embarazo no deseado: protocolo de revisión sistemática

RESUMEN

Objetivo: Este estudio (PROSPERO CRD42024515910) explora el tema del embarazo no deseado en un contexto amplio, para mostrar datos actuales sobre las razones de las mujeres para continuar con un embarazo no deseado, incluso si viven en zonas donde el aborto es legal.

Método: Utilizaremos las bases de datos PubMed, Scopus, Web of Science, CINAHL y LILACS, desde 2019, combinando descriptores controlados en lenguaje natural e indexado. Consideraremos datos cualitativos y cuantitativos. Para el análisis cualitativo utilizaremos categorías temáticas, y para el análisis cuantitativo analizaremos dos perspectivas: la decisión, separando a quienes desean continuar con el embarazo de quienes desean interrumpirlo, y el acceso, analizando qué sucedió con quienes no abortaron y qué sucedió con quienes lo interrumpieron. Finalmente, combinaremos los resultados mediante una síntesis convergente e identificaremos los determinantes de la decisión de continuar con un embarazo no deseado.

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Introduction

Unwanted or unplanned pregnancy is a common experience for many women around the world, regardless of location, income, or the legal status of abortion.¹ Almost half of the world's pregnancies are unwanted,² therefore, constituting a large public health problem, since unwanted pregnancies are associated with unhealthy perinatal behavior,^{3,4} as well as social adversities,^{5,6} stress,^{6–10} maternal experience of interpersonal violence,^{3,11–13} depression in pregnant women^{3,10,11} and depression in post-partum.^{11,12,14–16}

Unwanted pregnancy rates have fallen worldwide,^{17–19} probably as a result of increased access to contraceptive methods.^{1,20} However, no method is capable of total precision, contributing to the occurrence of unwanted pregnancies, even if there is prevention and caution on the part of the woman or couple trying to avoid pregnancy.

During pregnancy, women live with divergent sensations/emotions and abundant conflicts, because each pregnancy involves the emergence of conflicting feelings in relation to motherhood, involving potential losses and gains, as well as the prospect of changes and new adaptations.^{21–23} Therefore, continuing with an unwanted pregnancy can be quite challenging in many ways for the woman who experiences it. However, some countries/states have legalized abortion, making it a safe option for women. Legalized abortion neither obliges a woman to have

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one nor guarantees that she will be able to terminate it whenever she wishes in a safe and timely manner. There are several reasons why an unwanted pregnancy may continue.

In this way, our review addresses the issue of unwanted pregnancy and aims to take many of these aspects into consideration, focusing on the main question “Among (P) women with an unwanted pregnancy in settings where abortion is legal, (I) what are the reasons and hypothesized factors associated with (O) non-termination the pregnancy (yes/no) (C) compared to those not exposed to the factors associated with non-termination?”, intending to update scientific evidence about women’s reasons for continuing with unwanted pregnancies in countries/states where the abortion is legal.

Method

This systematic review protocol was pre-registered on the PROSPERO (registration number CRD42024515910), and it was based on review methods in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses Protocols (PRISMA-P) guidelines²⁴ (see Appendix 1 in Supplementary data).

Eligibility criteria

We will include studies with women who have continued unwanted pregnancies where abortion is legalized; studies with primary data, considering quantitative and/or qualitative method studies with publication date between 2019 and October 2025 in any language.

We will exclude studies that do not present women’s reasons for continuing with an unwanted pregnancy where abortion is legalized; studies published in pre-print, theses, dissertations, reports, opinion articles, reviews, and abstracts.

Information sources

We will search in the databases PubMed, Scopus, Web of Science, CINAHL, and LILACS, from 2019, and include studies until October 2025, without language restrictions on the search strategy.

We set this time limit because the topic is constantly evolving, influenced by legal changes, cultural shifts, and variations in predominant religion. Therefore, we chose to use data in a more up-to-date context.

The primary search strategy will be used within titles, abstracts, and keywords, with the combination of controlled descriptors in natural and indexed language, according to the specific characteristics of each database, also using the Boolean descriptors “OR” and “AND”. A librarian will be consulted in this stage of executing the study’s search strategy. We will not search in the gray literature.

Search strategy

The search strategy contains the following keywords (“Induced abortion” OR “unplanned pregnancy” OR abortion) AND (“Motivation” OR reason) AND (“Women” OR “Adolescent” OR “female adolescent”) (see Appendix 2 in Supplementary data).

Study records

Duplicates will be identified, checked, and subsequently deleted. Then, the articles will be selected based on the title and abstract. If they agree with the eligibility criteria, the full text will be read. If the study was published in a language unfamiliar to the authors, we will contact the corresponding author to receive the abstract and the full text in English, Spanish, or Portuguese. We

will read the full text to confirm that the study agrees with the eligibility criteria. Rejected studies will be recorded with the reason for rejection. To carry out the selection phases, we intend to use the Rayyan[®],²⁵ which helps speed up the selection of studies through a semi-automated process.

Once the screening stage is completed, we will have the studies to be analyzed in this systematic review, and possible meta-analysis (if there is more than one study that evaluates the same type of result), according to the inclusion criteria mentioned.

Data management

The data to be collected by the authors must include, in addition to the title, the name of the first author, the year of publication, the year(s) of data considered in the study, the place where the study was carried out (state/country), objective of the study, type, data collection period, method, sample size, age range of the participating women presented as an average or prevalent range, characteristics of the participants and outcome of the main topic (reasons presented for continuing with the unwanted pregnancy where abortion is legal) and relevant contextual variables. The qualitative and quantitative data will be entered into the previously tested standard electronic spreadsheet.

We expect to finalize the literature search, selection, and quality assessment of studies by December 2025, the data extraction, synthesis, and quality assessment of evidence by March 2026, and we expect to write and publish the results by May 2026.

All stages will be carried out by two authors independently, and disagreements will be resolved by consensus. If there are discrepancies, they will be analyzed by a third reviewer. Attempts will be made to obtain any missing data by email, contacting the corresponding author or co-author to provide the necessary information. If we are unable to contact, the data will not be considered for analysis, and this will be mentioned in the discussion section.

Risk of bias

In the assessment of methodological quality of the studies resulting from the search carried out in the previous stage, two reviewers will evaluate the studies independently using the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE),²⁶ which is a list of verification for reporting observational studies.

For the purpose of assessing the risk of bias, the Newcastle-Ottawa Scale (NOS) tool adapted for cross-sectional studies will be used, most recommended by the Cochrane Collaboration to assess the quality of quantitative observational studies²⁷, cross-sectional, and longitudinal.²⁸ For qualitative studies, the Critical Appraisal Skills Programme (CASP) for qualitative research tool will be used.²⁹ To improve the reliability of the risk of bias assessment, contact with study authors will be attempted to obtain unpublished information. Afterward, a discussion will be held to reach an agreement between the parties or by a third reviewer.

Data synthesis

For a qualitative analysis, we will identify the most common themes in the reasons for continuing with an unwanted pregnancy. We will group this data into thematic categories, such as access to services and difficulties, financial and social situation, religious and moral influence, and personal and emotional experiences. The analysis of the themes, organization of data, and creation of the categories will be done in pairs. If there is disagreement, the two reviewers will discuss discrepancies; if disagreement persists, a third reviewer will arbitrate.

In the quantitative analysis, since we are considering women with an unwanted pregnancy (independently of whether they wanted to terminate it or not we will analyze two complementary situations: First, the decision: among women with an unwanted pregnancy, we will separate those who wish to continue the pregnancy (outcome=1) from those who have had an abortion (outcome=0). Factors (exposures) that may influence this decision (e.g., social, cultural, religious, or contextual) will be considered. Second, access and outcomes: among women who wanted an abortion, we will examine what happened to some who did not have an abortion (outcome=1) and what allowed others to terminate their pregnancies (outcome=0). In this group, we will analyze the difficulties faced (exposures), such as lack of access to services, legal or financial obstacles, fear of what others will think, or lack of information.

According to this plan, we will be able to identify the determinants of the decision to continue with an unwanted pregnancy and the barriers faced by those who wanted but could not terminate it. Therefore, we will extract effect measures reported by the studies or calculate them, if possible. Associations between contextual or individual variables (independent variables) and the outcomes (continuation or termination of unwanted pregnancy) will be summarized using odds ratios as the measure of association.

An outcome of 1 means continuing with the unwanted pregnancy (by choice or lack of choice), and an outcome of 0 means terminating the unwanted pregnancy. Factors that can influence (exposures), independent variables, may include, for example, having a low level of education (yes/no), lower income (yes/no), being married or not, following a religion, or other social and contextual factors. We will pool estimates when at least two studies report comparable outcome measures.

We will conduct a meta-analysis, using the fixed-effects model when homogeneity exists among studies, and the random-effects model when there are differences. Heterogeneity will be assessed with the χ^2 test ($p < 0.05$) and quantified with the I^2 statistic (0% no difference, 25% small, 50% medium, $\geq 75\%$ high). The results of this meta-analysis will be presented in a forest plot with 95% confidence intervals. We will use the Review Manager (RevMan) software to perform the statistical analysis. Finally, we will combine the results of qualitative and quantitative analysis through a convergent synthesis.

Subgroups or subsets analysis

If substantial heterogeneity is detected, subgroup analyses will be conducted to explore potential sources. Contextual influences such as the legal model of abortion access, culture, predominant religion, and socioeconomic factors will be investigated. Also, we will perform an additional stratification by country and region (e.g., Europe, Latin America, Africa, Asia). For quantitative pooled outcomes, we will use the Grading of Recommendations Assessment, Development and Evaluation (GRADE)³⁰ to assess the certainty of evidence. We plan to submit the results to a peer-reviewed journal.

Discussion

This protocol aims to summarise the scientific evidence through a systematic review about women's reasons for continuing with unwanted pregnancies in states/countries where abortion is legalized. It will also describe the factors influencing the decision to continue with an unwanted pregnancy, which are important to identify possible opportunities for improving care, to carry out interventions aimed at minimizing unfavorable outcomes in unwanted pregnancies, avoiding institutional barriers, and ensuring timely access to health care.

They can also be useful to establish the needs of specific/more vulnerable population groups, which require greater commitment from those responsible, through social, economic, political, and epidemiological actions, thereby strengthening and redirecting sexual and reproductive health policies.

Possible impacts and limitations

Possible limitations may exist due to the risk of not including some studies that were not covered by the search strategy. The diversity of selected study types can also create heterogeneities and, therefore, quantitatively affect the results. In addition, there may be a risk of bias due to the complexity of combining studies in several contexts and methodological limitations of the primary studies, which may affect the analysis.

Despite these limitations, the study will provide a relevant overview of the main factors influencing the decision to continue with an unwanted pregnancy by women who live where abortion is an option, which can help strengthen clinical practices and redirect sexual and reproductive health policies in different contexts.

In clinical practice, we can provide data to possibly change the approach in prenatal consultations for women experiencing an unwanted pregnancy, to offer support and referral to psychological counselling when needed, and to ensure professionals are attentive to mental health problems, the risks of domestic violence, and social vulnerability. On the other hand, in health policies, we can identify access barriers and the necessity of information campaigns, or, if necessary, some redirection.

Editor in charge

Salvador Peiró.

Authorship contributions

A. Moutinho: conceptualisation and study design, search strategy, writing original draft and editing. P. Aguiar and M.H. Presado: supervision, critical review and guide the manuscript final version. All authors have read and agreed to the published version of the manuscript.

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Conflicts of interest

None.

Supplementary data

Supplementary data associated with this article can be found, in the online version, at [doi:10.1016/j.gaceta.2025.102548](https://doi.org/10.1016/j.gaceta.2025.102548).

References

1. Bearak J, Popinchalk A, Ganatra B, et al. Unintended pregnancy and abortion by income, region, and the legal status of abortion: estimates from a comprehensive model for 1990-2019. *Lancet Glob Health*. 2020;8:e1152-61.

2. Baker D, Sedgh G, Autores PE, et al. Situação da população mundial. 2022. (Accessed 04/08/2025). Available at: <https://brazil.unfpa.org/sites/default/files/pub-pdf/swop2022-ptbr-web.pdf>.
3. Mark NDE, Cowan SK. Do pregnancy intentions matter? A research note revisiting relationships among pregnancy, birth, and maternal outcomes. *Demography*. 2022;59:37–49.
4. Widowati LP, Damayanti R. Unintended pregnancy and antenatal care behavior in Indonesia. *JNKi Jurnal Ners dan Kebidanan Indones (Indonesian J Nurs Midwifery)*. 2022;10:214–23.
5. Ermia E, Widiastih R, Mediani HS. The impact of unwanted pregnancy in adolescents toward pregnancy care: a systematic review. *Open Access Maced J Med Sci*. 2022;10:7–14.
6. Dijkstra CI, Dalmijn EW, Bolt SH, et al. Women with unwanted pregnancies, their psychosocial problems, and contraceptive use in primary care in Northern Netherlands: insights from a primary care registry database. *Fam Pract*. 2023;40:648–54.
7. Lewinsohn R, Crankshaw T, Tomlinson M, et al. This baby came up and then he said, 'I give up!': the interplay between unintended pregnancy, sexual partnership dynamics, and social support and the impact on women's well-being in KwaZulu-Natal, South Africa. *Midwifery*. 2018;62:29–35.
8. Phiri TM, Nyamaruze P, Akintola O. Stress and coping among unmarried pregnant university students in South Africa. *BMC Pregnancy Childbirth*. 2021;21:817.
9. Zhang Y, Jin A, Zhu J, et al. Stress response to fertility decisions of married and parous women with unexpected pregnancy: a three-month study at tertiary Suzhou hospital, China. *Clin Exp Obstet Gynecol*. 2023;50:208.
10. Wang N, Liu Y, Ai J, et al. The association between unintended pregnancy and maternal mental health in rural China. *Front Public Health*. 2025;13:1498473.
11. Nelson HD, Darney BG, Ahrens K, et al. Associations of unintended pregnancy with maternal and infant health outcomes: a systematic review and meta-analysis. *JAMA*. 2022;328:1714–29.
12. Chan KL. The role of father involvement and intimate partner violence on postnatal depression among women with unintended pregnancy. *J Interpers Violence*. 2021;36:NP9864–84.
13. Sari O, Dağcıoğlu BF, Akpak YK, et al. Planned and unplanned pregnancy and its association with coping styles and life quality. *Health Care Women Int*. 2023;44:1314–24.
14. Qiu X, Zhang S, Sun X, et al. Unintended pregnancy and postpartum depression: a meta-analysis of cohort and case-control studies. *J Psychosom Res*. 2020;138:110259.
15. Baba S, Kimura T, Ikehara S, et al. Impact of intention and feeling toward being pregnant on postpartum depression: the Japan Environment and Children's Study (JECS). *Arch Womens Ment Health*. 2020;23:131–7.
16. Walsh EK, Langdon SW. Feelings matter: predicting postpartum depression symptoms from pregnancy planning and emotional reaction to pregnancy. *Matern Child Health J*. 2025;29:1469–78.
17. Bearak J, Popinchalk A, Alkema L, et al. Global, regional, and subregional trends in unintended pregnancy and its outcomes from 1990 to 2014: estimates from a Bayesian hierarchical model. *Lancet Glob Health*. 2018;6:e380–9.
18. Ayalew HG, Liyew AM, Tessema ZT, et al. Prevalence and factors associated with unintended pregnancy among adolescent girls and young women in sub-Saharan Africa, a multilevel analysis. *BMC Womens Health*. 2022;22:464.
19. Bearak JM, Alkema L, Kantorová V, et al. Alignment between desires and outcomes among women wanting to avoid pregnancy: a global comparative study of "conditional" unintended pregnancy rates. *Stud Fam Plann*. 2023;54:265–80.
20. Rice WS, Redd SK, Luke AA, et al. Dispersion of contraceptive access policies across the United States from 2006 to 2021. *Prev Med Reports*. 2022;27:101827.
21. Helfferich C, Gerstner D, Knittel T, et al. Unintended conceptions leading to wanted pregnancies – an integral perspective on pregnancy acceptance from a mixed-methods study in Germany. *Eur J Contracept Reprod Health Care*. 2021;26:227–32.
22. Dalmijn EW, Visse MA, van Nistelrooij I. Decision-making in case of an unintended pregnancy: an overview of what is known about this complex process. *J Psychosom Obstet Gynecol*. 2024;45:2321461.
23. Yong MQY, Yeo Y, Shorey S. Factors affecting unintended pregnancy resolution from the perspectives of pregnant women and people: a systematic review of qualitative evidence. *Midwifery*. 2023;127:103866.
24. Moher D, Shamseer L, Clarke M, et al. Preferred reporting items for systematic review and meta-analysis protocols (PRISMA-P) 2015 statement. *Syst Rev*. 2015;4:1.
25. Ouzzani M, Hammady H, Fedorowicz Z, et al. Rayyan – a web and mobile app for systematic reviews. *Syst Rev*. 2016;5:1–10.
26. Elm E, von, Altman DG, Egger M, et al. Strengthening the reporting of observational studies in epidemiology (STROBE) statement: guidelines for reporting observational studies. *BMJ*. 2007;335:806–8.
27. Lo CKL, Mertz D, Loeb M. Newcastle-Ottawa Scale: comparing reviewers' to authors' assessments. *BMC Med Res Methodol*. 2014;14:45.
28. Luchini C, Stubbs B, Solmi M, et al. Assessing the quality of studies in meta-analyses: advantages and limitations of the Newcastle Ottawa Scale. *World J Meta-Anal*. 2017;5:80–4.
29. Critical Appraisal Skills Programme. CASP Checklist: CASP Qualitative Studies Checklist. 2024. (Accessed 31/07/2025). Available at: <https://casp-uk.net/casp-checklists/CASP-checklist-qualitative-2024.pdf>.
30. Andrews JC, Schünemann HJ, Oxman AD, et al. GRADE guidelines: 15 Going from evidence to recommendation – Determinants of a recommendation's direction and strength. *J Clin Epidemiol*. 2013;66:726–35.