

Factors associated with the non-use of condoms among young people: a systematic review protocol

Fatores associados à não utilização de preservativo entre jovens: protocolo de revisão sistemática

Factores asociados al no uso del preservativo en jóvenes: protocolo de revisión sistemática

Received: 09/16/2022 | Revised: 09/25/2022 | Accepted: 09/26/2022 | Published: 10/05/2022

Pedro Augusto Bossonario

ORCID: <https://orcid.org/0000-0001-6287-174X>
Universidade de São Paulo, Brazil
E-mail: pedro.bossonario@gmail.com

Melisane Regina Lima Ferreira

ORCID: <https://orcid.org/0000-0003-1694-5124>
Universidade de São Paulo, Brazil
E-mail: melisanerlf@usp.br

Rubia Laine de Paula Andrade

ORCID: <https://orcid.org/0000-0001-5843-1733>
Universidade de São Paulo, Brazil
E-mail: rubia@eerp.usp.br

Rafaele Oliveira Bonfim

ORCID: <https://orcid.org/0000-0001-8157-2323>
Universidade de São Paulo, Brazil
E-mail: rafaelebonfim@gmail.com

Nanci Michele Saita

ORCID: <https://orcid.org/0000-0002-0203-2765>
Universidade de São Paulo, Brazil
E-mail: nanci_michele@hotmail.com

Rafael de Siqueira Silva

ORCID: <https://orcid.org/0000-0002-0277-2667>
Universidade de São Paulo, Brazil
E-mail: rafaelsiqueira896@usp.br

Aline Aparecida Monroe

ORCID: <https://orcid.org/0000-0003-4073-2735>
Universidade de São Paulo, Brazil
E-mail: amonroe@eerp.usp.br

Abstract

Objective: To identify and analyze the factors associated with not using condoms among the young population.

Method: A search for publications, selection, and data extraction from relevant articles will be conducted following the stage of elaborating the guiding question, in addition to the analysis and synthesis of evidence. The PEO strategy (person, exposure, and outcome) was used to elaborate the research question: “What are the factors associated with the non-use of condoms among young people?” The databases will be searched through controlled and free vocabulary, previously researched and related to the studied subject. Six databases will be considered for the search for publications, one referring to the gray literature. After obtaining the results, the studies will be exported to the Rayyan QCRI software program to exclude duplicate materials and publications will be selected by two independent reviewers. Observational-analytical studies will be included. The selected articles will be read in full, the data will be extracted using a structured form, the methodological quality analyzed, and finally, a narrative and quantitative synthesis of the obtained results will be performed.

Keywords: Risk factors; Adolescent; Young adult; Condoms; Unsafe sex.

Resumo

Objetivo: identificar e analisar os fatores associados a não utilização de preservativo entre a população jovem.

Método: seguindo a etapa de elaboração da pergunta norteadora, será realizada busca de publicações, seleção e extração de dados de artigos relevantes, além da análise e síntese das evidências. A estratégia PEO (pessoa, exposição e *outcome* – desfecho) foi utilizada para elaboração da questão de pesquisa: “Quais são os fatores associados a não utilização de preservativo entre jovens?”. As buscas nas bases de dados serão realizadas por meio de vocabulários controlados e livres, previamente pesquisados e que tenham relação com a temática estudada. Serão contempladas seis bases de dados para a busca de publicações, sendo uma delas referente à literatura cinzenta. Após obtenção dos resultados, os estudos serão exportados para o software Rayyan QCRI para a exclusão de materiais duplicados e seleção de publicações por dois revisores independentes. Estudos observacionais-analíticos serão incluídos e passarão

pela leitura na íntegra, extração de dados por uma ficha estruturada, análise da qualidade metodológica e, por fim, a síntese narrativa e quantitativa dos resultados obtidos.

Palavras-chave: Fatores de risco; Adolescente; Adulto jovem; Preservativos; Sexo sem proteção.

Resumen

Objetivo: identificar y analizar los factores asociados al no uso del preservativo en la población joven. *Método:* posterior a la etapa de elaboración de la pregunta orientadora, se realizará la búsqueda de publicaciones, selección y extracción de datos de artículos relevantes, además del análisis y síntesis de evidencias. Se utilizó la estrategia PEO (persona, exposición y *outcome* – resultado) para elaborar la pregunta de investigación: “¿Cuáles son los factores asociados al no uso del preservativo en jóvenes?”. La búsqueda en las bases de datos se realizará a través de vocabularios controlados y libres, previamente investigados y relacionados con el tema estudiado. Se considerarán seis bases de datos para la búsqueda de publicaciones, una de ellas referida a la literatura gris. Luego de obtener los resultados, los estudios serán exportados al software Rayyan QCRI para la exclusión de materiales duplicados y selección de publicaciones por parte de dos revisores independientes. Se incluirán estudios observacional-analíticos que serán objeto de lectura completa, extracción de datos mediante formulario estructurado, análisis de calidad metodológica y, finalmente, síntesis narrativa y cuantitativa de los resultados obtenidos.

Palabras clave: Factores de riesgo; Adolescente; Adulto joven; Condomes; Sexo inseguro.

1. Introduction

In view of the increase in Sexually Transmitted Infections (STIs) among diverse populations around the world, health promotion activities and prevention strategies are necessary to reach vulnerable populations, such as young people aged 15 to 24, who are also included among the populations highlighted in the fight against HIV transmission (WHO, 2016; UNAIDS, 2021). Thus, STIs are infections transmitted through oral, vaginal and/or anal sexual intercourse and can be caused by viruses, bacteria or other microorganisms; they can be prevented through the use of condoms which are often available free of charge at health services, as in the case of the Brazilian Unified Health System (*Sistema Único de Saúde - SUS*) (Magalhães et al., 2021).

Despite being an important resource for prevention purposes, there is resistance to condom use among the young population, which can lead to an increase in the transmission rate and vulnerability of STIs due to the early initiation of sexual activities, consumption of tobacco, alcohol and illicit drugs, the plurality of partners, doubts about the prevention and transmission of STIs, the precariousness of sex education and the limited access to health services (Sá et al., 2015; WHO, 2016; Davis et al., 2018; Owusu, 2020). The non-use of condoms can be related to issues of age, feeling of invulnerability, trivialization of STIs, less pleasurable sensation and non-agreement of the partner to use the method (Sok et al., 2020; Moreira et al., 2021).

Faced with the challenges involved in the use of condoms by the young population, there is an urgent need to specifically address the age group of young people between 15 and 19 years old, since they are 2 to 3 times more likely to be affected by STIs. Thus, health activities capable of building knowledge on the subject and adapting health prevention strategies according to the reality of these people are required, since part of this population may have a low understanding of STIs, highlighting the importance of peer education and also between family members (Magalhães et al., 2021; Moreira et al., 2021).

Finally, understanding the demographic, behavioral and socio-structural elements that make the young population vulnerable to STIs contribute to opportunities capable of improving health practices in different sectors in order to overcome gaps in the field of preventing the transmission of these infections (Parkhurst, 2014; Naidoo et al., 2014; Lenzi et al., 2018), which are often restricted to condom distribution.

Considering the vulnerability of young people to STIs when they do not use condoms, this article presents a protocol for a systematic review with the objective to identify and analyze risk factors for not using condoms among the young population. It is worth mentioning that this material is registered with PROSPERO (CRD42021276567) and that a preliminary search was carried out to verify the originality and importance of the review on the subject.

2. Method

This article presents a systematic review protocol that was developed according to the Preferred Reporting Items for Systematic Review and Meta-Analysis Protocols (PRISMA-P) recommendations (Moher et al., 2015; Shamseer et al., 2015) and the steps of the “Methodological Guidelines: elaboration of a systematic review and meta-analysis of comparative observational studies on risk factors and prognosis” (Brasil, 2014). We chose to conduct a systematic review for its potential to contribute to gathering and evaluating the data contained in the literature, publishing evidence in the considered area and collaborating in decision-making on a topic (Donato & Donato, 2019).

The intention of the present protocol is to describe the steps followed to carry out the systematic review, such as the elaboration of the guiding question, establishment of the eligibility criteria for primary studies, selection of publications in the databases, retrieval of eligible studies, reading the title and summary of materials listed, full reading of selected studies, data extraction, methodological quality assessment, and synthesis of results (Brasil, 2014).

The PEO acronym was used to formulate the question that will guide the review, constructed as follows: Population (P) referring to young people; Exposure (E) to risk factors; and Outcome (O) of not using condoms, which made it possible to elaborate the study question “What are the factors associated with not using condoms among young people?”

Primary studies or gray literature which present the hypothesis about factors associated with non-use of condoms among young people will be considered as inclusion criteria; in addition, observational-analytical studies, regardless of country of origin and/or publication. Studies that do not consider the young population will be excluded, which will be considered between 15 and 24 years old (UNAIDS, 2021). Therefore, materials whose study population involves people between 0 and 14 years old and above 25 years old will be excluded.

The databases selected for the bibliographic survey will cover the MEDLINE (Medical Literature Analysis and Retrieval System Online), Embase (Excerpta Medica Database), Scopus (SciVerse Scopus), LILACS (*Literatura Latino-Americana e do Caribe em Ciências da Saúde*) and Web of Science, with Google Scholar being elected to search for gray literature. Descriptors and keywords will be identified in the Descriptors of Science and Health (DeCS), Medical Subject Headings (MeSH) and Emtree, in addition to preliminary searches in the literature, in order to identify the free vocabulary used in the writing of publications. The Boolean operators OR and AND will be considered for the search, adapting them to each database (Brasil, 2014), as described in the search strategies in Table 1. No language limit or publication period will be defined for searches.

Table 1. Search strategies used in the systematic review on factors associated with not using condoms among young people in each database, Ribeirão Preto, SP, Brazil, 2022.

Database	Controlled vocabulary / free vocabulary
MEDLINE	("adolescence*[All Fields] OR "adolescenty"[All Fields] OR "adolescent*"[All Fields] OR "Adolescent"[MeSH Terms] OR "prime adult"[All Fields] OR "prime adults"[All Fields] OR "teen*"[All Fields] OR "teenage"[All Fields] OR "teenaged"[All Fields] OR "teenager*"[All Fields] OR "teenages"[All Fields] OR "Young Adult"[MeSH Terms] OR "Young Adult"[All Fields] OR "young adults"[All Fields] OR "Young men"[All Fields] OR "Young people"[All Fields] OR "young person"[All Fields] OR "young persons"[All Fields] OR "Young population"[All Fields] OR "Young women"[All Fields] OR "youngster*"[All Fields] OR "youth*"[All Fields]) AND ("associated factor"[All Fields] OR "associated factors"[All Fields] OR "predictive factor"[All Fields] OR "predictive factors"[All Fields] OR "predictor*"[All Fields] OR "risk factor"[All Fields] OR "Risk Factors"[All Fields] OR "Risk Factors"[MeSH Terms]) AND ("Condoms"[MeSH Terms] OR "condom*"[All Fields] OR "Condom Manufacture"[All Fields] OR "single use internal condom"[All Fields] OR "single use internal condom"[All Fields] OR "Single-Use Internal Condoms"[All Fields] OR "Unsafe Sex"[MeSH Terms] OR "Condomless Sex"[All Fields] OR "high risk sex"[All Fields] OR "high risk sex"[All Fields] OR "Unprotected Intercourse"[All Fields] OR "Unprotected Sex"[All Fields])
LILACS	("Young adult" OR "Young adults" OR "Young people" OR "Young person" OR "Young persons" OR "Young men" OR "Young women" OR "Young population" OR Youngster* OR "Prime adult" OR "Prime adults" OR Youth* OR Adolescent* OR Adolescence OR Teenager* OR Teenage OR Teen* OR Jovem OR Jovens OR Adolescente* OR Adolescência OR Juventude OR Joven* OR Juventud) AND (Preservativo* OR "Camisa-de-Vênus" OR "Camisas-de-Vênus" OR Camisinha* OR "Preservativo Masculino" OR Condones OR Condom* OR "Condom Manufacture" OR "Preservativos Femininos" OR "Preservativo Feminino" OR "Preservativo Interno de Uso Único" OR "Condones Femeninos" OR "Condón Interno de un Solo Uso" OR "Female Condom*" OR "Single Use Internal Condom" OR "Single-Use Internal Condom*" OR "Sexo sem Proteção" OR "Comportamento Sexual de Risco" OR "Relações Sexuais Desprotegidas" OR "Sexo Desprotegido" OR "Sexo Inseguro" OR "Sexo Promíscuo" OR "Sexo Sem Preservativo" OR "Sexo de Alto Risco" OR "Sexo de Risco" OR "Sexo não Seguro" OR "Sexo Inseguro" OR "Relaciones Sexuales sin Protección" OR "Sexo de Alto Riesgo" OR "Sexo sin Condón" OR "Unsafe Sex" OR "Condomless Sex" OR "High Risk Sex" OR "High-Risk Sex" OR "Unprotected Intercourse" OR "Unprotected Sex") AND ("Risk Factor" OR "Risk Factors" OR "Predictive Factor" OR "Predictive Factors" OR Predictor* OR "Associated factor" OR "Associated factors" OR "Factores de Risco" OR "Factores de riesgo" OR "Fator de risco" OR "Fator preditivo" OR "Factores predictivos" OR Predictor* OR "Fator associado" OR "Factores associados" OR "Factor de riesgo")
Embase	('young adult'/exp OR 'young adult' OR 'young adults'/exp OR 'young adults' OR 'adolescent'/exp OR adolescent OR 'young people'/exp OR 'young people' OR 'young person' OR 'young persons' OR 'young men' OR 'young women' OR 'young population' OR youngster* OR 'prime adult'/exp OR 'prime adult' OR 'prime adults'/exp OR 'prime adults' OR youth* OR adolescent* OR 'adolescence'/exp OR adolescence OR teenager* OR 'teenage'/exp OR teenage OR teen*) AND ('risk factor'/exp OR 'risk factor' OR 'risk factors'/exp OR 'risk factors' OR 'predictive factor'/exp OR 'predictive factor' OR 'predictive factors' OR predictor* OR 'associated factor' OR 'associated factors') AND ('condom*' OR 'condom manufacture' OR 'single use internal condom' OR 'single-use internal condom' OR 'single-use internal condoms' OR 'unsafe sex'/exp OR 'unsafe sex' OR 'condomless sex'/exp OR 'condomless sex' OR 'high risk sex'/exp OR 'high risk sex' OR 'high-risk sex'/exp OR 'high-risk sex' OR 'unprotected intercourse' OR 'unprotected sex'/exp OR 'unprotected sex')
Scopus	(TITLE-ABS-KEY ("Young adult" OR "Young adults" OR "Young people" OR "Young person" OR "Young persons" OR "Young men" OR "Young women" OR "Young population" OR youngster* OR "Prime adult" OR "Prime adults" OR youth* OR adolescent* OR adolescence OR teenager* OR teenage OR teen*)) AND (TITLE-ABS-KEY ("Risk Factor" OR "Risk Factors" OR "Predictive Factor" OR "Predictive Factors" OR predictor* OR "Associated factor" OR "Associated factors")) AND (TITLE-ABS-KEY ("Condom*" OR "Condom Manufacture" OR "Single Use Internal Condom" OR "Single-Use Internal Condom" OR "Single-Use Internal Condoms" OR "Unsafe Sex" OR "Condomless Sex" OR "High Risk Sex" OR "High-Risk Sex" OR "Unprotected Intercourse" OR "Unprotected Sex")) = 5.996 resultados
Web of Science	"Young adult" OR "Young adults" OR "Young people" OR "Young person" OR "Young persons" OR "Young men" OR "Young women" OR "Young population" OR youngster* OR "Prime adult" OR "Prime adults" OR youth* OR adolescent* OR adolescence OR teenager* OR teenage OR teen* (Topic) and "Risk Factor" OR "Risk Factors" OR "Predictive Factor" OR "Predictive Factors" OR predictor* OR "Associated factor" OR "Associated factors" (Topic) and "Condom*" OR "Condom Manufacture" OR "Single Use Internal Condom" OR "Single-Use Internal Condom" OR "Single-Use Internal Condoms" OR "Unsafe Sex" OR "Condomless Sex" OR "High Risk Sex" OR "High-Risk Sex" OR "Unprotected Intercourse" OR "Unprotected Sex" (Topic)
Google Scholar (Two strategies will be used)	"young people" "risk factor" "condom" "unsafe sex"

Source: Elaborated by the authors.

The studies retrieved from the databases will be exported to the application for conducting systematic reviews called Rayyan QCRI from the Qatar Computing Research Institute (Ouzzani et al., 2016). Duplicate publications will be excluded using this program, and then the title and abstract will be read by two independent reviewers. A third reviewer will participate in this step if there is any doubt or disagreement about the inclusion of materials. All articles eligible for inclusion will be read in full to ensure that they answer the initially formulated question. In addition, a flow diagram will be presented for better elucidation of the steps taken and quantification of the materials considered in the review, as proposed by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses 2020 Statement (PRISMA) (Page et al., 2021).

Data extraction will take place through a standardized form, in which two trained researchers will independently collect the obtained results, and a third researcher can be consulted if necessary. The form is based on a suggestion from The Joanna Briggs Institute (Moola et al., 2020) and will consider the following variables: authors, year of publication, journal name, study objective, study type, study location, population and study sample characteristics, procedures performed in subject recruitment, study and follow-up duration, exposure factors (independent variables), dependent variables, data analysis, adjustment for confounders, study results and comments. The authors of the included materials may be contacted in necessary situations so that possible doubts can be clarified.

The methodological quality assessment (MQA) of the included articles will be performed by the instruments of The Joanna Briggs Institute according to each type of study conducted (Moola et al., 2020). At this stage, it will be possible to identify the number of items considered in the study and that were met according to those addressed and recommended by the MQA instruments. If possible, the data will be quantitatively synthesized through a meta-analysis after a narrative synthesis of the results of the studies has been performed.

It is worth noting that the data will be updated in the PROSPERO database after the above-mentioned steps are completed, ensuring the transparency of what was carried out, as well as the conclusion of the study and the protocol.

3. Expected Results

This systematic review intends to correlate risk factors associated with the non-use of condoms and that can lead to an increase in HIV/STI cases among the young population, thereby enabling reflections on the theme and health planning which contribute to health promotion and to reduce virus transmission among the population studied.

Acknowledgements

The present work was carried out with the support of the Coordination for the Improvement of Higher Education Personnel - Brazil (CAPES) - Financing Code 001.

References

- Brasil. Ministério da Saúde (2014). *Diretrizes Meteorológicas: elaboração de revisão sistemática e metanálise de estudos observacionais comparativos sobre fatores de risco e prognóstico*. https://bvsm.sau.br/bvsm/ct/PDF/diretrizes_metodologias_estudos_observacionais.pdf.
- Davis, A., McCrimmon, T., Dasgupta, A., Gilbert, L., Terlikbayeva, A., Hunt, T., Primbetova, S., Wu, E., Darisheva, M., & El-Bassel, N. (2018). Individual, social, and structural factors affecting antiretroviral therapy adherence among HIV-positive people who inject drugs in Kazakhstan. *International Journal of Drug Policy*, 62, 43-50.
- Donato, H., & Donato, M. (2019). Stages for undertaking a systematic review. *Acta medica portuguesa*; 32(3), 227-35. <https://doi.org/10.20344/amp.11923>.
- Lenzi, L., Tonin, F. S., Souza, V. R. D., & Pontarolo, R. (2018). Suporte social e HIV: relações entre características clínicas, sociodemográficas e adesão ao tratamento. *Psicologia: Teoria e Pesquisa*, 34, e34418. <https://doi.org/10.1590/0102.3772e34422>.
- Magalhães, E. F., Santos, F. G. B., Barros, L. F. B., & Souza, L. F. B. (2021). Jovens adolescentes: Os fatores de Risco das infecções sexualmente transmissíveis e fatores protetivos. *Brazilian Journal of Development*, 21(12), 1-20. <https://doi.org/10.34117/bjdv7n12-295>

- Moher, D., Shamseer, L., Clarke, M., Ghersi, D., Liberati, A., Petticrew, M., Shekelle, P., & Stewart, L. A. (2015). Preferred reporting items for systematic review and meta-analysis protocols (PRISMA-P) 2015 statement. *Systematic reviews*, 4(1), 1-9. <https://doi.org/10.1186/2046-4053-4-1>.
- Moola, S. Z. C. E. K. R. E., Munn, Z., Tufanaru, C., Aromataris, E., Sears, K., Sfetcu, R., Currie, M., Lisy, K., Qureshi, R., Mattis, P., & Mu, P. F. (2017). Chapter 7: Systematic reviews of etiology and risk. *Joanna Briggs Institute Reviewer's Manual*. The Joanna Briggs Institute, 5. <https://doi.org/10.46658/JBIMES-20-08>.
- Moreira, G. B. C., Martins, G. B. B. S., Péret, I. S. A., Pires, L. C. S., Ribeiro, L. F. C., & Santos, L. I. (2021). Adolescentes e as infecções sexualmente transmissíveis: comportamentos de risco e fatores contextuais que contribuem para o aumento da incidência no Brasil. *Revista interdisciplinar ciências médicas*, 5(1), p 59-66.
- Naidoo, P., Chirinda, W., Mchunu, G., Swartz, S., & Anderson, J. (2015). Social and structural factors associated with vulnerability to HIV infection among young adults in South Africa. *Psychology, health & medicine*, 20(3), 369-79. <https://doi.org/10.1080/13548506.2014.936883>.
- Ouzzani, M., Hammady, H., Fedorowicz, Z., & Elmagarmid, A. (2016). Rayyan - a web and mobile app for systematic reviews. *Systematic Reviews*, 5(210), 1-10. <https://doi.org/10.1186/s13643-016-0384-4>.
- Owusu, A. Y. (2020). A gendered analysis of living with HIV/AIDS in the Eastern Region of Ghana. *BMC Public Health*, 20(751), 1-15. <https://doi.org/10.1186/s12889-020-08702-9>.
- Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., Akl, E. A., Brennan, S. E., Chou, R., Glanville, J., Grimshaw, J. M., Hróbjartsson, A., Lalu, M. M., Li, T., Loder, E. W., Mayo-Wilson, E., McDonald, S., McGuinness, L. A., Stewart, L. A., Thomas, J., Tricco, A. C., Welch, V. A., Whiting, P., & Moher, D. (2021). The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *BMJ*, 372(71), 1-9. <https://doi.org/10.1136/bmj.n71>.
- Parkhurst, J. O. (2014). Structural approaches for prevention of sexually transmitted HIV in general populations: definitions and an operational approach. *Journal of the International AIDS Society*, 17, 19052. <https://doi.org/10.7448/IAS.17.1.19052>.
- Sá, M. I., Silva, M. T., Almeida, D., Vieira, B., Lima, T., Conde, C., Teixeira, M., Lima, J., & Oliveira, T. (2014). Infecções sexualmente transmissíveis e factores de risco nas adolescentes e jovens: Dados de um Centro de Atendimento a Jovens. *Revista de pediatria do centro hospitalar do porto*, 24(2), 64-9.
- Shamseer, L., Moher, D., Clarke, M., Ghersi, D., Liberati, A., Petticrew, M., Shekelle, P., & Stewart, L. A. (2015). Preferred Reporting Items for Systematic Review and Meta-Analysis Protocols (PRISMA-P) 2015: elaboration and explanation. *BMJ*, 349:g7647. <https://doi.org/10.1136/bmj.g7647>.
- Sok, S., Hong, R., Chhoun, P., Chann, N., Tuot, S., Mun, P., Brody, C., & Yi, S. (2020). HIV risks and recent HIV testing among transgender women in Cambodia: Findings from a national survey. *Plos one*, 15(9), e0238314. <https://doi.org/10.1371/journal.pone.0238314>.
- UNAIDS. *Young People and HIV*. (2021). https://www.unaids.org/sites/default/files/media_asset/young-people-and-hiv_en.pdf.
- World Health Organization. (2016). *Global Health Sector Strategy on Sexually Transmitted Infections 2016-2021. Towards Ending STIs*. World Health Organization. <https://apps.who.int/iris/bitstream/handle/10665/246296/?sequence=1>.