

PEER REVIEW HISTORY

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ARTICLE DETAILS

TITLE (PROVISIONAL)	The menstrual experience of adolescents in the United States: Protocol for a scoping review
AUTHORS	Olowojesiku, Ronke; Shim, Deborah; Moppins, Bryanna; Park, Daye; Patterson, Jasmine; Schoenl, Samantha; Gaines, Julie; Sperr, Edwin; Baldwin, Amy

VERSION 1 – REVIEW

REVIEWER	Sheena Eagan East Carolina University, USA
REVIEW RETURNED	06-Jul-2020

GENERAL COMMENTS	The systematic review is clearly of value and methodologically sound, HOWEVER- there is no discussion or conclusion to synthesize the sources reviewed. The power of a systematic review is that macro level view and synthesis, which is missing from this paper. I recommend that the paper be restructured for clarity and that a discussion and conclusion section be included and emphasized.
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REVIEWER	Dr Olufemi Aluko
REVIEW RETURNED	19-Jul-2020

GENERAL COMMENTS	I have inserted my comments in-text of the manuscript. The reviewer provided a marked copy with additional comments. Please contact the publisher for full details.
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REVIEWER	Chelsea Polis Guttmacher Institute, United States
REVIEW RETURNED	12-Oct-2020

GENERAL COMMENTS	This manuscript describes a protocol for a systematic review which plans to summarize the literature addressing the menstrual experience of adolescents in the United States. The paper is well-written, utilizes appropriate methodological guidance for scoping reviews, and the scoping review would fill an important gap in the literature. While I do have a few suggestions to further improve the protocol and a couple of minor comments, overall, I think this protocol is well-specified and as a result I have very few comments. I look forward to eventually seeing the results of this scoping review and wish the authors the best of luck in conducting it. Major comments: * The authors do not sufficiently justify why they focus only on the United States, rather than on high income countries in general.
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	<p>Since other scoping reviews have covered LMICs, it seems that it may not be too ambitious to widen the scope for this scoping review to HICs, and would result in a more broadly applicable and impactful manuscript.</p> <p>* Additional specification of the research question (and thus of inclusion and exclusion criteria) may be helpful (though I acknowledge that to some extent, this is a necessarily iterative process in the conduct of a scoping review). For example, the authors might find it a useful exercise to look at the inclusion/exclusion criteria that we used for a recent scoping review on women's responses to contraceptive-induced menstrual bleeding changes. On page 3, we list a number of topical areas - this list might give the authors some additional ideas on how to further focus their own inclusion/exclusion criteria. https://reproductive-health-journal.biomedcentral.com/articles/10.1186/s12978-018-0561-0</p> <p>* It would be useful to be more specific about which stakeholders have already been involved, how they were selected, and at which specific milestones of the project they will be engaged throughout the conduct of the scoping review.</p> <p>* The protocol does not define any limitations of the scoping review; this would be a useful addition, though I recognize that additional specifics may be added in the conduct of the actual review itself.</p> <p>Minor comments:</p> <p>* Line 46: Unclear what is being referred to as "this period" - I think the authors are referring to the ages 15-50 but this could be made more clear.</p> <p>* Line 51: "Conception and birth" is a narrow interpretation of the topics typically addressed in reproductive health research; I suggest referring to Starrs et al 2018 (https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(18)30293-9/fulltext) to provide a more comprehensive description of what this body of work has typically focused on.</p> <p>* Line 13: I suggest ending the sentence after "experienced librarians". The use of defined inclusion and exclusion criteria are more relevant for the components described in the subsequent sentence - the abstract and full text review.</p> <p>* Lines 219-221: Please provide clarification regarding how a Kappa statistic will be calculated based on the qualitative information gathered during data charting.</p>
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VERSION 1 – AUTHOR RESPONSE

From Reviewer 1:

- “The systematic review is clearly of value and methodologically sound, HOWEVER- there is no discussion or conclusion to synthesize the sources reviewed. The power of a systematic review is that macro level view and synthesis, which is missing from this paper. I recommend that the paper be restructured for clarity and that a discussion and conclusion section be included and emphasized.”
 - Per editorial comment, the authors did not add an additional discussion and conclusion section per the journal’s preferred structure

From Reviewer 2:

- Line 3: “Do issues related to menstruation like access to hygiene products and menstrual education go unaddressed? I do not think so. there are several school-based puberty education and promotion of disposable sanitary towels, among adolescents in various climes. However, these programmes have not achieved the desired results, up till now. I will therefore suggest a recast of the introductory statement.”
 - The authors appreciate the reviewer’s point of distinction. In stating the issues related to menstruation go unaddressed, we wanted to emphasis that they were not addressed at the level that needed to be, as evidenced by prior literature review and editorial pieces. However, we recognize the original statement was oversimplified, and have thus revised it in the updated manuscript to recognize the desire to address this issue worldwide and the limitations to the current body of research. The opening sentences to the abstract now read: “In recent years, there has been a growing desire to address issues related to menstruation, particularly for adolescent girls. In low and middle-income countries, prior literature review of the adolescent menstrual experience suggests that the body of research lags behind current interventions and may not adequately reflect the efficacy of these interventions.”
- Line 6: “I am not certain that this statement is true? limited research on menstrual experiences of adolescents in the US? I will suggest perusal of published and grey literature but not certain there are paucity of data on menstrual experiences of adolescents anywhere in the world.”
 - In making this statement in the abstract, the authors refer to a recent correspondence by Sommers and colleagues who express concern about the amount of menstrual health research in the United States. The correspondence is referenced in the text of the manuscript, accessed here <https://www.sciencedirect.com/science/article/abs/pii/S0140673619303009?via%3Dihub>. However, we recognize that as the aim of the proposed scoping review is to observe what the current state of menstrual health research is in the US, it would be premature to state there is limited research on menstrual experiences in the US. We have therefore revised the statement to say that the body of research remains uncharacterized.
- Line 36: on changing demographic to demography and question to questions
 - Our understanding of the use of the term demography would be to refer to the study of human populations. In using the term demographic, we intend to refer to one specific population, in this case, adolescents in the US.
 - We chose to use the singular form of question as we only propose one research question in our manuscript
- Line 38: “Studies conducted and either published or grey in the last 10 years. 20 years seems too large for a sensitive study on adolescents experiences on menstruation. I will suggest that the authors make provision for the boddly of evidence in the last 10 years, and if insufficient can consider the last 15, or 20 years as proposed.”
 - The authors in reviewing the literature prior to finalizing this proposal were concerned that significant studies would be missed if the year cut-off were too strict. We anticipate that the number of studies included in the review would not preclude a sensitive study of the subject matter.
- Line 46: on clarification of “this period”
 - The authors have edited the original manuscript to clarify that “this period” refers to the timing of reproductive potential being ages 15-50
- Line 47: “The authors should rephrase 'reproductive health management' to bring out its meaning. Maybe the management of reproductive health issues among adolescents”
 - The authors have edited this phase to state, “Management of reproductive health issues remains...”
- Line 52: “and menstrual hygiene management”
 - With this statement, the authors wish to propose menstruation as a broad topic of study that would encompass menstrual health, including menstruation hygiene. We have edited the statement to state menstruation and menstrual health to refer to both the phenomenon of menstruation and the health around it.
- Line 74: regarding name of WASH curriculum
 - The authors have made the suggested edit in the revised document.
- Line 74: “menstruation education, menstrual hygiene and menstrual hygiene management”
 - The authors have revised the phrase to state menstrual hygiene and education

- Line 107
 - The authors have edited the phrase to read “...shown that unmet menstrual needs negatively impact young girls”.
- Line 111: on changing research to researches
 - The authors understand the use of the word research to be collective in nature, encompassing all research done on the subject in hand, and therefore does not need to be plural
- Line 116: on changing objective to objectives
 - The authors made the suggested edit in the revised document
- Lines 142-147: “is this research question inclusive of 1. menarche and 2. post menarche related menstruation experiences?” and “can these menstrual experiences be further dichotomised into pre-menarche and post-menarche?”
 - The authors clarified the question to emphasis that the area of study is both menarche and post-menarche menstrual experience. At this point in the study, we do not feel the need to categorize adolescent experiences into pre-menarche, menarche, and post-menarche; however, we may report our findings as such once the review is completed
- Table 1: “what about the societal (religious-cultural) beliefs about menstruation, entrenched in the female child prior menarche? or after experiencing menarche?”
 - The authors consider the effects of societal beliefs about menstruation on individual adolescent feelings toward menstruation to be captured under the term “perceptions” around menstruation. However, we have added the term belief to the list of terms under menstrual experience to further expound on this point.
- Line 183: “is this study planning to include only studies and grey literature with ethical permission of just any study that met the inclusion criteria?”
- Line 260: “in the USA”
 - The authors made the suggested edit in the revised document
- Regarding search strategy
 - On “sanitary towels” included in search: The search terms include a larger MeSH heading of menstrual hygiene products which includes reusable sanitary products
 - Regarding “attitude” term list, “please consider the other domains of attitude in this regard.”: The authors feel that the list of terms related to attitude, including feeling, comprehension, understanding, learning, management, and perception adequately captures various domains of attitude based on our prior knowledge and therefore, we are not aware of any specific areas that may be missing from our term list.

From Reviewer 3:

Major comments:

- The authors do not sufficiently justify why they focus only on the United States, rather than on high income countries in general. Since other scoping reviews have covered LMICs, it seems that it may not be too ambitious to widen the scope for this scoping review to HICs, and would result in a more broadly applicable and impactful manuscript.
 - The authors appreciate this point of consideration brought forth by the reviewer. While it would be particularly interesting to provide a counter-review on HICs with regards to this topic, our main motivation on focusing on the US is its unique healthcare system compared to other HICs. Given that many pockets of the US are functionally low-income and low-resource with little safety net as a result of the fragmented healthcare delivery system and that the county’s overall healthcare outcomes relative to spending fall short of other HICs, we would like to do a more focused study on the US to assess for additional needs/barriers unique to our system. Our concern would be that these specific barriers and needs may be masked in a larger multi-country study. We have added additional lines to the revised manuscript under the study rationale to more explicitly explain our decision to focus on the US (lines 111-116: “We chose to focus on the United States specifically as opposed to other high-income countries given its healthcare landscape. The multisystem, non-universal healthcare model present in the States poses unique challenges and disparities that may not be easily comparable to other economically similar countries. Understanding the research conducted thus far on the menstrual experiences of adolescents in the United States is essential to better advocate for changes to meet unmet needs.”)

- Additional specification of the research question (and thus of inclusion and exclusion criteria) may be helpful (though I acknowledge that to some extent, this is a necessarily iterative process in the conduct of a scoping review). For example, the authors might find it a useful exercise to look at the inclusion/exclusion criteria that we used for a recent scoping review on women's responses to contraceptive-induced menstrual bleeding changes. On page 3, we list a number of topical areas - this list might give the authors some additional ideas on how to further focus their own inclusion/exclusion criteria. <https://reproductive-health-journal.biomedcentral.com/articles/10.1186/s12978-018-0561-0>
 - The authors thank the reviewer for the additional resource; we found it helpful to help better frame our inclusion and exclusion criteria. Based on our current experience with the data and body of research, we have updated the manuscript to better flesh out the exclusion criteria (lines 166-173)
- It would be useful to be more specific about which stakeholders have already been involved, how they were selected, and at which specific milestones of the project they will be engaged throughout the conduct of the scoping review.
 - The authors clarified the stakeholders involved and the specific timepoints of stakeholder input in the revised manuscript in lines 253-259.
- The protocol does not define any limitations of the scoping review; this would be a useful addition, though I recognize that additional specifics may be added in the conduct of the actual review itself.
 - The authors attempt to clarify the limitations to the scoping review under the strengths and limitations section in lines 38-43 to report limitations based on time and language restrictions, as well as not being able to ensure that the review is completely comprehensive despite attempts to use a broad search strategy.

Minor comments:

- Line 46: Unclear what is being referred to as "this period" - I think the authors are referring to the ages 15-50 but this could be made more clear.
 - The authors clarify this statement in the revised manuscript to read "this period of reproductive potential" to refer to the 15-50 age range more explicitly
- Line 51: "Conception and birth" is a narrow interpretation of the topics typically addressed in reproductive health research; I suggest referring to Starrs et al 2018 ([https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(18\)30293-9/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(18)30293-9/fulltext)) to provide a more comprehensive description of what this body of work has typically focused on.
 - The authors appreciate the additional resource provided on this topic. In describing reproductive health research, our intention was not to limit the definition of the field to such a narrow scope, but rather to provide examples of commonly studied subjects and highlight that menstruation is an understudied area as evidenced by the correspondence referenced here ([https://www.thelancet.com/journals/lanchi/article/PIIS2352-4642\(18\)30204-9/fulltext](https://www.thelancet.com/journals/lanchi/article/PIIS2352-4642(18)30204-9/fulltext)). However, we recognize that our phrasing can be misinterpreted, and have adjusted it in the revised manuscript (lines 53-55, "while reproductive health research covers a wide array of topics from conception, to safe delivery, and infertility, less work has been done to understand the various factors related to another key component of health: menstruation and menstrual health")
- Line 13: I suggest ending the sentence after "experienced librarians". The use of defined inclusion and exclusion criteria are more relevant for the components described in the subsequent sentence - the abstract and full text review.
 - The authors have made the suggested edit in the revised manuscript.
- Lines 219-221: Please provide clarification regarding how a Kappa statistic will be calculated based on the qualitative information gathered during data charting.
 - The authors intend to calculate a Kappa statistic using a numerical count of the number of matched and unmatched responses between reviewers during charting process (e.g. if for year, both authors chart '2001', this would be considered 1 match). We clarify the Kappa calculation in the revised manuscript in lines 232-234.

VERSION 2 – REVIEW

REVIEWER	Chelsea Polis Guttmacher Institute, USA
REVIEW RETURNED	28-Nov-2020

GENERAL COMMENTS	<p>1. This sentence: “In low and middle-income countries, prior literature review of the adolescent menstrual experience suggests that the body of research lags behind current interventions and may not adequately reflect the efficacy of these interventions” does not read clearly. What do the authors mean that research lags behind current interventions? Also, it was not clear to me in the body of the text which literature review or reviews the authors are referring to here. I understand that references cannot be added in the abstract, but it should be made clear in the body of the manuscript what literature review(s) are being referred to here.</p> <p>2. The authors have stated that they prefer not to broaden the scoping review to include other high-income countries, providing an (unconvincing) explanation focused on the US healthcare system. I suggest the authors consider whether including a single country should be stated as a potential limitation of this scoping review, given that it already focuses on a very specific demographic.</p> <p>3. The authors have added language regarding the stakeholders involved, but I still have two concerns: they appear to be active on this topic only in the “local community” of the authors, and they are not specifically named. Their efforts should be acknowledged, and the authors should consider whether local expertise needs to be rounded out with experts working on these topics in other parts of the United States.</p> <p>4. I remain uncomfortable with this (revised) phrase: “While reproductive health research covers a wide array of topics from conception, to safe delivery, and infertility...” and wish to again emphasize that this remains a very narrow interpretation of topics in reproductive health research. If the authors do not wish to use more comprehensive language, I suggest simply removing the specific examples (i.e., “While reproductive health research covers a wide variety of topics, less work has been done...”) and providing a reference after “reproductive health research” where the topics are explained in greater depth.</p> <p>5. Line 139 now states that there are 5 steps, but 6 steps are still listed in lines 139-141.</p>
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VERSION 2 – AUTHOR RESPONSE

Thank you very much for opportunity to share this work. Below please find our responses to the reviewer's comments:

Comments to the Author:

1. This sentence: “In low and middle-income countries, prior literature review of the adolescent menstrual experience suggests that the body of research lags behind current interventions and may not adequately reflect the efficacy of these interventions” does not read clearly. What do the authors

mean that research lags behind current interventions? Also, it was not clear to me in the body of the text which literature review or reviews the authors are referring to here. I understand that references cannot be added in the abstract, but it should be made clear in the body of the manuscript what literature review(s) are being referred to here.

--Thank you so much for pointing out that this does not read clearly. We have revised this sentence to be clearer and more specifically highlighted the particular review referenced in line 92.

2. The authors have stated that they prefer not to broaden the scoping review to include other high-income countries, providing an (unconvincing) explanation focused on the US healthcare system. I suggest the authors consider whether including a single country should be stated as a potential limitation of this scoping review, given that it already focuses on a very specific demographic.

--Thank you so much for this suggestion, we have sought to better expound on our thinking behind focusing on the US in lines 112-123 as we do feel strongly that the US merits more specific study, and we have also addressed the limitation in a single country focus in the opening strengths and limitations

3. The authors have added language regarding the stakeholders involved, but I still have two concerns: they appear to be active on this topic only in the "local community" of the authors, and they are not specifically named. Their efforts should be acknowledged, and the authors should consider whether local expertise needs to be rounded out with experts working on these topics in other parts of the United States.

---This protocol describes work that is still in progress -- we do anticipate naming stakeholders and describing their contributions in the final product. We feel that keeping the number of outside stakeholders relatively small is appropriate at this stage, as the primary purpose for gathering outside input is to focus our review efforts. We will certainly widen our scope of collaborators should we attempt to apply the insights generated by this review further.

4. I remain uncomfortable with this (revised) phrase: "While reproductive health research covers a wide array of topics from conception, to safe delivery, and infertility..." and wish to again emphasize that this remains a very narrow interpretation of topics in reproductive health research. If the authors do not wish to use more comprehensive language, I suggest simply removing the specific examples (i.e., "While reproductive health research covers a wide variety of topics, less work has been done...") and providing a reference after "reproductive health research" where the topics are explained in greater depth.

--We agree with your concerns and appreciate your feedback. We have revised the phrase as suggested.

5. Line 139 now states that there are 5 steps, but 6 steps are still listed in lines 139-141.

--Thank you so much for pointing out this inconsistency. We have corrected this in the manuscript.

VERSION 3 – REVIEW

REVIEWER	Chelsea Polis Guttmacher Institute, USA
REVIEW RETURNED	11-Jan-2021
GENERAL COMMENTS	The authors have adequately addressed my remaining concerns, and I wish them the best of luck on completing this scoping review.