

Effectiveness of educational audiovisual aid on Sexually Transmitted Infections: a systematic review protocol

Efetividade de recursos audiovisuais educativos sobre Infecções Sexualmente Transmissíveis: protocolo de revisão sistemática

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ABSTRACT

Objective: to analyze the effect of interventions provided by audiovisual aid compared to traditional guidance to increase knowledge on sexually transmitted infections among young, adult, and older persons. **Method:** this is an effectiveness systematic review. Young, adult, and older persons are to be included. The intervention was supported by audiovisual aid. The initial search strategy was built on MEDLINE and will be adapted to the following databases: Scopus, Web of Science, CINAHL, the Latin American and Caribbean Health Sciences Literature (LILACS via BVS), Cochrane, and Embase. There will not be a time or language delimitation. Two independent reviewers will carry out the selection and screening. Standardized instruments will be used to carry out the critical analysis of the eligible studies. These studies will go through a synthesis and data extraction process regardless of methodological quality. If possible, these studies will be grouped into a statistical meta-analysis. PROSPERO registration number: CRD42022374619.

Descriptors: Young Adult; Audiovisual Aid; Sexually Transmitted Diseases.

RESUMO

Objetivo: analisar o efeito das intervenções fornecidas por meio de recursos audiovisuais em comparação com a orientação tradicional para melhorar o conhecimento sobre infecções sexualmente transmissíveis entre jovens, adultos e idosos. **Método:** trata-se de uma revisão sistemática de efetividade, serão incluídas pessoas jovens, adultos e idosos, cuja intervenção foi apoiada em recursos audiovisuais. A estratégia de busca inicial foi construída na MEDLINE e será adaptada para as bases Scopus, Web of Science, CINAHL, Literatura Latino-Americana e do Caribe em Ciências da Saúde (LILACS via BVS), Cochrane e Embase. Não haverá delimitação de tempo ou idioma. A seleção e triagem acontecerá por dois revisores independentes. Para a análise crítica dos estudos elegíveis será utilizado instrumentos padronizados. Os estudos, independente da qualidade metodológica, passarão pelo processo de síntese e extração de dados. Se possível, os estudos serão agrupados em uma meta-análise estatística. Número de registro na PROSPERO: CRD42022374619.

Descritores: Adulto Jovem; Recursos Audiovisuais; Infecções Sexualmente Transmissíveis.

INTRODUCTION

Educational technologies produced by audiovisual aid are promising for promoting, preventing, and recuperating health. They have been able to broaden individuals' knowledge of health practices related to a theme⁽¹⁻²⁾. Given their creative, compelling nature and the use of senses such as hearing and sight, educational technologies have been increasingly used as tools to facilitate care and promising sources of high-quality health information⁽³⁾.

A randomized clinical trial showed that an educational video intervention modality was as effective in promoting health as in-person coun-

selling carried out by professionals during home visits⁽⁴⁾. Given the complexity of Sexually Transmitted Infections (STIs), educational resources to enable immersion in this topic, accessibility, and entertainment may expand prevention options and keep the population informed so that they can make the right decisions concerning their health⁽⁵⁾.

There is estimated a million new STI cases daily, among asymptomatic and symptomatic cases⁽⁶⁾. The main diseases can be divided into two groups. The first group is composed of curable bacterial infections such as chlamydia, gonorrhea, syphilis, and trichomoniasis⁽⁷⁾. The second group is composed of viral infections, which are treatable but have the potential to cause carcinomas and severe health problems, e.g., HIV (Human Immunodeficiency Virus), hepatitis B, and HPV (Human Papillomavirus).

People aged between 15 and 24 years present the most significant infection prevalence⁽⁸⁾ and risk practices such as not using condoms and having multiple sexual partners. The older people population has presented a concern. In the past few years, there has been an increase in the number of sexually active older people with risky sexual behavior⁽⁹⁾.

Deep knowledge of these infections is still limited to a minority population. Most have a moderate degree of information on transmission, prevention, and consequences of these infections⁽¹⁰⁾. It is suggested that the mechanisms to educate the population should go beyond the clinics and classrooms; state-of-the-art technologies focused on a certain target catering to its needs must be considered, as they may influence healthy sexual decision-making⁽¹¹⁾.

This review aimed to analyze the effect of interventions provided by audiovisual aid compared to traditional guidance on increasing knowledge on STIs among young, adult, and older people. The literature found that an increasing number of publications are focused on developing technologies to improve individuals' health knowledge.

Because audiovisual aid is easily usable, attractive, and targeted at specific populations, they can also improve individuals' knowledge and facilitate promoting STI information. To this end, one must understand how this technology has been broadening knowledge and the quality of the studies made on these resources, as well as investigate the effectiveness of this intervention. A preliminary study was conducted on the International Prospective Register of Systematic Reviews (PROSPERO), Medical Literature Analy-

sis and Retrieval System Online (MEDLINE), and the JBI Evidence Synthesis. Neither current nor in-progress systematic reviews were found to address this study review question.

METHOD

This effectiveness systematic review will be carried out according to the methodological stages devised by Joanna Briggs Institute (JBI)⁽¹²⁾. It will be reported according to the Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA)⁽¹³⁾ checklist. This study is registered on PROSPERO under ID CRD42022374619. This protocol was devised according to the Preferred Reporting Items for Systematic Review and Meta-Analysis Protocols (PRISMA-P)⁽¹⁴⁾.

Review question

The PICO strategy

How effective is the use of audiovisual aid compared to in-person guidance or no intervention on the knowledge of young, adult, and older persons of Sexually Transmitted Infections?

Inclusion Criteria

Participants

This study's population will include young people (13 to 25 years), adults (25 to 61 years), and older people (over 61 years)⁽¹⁵⁾. Participants will be of any sex or ethnic origin and do not have physical, mental, or sensory impairments.

Intervention

The studies included will help assess interventions based on audiovisual aid (involving images and sound) of any duration, frequency, and intensity. They will be played to improve knowledge, and specific resources will be utilized for blind and deaf persons. To carry out this review, interventions may include videos hosted on different platforms, video calls, and mobile applications that present information via sound and images. Interventions will be excluded, including audio calls without video, video games, and virtual reality.

Comparator

Audiovisual aid will be compared to traditional guidance or no intervention. Traditional dialogue guidance is understood herein as exposition in the form of lectures or classes. Specific resources, except for image projectors, do not necessarily support such presentations.

Outcomes

The primary results of this review will be the level of knowledge of Sexually Transmitted Infections measured by validated instruments before and after interventions and the level of statistically significant knowledge of the intervention group.

Type of study

Randomized and non-randomized clinical trials, pre- and post-test intervention studies, time-series analyses, and analytical observational delineations.

Research strategy

The primary results of this review will be the level of knowledge of Sexually Transmitted Infections measured by validated instruments before and after interventions and the level of statistically significant knowledge of the intervention group. The indexing terms were identified to devise the search strategy, followed by a search on the Medical Subject Headings (MeSH).

The initial search strategy was carried out on MEDLINE (PubMed), and it will be adapted for each database and the controlled and non-controlled descriptors (Figure 1). The searches will be submitted to a formal review according to the PRESS (Peer Review of Electronic Search Strategies) guidelines⁽¹⁶⁾. Publications in any language and without time delimitation will be included.

The databases to be researched include the MEDLINE (via PubMed), Scopus, Web of Science, Cumulative Index to Nursing and Allied Health Literature (CINAHL-Ebsco), Latin American and Caribbean Health Sciences Literature (LILACS via BVS), Cochrane, and Embase.

Manually-searched studies will be added to the reference list of selected articles. The OpenGrey, the Theses Catalogue of the Coordination for the Improvement of Higher Education (CAPES), and Google Scholar will be searched to identify the grey literature. To analyze all the retrieved references, the authors of the articles that are not entirely and freely available will be contacted and asked to provide the full versions of the articles.

Search	Expression of primary search	Retrieved records
#1	"Adolescent"[Mesh] OR Adolescent OR "Young Adult"[Mesh] OR (Young Adult) OR "Adult"[Mesh] OR Adult OR "Aged"[Mesh] OR Aged OR Adolescents OR Adolescence OR Teens OR Teen OR Teenagers OR Teenager OR Youth OR Youths OR (Adolescents, Female) OR (Adolescent, Female) OR (Female Adolescent) OR (Female Adolescents) OR (Adolescents, Male) OR (Adolescent, Male) OR (Male Adolescent) OR (Male Adolescents) OR (Adult, Young) OR (Adults, Young) OR (Young Adults) OR Adults OR Elderly	9,593,077
#2	"Audiovisual Aids"[Mesh] OR (Audiovisual Aids) OR "Video-Audio Media" [Publication Type] OR (Video-Audio Media) OR "Webcast" [Publication Type] OR Webcast OR (Aid, Audiovisual) OR (Aids, Audiovisual) OR (Audiovisual Aid) OR (Audio-Visual Aids) OR (Aid, Audio-Visual) OR (Aids, Audio-Visual) OR (Audio Visual Aids) OR (Audio-Visual Aid) OR (Visual Aids) OR (Aid, Visual) OR (Aids, Visual) OR (Visual Aid) OR (Audiovisual Media) OR (Audio-Visual Media) OR Webcasts OR (Streaming Video)	162,605
#3	"Sexually Transmitted Diseases"[Mesh] OR (Sexually Transmitted Diseases) OR "HIV"[Mesh] OR (HIV) OR "Syphilis"[Mesh] OR Syphilis OR "Hepatitis B"[Mesh] OR (Hepatitis B) OR "Chlamydia"[Mesh] OR Chlamydia OR "Gonorrhea"[Mesh] OR Gonorrhea OR "Trichomonas Infections"[Mesh] OR (Trichomonas Infections) OR "Herpes Genitalis"[Mesh] OR (Herpes Genitalis) OR "Papillomavirus Infections"[Mesh] OR (Papillomavirus Infections) OR (Disease, Sexually Transmitted) OR (Venereal Diseases) OR STDs OR (Sexually Transmitted Infections) OR (Infection, Sexually Transmitted) OR STIs OR STI OR (Human Immunodeficiency Virus) OR (AIDS Virus) OR (Great Pox) OR (Hepatitis B Virus Infection)	706,762
#4	#1 AND #2 AND #3	1,367

Figure 1 – Primary search strategy developed on the MEDLINE database via PubMed. Teresina, PI, Brazil, 2023

Study selection

After the database search, the retrieved references will be exported to EndNote to delete duplicates. The selection and screening process will be conducted using Rayyan software. Two independent reviewers will carry this out, who will accompany a third reviewer in case of divergences. Initially, the reviewers will analyze the study titles and summaries based on the inclusion and exclusion criteria established in the PICO acronym. The eligible articles will be fully retrieved; the articles that do not meet the criteria will be registered along with explanations. The study selection process will be described in the final systematic review and presented in a flowchart available on PRISMA.

Methodological quality assessment

The eligible studies will be critically assessed by two independent reviewers, considering the type of study and its methodological description. JBI-standardized instruments (JBI Critical Appraisal Checklist for Randomized Controlled Trials and JBI Critical Appraisal Checklist for Quasi-Experimental Studies: non-randomized experimental studies)⁽¹³⁾ will be utilized.

When data is lacking, or additional information is needed, the study's corresponding authors will be consulted. The critical assessment will be presented via a table and a description. Regardless of methodological quality, these studies will undergo a synthesis and data extraction process. Questions related to the article's methodology quality will be discussed, as well as their limitations for practical usage.

Data extraction

The System for the Unified Management, Assessment and Review of Information (JBI SUMARE)⁽¹⁷⁾ data extraction tool will be used. The data to be extracted from the included studies are as follows: first author, year and place of publication, sample size, participant characteristics (age, sex, race, education, income, occupation, and type of impairment if there is one); study context and design, funding sources, type of audiovisual resource used, the content of the intervention, type of instrument for the pre- and post-tests, outcome measures, measures of continuous and/or dichotomous data effect (odds ratio, hazard ratio, or mean difference), statistical significance, and other methodological quality indicators (randomization, allocation hiding, blinding, report completeness).

Any discrepancies between the two reviewers will be resolved through a discussion with a third reviewer. If relevant data is lacking, the article authors included in this review will be hired for additional information.

Data synthesis

If possible, these studies will be grouped into a statistical meta-analysis. The dichotomous variables will be assessed in terms of their size. They will be presented via odds ratio, while the continuous variables will be assessed via weighted (or standardized) mean differences in the post-final intervention. A 95%-confidence interval will be used for this analysis. The heterogeneity assessment will be carried out using the χ^2 e I^2 tests. The statistical analyses will be conducted using either random or fixed effects based on statistical guidelines⁽¹⁸⁾. The results will be presented in narrative format and include tables and figures when a statistical grouping is impossible. The results will be presented in narrative format and include tables and figures when a statistical grouping is impossible.

A funnel graph will be generated in META-FUNNEL (Stata Corp) to assess publication bias and graph symmetry using statistical tests (Egger test, Begg test, Harbord test) when appropriate.

Building confidence in results

The Grading of Recommendations, Assessment, Development, and Evaluation (GRADE) will classify evidence certainty⁽¹⁹⁾. To characterize the data obtained, absolute and relative risks will be calculated for the groups (intervention and control). Other aspects, such as the degree of recommendation based on the evidence level, the percentage of variation among studies, and the precision and risk of biased publishing, will also be calculated whenever possible. The reported results are:

- I) level of knowledge after intervention versus level of knowledge after a traditional class or no intervention;
- II) statistically significant difference between the intervention and control groups;
- III) statistically significant difference in the intervention group before and after intervention is used.

CONFLICT OF INTERESTS

The authors have declared that there is no conflict of interests.

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