STUDY PROTOCOL

What is known about the protective factors that promote LGBTI+ youth wellbeing? A scoping review protocol [version 1; peer review: 1 approved, 1 approved with reservations]

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Open Peer Review

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Open Peer Review

Report

Yael Perry 1, Telethon Kids Institute, Perth, Australia

Michelle Johns, Centers for Disease Control and Prevention, Atlanta, USA

Any reports and responses or comments on the article can be found at the end of the article.

Abstract

Background: There is much concern at the substantial vulnerabilities experienced by lesbian, gay, bisexual, transgender and intersex (LGBTI+) youth as a consequence of discrimination, stigmatisation and marginalisation. Recent research highlights the importance of understanding factors that can promote wellbeing for this population. This paper presents a protocol for a scoping review which aims to systematically map and synthesise the extent and nature of the peer-reviewed, published academic literature on the protective factors that promote wellbeing for sexual and gender minority young people.

Methods: In accordance with the methodological framework for scoping reviews, the following six stages will be undertaken: (1) identifying the research question, (2) identifying relevant studies, (3) study selection, (4) charting the data, (5) collating, summarising and reporting results and (6) consultation. The PRISMA Extension for Scoping Reviews (PRISMA-ScR): Checklist and Explanation will be used throughout the review process. Key inclusion criteria will use the Population, Concept, Context approach, with two reviewers independently conducting the screening and extraction stages across five databases. Identified protective factors will be collated, summarised and categorised iteratively by one reviewer in consultation with the review team. Stakeholder consultation is a key strength of the scoping review process and will be complemented by the public patient involvement of LGBTI+ young people with expertise by experience.

Conclusions: The scoping review has the potential to inform policy, practice and future research through enhanced understandings of the complex interplay of factors that promote wellbeing for sexual and gender minority youth. This first stage of the research process will inform the development of a larger research project. The findings will be disseminated through a peer reviewed publication, a conference presentation and by sharing the findings with key stakeholders, including LGBTI+ young people.
Keywords
Youth, LGBTI+, sexual and gender minority, wellbeing, protective factors, scoping review

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Introduction
It is accepted that there is “no health without mental health”, with the World Health Organization describing mental health as “a state of wellbeing”. While this conceptualisation provides a holistic view of mental health, less clarity exists in relation to understanding the different aspects of mental health, including positive aspects of mental health or the relationship between mental health and social wellbeing. This may be due to the implicit understandings of this referring solely to difficulties and concerns requiring diagnosis and treatment. These understandings may inform the public discourse with resultant stigmatisation. Research regarding attitudinal changes in the wider Irish population identified greater reluctance to openly share information about mental health concerns in personal and professional relationships. Furthermore, over half the Irish population would not wish others to know if they had a mental health difficulty. In response, improved mental health and wellbeing have been identified as central to mental health promotion in Ireland with the launch of Connecting for Life: Ireland’s national strategy to reduce suicide 2015–2020. The Strategy outlines protective factors, such as help-seeking and social connectedness; however, the under-development of research into protective factors for mental health, particularly for population-specific target groups, is acknowledged.

While Connecting for Life adopts a whole-population approach, it identifies specific priority groups, notably those vulnerable to suicide including lesbian, gay, bisexual, transgender, intersex, questioning, queer, asexual, and non-binary (LGBTI+) populations. The acronym LGBTI+ comprises two dimensions: sexual orientation and gender identity. Sexual orientation refers to identification, behaviour and attraction, with suggestions of a higher life-time prevalence of same-sex behaviour and attraction than identification, and a greater prevalence of bisexual people, particularly bisexual women. Gender identity refers to someone’s internal sense of their gender as male, female or non-binary, and may not accord with the sex ascribed at birth. As such, those who identify as transgender and non-binary also have a sexual orientation and may be heterosexual, lesbian/gay, bisexual or asexual.

The wellbeing of LGBTI+ populations has generated considerable research interest over many decades, often identifying vulnerability to psychological distress, self-harm and suicide, both nationally and internationally. This is often contextualised within a minority stress framework, highlighting the consequence of stigmatisation, marginalisation and discrimination on the wellbeing of LGBTI+ populations. Particular concern has been expressed in relation to LGBTI+ youth with noted mental health disparities. These concerns also extend to the Irish context.

There is a tendency to focus on resultant deficits, with sparse literature on strengths-based approaches which promote and protect LGBTI+ wellbeing. This research approach may assume that, because of the marginalisation of sexual and gender minority youth, these young people are automatically ‘at risk’. Researchers have cautioned against this continued representation which may inadvertently portray young LGBTI+ lives as a trajectory, assuming self-harm and suicidality. It has been emphasised that the research taken to indicate heightened mental health risk fails to emphasise that the vast majority of those who identify as LGBTI+ report positive experiences of mental health and social wellbeing. Such generalised and universalising approaches may fail to recognise the range of mental health promoting factors available to LGBTI+ populations, including young people. Furthermore, researchers have emphasised that the dominant research focus on mental health risk for LGBTI+ youth does not identify interventions or suggest solutions. As a result, this representation may unintentionally stigmatise sexual and gender minority young people, with a subsequent decrease in help-seeking. The national and international literature suggesting substantial vulnerabilities among LGBTI+ youth also highlight the importance of understanding factors that can promote wellbeing for this population.

The current research imbalance and emphasis on mental health disparities may result in research, policy and practice remaining confined to deficit-focused connotations of LGBTI+ wellbeing. The limitations of the current research focus on monitoring and assessing policy and practice promoting the wellbeing of these populations have been acknowledged. Health and social policies are integral to promoting the social acceptance of LGBTI+ people with stark differences noted between countries and over time. In particular, marked contrasts are evident amongst countries formerly colonised by Britain in relation to decriminalisation of homosexuality. This can be seen in the Irish context, where despite its history of colonisation, there has been significant progress since 1993 following decriminalisation. The rapid recognition of LGBTI+ rights was markedly enhanced in 2014 when the Irish Government became a signatory to the Declaration of Intent on the International Day Against Homophobia and Transphobia. This commitment informed legislative and policy measures including: a referendum and subsequent changes to the constitution to provide for marriage equality; legislation on gender recognition for adults; and the publication of the LGBTI+ National Youth Strategy as part of the programme for government. This strategy was the first of its kind in a global context, with three overarching goals with the third of these prioritising the development of the research and data environment. This acknowledges the dearth of research internationally and the urgent need for Irish-specific studies to ensure policy and practice is evidence-informed in relation to promoting LGBTI+ youth wellbeing.

It is within this context that this scoping review is being undertaken and to our knowledge is the first of its kind, informed by a holistic approach to LGBTI+ youth wellbeing, to be conducted on this topic, both nationally and internationally.

Methods
Study rationale
The scoping review is part of a broader PhD mixed-methods project which seeks to identify the protective and other factors that may promote the wellbeing of young people who identify
as LGBTI+. This first stage of the research process will locate the study within the literature to inform the future development of the qualitative and quantitative aspects of the project. The project is aligned to the Irish LGBTI+ National Youth Strategy and the specific objective to “develop research into the factors that support positive mental health for LGBTI+ young people” (p.31).

To the best of our knowledge, there is no existing peer reviewed or published synthesis of the research on LGBTI+ youth wellbeing. This is surprising, given the extensive research focus, over several decades, on LGBTI+ mental health disparities, with specific attention given to youth mental health risk. The limited research focus on protective factors that promote LGBTI+ wellbeing is noteworthy given that a decade has passed since Haas and colleagues drew attention to the issue. This group of researchers specifically recommended that studies should be conducted on potentially protective factors, including those that mitigate mental health risk and promote resilience for sexual and gender minority populations.

Scoping review objectives
The overarching objective of the scoping review is to collect and synthesise the quantitative, qualitative and mixed-methods literature on the protective factors that promote sexual and gender minority youth wellbeing. The review aims to map the concepts, themes and types of available evidence within the existing national and international literature. Furthermore, this review will identify research deficits and knowledge gaps in order to inform further research on this topic.

A key strength of the scoping review framework is the priority placed on stakeholder consultation with those with research and policy knowledge or expertise of the topic. The consultation will be enhanced by engaging LGBTI+ youth with expertise by experience via focus groups.

The scoping review has the potential to inform policy, practice and future research, particularly through mapping a course forward to guide the planning and the commissioning of future research. A scoping review is particularly appropriate given the provision for a consultation stage as part of the methodological framework. The following research question will be considered: What is the extent, range, and nature of the peer-reviewed published qualitative, quantitative and mixed-methods evidence regarding LGBTI+ youth wellbeing? This question has been revised or refined through informal consultation with key stakeholders, consistent with iterative and reflexive approach underpinning scoping reviews. Informed by this approach, a holistic view of wellbeing underpins this review which regards mental health as inclusive of any aspect of experience of mental health, wellbeing and wellness. This acknowledges that while the dominant research focus has been on mental health risk, many of these studies will also include information about factors that promote LGBTI+ youth mental health wellbeing.

Stage 2: identifying relevant studies
In order to identify relevant studies, the search strategy will be underpinned by key inclusion criteria based on the PRISMA checklist for scoping reviews using the Population, Concept, Context (PCC) screening criteria:

- **P** – Population: sexual and gender minority young people aged 10–24 years
- **C** – Concept: Any mental health, wellbeing or wellness measure
- **C** – Context: Any country (or region) with broadly comparable social acceptance measures

With the limited research attention given to the topic, the scoping review will focus on published, academic, peer reviewed research articles including quantitative, qualitative, and mixed-methods publications. Additionally, review articles will be included, such as: evidence syntheses, systematic reviews, and meta-analyses using quantitative, qualitative, and mixed-methods approaches, scoping reviews, narrative reviews, rapid reviews, and realist reviews. Other types of publication will be excluded from the search (i.e., book chapters, conference abstracts, dissertations, reports etc.) or publications in a language other than English. Based on the advice of the social science liaison librarian, no time limits will be placed on the initial search and the literature from journal inception will be scoped. The scoping review will consider all research with sexual and gender minority youth. LGBTI+ populations aged between

...
10 and 24 years will be included, consistent with the National Youth Strategy definition of youth. Studies with outcomes within a holistic view of wellbeing will be included, that is, including all aspects of mental health and wellness. The review will consider any supportive, health-promoting or protective factors for LGBTI+ youth wellbeing. In light of the continued criminalisation of homosexuality in some parts of the world, with an impact on research and obtaining data, the context will be limited to countries and regions where there are broadly comparable measures of social acceptance of LGBTI+ populations as measured by the Global Acceptance Index. While this may limit generalisability, the rapid pace of change, as can be seen in the example of Ireland, may generate interest and be relevant to countries and regions where there is less acceptance.

**Search strategy.** A preliminary search was undertaken to establish whether existing scoping reviews had been conducted on the topic or in relation to protective factors for LGBTI+ youth wellbeing. A search for any reviews already conducted or aligning with the topic was undertaken in consultation with the liaison librarian, across the Cochrane Database of Systematic Reviews, Campbell Collection, Epistemonikos and JBI Evidence Synthesis. When this yielded no results, the Database of Abstracts of Reviews of Effects from the National Institute for Health Research and PROSPERO, an international database of systematic reviews regarding health and social wellbeing, were subsequently searched. When no systematic, scoping or any other type of review was identified, an initial keyword search was piloted across three electronic databases: PubMed, PsycINFO and ASSIA. This informed further review of the search strategy with informal consultation undertaken with key stakeholders and LGBTI+ young people to ensure that deliberately broad keywords and search terms were included. In particular, this approach recognises the varied range of terms used to refer to sexual and gender minority communities. To identify relevant studies, the following terms for sexual and gender minorities will be searched including (Title/Abstract LGBTI OR LGBTQ OR studies, the following terms for sexual and gender minorities will be searched including (Title/Abstract LGBTI OR LGBTQ OR studies, the following terms for sexual and gender minorities will be searched including (Title/Abstract LGBTI OR LGBTQ OR terms for wellbeing including (key wellness OR wellbeing OR life satisfaction” OR resilient OR “resilience”)

The researchers sought the assistance of the librarian to further revise and refine the search strategy for keyword terms and index headings and to identify databases for inclusion. An electronic search strategy will be used to identify databases of the published, peer-reviewed literature. Based on the pilot search and consultation with the liaison librarian, five electronic databases have been selected, containing academic, peer-reviewed journals for systematic searching from inception with relevance to medicine, nursing, psychology, allied health, social sciences and education including: PubMed, CINAHL, PsycINFO, ASSIA and ERIC International. The search strategy for PubMed database can be found in the online supplementary material (see Extended data).

**Stage 3: study selection**

The search results will be stored in an electronic referencing system and duplicates removed. Studies will be included for abstract screening if they meet the criteria for Population, Concept, Context as outlined. Two reviewers will initially screen a small portion of the available evidence independently, to ensure the inclusion and exclusion criteria is clear, firstly screening by title and abstract, with discussion until there is complete agreement regarding inclusion. A third reviewer will be consulted until there is consensus regarding the inclusion and exclusion criteria. Abstracts will subsequently be assessed by two reviewers, independently, with discussion afterward until there is agreement. If a consensus cannot be reached further discussion will take place with a third reviewer until there is an agreed decision to include or exclude the study for analysis. Study selection will be based on a priori inclusion and exclusion criteria as outlined in Table 1 below. A copy of the screening template is available as Extended data.

<table>
<thead>
<tr>
<th>Inclusion</th>
<th>Exclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Study includes participants who self-identify as lesbian, gay, bisexual, transgender, intersex, queer, questioning, asexual or nonbinary</td>
<td>Heterosexual, cisgender participants only</td>
</tr>
<tr>
<td>Study with participants aged 10–24 years</td>
<td>Study whereby participants are children &lt;10 years or adults &gt;24 years</td>
</tr>
<tr>
<td>Study whereby the majority of study participants are aged between 10–24 years (i.e. more than 50%)</td>
<td>Study whereby less than 50% of participants are inside the specified age range</td>
</tr>
<tr>
<td>Study referring to any measures of mental health, wellbeing or wellness</td>
<td>No reference in article to protective or other factors that promote LGBTI+ youth wellbeing</td>
</tr>
<tr>
<td>Published in English</td>
<td>Published in language other than English</td>
</tr>
<tr>
<td>Peer-reviewed</td>
<td>Non-peer-reviewed</td>
</tr>
<tr>
<td>Academic journal article</td>
<td>Book, dissertation, conference abstract, report etc.</td>
</tr>
<tr>
<td>Study conducted in a country (or region) with a broadly similar Global Acceptance Index rank</td>
<td>Study conducted in a country (or region) with a widely disparate Global Acceptance Index rank</td>
</tr>
</tbody>
</table>

**Table 1. Inclusion and exclusion criteria of study selection.**
Queries for discussion will be recorded using a written template (see Extended data)\textsuperscript{43}. A table with excluded studies and reasons for exclusion will be generated based on this \textit{a priori} criteria. The study team will be consulted throughout this process of selecting sources of evidence. The final step includes citation searching of the studies where the reference lists of the included articles will be reviewed using the citation function of Google Scholar to search for additional studies, supplemented by reference searching\textsuperscript{36,37,39}.

\textbf{Stage 4: charting the data}

The data extraction process in scoping reviews is referred to as ‘charting’ the data\textsuperscript{36,37,39}. A data extraction tool will be developed and piloted by the research team to provide a written overview of the key information to be captured in a summary table\textsuperscript{39}. This will record the following information: author(s); year of publication; country where study was conducted; aims/purpose of the study; methodology/methods; study population and sample size; outcomes and key findings in relation to the scoping review questions. The project lead will complete a full-text review and extract the data according to the summary table. All variables will be identified including assumptions and simplifications. The summary table will be tested by the study team to check a random sample of the completed data extracted. Consultation will take place with the study team throughout this process. This will establish processes for obtaining and confirming data. Where there is disagreement, the study team will be consulted until there is a decision to include or exclude a study. It is anticipated that completion of the summary table will be an iterative and reflexive process\textsuperscript{36,37,39}.

\textbf{Stage 5: collating, summarising and reporting the results}

The PRISMA-ScR checklist for reporting scoping reviews will be used\textsuperscript{39}. A rationale for collating the results will describe the methods and the use of this information in any data synthesis will be outlined\textsuperscript{39}. The methods of handling and summarising the charted data will be described\textsuperscript{39}. The selection of sources of evidence will be outlined using a flow diagram\textsuperscript{39}. The characteristics of sources of evidence will be described and cited, with the results synthesised and summarised\textsuperscript{39}. It is anticipated that there will be variation in study design and method. A general interpretation will be provided along with potential implications and limitations of the scoping review\textsuperscript{39}.

\textbf{Stage 6: consultation}

\textbf{Stakeholder consultation.} A scoping review provides for a consultation stage as part of the methodological framework\textsuperscript{39}. Levac, Colquhoun and O’Brien recommend that this stage is a requirement for a scoping review as it enhances methodological rigor\textsuperscript{37}. The consultation will be undertaken with stakeholders recruited through a purposive sampling approach\textsuperscript{44}. This widely used technique is considered particularly useful in identifying and selecting research and policy stakeholders who have particular knowledge about the research question\textsuperscript{44}. The consultation comprises three phases: (1) search phase: reviewing and revising search terms and inclusion/exclusion criteria; (2) analysis phase: an iterative refinement of included sources of evidence and relevant data (3) findings: critical appraisal to ensure correct data interpretation and suggestions for knowledge translation\textsuperscript{36,37,39}. This will be enhanced by public patient involvement (PPI) through focus groups with LGBTI+ young people.

\textbf{Patient and public involvement.} Involvement of young people in research processes is increasingly emphasised by researchers, policy makers and practitioners\textsuperscript{36–42}. The provision within the framework for a consultation stage aligns with the objectives of the study and recognises LGBTI+ youth expertise, the social and cultural capital within youth networks and youth agency regarding their mental health and well-being\textsuperscript{41–42}. Focus groups will use interactive participatory approaches to share the findings from the scoping review to explore LGBTI+ young people’s understandings, meanings and interpretations\textsuperscript{41}. In Ireland, it is acknowledged that some young people are seldom-heard, including sexual and gender minority youth\textsuperscript{41}. Baker and Beagan call for collaboration that promotes ‘learning with’ LGBTI+ communities\textsuperscript{46}. This recognises that young people can and should be more involved in all stages of the research process, not just in providing data to researchers\textsuperscript{40–42}. This will inform further synthesis of the review.

\textbf{Dissemination and ethics}

Ethical approval has been granted from the UCD Humanities Research Ethics Committee to undertake consultations on the scoping review findings with stakeholders and to conduct focus groups with young people (Ref#: HS-19-80-Ceathal-Campbell ). It is hoped that the involvement of sexual and gender minority youth will provide insights into research dissemination with these populations of young people, their families and with professionals in health, social care and education\textsuperscript{42}. The research team anticipate that the results will be disseminated through a peer reviewed publication, a conference presentation and presentations to the key stakeholders, including LGBTI+ youth.

\textbf{Discussion}

To our knowledge, this will be the first scoping review exploring the protective factors that promote the wellbeing of sexual and gender minority youth, including young people who self-identify as LGBTI+. Drawing on Arksey and O’Malley’s methodological framework, the search strategy will map the established quantitative, qualitative and mixed-methods evidence of the protective factors currently considered, identify research gaps and provide recommendations. The PRISMA Extension for Scoping Reviews (PRISMA-ScR) checklist will be used throughout the review process in order to ensure transparency and enhancing the potential for replication. Stakeholder consultation is a key strength of the scoping review process and will engage with a range of people with expertise in the research and policy fields. This will be complemented by PPI of sexual and gender minority youth through interactive, participatory focus groups. This offers a unique opportunity to include LGBTI+ young people with expertise by experience in the research process. A recognised limitation of scoping reviews is that they
do not assess the quality of studies, like the more traditional systematic review. However, a scoping review methodology has the capacity to collect a great quantity of different types of literature. This is of particular relevance when there is little known or published about a topic area. This could inform the design of future full systematic reviews on this subject area by demonstrating the breadth and nature of the literature to date.

**Data availability**

Underlying data

No underlying data are associated with this article.

**Extended data**

Open Science Framework: Scoping review protocol on protective factors that promote LGBTI+ youth wellbeing. [https://doi.org/10.17605/OSF.IO/PM5AX](https://doi.org/10.17605/OSF.IO/PM5AX).

This project contains the following extended data:

- PubMed search scoping review OSF (DOCX). (PubMed search string to be used in the scoping review.)
- Screening criteria using Population, Concept, Context for OSF (DOCX). (Screening criteria to be used in the scoping review.)
- Screening template using PCC criteria and inclusion criteria OSF (DOCX). (Eligibility criteria screening template to be used in the scoping review.)

Extended data are available under the terms of the Creative Commons Zero “No rights reserved” data waiver (CC0 1.0 Public domain dedication).

**References**

   Reference Source

   Reference Source

   Reference Source

   Reference Source

   Publisher Full Text

   Publisher Full Text

   Publisher Full Text

   PubMed Abstract | Publisher Full Text | Free Full Text

   PubMed Abstract | Publisher Full Text

   Publisher Full Text

40. McEvoy O: **A practical guide to including seldom heard children and young people in decision-making.** Department of Children and Youth Affairs, Dublin. 2015.
   Reference Source

   Publisher Full Text

   PubMed Abstract | Publisher Full Text | Free Full Text

   Reference Source

   Reference Source

   PubMed Abstract | Publisher Full Text

46. Ceatha N: **Scoping review protocol on protective factors that promote LGBTI+ youth wellbeing.** 2020.
   http://www.doi.org/10.17605/OSF.IO/PM5AX
Open Peer Review

Current Peer Review Status: ?  

Version 1

Reviewer Report 27 May 2020
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Michelle Johns
Division of Adolescent and School Health, Centers for Disease Control and Prevention, Atlanta, GA, USA

This review addresses an important gap in the literature, and I applaud the research team for taking it on.

Considerations:

Wellbeing is a broad construct that has been operationalized in many ways. It would be helpful for the authors to define how they are operationalizing wellbeing within the introduction to help establish the boundaries of this review for the reader.

Additionally, the inclusion of “mental health” as a key word is likely to pull many articles related to mental health disorders/sequelae such as depression, anxiety, PTSD, etc. It would be useful to address head on how the research team will handle such articles. Do they fit the scope? If so, under what circumstances?

The authors may be interested to know that a prior systematic review focused on the issue of transgender youth and protective factors, and included considerations of mental health: Johns, M.M., et al., (2018)1.

References

Is the rationale for, and objectives of, the study clearly described?
Yes

Is the study design appropriate for the research question?
Yes

Are sufficient details of the methods provided to allow replication by others?
Yes
Are the datasets clearly presented in a useable and accessible format?
Not applicable

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: Sexual and gender minority health, sexual health, mental health, stigma, resilience.

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard.

Author Response 05 Jun 2020
Nerilee Ceatha, University College Dublin, Belfield, Ireland

We would like to thank the reviewer for their approval of the scoping review. We also welcome the suggestions of how the protocol can be improved, especially by clarifying constructs and how these will be operationalised. We will respond to these points below:

Wellbeing
We agree with the suggestion that it would be helpful to define wellbeing and how this will be operationalised in the introduction. Revising the protocol has provided an opportunity to make this more explicit in order to help establish the boundaries of the review. We accept that wellbeing is contested1,2. Our use of the term draws from the holistic framing by the WHO3. This is further complemented by situating individuals within an ecological model where health is premised on social justice4. To operationalise this construct we have drawn on the work of Wilson and Cariola and made this specific within the inclusion criteria5.

Mental health
We view mental health as an integral component of wellbeing. This approach is premised on our understandings that mental health is not binary; that anyone may experience times when their mental health may be compromised and that this does not preclude times of wellbeing1,2. This holistic conceptualisation attempts to move away from clinical and pathologized framing of mental health which can be stigmatising1. Careful consideration has been given regarding articles including articles related to mental health diagnoses and sequelae. Again, building on Wilson and Cariola’s review, this has been operationalised using Minority Stress Theory5. As such, the scoping review will include articles which refer to mental health and then specifically review to determine whether there is any reference to factors that mitigate minority stress including, but not limited to: interpersonal, community-based or policy measures, alongside measures of resilience. To operationalise this, we have developed a flow chart of inclusion and exclusion criteria and further revised the screening tool (see Extended data)6.

Prior systematic review
We are aware of the systematic review by Johns et al on transgender youth and protective factors7. We have been using this study as a reference when piloting the search strategy to ensure that the search captures key articles, reviews such as this.

We again thank the peer reviewer for their review. We very much appreciate the feedback and believe that the revised protocol has been strengthened by addressing these suggestions which will be beneficial throughout the scoping review process.


**Competing Interests:** No competing interests were disclosed.
(male/female/non-binary) and sexual diversity (hetero/lesbian/gay/bisexual/asexual) do not encompass the myriad of identities and orientations people regularly express. The authors should clarify that a very wide spectrum of sexual orientations and gender identities exist (and are subjectively defined) and that the examples provided are not exhaustive. Consider reviewing (and using) the following systematic review on terminology in your search terms: Lee, J. G., Ylioja, T., & Lackey, M. (2016)¹.

- With regards to the research question, the authors oscillate between using the terms ‘protective factors’ and ‘youth wellbeing’. This needs to be clarified as wellbeing is a very vague construct and potentially encompasses far more than simply protective factors. The current operationalization of the wellbeing concept includes mental health – is this the opposite of mental illness or something else? I suggest that protective factors is used as the primary Concept (C) in place of wellbeing as this is far more specific and arguably will lend itself to a more useful review.

- Delete repeated references to the social science liaison librarian – this may have been important for the development of your conceptualization of the review, but isn’t usually included in the protocol.

- No time limits are placed on the literature search, however, the social context has changed dramatically for LGBTI+ young people over recent years. Is it appropriate to review and include literature from the 80s or 90s?

- The exclusion criteria for age (less than 50% of participants are in the specified age range) may be practically difficult to use – most studies won’t state participants’ ages by %. May want to consider using the mean age falling within the specified age range (as well as a criterion that specifies the study targets young people specifically, so as not to inadvertently include a study targeting adults that happens to recruit a young population).

- The authors should consider using a standardized risk of bias tool (e.g. Mixed Methods Assessment Tool which can be used for both quantitative and qualitative studies).

An additional (minor) point – for the sake of clarity and ease of reading - some of the protocol is repetitive in nature. It would benefit from an additional review by the authors to minimize this repetition.

References

Is the rationale for, and objectives of, the study clearly described?
Yes

Is the study design appropriate for the research question?
Yes

Are sufficient details of the methods provided to allow replication by others?
Partly

Are the datasets clearly presented in a useable and accessible format?
Not applicable
**Competing Interests:** No competing interests were disclosed.

**Reviewer Expertise:** Youth mental health, LGBTIQ mental health, prevention of mental illness.

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard, however I have significant reservations, as outlined above.

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**Author Response 05 Jun 2020**

**Nerilee Ceatha,** University College Dublin, Belfield, Ireland

We would like to thank the reviewer for their detailed review and helpful feedback. We particularly appreciate the constructive comments of how the protocol can be improved, especially by clarifying constructs and criteria. We will respond to each of the points below:

**Grey literature**

We have given careful consideration to the wealth of grey literature and its inclusion. While we concur that there is a wealth of grey literature, there is broad variation in the quality of that literature. However, critical appraisal is not part of a scoping review methodology and this review would not include quality assessment and risk of bias. We acknowledge that there may potentially be a lot of important grey literature in dissertation form. We have now included dissertations, which may be unpublished, and will search three key repositories.

**Stakeholders**

Thank you for highlighting the need to describe and define the stakeholders who have been and will be invited to consult throughout the protocol development and scoping review process. Informed by the work of Levac and colleagues, we have provided further details of the purpose for the consultation and sought to specify the stakeholders invited to consult. Drawing on the recommendations of Daudt and colleagues, we have also clearly articulated that the study team includes suitable stakeholders.

**Use of the LGBTI+ acronym**

In relation to the use of the LGBTI+ acronym, we welcome these suggestions. We are aware of the wide variations and how this is expressed in relation to identities and orientations regarding sex, gender and sexual orientation. This review is being conducted within the Irish policy context, with LGBTI+ being the preferred acronym. However, we wish to ensure that this review has international resonance. Thank you for drawing attention to the importance of ensuring that definitions of diversity of sexual orientations and gender identities should be expanded to encompass other expressions, including intersex identifications. We have made this more explicit throughout the protocol. Further, we have highlighted that the use of broad search parameters reflects our understanding of this diversity and ways of expressing these variations across a wide spectrum. While the work of Lee, Ylioja and Yackey was cited, this has now been made more explicit.

**Refining the Research Question re: wellbeing**

Revising the protocol has provided an opportunity to ensure consistency and outline how constructs will be operationalised with regards to the research question. We now refer to...
‘protective factors’ throughout the protocol. We have given consideration to the use of ‘wellbeing’ as the Primary Concept (C) and agree that this can be a vague term, however, it is used extensively throughout the literature. As such, much would be lost if the search did not include this term. However, we concur that the inclusion of the term ‘wellbeing’ needs to be specific in order to provide a more useful review. We have amended the Primary Concept to ‘protective factors that promote wellbeing’. We have clarified that our use of the term ‘wellbeing’ draws from a holistic concept as outlined by the WHO, complemented by the Ottawa Charter for health promotion. We have drawn on the work of Wilson and Cariola and specifically outlined how these constructs will be operationalised within the inclusion and exclusion criteria. We welcome the question on the inclusion of mental health, which we view as an integral component of wellbeing. This approach is premised on our understandings that mental health is not binary; that anyone may experience times when their mental health may be compromised and that this does not preclude times of wellbeing. This holistic conceptualisation attempts to move away from clinical and pathologized framing of mental health which can be stigmatising. Again, building on Wilson and Cariola’s review, this has been operationalised in the context of Minority Stress Theory. As such the scoping review will include articles which refer to mental health and then specifically screen to determine whether there is any reference to factors that mitigate minority stress including, but not limited to: interpersonal, community-based or policy measures, alongside measures of resilience. To operationalise this, we have developed a flow chart of inclusion and exclusion criteria and further revised the screening tool (see Extended data).

Reference to the subject librarian
The repeated references have been removed.

Timeframe on the search
We have given careful consideration as to whether to impose a timeframe on the search. One of the core functions of a scoping review is to determine the coverage of a body of literature on a given topic. While it is acknowledged that there have been rapid changes in the last decade, with the example of Ireland one of the most dramatic in this regard, assessing the timeline of publications on this topic will facilitate the mapping of these changes. Further, Wilson and Cariola recommend that Minority Stress Theory, published in 2003, may be useful in addressing research gaps.

Inclusion and exclusion criteria regarding age
Thank you for the suggestion that we include a criterion that specifies the study targets young people and that the mean age of study participants should fall within the specified age range. This is very helpful. The inclusion and exclusion criteria have been amended to reflect these suggestions.

Risk of bias
A ‘standardized risk of bias tool’ would be appropriate for use with a systematic review, rather than a scoping review. Thus, assessment using a ‘standardized risk of bias tool’ is beyond the scope of this review. Further, these types of review have the potential to determine whether a systematic review is needed and the potential design of this. Daudt and colleagues suggest that scoping reviews may be a “necessary pre-requisite” for determining whether a full systematic review is required.

Repetition
The protocol has been edited to address the repetition in the writing.

Thank you for the review and the encouraging comments that the study is timely and important with implications for research, policy and practice. We very much appreciate the feedback and believe that the revised protocol has been strengthened by addressing these suggestions. These refinements and revisions will be beneficial throughout the scoping review process.

References


Competing Interests: No competing interests were disclosed.