

Systematic review

Fields that have an **asterisk (*)** next to them means that they **must be answered**. **Word limits provide guidance** but do not actually limit the number of words that can be entered in each section. You are encouraged to follow maximum length. Registrant means the person filling out the form.

1. * Review title.

Give the title of the review in English

Engagement with social media interventions for improving health outcomes of sexual and gender minorities:
a systematic review

2. Original language title.

For reviews in languages other than English, give the title in the original language. This will be displayed with the English language title.

3. * Anticipated or actual start date.

Give the date the systematic review started or is expected to start.

01/09/2019

4. * Anticipated completion date.

Give the date by which the review is expected to be completed.

01/03/2020

5. * Stage of review at time of this submission.

Tick the boxes to show which review tasks have been started and which have been completed. Update this field each time any amendments are made to a published record.

Reviews that have started data extraction (at the time of initial submission) are not eligible for inclusion in PROSPERO. If there is later evidence that incorrect status and/or completion date has been supplied, the published PROSPERO record will be marked as retracted.

This field uses answers to initial screening questions. It cannot be edited until after registration.

The review has not yet started: No

Review stage	Started	Completed
Preliminary searches	Yes	No
Piloting of the study selection process	No	No
Formal screening of search results against eligibility criteria	No	No
Data extraction	No	No
Risk of bias (quality) assessment	No	No
Data analysis	No	No

Provide any other relevant information about the stage of the review here.

The proposal is funded and the protocol has been finalized. The search term strings are being developed.

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6. * Named contact.

The named contact is the guarantor for the accuracy of the information in the register record. This may be any member of the review team.

Eleanna Melcher

Email salutation (e.g. "Dr Smith" or "Joanne") for correspondence:

Ms Melcher

7. * Named contact email.

Give the electronic email address of the named contact.

emm165@pitt.edu

8. Named contact address

Give the full institutional/organisational postal address for the named contact.

Suite 600, 230 McKee Place Pittsburgh, PA 15213, USA

9. Named contact phone number.

Give the telephone number for the named contact, including international dialling code.

(320)-223-9091

10. * Organisational affiliation of the review.

Full title of the organisational affiliations for this review and website address if available. This field may be completed as 'None' if the review is not affiliated to any organisation.

University of Pittsburgh, Center for Research on Media, Technology, and Health

Organisation web address:

<https://www.crmth.pitt.edu/>

11. * Review team members and their organisational affiliations.

Give the personal details and the organisational affiliations of each member of the review team. Affiliation refers to groups or organisations to which review team members belong. **NOTE: email and country now MUST be entered for each person, unless you are amending a published record.**

Ms Eleanna Melcher. University of Pittsburgh, Center for Research on Media, Technology, and Health
Dr Cesar Escobar-Viera,. University of Pittsburgh, Center for Research on Media, Technology, and Health
Ms Rebekah Miller. University of Pittsburgh
Dr Sherry Pagoto. University of Connecticut Center for mHealth and Social Media

12. * Funding sources/sponsors.

Details of the individuals, organizations, groups, companies or other legal entities who have funded or sponsored the review.

Funding from 'NIH/NIMHD, grant number MD012813 'Social media use and depression among U.S. lesbian, gay, and bisexual young adults.'

Grant number(s)

State the funder, grant or award number and the date of award

13. * Conflicts of interest.

List actual or perceived conflicts of interest (financial or academic).

None

14. Collaborators.

Give the name and affiliation of any individuals or organisations who are working on the review but who are not listed as review team members. **NOTE: email and country must be completed for each person, unless you are amending a published record.**

15. * Review question.

State the review question(s) clearly and precisely. It may be appropriate to break very broad questions down into a series of related more specific questions. Questions may be framed or refined using PI(E)COS or similar where relevant.

What are the characteristics of scholarly research examining interventions delivered through social media for improving health outcomes of sexual and gender minority populations? How is user engagement with social media interventions being defined and measured? What are the components of heavily used interventions that make them so engaging?

16. * Searches.

State the sources that will be searched (e.g. Medline). Give the search dates, and any restrictions (e.g. language or publication date). Do NOT enter the full search strategy (it may be provided as a link or attachment below.)

We will execute literature searches in PubMed/MEDLINE [Medical and public health], PsycINFO [Psychology], and EBSCOhost [Social Sciences].

We will include studies published in peer-reviewed journals, in the English language, published from 2003

onward (the year Myspace was started). IT conference proceedings will be included only when full-research papers were required for submission and each submission went through complete peer-review process.

Searches surrounding interventions delivered through social media, sexual minorities (defined as lesbian, gay, bisexual, and men who have sex with men) and gender minorities (transgender and gender queer or gender fluid people). Exclusion criteria includes: theses or dissertations, opinion pieces or reviews, and use of short message services (not defined as social media).

17. URL to search strategy.

Upload a file with your search strategy, or an example of a search strategy for a specific database, (including the keywords) in pdf or word format. In doing so you are consenting to the file being made publicly accessible. Or provide a URL or link to the strategy. Do NOT provide links to your search **results**.

https://www.crd.york.ac.uk/PROSPEROFILES/142189_STRATEGY_20190715.pdf

Alternatively, upload your search strategy to CRD in pdf format. Please note that by doing so you are consenting to the file being made publicly accessible.

Do not make this file publicly available until the review is complete

18. * Condition or domain being studied.

Give a short description of the disease, condition or healthcare domain being studied in your systematic review.

We are assessing interventions delivered through social media for sexual and gender minorities. These could include: needs assessment (i.e., attitudes, beliefs, preferences), design and development, usability, acceptability, feasibility, pilot trials, clinical trials, efficacy trials. We are specifically studying users' engagement with the social media interventions, and the subsequent clinical outcomes of the intervention.

19. * Participants/population.

Specify the participants or populations being studied in the review. The preferred format includes details of both inclusion and exclusion criteria.

~~The population of interest are gender transgenies and gender minorities.~~ The population of interest are gender transgenies and gender minorities, gender fluid people; Sexual Minorities

include: gay, lesbian, bisexual, men who have Sex with Men (MSM)

Excluded: Non-sexual minorities (i.e. heterosexual people)

20. * Intervention(s), exposure(s).

Give full and clear descriptions or definitions of the interventions or the exposures to be reviewed. The preferred format includes details of both inclusion and exclusion criteria.

Exposure: interventions delivered through social media are any combination of programs or strategies designed to produce behavior change or improve health outcomes delivered via social networking platforms/apps. Social media encompasses web-based or mobile platforms and/or apps for social networking, professional networking, content production and sharing, online communities, location-based

services, NOT short message services (SMS).

21. * Comparator(s)/control.

Where relevant, give details of the alternatives against which the intervention/exposure will be compared (e.g. another intervention or a non-exposed control group). The preferred format includes details of both inclusion and exclusion criteria.

This study does not employ any controls for which to compare the reviewed objects to.

22. * Types of study to be included.

Give details of the study designs (e.g. RCT) that are eligible for inclusion in the review. The preferred format includes both inclusion and exclusion criteria. If there are no restrictions on the types of study, this should be stated.

We will include sources that are in peer-reviewed, English-language, journals for medicine, public health, or social sciences. We will be including feasibility and acceptability studies, pilot trials, RCT and other efficacy trials, and implementation studies. IT conference proceedings will be examined (on a case-by-case basis) only when full-research papers were required for submission and each submission went through complete peer-review process. Sources cannot be theses nor dissertations, conference presentations, or opinion pieces. An included study must focus on or include sexual or gender minority populations, must involve interventions delivered through social media and be focused on sexual or gender minority population, and assess usage and or engagement with the intervention.

23. Context.

Give summary details of the setting or other relevant characteristics, which help define the inclusion or exclusion criteria.

24. * Main outcome(s).

Give the pre-specified main (most important) outcomes of the review, including details of how the outcome is defined and measured and when these measurement are made, if these are part of the review inclusion criteria.

We are specifically interested in examining the engagement with social media delivered interventions, and the subsequent clinical results of the intervention. This outcome will be assessed as part of the review inclusion criteria. It is directly relevant to clinical health outcomes in that it not only guides interventional research, but will help health professionals recommend efficacious tech-interventions for their patients. We have no specific health outcomes, however, the included studies must have assessments of: needs (i.e. attitudes, beliefs, preferences), design and development of intervention, usability of intervention, acceptability and feasibility of intervention, pilot trial information, clinical trial outcomes, or efficacy of the intervention.

* Measures of effect

Please specify the effect measure(s) for your main outcome(s) e.g. relative risks, odds ratios, risk difference, and/or 'number needed to treat'.

Not applicable

25. * Additional outcome(s).

List the pre-specified additional outcomes of the review, with a similar level of detail to that required for main outcomes. Where there are no additional outcomes please state 'None' or 'Not applicable' as appropriate to the review

None

* Measures of effect

Please specify the effect measure(s) for you additional outcome(s) e.g. relative risks, odds ratios, risk difference, and/or 'number needed to treat.

Not applicable

26. * Data extraction (selection and coding).

Describe how studies will be selected for inclusion. State what data will be extracted or obtained. State how this will be done and recorded.

Screening and data extraction will be completed using DistillerSR. We will upload structured forms into the software and use them throughout the entire data extraction process. Three researchers will independently screen all article titles and abstracts to generate a set of references for which there was any possibility for selection. Next, we will randomly assign the reviewers an equal number of references to assess full text of these studies to determine eligibility. We will calculate inter-rater reliability to ensure agreement among reviewers. To minimize the risk of reviewer bias, consensus meetings will be held between the first author and each reviewer to resolve any differences, but only after independent screening of all articles. Extraction forms will include five categories of information: (1) study logistics (e.g., setting, country, publication year, study design, funding source), (2) study population characteristics (including number of subjects, age, gender, race/ethnicity, sexual minorities included, education level, and income), (3) intervention outcomes measured (4) main results and limitations, and (5) adequacy of reporting. To ensure accuracy, we will implement a quality control mechanism in which one reviewer completes a first data extraction and the second reviewer validates or disagrees with it. Again, disagreements will be resolved in consensus meetings with each pair and the first author.

27. * Risk of bias (quality) assessment.

State which characteristics of the studies will be assessed and/or any formal risk of bias/quality assessment tools that will be used.

We will use the 2010 CONSORT statement for randomized clinical trials and the CONSORT Extensions (e.g., pilot and feasibility trials, pragmatic trials, n-of-1 trials, etc) according the type of study reported in each included manuscript.

28. * Strategy for data synthesis.

Describe the methods you plan to use to synthesise data. This **must not be generic text** but should be **specific to your review** and describe how the proposed approach will be applied to your data. If meta-

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analysis is planned, describe the models to be used, methods to explore statistical heterogeneity, and software package to be used.

We will synthesize in table and narrative format the characteristics of studies on interventions delivered through social media for sexual and gender minorities. The characteristics that we will synthesize include the studies' author; country; year of publication; sample size, description, age range, and median age; race/ethnicity; female and sexual minorities composition of the sample; gender minority composition of the same; and reporting adequacy score. We will also synthesize in table and narrative format the studies' exposure assessment tool, outcome assessment tool, and main findings.

29. * Analysis of subgroups or subsets.

State any planned investigation of 'subgroups'. Be clear and specific about which type of study or participant will be included in each group or covariate investigated. State the planned analytic approach.

None.

30. * Type and method of review.

Select the type of review, review method and health area from the lists below.

Type of review

Cost effectiveness

No

Diagnostic

No

Epidemiologic

No

Individual patient data (IPD) meta-analysis

No

Intervention

No

Meta-analysis

No

Methodology

No

Narrative synthesis

Yes

Network meta-analysis

No

Pre-clinical

No

Prevention

No

Prognostic

No

Prospective meta-analysis (PMA)

No

Review of reviews

No

Service delivery

No

Synthesis of qualitative studies

No

Systematic review

Yes

Other

No

Health area of the review

Alcohol/substance misuse/abuse

No

Blood and immune system

No

Cancer

No

Cardiovascular

No

Care of the elderly

No

Child health

No

Complementary therapies

No

COVID-19

No

Crime and justice

No

Dental

No

Digestive system

No

Ear, nose and throat

No

Education

No

Endocrine and metabolic disorders

No

Eye disorders

No

General interest

No

Genetics

No

Health inequalities/health equity

No

Infections and infestations

No

International development

No

Mental health and behavioural conditions

Yes

Musculoskeletal

No

Neurological

No

Nursing

No

Obstetrics and gynaecology

No

Oral health

No

Palliative care

No

Perioperative care

No

Physiotherapy

No

Pregnancy and childbirth

No

Public health (including social determinants of health)

No

Rehabilitation

No

Respiratory disorders

No

Service delivery

No

Skin disorders

No

Social care

No

Surgery

No

Tropical Medicine

No

Urological

No

Wounds, injuries and accidents

No

Violence and abuse

No

31. Language.

Select each language individually to add it to the list below, use the bin icon to remove any added in error.

English

There is an English language summary.

32. * Country.

Select the country in which the review is being carried out. For multi-national collaborations select all the countries involved.

United States of America

33. Other registration details.

Name any other organisation where the systematic review title or protocol is registered (e.g. Campbell, or The Joanna Briggs Institute) together with any unique identification number assigned by them. If extracted data will be stored and made available through a repository such as the Systematic Review Data Repository (SRDR), details and a link should be included here. If none, leave blank.

34. Reference and/or URL for published protocol.

If the protocol for this review is published provide details (authors, title and journal details, preferably in Vancouver format)

Add web link to the published protocol.

Or, upload your published protocol here in pdf format. Note that the upload will be publicly accessible.

No I do not make this file publicly available until the review is complete

Please note that the information required in the PROSPERO registration form must be completed in full even if access to a protocol is given.

35. Dissemination plans.

Do you intend to publish the review on completion?

Yes

Give brief details of plans for communicating review findings.?

At the conclusion of the systematic review, we plan to submit the results of the review to a peer-reviewed journal for publication.

36. Keywords.

Give words or phrases that best describe the review. Separate keywords with a semicolon or new line. Keywords help PROSPERO users find your review (keywords do not appear in the public record but are included in searches). Be as specific and precise as possible. Avoid acronyms and abbreviations unless these are in wide use.

Sexual minorities
Sexual minorities delivered through Social media

Gender minorities

Gay

Lesbian

Bisexual

MSM

Queer

Transgender

37. Details of any existing review of the same topic by the same authors.

If you are registering an update of an existing review give details of the earlier versions and include a full bibliographic reference, if available.

38. * Current review status.

Update review status when the review is completed and when it is published. New registrations must be ongoing.

Please provide anticipated publication date

Review_Ongoing

39. Any additional information.

Provide any other information relevant to the registration of this review.

40. Details of final report/publication(s) or preprints if available.

Leave empty until publication details are available OR you have a link to a preprint. List authors, title and journal details preferably in Vancouver format.

Give the link to the published review or preprint.