




A mental health perspective to adolescents' social media experiences

A recommendation by **Veli-Matti Karhulahti**  based on peer reviews by **Elena Gordon-Petrovskaya**, **Jana Papcunova** and **Amy Orben** of the STAGE 2 REPORT:

Jo Hickman Dunne, Louise Black, Molly Anderton, Pratyasha Nanda, Emily Banwell, Lily Corke Butters, Ola Demkowicz, Jade Davies, Brittany I Davidson, Pamela Qualter, Neil Humphrey, Caroline Jay, Margarita Panayiotou (2024) Identifying relevant dimensions to the measurement of social media experience via focus groups with young people. PsyArxiv, ver. 9, peer-reviewed and recommended by Peer Community in Registered Reports. <https://doi.org/10.31234/osf.io/erjvz>

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Measuring people's experiences, thoughts, and mental processes has always been a core challenge of psychological science (e.g. Nisbett & Wilson 1977). When such measurement relates to rapidly changing and conceptually diverse human-technology interactions, the task becomes even more difficult due to protean, multidimensional constructs. A good understanding of a construct is a basic step in its measurement (Borsboom 2005). In the present registered report—carried out as part of a long-term measure development project—Dunne et al. (2024) carried out a focus group study with adolescents (n=26) aged 11 to 15 in Northwest England to improve the understanding of constructs related to social media and mental health. The authors applied reflexive thematic analysis to explore adolescents' social media use experiences and related motivations in the light of mental health. The data and research process led to a construction of five themes, which were connected to mental health in direct and indirect ways. The participants voiced direct experiences of anxiety, self-esteem, and social aspects that reflect a mental health network where social media play diverse roles. Indirect implications of coping and self-control were found to supplement the network. Taken together, the themes and their implications to wellbeing make a valuable contribution to the evolving qualitative understanding young people's social media use in the UK (e.g., Conroy et al. 2023) and serve as a useful basis for future measure development. A particular strength of the work was the engagement of three Young Researchers who co-facilitated the focus groups and were involved in the analysis. The research meets high reflexivity and transparency criteria, and the carefully constructed supplementary materials provide informative details especially for measure developers. Finally, the authors must be commended for sharing

these valuable data for reuse. The Stage 2 manuscript was reviewed over two rounds by three unique reviewers. The reviewers' expertise ranged from social media and technology use research to health psychology and qualitative methods. Based on careful revisions and detailed responses to the reviewers' comments, the recommender judged that the manuscript met the Stage 2 criteria and awarded a positive recommendation. **URL to the preregistered Stage 1 protocol:**<https://osf.io/w24ec> **Level of bias control achieved: Level 2.** *At least some data/evidence had been accessed and partially observed by the authors prior to IPA, but the authors certify that they have not yet observed the key variables within the data that were used to answer the research question.* **List of eligible PCI-RR-friendly journals:**

- [Collabra: Psychology](#)
- [F1000Research](#)
- [Peer Community Journal](#)
- [PeerJ](#)
- [Studia Psychologica](#)
- [Swiss Psychology Open](#)
- [WiderScreen](#)

References:

1. Borsboom, D. (2005). *Measuring the mind: Conceptual issues in contemporary psychometrics*. Cambridge University Press.
2. Conroy, D., Chadwick, D., Fullwood, C., & Lloyd, J. (2023). "You have to know how to live with it without getting to the addiction part": British young adult experiences of smartphone overreliance and disconnectivity. *Psychology of Popular Media*, 12, 471-480. <https://doi.org/10.1037/ppm0000425>
3. Dunne, J. H., Black, L., Banwell, E., Nanda, P., Anderton, M., Butters, L.C., Demkowicz, O., Davies, J., Davidson, B., Qualter, P., Humphrey, N., Jay, C., & Panayiotou, M. (2024). Identifying relevant dimensions to the measurement of adolescent social media experience via focus groups with young people [Stage 2]. Acceptance of Version 9 by Peer Community in Registered Reports. <https://doi.org/10.31234/osf.io/erjvz>
4. Nisbett, R. E., & Wilson, T. D. (1977). Telling more than we can know: Verbal reports on mental processes. *Psychological review*, 84, 231-259. <https://doi.org/10.1037/0033-295X.84.3.231>

Reviews

Evaluation round #2

DOI or URL of the preprint: <https://doi.org/10.31234/osf.io/erjvz>
Version of the preprint: 8

Authors' reply, 15 November 2024

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Decision by Veli-Matti Karhulahti , posted 25 September 2024, validated 25 September 2024

Minor Revision

Dear Margarita Panayiotou and co-authors,

Thank you for all careful revisions. I've received re-reviews from all three experts and they consider the study ready for publication now. I agree with them. I have only three very minor things:

1. The title now reads "Stage 2 Registered Report". I believe this is a mistake, as there is no reason to have 'stage 2' in the title. Please check.

2. Please remove or edit the words "analysis process has been documented" which seems to be accidentally forgotten in the middle of a sentence.

3. I cannot find COIs stated in the paper. Please add a statement or correct me if I just fail to find it.

Replying to the above will also give you one more opportunity to proofread the work before final approval. Regarding style, I encourage you to revisit especially parts that refer to measure development; it's not always clear whether you refer to your own measure or global measure development. E.g., "Our study provides important insights into adolescent social media experiences and represents the first stage of a wider endeavour for robust measure development" – there are certainly earlier efforts to qualitatively map out you people's social media use and wellbeing even in the UK (e.g., Conroy et al. 2023). Such clarifications can further improve the work. Looking forward to the final version!

Veli-Matti Karhulahti

Reviewed by Amy Orben, 06 September 2024

I read the revised version of the manuscript with interest and am happy with the author's responses to my points raised.

Reviewed by Jana Papcunova, 16 September 2024

The study has demonstrated significant advancements and improvements since the initial review, resulting in a well-executed piece of research with substantial contributions to the field of adolescent mental health and social media. The refinements made have notably enhanced both the quality and the impact of the study. I have no further comments.

Jana Papcunová

Reviewed by Elena Gordon-Petrovskaya, 23 September 2024

I am happy with the rewrites that have been made to this version of the paper. My previous review was largely based on comments about structuring the rewriting to make it clear what was addressing the hypotheses and research questions. The authors have clearly made substantial changes to the way the paper is written, including adding a section titled 'Social media experience: heterogeneity and multidimensionality', and have revised the themes.

Evaluation round #1

DOI or URL of the preprint: <https://doi.org/10.31234/osf.io/erjvz>

Version of the preprint: 6

Authors' reply, 02 September 2024

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Decision by [Veli-Matti Karhulahti](#) , posted 02 June 2024, validated 02 June 2024

Major Revision

Dear Margarita Panayiotou and co-authors, Thank you for submitting your carefully completed Stage 2. We were happy to have three of the original reviewers return to review the manuscript, and all of them are generally satisfied with the outcome. I let you address their feedbacks respectively, while leaving a few notes of my own as usual. 1. My main methodological concern was not addressed by the reviewers, but I am confident that this should be given careful attention. You've done a wonderful job at describing the research process and its details, yet the generated themes do not match the RTA model where themes serve as meaning-driven interpretive stories; this is the most commonly occurring problem in reflexive TA reporting. The current themes and subthemes are closer to thematic framework or template analysis, where the function of a theme is often a "topic summary". Themes in RTA should not serve as topics but convey specific meanings. Please allow me to re-refer to the sources indicated at Stage 1. Braun and Clarke 2021: <https://doi.org/10.1080/14780887.2020.1769238> – 2023: <https://doi.org/10.1080/26895269.2022.2129597> : *Topic summary themes are so widely used in reflexive TA that we have identified this as the most common problem in reflexive TA ... Theme names can suggest a topic summary through, for instance, a one-word name that identifies the topic, such as "Doctors," or something like "Experiences of...," "Barriers to...," "Influences on...," suggesting diverse experiences, barriers and influences will be discussed (sometimes meaning-based themes may just be badly named, see Braun & Clarke, 2022b). By contrast, themes as interpretative stories built around uniting meaning cannot be developed in advance of analysis. They contain diversity, but they have a central idea that unifies the diversity (instead of "good experiences of healthcare" you might have the theme "validation of my personhood").* (p. 2) For more references, see "What's the difference between a topic summary and a theme?" in <https://www.thematicanalysis.net/faqs/> The meaning of a theme is always a matter of subjective interpretation to some degree, for which it doesn't make sense to exert too much review effort on them. That said, please read the indicated sources carefully and reconsider a) what are the meanings/stories you wish to convey through the themes, b) does each theme have independent meaning, could some be combined?, c) rename themes as you see best, please avoid Braun and Clarke's problematic examples ("Motivations for..", "Experiences of..", etc.). 2. Two reviewers were hoping for more clear and detailed responses to the RQs and especially on the aspects of mental health (and your hypotheses about that). They also point out useful directions/sources, which could serve as bases of further reflection. I understand the intention has been to report 3 themes that correspond with each RQ, however, as reviewers note, the answers to the RQs still remain partly uncommunicated. I suggest creating a separate Discussion section, which could potentially include a subsection for addressing RQs/QHs with further interpretations and reflections with mental health literature. A second subsection could be dedicated to measure development (as you already have it), and as one reviewer notes, this section would also benefit from more detail about how the findings can be utilised for measurement development in practice. For example, I could envision a preliminary list of potential (~100) draft items based on codes in the data as a supplement, which could serve as a helpful starting point for a future measure development EFA (not only for you but others too). 3. In the current version, the results and discussion are mixed so that some of the themes involve brief links to earlier literature and nods toward measurement. If you choose to follow the above suggested structure, those could be moved to Discussion so that Results and Discussion are clearly separate. Also, with reference to the stated goal on p. 14 ("The aim of the focus groups was therefore to highlight potential gaps in previous conceptualisations and identify constructs that may have been omitted from existing conceptual frameworks"), it would be valuable to spell out what exact gaps were identified, and what new constructs omitted by previous

literature were discovered.

4. One reviewer makes an appropriate reminder to be careful about age/gender comparisons. Comparisons are always tricky with qualitative data, as individuals can be very different. Depending on how the next version looks and considering the qualitative nature of the data, I'd advise communicating any such differences by presenting two cases next to each other, so that the reader can observe closely how two individuals (representing different groups) deal with a similar situation differently, i.e. showing a case of qualitative difference (which does not necessarily entail quantitative difference).

5. Finally, one reviewer asks for a revision to a Stage 1 sentence. If you agree with that, you have a permission to make such change even though it's Stage 1 text. In summary, this is a highly interesting Stage 2 that can serve as a helpful starting point for new measure development. Before publication, however, some methodological issues on theme generation and reporting need to be addressed. I'm aware this may entail a nontrivial amount of work, as re-analysing qualitative data is always intensive labor. Therefore, I am happy to be contacted during the revisions in order to facilitate the process and minimise efforts involved. In the end, this is valuable work and we all wish to have it published in as good form as possible. Best wishes

Veli-Matti Karhulahti

Reviewed by **Amy Orben**, 31 May 2024

I enjoyed reviewing this Stage II Registered Report on social media measurement development, after having reviewed the Stage I. I am not an expert in qualitative methods, so would recommend an additional reviewer with this expertise to examine the manuscript. Overall I found it compelling and measured. My only two points were:

1) At the end of results sub-sections, e.g. line 548-550, the authors sometimes refer back to the scale development in a very off-hand/brief way. It would be good to remind the reader more specifically what these results could show for the scale development, e.g. defining what is meant by 'items' as they might have forgotten that the ultimate aim of this paper is to do scale development.

2) I think a bit more care should be given about talking about age/gender differences due to the small sample size and due to there only being one group for each age group (or two for one) and for the groups often being mixed gender, it might be that this would have changed the results substantially. This should be noted in the limitations, and potentially in the results.

Signed,

Amy Orben

Reviewed by **Jana Papcunova**, 24 May 2024

The study is a valuable contribution to the understanding of adolescent social media experiences and their relation to mental health. The authors have laid a solid foundation for future research and measure development. My background as a researcher and practicing psychologist leads me to a few comments.

Experiencing bullying, racism, or other forms of online harassment (ex. *Like there's just people that bully people. Like I actually experienced racism on Roblox, like how is that even possible*) may lead to feelings of sadness, anxiety, depression, or low self-esteem. Persistent exposure to such negative experiences can exacerbate these effects over time and contribute to long-term mental health issues.

More to read: <https://doi.org/10.3389/fpsyg.2023.1118736>

Furthermore, adolescents may gradually become desensitized to online harassment or discrimination. Phrases like *"you get used to it now, so it's kind of like you don't care"* indicate a normalization of harmful online conduct. The normalization of toxic online behavior is concerning.

More to read: <https://doi.org/10.1080/14675986.2023.2187350>

Overall, comments like the ones you described can have significant implications for adolescents' mental health and well-being. It is important to recognize these potential effects and provide support and resources

to help adolescents navigate the challenges of online interactions in a healthy and constructive manner. I was just wondering whether “*Closure and Feedback*” was provided: A debrief session that can offer closure and allow the participants to provide feedback on their experience, including what they found valuable and any concerns they may have.

The methodology employed in the study is robust, focusing on qualitative insights from adolescents in North-West England. The authors have commendably acknowledged the limitations regarding the generalizability of the findings, primarily due to the regional focus on North-West England and the socio-economic background of the participants. To enhance the study’s robustness and provide a broader context, it would be beneficial to incorporate comparative data from sources like Eurobarometer or Eurostat. These sources offer extensive data on social media use and mental health across various European regions trends (ex. Eurobarometer, Media & News Survey, Eurostat, Young people and digital world etc), allowing for a more comprehensive understanding of how the findings of the study align or differ from broader European trends.

Reviewed by Elena Gordon-Petrovskaya, 28 May 2024

This is a strong, impressive, and interesting piece of work. A lot of thought and work has clearly gone into the data collection and analysis, and I think it will make a valuable contribution to literature. I was unable to identify any substantial deviation from the Stage 1 report. In general, the data collected appears to be appropriate for answering the RQs, collected over a diverse sample during lengthy focus groups and analysed by a very thorough and transparent process. The introduction, rationale and stated hypotheses are the same as the approved Stage 1 submission, and there are no further unregistered analyses.

There are slight differences in the registered and actual procedures, but I do not believe they make any significant difference to the strength of the study. Namely, participants were recruited through three rather than four secondary schools, with N=26 participants rather than a planned N=32 (this is explained as due to recruitment issues, and makes perfect sense.) The process for analysis and anonymisation also appears to have been followed.

My only significant point is around the organisation of the paper in a way which answers the RQs and tests the hypotheses.

The authors’ hypotheses were twofold:

H1: We expect heterogeneity in the motivations and experiences of social media use and types of platforms used, especially between different age groups.

H2: We expect that social media experience will be multidimensional with key dimensions like cyberbullying, social comparison, fear of missing out, and social support and connection to be discussed.

These are framed as having relevance for all three research questions, which encompass motivations underpinning social media use, social media experiences in light of mental health, and views of risks and benefits associated with using social media.

I did not feel that the two hypotheses were meaningfully addressed or referred to in the text at any point in the results and discussion, beyond one reference to each. I understand that to an extent, their assessment emerges naturally, for instance, with points such as “More broadly, whilst some young people found motivation or inspiration in the content that others shared, others felt demotivated by feeling that they did not match up,” which serves to answer H2. However, the hypotheses have been formulated and presented for a reason, and it feels like they should be referred to continuously throughout the results and discussion, with specific reflection dedicated in text to each hypothesis and whether it has been met. Indeed, how do you decide

whether hypothesis 1, for instance, is met? When do you make the decision that heterogeneity does, in fact, exist? More detail on this would be good.

Similarly, I was a little confused by the lack of discussion of social media experiences in light of mental health in the Results section. In terms of the other two RQs, the themes are literally grouped to address them, but mental health is only mentioned within the descriptions of themes which address those other research questions. Given that this is a focus of your work, it would be useful to see mental health more drawn out and highlighted throughout the Results and Discussion sections.

Finally, a very minor point. On page 3, you write, "To add to this landscape, the field is highly polarised with some work arguably aiming to instil a sense of alarm (e.g., Twenge, 2020)." This is strong language - I'm aware of the polarisation in the field, but do not believe researchers like Twenge carry out their work with the intention of creating alarm, and more likely share a common goal with the rest of us to add to knowledge in the most meaningful way. I would advise rephrasing this sentence.

All in all, like I said, this is a great piece of work and I think it will be an excellent contribution to literature. I really like the methods you've chosen, particularly with the involvement of young researchers. Best of luck with this project going forward.

Elena Petrovskaya.