

Comment	Response
Editor: Mateo Leganes-Fonteneau	
<p>Dear authors, I now have reports from two expert reviewers who have each provided thorough, thoughtful, and constructive comments. They are both generally positive about this qualitative meta-synthesis, but have different conceptual and technical comments that I believe are well reasoned and that could improve the quality of the Stage 1 report and of your work.</p>	<p>We thank all the recommenders and reviewers for their feedback, which is helpful for improving the paper. We do our best to address all comments one by one below. The revised parts of the RR are highlighted in yellow.</p>
<p>A crucial issue needs be addressed, and that is the need to clarify the concept of gaming disorder as opposed to game-related health problems. This conceptual clarification can have dramatic effects on the results, as shown by the quick prospect that Dr. Amendola did. Dr. Amendola missed the search term classification in one of his comments, as that is indeed present in line 170, but still this clarification should transpire throughout the search terms. Ms Smart also had comments regarding search terms and overall conceptualization. How are the authors going to maintain a close match between the conceptualization of the disorder and the pertinence of the search terms and/or results?</p>	<p>Thank you for summarizing the main concern. We have addressed the conceptualization issue by clearly defining terms “gaming disorder” and “gaming-related health problems” (please see lines 69-80).</p> <p>For the comments regarding the searches, please see our responses below.</p>
<p>Additional conceptual and technical points are raised by both reviewers and will certainly help the authors with this report. I will be looking forward to the next round.</p>	<p>We have done our best to address these conceptual and technical points, and our solutions to them are outlined in more detail below.</p>
Reviewer 1: Gemma Lucy Smart	
<p>Thank you for the opportunity to review this report.</p>	<p>Thank you very much for your kind words and constructive feedback. We really appreciate it.</p>

<p>Overall I believe this is an important and timely review, with the potential to illuminate what is a messy but important part of the field of research into (Internet) Gaming Disorder. Some small tweaks to this proposal and the research design could improve the quality of your work.</p> <p>I have a number of comments that I hope will be helpful in the preparation of your review, and I will list them according to line number:</p>	
<p>61: The DSM has moved to a numbered convention (no longer Roman numerals) i.e. DSM-5-TR</p>	<p>We confirm that we have changed this.</p>
<p>68-70: Not a single problem, but many problems. Not just raised by this author either, this is a consistently raised conceptual issue - I discuss it in my thesis if you're after an overview: https://www.researchgate.net/publication/334670305_Internet_Gaming_Disorder_Fact_or_Fantasy_A_conceptual_analysis_of_a_new_psychiatric_classification</p>	<p>Thanks for the suggestion. We now have read the thesis and follow it by providing a bit longer (but still brief) description of issues related to IGD and GD concepts.</p>
<p>70-71: Meaning unclear, consider re-writing this sentence.</p>	<p>We confirm that the sentence has been rewritten.</p>
<p>73-74: There are plenty of sound models, but none are agreed upon (i.e. the problem is a lack of consensus, rather than a lack of models). Perhaps re-word to reflect this.</p>	<p>We confirm that the part has been rewritten.</p>
<p>75-76: This sentence, and actually the whole paragraph needs a re-think. It needs to be linked to your overall theory and the last sentence of the previous paragraph if it's to be included. My suggestion would be to cut the whole paragraph, or to be more clear that you're only giving the reader a 'taster' of the field, because it's a bit cut and paste.</p>	<p>We confirm that the paragraph has been revised.</p>
<p>107: "few would disagree" is an argument by authority (logical fallacy). You can, and</p>	<p>We agree with your comment, and have removed the phrasing.</p>

<p>have, made the same point without the fallacy, so delete that phrasing and re-word.</p>	
<p>126-127: Repeat of previous point about prevalence, which you questioned.</p>	<p>Thank you for noticing this - we have deleted the sentence.</p>
<p>168: Sub-type Internet Gaming Disorder should be included.</p>	<p>Thank you for the suggestion. Due to the functionality of search algorithms, the term 'gaming disorder' inherently includes 'internet gaming disorder' within its scope. Consequently, adding 'internet gaming disorder' to the search criteria does not yield additional results.</p>
<p>180: Would it make greater conceptual sense to constrain your search historically? This is my most substantive feedback. Given the heterogeneity of the data, particularly the further you go back, and the changes to games, it seems odd to survey the entirety of the gaming era. I would suggest at the very least constraining to the beginning of the rise of MMOGs and/or the Internet. Otherwise you're comparing apples with pears. Some justifications for the time-period you cover needs to be given.</p>	<p>This is a very interesting suggestion which ignited thorough discussions within the team and has led us to a couple of additional adjustments. We prefer to keep all the case reports without constraining it historically. We summarize our reasoning here:</p> <p><i>Case studies typically represent instances that are notable for their rarity, peculiarity, or novelty within a specific time and cultural context. Despite their inherent bias (e.g., a high risk of selection bias and low certainty of evidence), case reports remain a valuable resource for guiding medical literature due to their unique insights. To alleviate the effects of selection bias, (a) our review encompasses the relevant case studies without any time restrictions, incorporating historical context to provide a more comprehensive understanding of gaming-related health problems (some of which in the current scientific era are diagnosed as gaming disorders in certain cultures). For instance, health issues related to gaming identified in the 1980s have been well-documented over the decades, leading to the publication of more novel and specific case reports in recent times.</i></p> <p>However, following on this suggestion, we have added two sensitivity analyses into the para-exploratory section. In the first one, we will examine how the outcomes of RQ1 and RQ2 differ based on the online vs. offline</p>

	<p>play style. This could provide insights that are also historically informative as online game play was rare before the 2000s. In the second one, we will examine if there are any differences based on the predominant game device (domestic vs. portable).</p>
<p>186-187: This is going to be very difficult to define. What exactly categorises a gambling game? There are games that are explicitly gambling, yes. But what about games that have gambling tasks at the core of their game play (such as Diablo)? How would you code those? You'll need to have a think about this.</p>	<p>Thank you for the comment. To address this, we now provide a definition of gambling that will be used to inform the relevant exclusion criterion (lines 207-209).</p>
<p>191-194: I understand this is constrained by your team, however the exclusion of Chinese data might be something you'll have to address.</p>	<p>We fully agree that data from other cultural, social, and linguistic contexts will be a valuable addition. We reflect on this limitation on lines 473-479, while inviting researchers with other cultural and linguistic backgrounds to build upon our work.</p>
<p>228: You've included co-morbidity under descriptive data, but it will certainly appear under reported reasons for seeking help. The complex interplay between gaming and co-morbid disorders will be hard to tease out.</p>	<p>Thank you for pointing this out. We agree with the idea and include a footnote that explains how we will deal with comorbidity:</p> <p><i>Unless comorbidity is explicitly reported as a problem, we categorize it as a descriptive characteristic of the case.</i></p>
<p>237: Consider the therapeutic value of gaming too, to avoid some of the conceptual errors in the current research which frames gaming as inherently negative.</p>	<p>Another great suggestion, thank you for that. We have added the positive value of gaming to the para-exploratory part. Please see lines 453-456.</p>
<p>298: Your epistemological approach appears to be grounded theory, if I'm not incorrect? Perhaps this could be made more explicit?</p>	<p>Although our approach overlaps with grounded theory, we do not use the term to avoid being associated with the tradition's different versions, which some readers might have in mind (and it would need to be further explained); however, we have further clarified our epistemological and ontological position in the methods section.</p>
<p>363: Handle this with care in terms of lived experience accounts. The language of 'informativeness' could suggest that you're</p>	<p>Thanks for the comment. To make it more explicit, we have added this footnote:</p> <p><i>Note that the informativeness score</i></p>

<p>ranking the lived experience of gamers and their distress in terms of their usefulness or importance. I understand you'd be making a more grounded point about relationship to theory, so it'd be important to make that very clear in any reports. I hope that point is salient.</p>	<p><i>concerns a study, not the lived experiences of a participant.</i></p>
<p>Excellent work so far, and I look forward to reading the final paper.</p>	<p>Once again, thank you for your time and feedback!</p>
<p>Simone Amendola</p>	
<p>I thank the Recommenders and the Authors for the opportunity to review this stage 1 RR.</p> <p>I compliment the authors for their relevant efforts in addressing the necessity for qualitative syntheses on gaming disorder (GD). Below are some comments and suggestions that the authors could consider when revising the text. I hope that they will be of help in improving its clarity. Best regards.</p> <p>I like the authors' idea of reviewing case reports and agree with them that the study has the potential to make an important contribution to the literature as it is described in the text. Case reports can be highly informative and provide evidence not well captured by other study designs. They can be useful to describe and provide evidence on rare conditions and inspire future investigation by more systematic methods. Indeed, they are helpful especially when no other higher level of evidence is available.</p>	<p>We would like to thank you for your feedback and time and efforts you put into reviewing this RR.</p>
<p>However, they may be affected by important limitations and bias and thus be hardly representative of the condition under study limiting the findings' generalizability. For instance, case reports that are missing/not</p>	<p>This is an interesting insight - thank you. We have added a limitations section, where we discuss the depicted issue. Please see lines 459-479. In summary, we argue that the effect of selection bias inherent to case studies is alleviated with the inclusion of all</p>

<p>published could have told a “different story”. Or, differently, case reports that are published might be a minority and published because of their peculiarity. Furthermore, considering inherent bias in case reports caution is needed when it comes to judgments/recommendations resulting from this body of evidence. The above aspects (high risk of selection bias and low certainty of evidence) could be mentioned/discussed in this stage 1 RR.</p>	<p>historical studies. Furthermore, we explicitly state that we infer only about the published case reports and do not make unwarranted generalizations.</p>
<p>The condition/phenomenon or behavior under study needs to be clarified and a definition for “game-related health problems” provided in the introduction. According to my opinion, it is a bit confusing in its current form. Sometimes “gaming disorder” is used (present in the title of the study but not in the abstract), but other times “game-related health problems” is preferred (reading the abstract the focus seems to be gaming activity in general). The meaning of the latter is wider and can include conditions different from gaming disorder, like excessive gaming, postural or eye problems, overweight, etc. Therefore, they should not be taken as being the same (“gaming disorder – or gaming-related health problems more generally”, line 96).</p>	<p>Thank you for the comment. We now provide a clear definition of “gaming disorder” as well as of “gaming-related health problems” (lines 69-80). We have also modified the title to emphasize that we focus on a wide spectrum of gaming-related health problems, not only on GD.</p>
<p>Research questions and methods seem in line with a view of gaming disorder and other related conditions as non-pathological. If the main objective of the study is to question/discuss the validity of the concept of gaming disorder this could be better highlighted in the text (considering the authors' conflicts of interest besides other aspects). To note, the search string mainly includes terms related to addiction/disorder.</p>	<p>Thank you for the suggestion. Nonetheless, the main goal of the study is not to question the validity. Instead, we aim to generate information clusters and meta-themes from the available case studies, which can build a better understanding of earlier evidence base.</p>
<p>Regarding the abstract, I feel that something is missing, such as what is expected from this study, why we need it, and what it could add to the current</p>	<p>We have added new information to the abstract to better contextualize it in the gaming disorder conversation. Because the abstract needs to have an impact statement after results are known too, we would prefer</p>

knowledge.	to leave it for Stage 2.
In the introduction, the authors discuss the concept of gaming disorder as a coping mechanism serving selfregulation (lines 74-83). However, conceptually, this does not exclude the validity of the GD category. This discussion might benefit from the inclusion of the “syndrome model of addiction” (Shaffer et al) and the “selfmedication hypothesis” (Khantzian).	We would like to thank you for this suggestion. The self-medication model aligns with the coping model we already described. We now combine the two and add a reference to the self-medication hypothesis (lines 85-86). On the other hand, the syndrome model would be almost impossible to falsify and thus we would rather not include it in the study.
According to my opinion, a point that needs to be considered among the study limitation and potential bias is the fact that only reports of treatment-seeking individuals will be considered. This could favor the findings supporting the view of "gaming disorder as a coping strategy" because highly impaired cases could be excluded (they might not seek help). Therefore, the findings of this study would not be representative or generalized to gaming disorder but only to a specific subgroup.	Thank you for making this valuable observation. We have now reframed RQ 1.1 so that it includes all gaming-related case studies, not only those where treatment-seeking was present. E.g., it will also include cases of mortality related to non-treatment-seeking (such as Lee et al. 2004).
Lines 230: The authors could include a description of how and based on which characteristics were those specific models selected among different models of GD. It is not clear why a model related to psychopathology (e.g., syndrome model, self-regulation hypothesis) is not examined.	This is a relevant comment, we have also added a psychopathology model (harmful dysfunction) as part of the coding process. The self-regulation hypothesis, in our view, aligns sufficiently with the coping model so that coding it separately would not generate new information. We have also expanded the information about the models in the introduction text.
Line 308, Informativeness: The authors might want to mention the available tools that inspired their tool. They could also consider the recommendations of Murad et al 2018 (10.1136/bmjebm-2017-110853). Indeed, Murad et al. identified a useful domain that could be considered for evaluating methodological quality, i.e., selection (Does the patient(s) represent(s) the whole experience of the investigator (centre) or is the selection method unclear to the extent that other patients with similar presentation may not have been reported?).	Thank you for the suggestion, we had missed this study. We carefully reviewed this assessment tool and found that most of its items were not applicable to the objectives and design of the meta-synthesis. However, the item that inquires about alternative causes and explanations inspired us to extract information on the exclusion of hazardous gaming and bipolar disorder diagnoses, which are recognized as official exclusion criteria in the ICD-11. This will provide a descriptive overview of the historical consideration of these conditions. We didn't find other relevant tools.

Furthermore, the use of summary score (line 359) leads to considering equally informative all items when some of them may be more important. Have the authors thought about the use of "an overall judgment" of informativeness?	
Minor suggestions:	
A reference for the data provided on line 42 could be added.	The sentence has been removed.
Lines 107-110: The search term strategy used could be reported. Using the search terms "game addiction" OR "gaming disorder" I found no more than 40 meta-analyses, and if reviews were included the results were 226. For clarity (based on the items retrieved), "meta-analyses" could be moved after "reviews".	Thank you for noticing this. We found out that there is a bug in the PubMed search engine. In short, the usage of PubMed Advanced Search Builder (which we used initially) produces completely different results compared to having the search string written directly: a term added by advanced search uses parentheses “()” which does not limit the search by two-word combinations unless further specification is added (such as [title]). A manual search confirms the number to be 228 including monographs.
After reading the introduction, I wonder whether there is a real need to use the word "meta-synthesis" rather than "systematic review of qualitative studies". From the text, it is not clear what meta-synthesis refers to. than "systematic review of qualitative studies". From the text, it is not clear what meta-synthesis refers to.	The second part of the process follows the methodology of meta-synthesis by Thomas and Harden 2008, from which the term derives. We have clarified the distinction of the parts in the text to communicate it better.
Coding: will agreement between coders be examined?	We do not plan to carry out a formal interrater agreement assessment. However, we will report how many times a resolvment was needed and shortly document the most problematic variables. Furthermore, the reports of all coders will be provided as supplemental material.
When is COI considered present? Additional information could be included when mentioning COIs.	We have clarified that we code only reported COIs. We have also added a coding column to keep track of what kinds of COIs are reported, if any.
Lines 267, RQ1.3: What about descriptions that could fit more than one category (e.g., bidirectional relationships)?	We agree this is a good specification and have edited the coding sheet to explicitly include this option. We kept the RQ the same, as causality involves multicausality.

Line 388: Why para-exploratory instead of exploratory (i.e., what does para- add to the meaning)?

Because this entire study is exploratory (i.e. we don't set any hypotheses to confirm), we wanted to separate the extra sections with the prefix "para" ("alongside").