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Motion Graphics and Animated Video Interventions for Sexual Health Education: A Systematic Review

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Tawanwongsri, W; Eden, C.

Corresponding author:
Weeratian Tawanwongsri

weeratian.ta@gmail.com

Author Affiliation:
Walailak University.

ADMINISTRATIVE INFORMATION

Support - None.

Review Stage at time of this submission - Preliminary searches.

Conflicts of interest - None declared.

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Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 23 August 2025 and was last updated on 23 August 2025.

INTRODUCTION

Review question / Objective To systematically identify, appraise, and synthesize evidence from experimental studies that have evaluated the use of motion graphics and animated video interventions for sexual health education, with the aim of determining their effects on knowledge, awareness, attitudes, behaviours, behavioural change, intention, uptake, and practice across diverse populations and settings.

Condition being studied Sexual health education and related outcomes (knowledge, awareness, attitudes, behaviours, behavioural change, intention, uptake, and practice) in diverse populations.

METHODS

Search strategy A comprehensive literature search was conducted in Scopus, MEDLINE (via PubMed), and the Directory of Open Access Journals (DOAJ) from database inception to 24 August 2025. Controlled vocabulary terms and free-text keywords were combined to capture studies involving motion graphics, animated videos, educational animations, digital animations, explainer videos, 2D/3D animations, or animated infographics used in the context of sexual health education. The search strategy combined intervention-related terms (e.g., “motion graphic*,” “animation*,” “animated video*,” “educational animation*”) with topic-related terms (e.g., “sexual health,” “sex education,” “HIV prevention,” “HIV education,” “HIV testing,” “condom*,” “PrEP,” “PEP”) and outcome-related terms (e.g., knowledge, awareness, attitudes, behaviours, behavioural change, intention, uptake, practice). Filters were applied to restrict the results to English-language publications. The reference lists of all included articles were also screened to identify additional eligible studies. Grey literature and unpublished studies were excluded.

Participant or population The review includes any population group, regardless of age, sex, or

setting, that participated in sexual health education interventions using motion graphics, animated videos, educational animations, digital animations, explainer videos, 2D/3D animations, or animated infographics.

Intervention Any population group, regardless of age, sex, or setting, that received sexual health education interventions using motion graphics, animated videos, educational animations, digital animations, explainer videos, 2D/3D animations, or animated infographics.

Comparator Any comparator was eligible, including standard education, alternative interventions, or no intervention.

Study designs to be included All experimental studies, including randomized controlled trials, quasi-experimental designs, and other intervention studies that quantitatively evaluated sexual health education interventions using motion graphics or animated videos.

Eligibility criteria Eligible studies were experimental in design, including randomized controlled trials and quasi-experimental projects, and examined any population regardless of age, sex, or setting. Interventions were required to address sexual health education using motion graphics, animated videos, educational animations, digital animations, explainer videos, 2D/3D animations, or animated infographics. Studies were included if they assessed at least one relevant sexual health outcome such as knowledge, awareness, attitudes, behaviours, behavioural change, intention, uptake, or practice, and if a comparator was present, it could include standard education, an alternative intervention, or no intervention. Only peer-reviewed published articles written in English with retrievable full text were eligible. Non-experimental studies, reviews, editorials, grey literature, and unpublished reports were excluded.

Information sources The literature search was conducted in three major electronic databases: Scopus, MEDLINE (via PubMed), and the Directory of Open Access Journals (DOAJ), from their inception until 24 August 2025. In addition, the reference lists of all included studies were screened to identify any further eligible articles. Grey literature and unpublished studies were not considered, as the review was restricted to peer-reviewed published research to ensure methodological quality and reliability.

Main outcome(s) The primary outcomes of interest were changes in sexual health–related knowledge, awareness, attitudes, behaviours, behavioural change, intention, uptake, and practice following exposure to motion graphics or animated video interventions.

Quality assessment / Risk of bias analysis The methodological quality of included studies was assessed according to study design. For randomized controlled trials, risk of bias was evaluated using the Cochrane Risk of Bias 2 (RoB 2) tool across five domains: randomization process, deviations from intended interventions, missing outcome data, measurement of outcomes, and selection of the reported result. For non-randomized studies, the Risk Of Bias In Non-randomized Studies of Interventions (ROBINS-I) tool was applied, covering seven domains including confounding, selection of participants, classification of interventions, deviations from intended interventions, missing data, measurement of outcomes, and selection of the reported result. Assessments were conducted independently by two reviewers, with disagreements resolved by discussion or consultation with a third reviewer.

Strategy of data synthesis Data from eligible studies were extracted using a standardized form and synthesized narratively. Owing to heterogeneity in study populations, intervention characteristics, outcome measures, and reporting formats, a quantitative meta-analysis was not feasible. Instead, a descriptive synthesis was undertaken, grouping studies according to intervention characteristics and domains of reported outcomes (e.g., knowledge, attitudes, behaviours, intention). In addition to study-level data, educational and multimedia characteristics of the motion graphics and animated video interventions (e.g., type of animation, duration and frequency, content focus, delivery platform, pedagogical/educational design features, production/expertise) were extracted and summarized in a dedicated table. Key findings were synthesized to highlight patterns, consistencies, and differences across studies.

Subgroup analysis No formal subgroup analyses were planned due to the anticipated heterogeneity in study designs, populations, interventions, and outcome measures. However, where appropriate, studies will be descriptively grouped and compared based on intervention characteristics (e.g., type of animation used), target population (e.g., adolescents, university students, community groups), and domains of reported outcomes (e.g., knowledge, attitudes, behaviours, intention).

Sensitivity analysis No formal sensitivity analyses were planned, as the review is primarily descriptive and heterogeneous in design, population, interventions, and outcomes. However, the robustness of the findings will be considered by taking into account the methodological quality and risk of bias of included studies during the narrative synthesis.

Language restriction English.

Country(ies) involved Thailand.

Keywords Motion graphics; Animated video; Educational animation; Sexual health education; Sex education; HIV prevention; Behavioral change; Systematic review.

Contributions of each author

Author 1 - Weeratian Tawanwongsri
Email: weeratian.ta@gmail.com
Author 2 - Chime Eden
Email: chime.eden17@gmail.com
Author 3 - Nattawat Suwanphan
Email: nattawat.suw@wu.ac.th
Author 4 - Dichitchai Mettarikanon
Email: mdichitc@wu.ac.th

Author Affiliation

Author 1 - Weeratian Tawanwongsri
Division of Dermatology, Department of Internal Medicine, School of Medicine, Walailak University, Nakhon Si Thammarat, Thailand
Author 2 - Chime Eden
Jigme Dorji Wangchuck National Referral Hospital (JDWNRH), Bhutan
Author 3 - Nattawat Suwanphan
Division of Digital Content and Media, School of Informatics, Walailak University, Nakhon Si Thammarat, Thailand
Author 4 - Dichitchai Mettarikanon
Division of Digital Content and Media, School of Informatics, Walailak University, Nakhon Si Thammarat, Thailand