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Sexuality education and adolescent pregnancy prevention: Bibliometric analysis

Educación sexual y prevención del embarazo adolescente: análisis bibliométrico

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Abstract

The present study aimed to characterize the temporal distribution, journals, authorship, institutional affiliations, and thematic profile of a corpus of publications on adolescent pregnancy prevention and care from an educational perspective. To this end, a descriptive, retrospective bibliometric study was conducted on 25 articles identified in a documentary matrix and verified through their full texts. Once the metadata had been standardized, the study designs were classified, and the authors' keywords were grouped using an explicit dictionary. In addition, frequencies, percentages, and coauthorship indicators were calculated, while geographic origin was determined according to the country of the first author's first affiliation. The results show that the corpus includes publications from 2020 to 2026, disseminated across 23 journals. The year with the highest representation was 2024, with seven articles, equivalent to 28.0% of the total. Ecuador, Peru, and Mexico accounted for 15 publications, or 60.0% of the corpus. Regarding authorship, 92 distinct authors were identified, with an average of 3.68 authors per article; moreover, 23 documents, corresponding to 92.0%, were coauthored. Nine articles were reviews, and two were randomized controlled trials. Among the 23 documents with retrievable keywords, education was the most frequent thematic family, followed by prevention. In conclusion, the corpus reflects wide editorial dispersion and a marked Latin American component, with educational, family, healthcare, and intersectoral approaches. These findings describe the analyzed collection without estimating global scientific output or program effectiveness. Therefore, the

evaluation of school-based interventions should differentiate between knowledge, behaviors, and reproductive outcomes.

Keywords: adolescent pregnancy, sexuality education, prevention.

Resumen

El presente estudio tuvo como objetivo caracterizar la distribución temporal, las revistas, la autoría, las afiliaciones institucionales y el perfil temático de un corpus de publicaciones sobre la prevención y atención del embarazo adolescente desde una perspectiva educativa. Para ello, se realizó un estudio bibliométrico descriptivo y retrospectivo de 25 artículos identificados en una matriz documental y verificados mediante sus textos completos. Una vez estandarizados los metadatos, se clasificaron los diseños de estudio y se agruparon las palabras clave de los autores mediante un diccionario explícito. Además, se calcularon frecuencias, porcentajes e indicadores de coautoría, mientras que el origen geográfico se determinó según el país de la primera afiliación del primer autor. Los resultados muestran que el corpus incluye publicaciones de 2020 a 2026, difundidas en 23 revistas. El año con mayor representación fue 2024, con siete artículos, equivalentes al 28.0% del total. Ecuador, Perú y México concentraron 15 publicaciones, es decir, el 60.0% del corpus. En cuanto a la autoría, se identificaron 92 autores distintos, con un promedio de 3.68 autores por artículo; además, 23 documentos, correspondientes al 92.0%, fueron coautorados. Nueve artículos fueron revisiones y dos fueron ensayos clínicos aleatorizados. Entre los 23 documentos con palabras clave recuperables, educación fue la familia temática más frecuente, seguida de prevención. En conclusión, el corpus refleja una amplia dispersión editorial y un marcado componente latinoamericano, con enfoques educativos, familiares, sanitarios e intersectoriales. Estos hallazgos describen la colección analizada sin estimar la producción científica global ni la efectividad de los programas. Por lo tanto, la evaluación de intervenciones escolares debería diferenciar entre conocimientos, comportamientos y resultados reproductivos.

Palabras clave: embarazo adolescente, educación sexual, prevención.

Introduction

Pregnancy during adolescence lies at the intersection of health, educational opportunities, and social conditions. Prevention therefore requires an understanding not only of access to information and services, but also of family relationships, gender norms, and opportunities to develop life projects. Consequently, research on this topic should distinguish studies aimed at preventing a first pregnancy from those addressing repeat pregnancies, the care of pregnant adolescents, or the consequences of early motherhood (Alukagberie et al., 2023; Buitrago et al., 2022).

In Peru, Sanca-Valeriano et al. (2022) analyzed data from 49,676 adolescent women surveyed through the ENDES between 2009 and 2018 and identified associations between pregnancy, lower educational attainment, and adverse economic circumstances. These findings situate schooling within a broader set of social disparities and do not justify reducing the problem to a lack of knowledge on the part of individuals. By contrast, the public policy experience analyzed by López-Gómez et al. (2021) was based on a socioecological, gender-responsive, and rights-based strategy to coordinate actors and services. Together, these contributions support an understanding of schools within their broader social and health care contexts.

Educational institutions provide opportunities to develop knowledge, communication skills, and decision-making capacity; however, their participation alone does not constitute a comprehensive intervention. In Oaxaca, Sánchez-Martínez and Espinoza-Rivera (2024) described differences in the coverage and content of sexuality education among students. At the normative level, Ronconi et al. (2023) examined dimensions such as comprehensiveness, curricular integration, teacher training, and the role of families. These studies indicate that the presence of educational activities should be assessed alongside their content, continuity, and institutional coordination.

Educational mechanisms also require conceptual precision. A workshop may improve knowledge of contraceptive methods without demonstrating a reduction in pregnancies. Interviews with professionals may provide information on the relevance of pedagogical mediation, but they do not allow causal effects to be estimated. For example, Bastida et al. (2020) described a school-based workshop, Vélez-Gallardo and Aliaga-Pacora (2023) evaluated changes in knowledge using a pre-experimental design, and Tabory and Sanchez-Pimentel (2024) examined professionals' experiences through a qualitative approach. Their contributions are complementary, but they address different questions and operate at different levels of inference.

The available corpus also includes a review of factors and interventions in Nigeria, a culturally adapted prevention protocol for Indigenous girls and their female caregivers, a school-based trial in Zambia, and a self-care trial during pregnancy in Iran (Alukagberie et al., 2023; Chambers et al., 2021; Chiu et al., 2025; Rezaie et al., 2021). This diversity makes it advisable to first describe how the assembled literature is organized before attempting an effectiveness synthesis, which would require more homogeneous clinical and educational criteria.

Bibliometric analysis makes it possible to examine publication attributes and patterns of research output and collaboration. It differs from an effects review because its units of analysis are documents and their metadata, rather than participants or pooled clinical outcomes (Donthu et al., 2021). In a small, previously selected collection, its value lies in providing a transparent and verifiable characterization without presenting its distributions as a census of all existing research.

Accordingly, the general objective was to conduct a bibliometric characterization of a selected corpus of publications on adolescent pregnancy prevention and care, and sexuality education, published between 2020 and 2026. The specific objectives were to describe the temporal and editorial distribution of the literature; quantify authorship team size and the geographic origin of first authors; identify study designs and keyword families; and examine the implications of this composition for educational research. The contribution of this study lies in integrating cleaned metadata with an interpretation that distinguishes scientific output, study-design characteristics, and the scope of the conclusions.

Methodology

A documentary, retrospective, and descriptive study was conducted using basic bibliometric indicators and a complementary characterization of study designs. The unit of analysis was the article. A closed corpus was examined, comprising the records in the “Articulos_Embarazo_Adolescente_Prevención” matrix and their associated full texts. The 2020–2026 period reflects the range observed after verifying the publication year of each article; it does not represent a prespecified, exhaustive search window. The analyzed collection was closed on October 3, 2026.

Corpus assembly and scope

The matrix contained 25 records. Matching was performed based on authorship, DOI, and individual titles. Articles addressing teenage pregnancy and its prevention, sexuality education, determinants, repercussions, policies, or care were considered. This included primary research, reviews, normative analyses, and protocols. This broad delimitation made it possible to discuss the collection and its relevance to education; it did not restrict the included materials to activities carried out in schools.

All 25 records were matched with a full text and a DOI. Titles were compared after normalizing DOI strings, and no duplicates were identified; therefore, all entries were retained for the descriptive analysis. Although the matrix header listed 30 articles, no additional records were available to support this figure. Consequently, the verified flow consisted of 25 records, 25 matching full texts, and 25 articles assessed. The number of identifications or exclusions prior to the assembly of this collection was not reconstructed.

The matrix identified several sources used to locate documents but did not provide detailed search strategies, search dates, database exports, or a screening history. Therefore, this study did not meet the criteria for a systematic search of Scopus or Web of Science, and no PRISMA flow diagram was produced using unverified retrieval counts. Complementary checks on publisher websites were performed solely to validate some metadata; they did not add records to the corpus. Methodological sources cited in the discussion were not included in the basis of 25 publications.

Data extraction and cleaning

The extracted variables were title, year of the volume or issue, journal, byline authors, DOI, country of the first author’s first affiliation, study design, and author keywords. Information was verified against the first pages and methods sections of the full texts. Names and typographic variants were standardized, while compound surnames and authorship order were preserved. Contributors mentioned only in contribution statements were not added to the byline authorship.

A uniform rule was applied to resolve temporal discrepancies: the publication year of the volume or issue was used and distinguished from acceptance dates and advance online publication. Thus, Bastida et al. were recorded as 2020, according to volume 11, issue 21, and Jacinto and Ruiz as 2022, according to volume 21, issue 1, despite their advance online publication in 2021. Missing authorship information in the matrix was completed for Sánchez-Martínez and Espinoza-Rivera, Cevallos et al., Bastida et al., and Quimi et al., and the identification of Tabory and Sanchez-Pimentel was corrected.

Geographic origin was assigned once per document according to the country of the first affiliation reported for the first-listed author. This indicator does not represent nationality, the country where fieldwork was conducted, the country of publication of the journal, or the full set of collaborating countries. For example, the article on Nigeria was attributed to Ireland, and the trial conducted in Zambia was attributed to the United States, according to the affiliations of their first authors. The original matrix field "journal country" was not used to estimate research origin.

Study-design and thematic classification

Articles were classified into nine mutually exclusive categories according to the procedure actually described: review; observational study; qualitative study; randomized trial; policy or normative analysis; pre-experimental study; instrument validation; descriptive educational intervention; and protocol. A journal's designation of a paper as an "original article" did not replace an examination of its methods. Reviews included narrative, integrative, and scoping approaches. Chagua (2026) was classified as observational because it evaluated a previous intervention without random assignment. Quimi et al. (2024) was classified as qualitative because it used participatory action research.

Explicit author keywords were retrievable for 23 documents. The articles by Chiu et al. (2025) and Rezaie et al. (2021) did not provide an explicit, retrievable keyword list and were excluded only from this analysis. One language version was used per document, prioritizing Spanish; for the Portuguese-language article, the original terms were retained. Keywords were not imputed from titles or abstracts.

The thematic analysis used six non-exclusive keyword families: education, prevention, family, sexual and reproductive health, sexuality, and contraception and family planning. These families were defined to examine educational and preventive dimensions; they do not constitute a ranking of all keywords. The dictionary and article identifiers underlying each category are presented in Table 5. Each document contributed at most one occurrence per family. "Family planning" was assigned to contraception rather than to family; the latter category grouped terms related to the family or intergenerational environment.

Indicators and processing

Frequencies and percentages by year, journal, country, and study design were calculated using 25 articles as the basis. For the keyword analyses, the denominator was the 23 articles for which this information was available. Percentages were calculated by dividing the number of articles in each category by the appropriate denominator and multiplying the result by 100. Mean authorship was calculated as the number of individual byline authors divided by the number of articles, and the degree of collaboration was calculated as the number of articles with two or more individual authors divided by the total number of articles. The collective signature "Miembros del Grupo de Salud Mental" was preserved for bibliographic purposes but was not converted into additional authors when counting authorship.

Data processing and graphic generation were performed in Python and Matplotlib using a normalized matrix. It was confirmed that the mutually exclusive categories totaled 25 articles and that denominators remained consistent across tables, text, and figures. The study did not include inferential tests, annual growth rates, h-index, citation counts, journal quartiles, bibliographic coupling, or co-citation analysis. The variables required for these indicators were not always available, and the selected corpus does not allow conclusions regarding global trends. A rigorous risk-of-bias assessment and a meta-analysis of effects were not conducted.

Results

Twenty-five publications with full text and a DOI, published in 23 journals, were analyzed. Most articles had multiple authors, and no author appeared in more than one document within the corpus. Table 1 summarizes the main indicators. Although the presence of a DOI facilitates document identification and retrieval, it does not, by itself, indicate methodological quality or indexing in a specific database.

Table 1

General indicators of the analyzed corpus

Indicator	Result
Articles analyzed	25
Observed period	2020-2026
Distinct journals	23

Countries represented by the first author's first affiliation	12
Individual signatures and distinct authors	92 and 92
Mean individual authors per article	3.68
Median and range of authors per article	3; 1-10
Single-authored articles	2 (8.0%)
Coauthored articles	23 (92.0%)
Articles with an identified DOI	25 (100.0%)
Articles with retrievable author keywords	23 (92.0%)

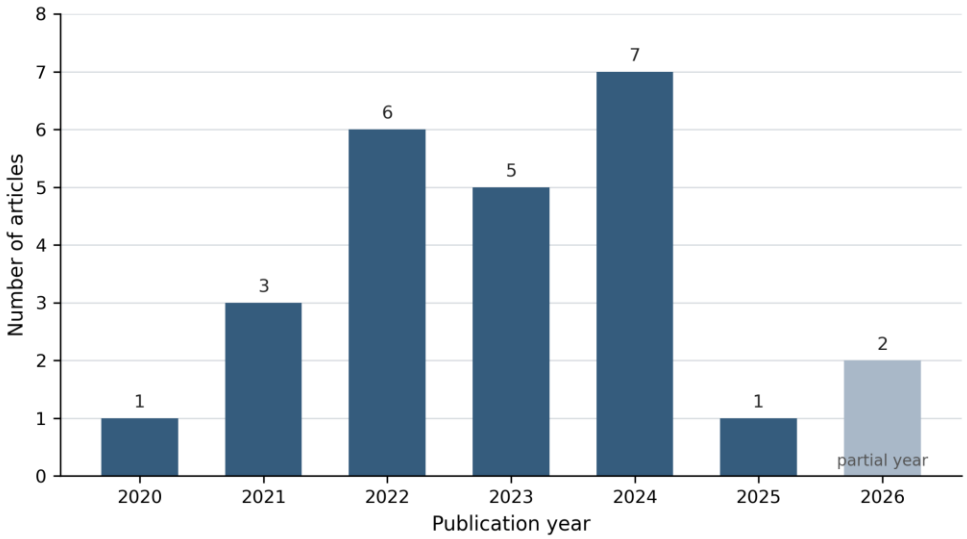
Note. Percentages are based on N=25N = 25N=25. The author count excludes one collective signature and contributors who do not appear in the article byline

Temporal distribution

The year 2024 was the most represented, with seven publications (28.0%), followed by 2022 with six (24.0%) and 2023 with five (20.0%). Together, these three years accounted for 18 documents (72.0%). The remaining publications appeared in 2021, with three (12.0%); 2026, with two (8.0%); and 2020 and 2025, with one each (4.0%). Figure 1 shows an irregular distribution within the collection rather than an estimate of growth or decline in international research. The year 2026 is incomplete.

Figure 1

Annual distribution of publications in the corpus



Note. N=25N = 25N=25. The year of the publication volume or issue was used. The 2026 bar corresponds to an incomplete year at the time the corpus was closed

Journal dispersion

Ciencia Latina Revista Científica Multidisciplinar and *Horizonte Sanitario* contributed two articles each. The remaining 21 journals were represented by one document each. The two most frequent journals accounted for only 16.0% of the collection, indicating broad editorial dispersion within the analyzed set. This distribution does not support attributing international leadership, impact, or superior quality to these journals.

Table 2
Concentration of articles by journal

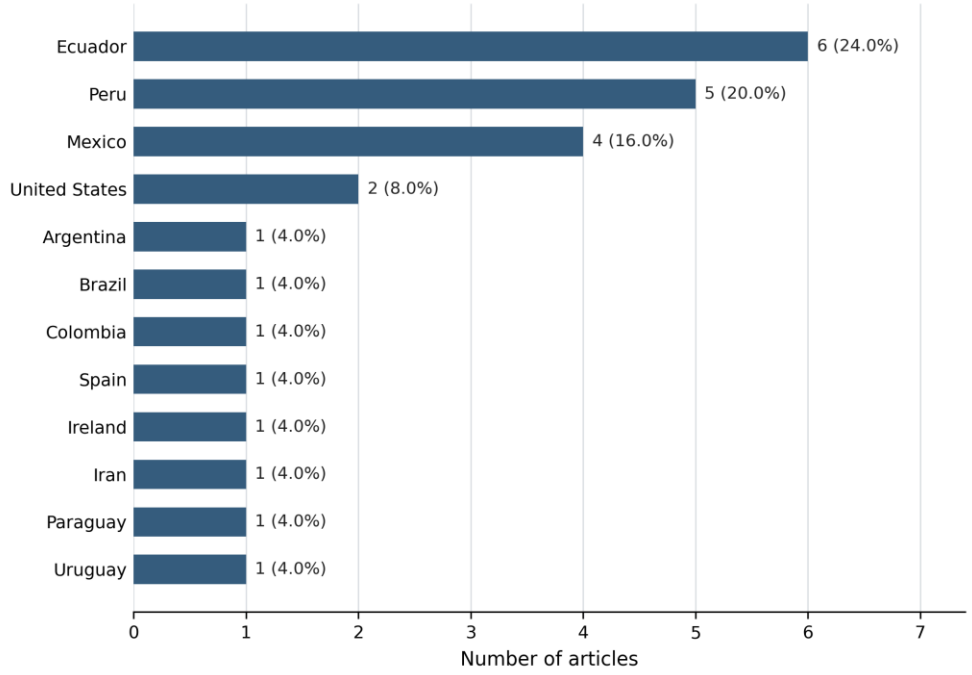
Journal or grouping	Journals	Articles	%
Ciencia Latina Revista Científica Multidisciplinar	1	2	8.0
Horizonte Sanitario	1	2	8.0
Other journals with one article each	21	21	84.0
Total	**23**	**25**	**100.0**

Note. All 23 journals are individually identified in the corpus references.
This table reports publication frequency, not citation counts or journal quartiles

Geographic origin and authorship

The first author's primary affiliation was located in Ecuador for six articles (24.0%), Peru for five (20.0%), and Mexico for four (16.0%). Together, these countries accounted for 60.0% of the corpus. The United States contributed two documents (8.0%), while the remaining eight countries contributed one document each (4.0%). Overall, 20 articles (80.0%) had a first author affiliated with an institution in a Latin American country. Figure 2 presents this document-level attribution; it does not indicate where participants resided or represent all international collaborations among research teams.

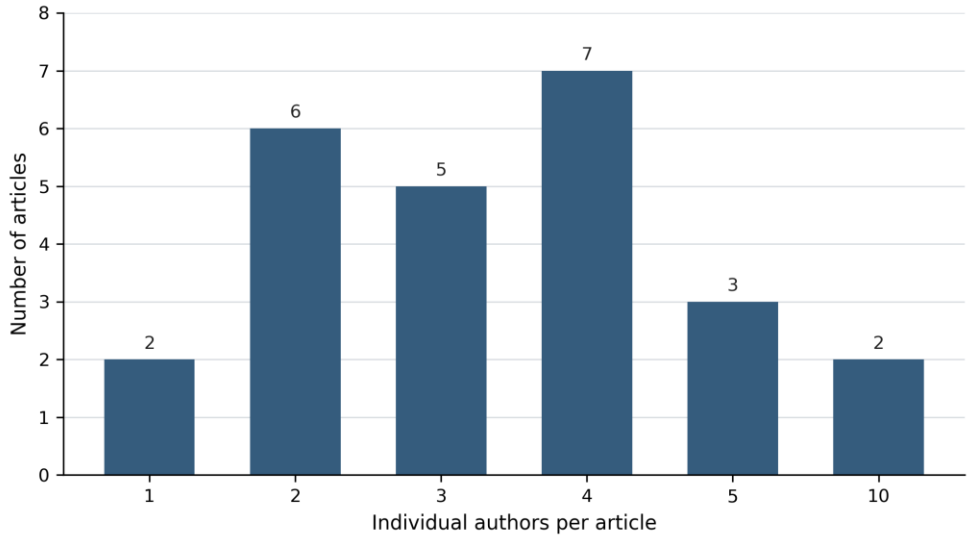
Figure 2
Country of the first author's first affiliation



Note. Exclusive count of one country per article; N=25N = 25N=25. Geographic origin was verified in the full texts and was not derived from the journal's country of publication

Ninety-two distinct authors were identified, with a mean of 3.68 and a median of three authors per article. Seven articles were authored by four individuals, six by two, five by three, and three by five. Two articles were single-authored, and two others included ten authors each (Figure 3). Accordingly, the collaboration index was 0.92. The absence of repeated author names prevents the identification of recurrent authors within this corpus and should not be interpreted as an absence of research experience or specialization beyond it.

Figure 3
Authorship team size



Note. The horizontal axis indicates the number of individual authors per article. One collective signature was excluded from the individual author count; N=25N = 25N=25

Study designs and scope of the evidence

Reviews were the largest category, with nine documents (36.0%), followed by five observational studies (20.0%) and three qualitative studies (12.0%). The two randomized trials addressed different objectives and populations: Chiu et al. (2025) evaluated a school-based intervention linked to the uptake of sexual health services, whereas Rezaie et al. (2021) examined self-care among adolescents who were already pregnant. Therefore, grouping them by document type does not imply equivalence between preventive outcomes.

Table 3
Distribution by study design or type of contribution

Category	n	%	Identifiers
Review	9	36.0	01, 05, 12, 16, 18, 20, 21, 24, 25
Observational	5	20.0	03, 09, 10, 13, 15
Qualitative	3	12.0	19, 22, 23
Randomized trial	2	8.0	07, 08
Policy or normative analysis	2	8.0	04, 11
Preexperimental	1	4.0	02
Instrument validation	1	4.0	14
Descriptive educational intervention	1	4.0	17
Protocol	1	4.0	06
Total	**25**	**100.0**	

Note. Mutually exclusive categories based on the methods described in each article. Identifiers correspond to the original matrix and do not constitute a formal hierarchy of risk of bias

A direct empirical relationship with the school setting was identified in five documents: the workshop described by Bastida et al. (2020), the study of students in Oaxaca, the interviews on pedagogical mediation in Lima, the observational evaluation of a previous school intervention, and the SKILLZ trial (IDs 17, 09, 22, 03, and

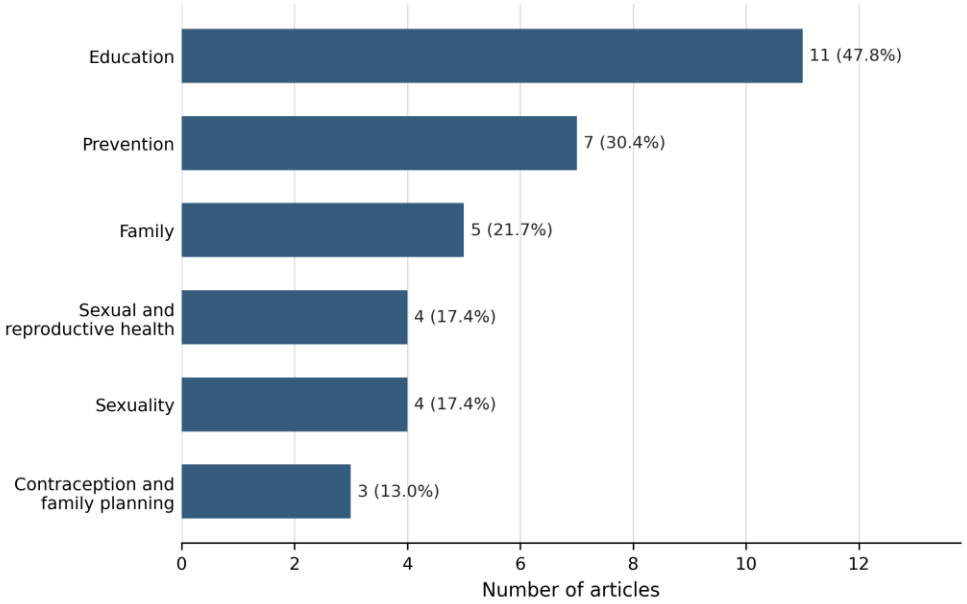
07). This relationship refers to the educational setting or antecedent and not to a homogeneous sample of currently enrolled school students. In particular, Chagua (2026) evaluated participants aged 18 years or older, and Tabory and Sanchez-Pimentel (2024) interviewed professionals.

Keyword families

Among the 23 articles with retrievable keywords, the education family appeared in 11 (47.8%), prevention in seven (30.4%), and family in five (21.7%). Sexual and reproductive health and sexuality were each present in four documents (17.4%), whereas contraception and family planning appeared in three (13.0%). Figure 4 shows these results. Because the categories are non-exclusive, their percentages should not be summed as components of a total. They also do not represent all content addressed in the full texts.

Figure 4

Presence of six thematic families in author keywords



Note. Denominator: 23 articles with retrievable author keywords. Categories are non-exclusive, with a maximum of one occurrence per article and family. The semantic grouping is documented in Table 5

Corpus traceability

Table 4 provides article-level traceability for the variables used in the bibliometric counts. Identifiers preserve the original numbering, while the complete reference and DOI for each article are provided in the reference list.

Table 4

Traceability of the 25 analyzed articles

ID and first author	Year	Affiliation country	Authors	Design
01 Andrade-Huamán	2026	Peru	1	Review
02 Vélez-Gallardo	2023	Peru	2	Preexperimental
03 Chagua	2026	Peru	1	Observational
04 López-Gómez	2021	Uruguay	4	Policy or normative analysis
05 Alukagberie	2023	Ireland	4	Review
06 Chambers	2021	United States	10	Protocol
07 Chiu	2025	United States	10	Randomized trial

08 Rezaie	2021	Iran	4	Randomized trial
09 Sánchez-Martínez	2024	Mexico	2	Observational
10 Vélez Zambrano	2023	Ecuador	2	Observational
11 Ronconi	2023	Argentina	3	Policy or normative analysis
12 Bezerra	2022	Brazil	2	Review
13 Sanca-Valeriano	2022	Peru	3	Observational
14 Rincón	2022	Colombia	5	Instrument validation
15 Ortiz	2022	Paraguay	4	Observational
16 Cevallos	2024	Ecuador	5	Review
17 Bastida	2020	Mexico	4	Descriptive educational intervention
18 Buitrago	2022	Spain	4	Review
19 Quimi	2024	Ecuador	4	Qualitative
20 Jacinto	2022	Mexico	2	Review
21 Jácome	2024	Ecuador	3	Review
22 Tabory	2024	Peru	2	Qualitative
23 Vázquez-Solís	2023	Mexico	5	Qualitative
24 Armijos	2024	Ecuador	3	Review
25 Jimenez	2024	Ecuador	3	Review

Note. Authors = individual byline signatories. ID 18 also includes a collective signature that was not added to the individual author count. Country corresponds to the first author's first affiliation, not the study location

Thematic coding framework

Table 5 presents the dictionary applied to author keywords and the article-level traceability of each thematic family. Differences in uppercase and lowercase letters were ignored, and no terms were inferred from abstracts. The identifiers allow each frequency reported in Figure 4 to be reconstructed. IDs 07 and 08 did not provide retrievable explicit keywords.

Table 5

Dictionary and traceability of thematic families

Family	Grouped terms (as recorded in source articles)	Articles and frequency
Education	*Educación sexual y reproductiva*; *Intervención educativa; Educación sexual; Educación*; *Ensino*; *Educación secundaria; Escolar; Mediación pedagógica*	01, 03, 09, 11, 12, 13, 16, 17, 20, 21, 22 (n = 11)
Prevention	*Prevención*; Primary prevention; Teen pregnancy prevention; Substance use prevention	01, 06, 16, 18, 19, 22, 25 (n = 7)
Family	*Carga familiar; Rol de la familia; Familiar; Orientación familiar*; Intergenerational	03, 06, 11, 21, 25 (n = 5)
Sexual and reproductive health	*Salud sexual y reproductiva; Salud reproductiva*; Reproductive health	03, 05, 15, 20 (n = 4)
Sexuality	*Sexualidad; Sexualidad saludable*	02, 10, 11, 17 (n = 4)
Contraception and family planning	*Métodos anticonceptivos; Contracepção; Planificación familiar*	03, 12, 23 (n = 3)

Note. Six families were selected because of their relationship to educational and preventive dimensions. Each article may appear in more than one family. “Family” and “family planning” were kept separate because of their different meanings. The education frequency includes different educational types and contexts, not only comprehensive sexuality education

Discussion

Bibliometric interpretation and educational context

The nature of the corpus reveals high editorial dispersion alongside a marked territorial concentration of first-author affiliations in Latin America. This combination indicates that the collection reflects contributions from several academic groups and disciplines, including education, health, nursing, law, and population studies. However, this geographical concentration may result from the preselection strategy and the availability of accessible full texts. It does not indicate that these countries are the most prolific worldwide, nor that underrepresented regions lack research on the topic.

The temporal distribution shows a greater concentration of publications between 2022 and 2024, but it does not provide a basis for claiming expansion, decline, or maturity of the field. The same caution applies to journals: the presence of 21 sources with only one publication indicates dispersion within the collection and is insufficient to establish a Bradford core. In a bibliometric analysis of limited scope, interpretation should remain proportionate to the documentary coverage and the indicators actually available (Donthu et al., 2021).

Coauthorship was frequent, although no author appeared in more than one article. Team size provides information on forms of collaborative research production, but it does not, by itself, allow inferences about interdisciplinarity, collaboration intensity, or scientific impact without additional information. A team of ten authors may reflect the requirements of a multicenter trial or the organization of a research program, whereas a review may be conducted by a smaller team. Therefore, differences in authorship are interpreted as document attributes rather than as judgments of quality.

The prominence of education and prevention among author keywords is consistent with the focus of the corpus. Thematic families related to sexuality, contraception, and the family environment reveal several dimensions of the topic. Nevertheless, their frequency depends on the keywords selected by each author and on the dictionary applied. A low frequency of a descriptor does not necessarily mean that the topic is absent from the articles. In particular, a term such as *gender* may be central to a study without appearing explicitly in its keyword list, as can be seen when the approach of Vázquez-Solís et al. (2023) is compared with its author keywords.

Distinguishing scientific output from effectiveness

The predominance of reviews and the diversity of primary studies prevent the 25 publications from being treated as 25 independent evaluations of interventions. Some reviews include studies that also appear as individual articles, which would create double counting if results were pooled without identifying overlap. In this study, each document contributes one bibliometric unit, not an independent effect estimate. Protocols likewise do not provide final results: Chambers et al. (2021) describe a planned evaluation; therefore, its inclusion documents research planning rather than demonstrated effectiveness.

Intervention outcomes are not interchangeable. Vélez-Gallardo and Aliaga-Pacora (2023) assessed knowledge using a single-group pretest–posttest comparison, whereas Bastida et al. (2020) described the design and implementation of a workshop. Both provide pedagogical information, but neither allows a reduction in pregnancies to be attributed to the intervention. The study by Tabory and Sanchez-Pimentel (2024), based on interviews with four professionals, provides insight into experiences and assessments; using it as evidence of causal effectiveness would exceed the inferential scope of its design.

Even in a randomized trial, interpretation should refer to the precise outcome measured. At six months, Chiu et al. (2025) observed a 22-percentage-point difference in HIV testing, with a 95% confidence interval of 14 to 29. For contraceptive use, the reported difference was six percentage points, with an interval of -2 to 14. The latter interval includes the null value and therefore does not support the same degree of certainty at that follow-up point as the result for HIV testing. Neither indicator is directly equivalent to demonstrating a reduction in pregnancies. Likewise, the trial by Rezaie et al. (2021) concerns self-care during pregnancy and should be distinguished from the prevention of a first pregnancy.

The analysis also identified the need to verify the denominators used before reusing previously reported percentages. Among nonparticipants, the 15 reports of pregnancy involving either the participant or her partner were divided by 172 to obtain 8.7% of the total. However, when calculated within the corresponding group, the percentage would be 15 out of 86, equivalent to 17.4%.

A similar situation was observed for the four reports of abortion: 2.3% corresponds to the total sample, whereas 4.7% corresponds to the nonparticipant group. These conversions are presented solely to clarify the original denominators and do not constitute a new causal analysis. Furthermore, because the evaluation included individuals aged 18 years or older, later events cannot automatically be classified as pregnancies occurring during adolescence.

Implications for educational research

The research reviewed situates sexuality education within a broader network of interactions. The study on gender norms and fatherhood by Vázquez-Solís et al. (2023), the review on family guidance by Jimenez et al. (2024), and the descriptive study by Ortiz et al. (2022) illustrate the need to consider families, partners, and the community environment. The educational implication is to design interventions that explicitly specify which component they aim to change and how that change will be measured, rather than attributing all outcomes to the transmission of information.

Another essential issue is coordination among institutions. López-Gómez et al. (2021) provide an example of intersectoral public policy, while Rincón et al. (2022) contribute an instrument for evaluating such efforts. Ronconi et al. (2023) offer a normative perspective on comprehensiveness and teacher preparation. These contributions may inform the design of implementation and coordination indicators, but they do not replace an evaluation of reproductive outcomes.

Table 6

Research priorities derived from the corpus

Interpretive problem	Criterion for a subsequent study	Illustrative articles
Knowledge and pregnancy are treated as equivalent outcomes	Measure and report knowledge, behaviors, and reproductive events separately.	Vélez-Gallardo and Aliaga-Pacora; Chiu et al.
Causality is attributed to descriptive or qualitative studies	Align conclusions with the design and use appropriate comparators when evaluating effects.	Bastida et al.; Tabory and Sanchez-Pimentel
Primary prevention and care during pregnancy are combined	Define the population, preventive stage, and outcome before selecting studies.	Rezaie et al.; Armijos et al.
The context is reduced to individual factors	Include family, gender, and education-health coordination indicators.	Vázquez-Solís et al.; Rincón et al.
The collection is interpreted as global research output	Build a reproducible search and retain complete exports with affiliations and references.	Methodological scope of the present analysis

Note. The table formulates methodological and educational implications; it is neither a formal risk-of-bias assessment nor a clinical recommendation

Limitations

The fundamental limitation of this work is its closed and preselected corpus. No full search record is available; therefore, coverage, selection bias, and exhaustiveness cannot be estimated, and the measured frequencies cannot be extrapolated to the total literature.

Attribution to the first author enables regional comparison but overlooks the contributions of other countries and multiple affiliations. Author counts are based on article bylines, not on researcher profiles external to the articles. There are also semantic choices involved in thematic grouping, and two papers did not have retrievable keywords. In addition, no independent assessment of inter-rater agreement was conducted. Although the dictionary and article-level identifiers allow verification, they do not eliminate possible subjectivity.

The categorization of research designs does not replace a formal quality appraisal. The study did not compile consistent data on citations, exported references, or year-specific indexing; consequently, it does not provide impact rankings or claim journal-quartile status. The year 2026 is not yet complete. Finally, observations on the substance of the research are used to interpret the corpus, not to determine which intervention is most effective in reducing adolescent pregnancy.

Conclusions

The corpus of 25 articles on teenage pregnancy prevention and care, and sexuality education, is dispersed across 23 journals, with most first-author affiliations in Latin America and a high frequency of coauthorship. Representation peaked in 2024, and the most prominent keyword families were education and prevention. These findings describe a specific set of documents rather than providing a panoramic view of the entire scientific production.

The availability of reviews, observational studies, qualitative research, trials, and methodological articles indicates that the collected literature addresses diverse research questions. The main implication for education is that reproductive outcomes should be disaggregated from learning and behavioral outcomes, and that each outcome should be interpreted according to its study design, population, and denominator. Care for adolescents who are already pregnant should also be distinguished from the prevention of a first pregnancy.

This study provides a validated bibliometric characterization, revised metadata, and specified categorization methods. Further progress toward a more comprehensive map of the field will require a replicable search strategy, complete data exports, and affiliation disambiguation. Future research should specify criteria for population, intervention, comparator, and follow-up, and assess the risk of bias in eligible studies to address uncertainties regarding the effectiveness of school-based interventions.

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