

## Peer-review report of

Jetten, J., Zhao, C., Álvarez, B., Kaempf, S., & Mols, F. (2023). Trying to unplug for 24 hours: Conspiracy mentality predicts social isolation and negative emotions when refraining from internet use. *advances.in/psychology*, 1(1).

<https://doi.org/10.56296/aip00003>

## Round 1

Dear Authors,

Thank you for submitting this exciting piece to *advances.in/psychology*. I was fortunate to receive reviews from two esteemed experts in social and personality psychology. I read the manuscript independently myself before reading their reviews. Both reviewers acknowledge clear strengths. The manuscript is written engagingly, focuses on a novel topic, and reports two studies from different cultural settings. Both reviewers also suggest various ways to strengthen the paper further. I will not repeat each of them here as they are detailed in their reviews, but I kindly ask you to address all points in a revision.

Most centrally, I agree with both reviewers that the potential contribution of the paper is limited by the design of the studies. Conspiracy mentality is well-known to be related to feelings of alienation. Thus, we do not know whether the findings reported in the two correlational studies are due to unplugging or simply reflect the baseline of people scoring high on conspiracy mentality. As I really like the idea behind the present work, I hope you are open to conducting a preferably pre-registered, experimental study that addresses the reviewers' concerns regarding causality and self-selection.

Generally, I also agree with the suggestions of Reviewer 1 to make the focus on being unplugged more central in the introduction. Importantly, I concur that the most novel aspect of this work concerns conspiracy mentality. Thus, it would be great if it took a more central position in the introduction. For instance, it would be interesting for readers to learn about theoretically informed ways in which such a mentality may predict experiences during unplugging. Here, it would also be essential to justify the included mediator and outcomes compared to other potential candidates (see Reviewer 2's comment).

Beyond the reviewers' constructive feedback regarding methodological issues, I have additional comments that I think need attention. One could argue that some

emotions (especially: isolated, lonely, connected) are confounded with the mediator social isolation and lack of support. Can you show that these variables represent different constructs and eventually present results excluding the conceptually most closely related emotions to increase their distinctiveness? Ideally, the proposed experimental study would address these limitations by using refined measurements. Such a study could also include some alternative mediators proposed by Reviewer 2. Finally, I think it would be interesting to present correlations between conspiracy mentality and each of the assessed emotions.

To sum up, the reviewers and I see many strengths in the present paper and its ideas. Thus, I invite you to revise and resubmit the manuscript by March 12, 2023 (Please let me know if you need more time). Given the general agreement about the limitations of the correlational data presented, I would appreciate it if a revision included additional data, preferably from an experiment.

Best,

Jonas R. Kunst

#### **Reviewer 1:**

This manuscript reports two studies, conducted in two separate samples, one Chinese and one Australian. Both studies, identical in design, explore the relationship between well-being indicators (positive emotions, negative emotions, and life satisfaction) during digital media disconnection (i.e., unplugging), and how a conspiracy mentality affects this relationship. The authors conclude that feeling more isolated and less supported while unplugging is associated with more negative emotions, especially for those higher in conspiracy mentality. Through mediation analyses, they show that the greater negative emotions experienced by those high in conspiracy mentality can be partially explained by their feeling more isolated and less supported during unplugging.

Understanding the well-being benefits and costs of digital media use in all its nuance is a worthy goal, and the paper's topic—the psychological impact of unplugging—is relevant to this goal. The paper was clearly written, and the data analysis also appeared to be competently handled. That said, I had some serious concerns about certain aspects of the paper, which prevent me from recommending it for publication in its current form in this journal. Below I summarize my main concerns.

- Probably the gravest issue I have with the paper pertains to the correlational nature of the studies. Specifically, the study design does not allow us to make any causal claims about the effects of unplugging. To their credit, the authors

acknowledge this limitation in their Discussion section. However, in my view, the lack of experimental design for this research question exceeds what can be tolerated as a limitation and borders on unacceptable. Because with the current design, we just cannot infer whether the effects are unique to unplugging, or whether the same relationships would still be observed in the absence of unplugging as well.

For example, the relationship between conspiracy mindset and higher negative emotions/lower life satisfaction and greater social isolation would most likely hold, even when asked independently of any unplugging experience. Indeed, several studies link conspiracy mindset to poorer emotional health and poorer relationships. The authors themselves have also cited some of these papers documenting these relationships.

In a similar vein, the finding that participants report more positive than negative emotions during unplugging cannot be unequivocally attributed to the nature of unplugging. In fact, the literature suggests that in general people report mild positive moods, something referred to as “positive mood offset” and is considered to have evolutionary benefits (Diener, Kanazawa, & Oishi, 2014). In the absence of a control group, we cannot be confident that the positive mood balance characterizing the unpluggers is anything different from what people would report on a regular day.

- Another issue I had with the paper concerned the choice of “conspiracy mentality” as a mediator for the relationship between unplugging and well-being. I hesitate to say the following, because in general I do not appreciate the kind of feedback based on what the authors did *not* do instead of what they did. However, in this case I genuinely wondered why the study did not go with some other, from my perspective much more conceptually relevant and theoretically justifiable variables, such as extraversion, neuroticism or quality of social connections as mediator choices.

I also bring this up, because it is highly likely that those high in conspiracy mentality possess certain personality traits, such as low agreeableness/high antagonism, which could be driving the observed effects. Or it could be that the conspiracy mentality measure serves as a proxy for assessing poor overall mental health. For future studies, it would be helpful to address the question of whether it is conspiracy mentality per se that is responsible for the outcomes, or something else that is common to those high in conspiracy mentality. Indeed, the authors themselves refer to the need for manipulating conspiracy mentality in future studies, which would help to address this question. Yet until that is done, it is hard for me to be satisfied with the conclusions of the current study regarding the role of conspiracy mentality.

- Another weakness of the research, again acknowledged by the authors to their credit, was that whether or not the participants truly unplugged as part of the study was not verified beyond their own words. This to me, is another limitation not easy to overlook given how crucial the actual experience of unplugging would be to the results.
- Relatedly, while the title of the study starts with “Unplugging for 24 hours,” inspecting the results we notice that the actual unplugging duration was around 11 hours in the first study, and 18 hours in the second study. In addition to changing the title, it would also be helpful if the authors reported the percentage of the participants who actually adhered to the challenge for the whole 24 hours. The fact that a majority did or could not is important in itself.

I also wondered about the issue of sleep. Do the reported 11 and 18 hours of unplugging include sleep? If so, then the actual digital disconnect lasted substantially less than 24 hours, which should be noted.

- I also could not understand why participants were not allowed to use their smartphone to make phone calls (to friends or family, for example) as part of unplugging, when this has nothing to do with digital media or the Internet. Although they were allowed to use landline phones, I don't know how common these are in China and Australia anymore. If they aren't, then this would also contribute to the participants' feeling more isolated and understandably so.
- Finally, I felt that the paper made some claims in the Discussion section that were not borne out by the data. Of course, the Discussion section can be more openly speculative than the rest of the paper, however there should be some limits to it and at the very least speculations need to be marked as such. Specifically, I am concerned about the following lines:

*“These results shed some light on the crucial role that the online environment provides in keeping the conspiracy community alive. It is because those who believe in conspiracy theories can find social support online and because they feel less socially isolated by connecting online that these individuals are negatively affected when going online is no longer an option.”*

My concern is that nothing in the data suggests that those who believe in conspiracy theories reported greater social isolation, because they could not access their

conspiracy communities during unplugging. In fact, I find it quite doubtful that everybody who scores high in conspiracy mentality, or even a majority, would be such involved members of online conspiracy communities that they would feel isolated when they cannot access these communities for a single day. This claim should either be removed or qualified as a possibility that can be explored in future research.

As reviewers our focus is on what went wrong with a paper and how it can be improved. But I also want to congratulate the authors for producing a manuscript like this, which is never easy, and for everything that went right with it. And I wish them the best of luck with the future of this project.

### **Reviewer 2:**

This is an engagingly written manuscript that addresses a particularly timely topic, the impact of access to the internet on experiences of well-being. As the authors explain, the data in the current literature on the impact of using the internet and social media are quite mixed. The authors of the current manuscript adopt a particular approach for evaluating the impact of internet and social media – in two studies, they investigate the impact of “unplugging.” As the authors define it, “Unplugging refers to not using digital media, including the internet, online entertainment, network information, and social media” while still being allowed access to traditional media (e.g., print media). Although there are aspects of the work that limit the magnitude of the scientific contribution of the work, which I will identify and discuss, the novelty of the approach and the importance and timeliness of the issues being addressed lead me to encourage further consideration of the current work for publication.

In terms of limitations, the most basic one relates to the design of the two studies described in the manuscript: The studies are both correlational ones with highly self-selected samples. The authors directly acknowledge the limitations of the correlational nature of the current research at the beginning of their section on Limitations and Future Directions, and they describe how their ideas could be tested experimentally. While I would not necessarily require it for further consideration for publication, given the feasibility of conducting further, experimental work with college or online samples I would strongly encourage the authors to include such an experiment in a revised version of the manuscript. It would obviously help to produce a more definitive set of findings and potentially help resolve some of the inconsistencies in the results between the two studies. A clearer and more definitive set of findings would thus benefit the authors scientifically and increase the appeal of the research to scholars and to a more general audience.

Beyond the correlational nature of the current research, another limitation that needs to be acknowledged is that the recruitment procedures may have produced a highly biased sample that restricts the generalizability of the findings. Participants in Study 1 were all recruited through an advertisement on Chinese social media inviting them to participate in an “unplugging challenge” for a chance to enter a lottery to win money. One of the general problems of such “opt-in” online recruitment techniques is that they can yield a highly biased sample, which is particularly likely in this case because they were being explicitly recruited for an “unplugging challenge.” Study 2 might not have this problem to the same degree, but it is unclear whether the Australian students participating for course credit also chose to participate in an “unplugging challenge.” More information about the recruitment procedures in Study 2 is needed. While the replication of mediation of the relationship between conspiracy mentality and emotions while unplugged between the two studies is reassuring, this effect may be restricted to participants who are interested in attempting to unplug. Some of the information collected from people who chose not to participate might shed some light on this issue. Even in future correlational research, it might be useful to collect data on how people who choose not to participate are similar to or different from those who do participate on the measures central to the current research. As the authors note in the section on Unplugging in the introduction, being willing or unwilling to be unplugged could be a pivotal factor. The issue of self-selection is an important one to consider in the Limitations and Future Directions section.

In terms of future directions, the authors might also consider suggesting greater focus on differentiating the ways people currently use the internet to gain information (e.g., about the news, politics, etc.) and/or for social interactions with others. For some results of the current research, such as those relating to beliefs in conspiracy theories, it may not make much difference (because either types of use may be relevant), but for other effects, such as those related to social support and social isolation, using digital media for solitary or for social interactive activities might moderate the influence of unplugging.

In addition to the limitation-related issues, I believe that the current work would benefit from some tightening of the rationale presented in the introduction. From my perspective, there are two general issues addressed in the present work. One involves correlations among certain variables (e.g., social support, isolation, and well-being) among internet/social media users. The other is about how social media users experience being unplugged. Conceptually, I do not think one is necessarily the “flip-side” of the other. While treating the effects as two sides of the same coin may be true for some basic needs (e.g., I eat because I am hungry, and depriving me of food makes me hungry), it is not often directly the case with habitual behavior (e.g., I start smoking because of peer pressure, but ceasing smoking has a range of significant independent effects). Thus, the needs I have when I am deprived of “x” does not necessarily correspond to the reason why I do “x” in the first place. If the



authors want to dispute the position that these are not different sides of the same coin, I am fine with that – but their rationale and support for it needs to be presented in the manuscript. Research on habit formation and cessation might offer some useful leads.

An alternate approach, which I suggest, is making the focus of the work on being unplugged more prominent at the beginning, and then grounding all of the rationale on the experience of being unplugged. The two paragraphs that presently begin the manuscript have this focus. However, subsequent sections typically begin with a broad review of the literature on media use. The authors do regularly bring readers back to the issue of unplugging at the end of the section, so what I am recommending is not a major overhaul of the introduction but rather some re-emphasis. For example, right after the two introductory paragraphs I would place the Unplugging section which now comes later in the introduction. Then I would begin other sections (including Digital Media Use and Well-Being, which now precedes Unplugging) with arguments, based on correlates of digital media use and other relevant psychological theories (e.g., about social isolation, habit cessation), about the dynamics of the relevant experiences while being unplugged. Empirically, because the current work is not experimental – all participants agreed to unplug and did for a period of time – the meat of the present work is the experience of being unplugged.

In addition, I recommend that the authors making the potential effects of conspiracy mentality more prominent in the development of the rationale and a central aspect of the presentation of the work in the introduction. This aspect of the work is most novel and shows consistent effect across the two studies. The way material is currently presented, it almost seems like an afterthought. For example, in the section on The Present Research, in the paragraph about the research questions that begins, “In two studies, we examined...,” the first 7 lines are generally about social isolation, support, and well-being. Mention of conspiracy mentality only appears at the end of that paragraph, as “Furthermore, we also explored...” I am not suggesting that the authors deviate from the original purpose behind their research but mainly shift the emphasis of the presentation through some reorganization. Specifically, I recommend that the authors structure the introduction around the issue of experiences of being unplugged (rather than around the general issues of social support, social isolation, and well-being) and then move on to how those experiences may be different depending on a person’s level of conspiracy mentality. The concepts of social isolation, social support, and well-being can then be integrated into the appropriate places within that structure.

With respect to the analyses, the authors report that they “controlled for the number of hours that participants successfully unplugged.” I also wondered, since the way the work is currently designed focuses on the experience of being unplugged,

whether this variable might moderate some of the processes being investigated. That is, given that all participants voluntarily agreed to unplug, are there differences as a function of how unplugged they actually were during the 24-hour period? The authors allude to this issue in the Limitations and Future Directions section: “Another limitation relates to the fact that, even though we controlled for the hours that participants had been unplugged, the experiences of those who were unplugged for longer may have been qualitatively different from the experiences of those who were unable to complete the full unplugging period and drop out may not have been random.” I am mainly suggesting some additional exploratory analyses. Comparing those who could and could not complete the 24-hour challenge successfully might also provide some suggestive data concerning the issue of “addiction,” which the authors bring up in the General Discussion.

I recognize that interpreting the findings of analyses using amount of time unplugged could be a bit challenging because participants determined the hours unplugged. For instance, in both studies more hours unplugged was related to greater life satisfaction while unplugged, more positive emotion, and less negative emotion. Is this because being unplugged longer has these beneficial effects or because people who can be without digital media longer are less dependent on the internet. Nevertheless, the results of tests for moderation by hours unplugged could be informative in an exploratory way. My points here also suggest the substantial value that an additional experimental study (such as testing people who agree to participate in the unplugging challenge manipulating different amounts of times unplugged, for instance 0, 8, 16, 24 hours) could provide. Such an experiment would be relatively easy to do while increasing the contribution of the current work.

In conclusion, I see a number of strengths in the current manuscript. The work addresses an important and timely topic – one that is likely to be of broad interest. The manuscript presents the relevant literature and is written in an engaging way. The results, based on two different samples, are stimulating. However, I have several suggestions for tightening the development of the rationale for the project and some ideas for additional analyses that may speak to some “loose ends,” including a few noted by the authors. I think that including an additional experimental study, which could be done economically and relatively easily, would greatly strengthen the package – a point the authors acknowledge in their discussion of future directions. While I am stopping short of advocating that that a new experimental study be required for resubmission and further consideration of the work, I urge the authors to strongly consider that possibility. As I noted earlier, an even more persuasive set of data would be in the authors’ and the journal’s interests. Overall, I find this to be a stimulating pair of studies that even with their acknowledged limitations could attract broad interest.



## Round 2

Dear Authors,

Thank you for submitting a revised version of your manuscript to [advances.in/psychology](https://advances.in/psychology). I received reviews from the previous two reviewers and read the revised manuscript before reading their evaluation. The reviewers diverge in their recommendation, with Reviewer 1 suggesting publication pending another round of revisions and Reviewer 2 recommending rejecting the paper. Personally, I find that the manuscript has significantly improved, even though you did not conduct an additional experimental study. Therefore, I believe it should be ready for publication after some additional issues have been addressed. As we practice transparent peer review, the evaluations are published alongside the final articles. This will allow readers to assess the paper in light of the diverging peer reviews, maximizing insights and ensuring that each reviewer's evaluation is heard regardless of my decision.

Reviewer 1 is content with many of your revisions but asks for additional changes to the introduction and discussion sections. Please attend to each of them in a revision. Their comments are detailed and constructive, so I will not repeat them here. In addition, please attend to the following minor issues:

1. Please provide exact p-values instead of \* cut-offs for each path in the mediation figures. Please italicize the “p” symbol.
2. Please clarify when 95% CIs are reported: i.e., (b = .54, 95% CI [.35, .67], SE = .08, p < .001) instead of (b = .54 [.35, .67], SE = .08, p < .001).
3. Please report the F-tests for the models tested.
4. Thanks for statistically addressing the potential overlap between the mediator and DV in the SOM. Please move the footnote referring to it into the main text, preferably to the end of the relevant mediation analyses in Study 1 (rather than Study 2 as currently is the case).
5. In the discussion, please delete the “for 24 hours” part from the following sentence as most participants, and especially those with conspiracy mentality, unplugged for less than 24 hours: “This suggests that those who believe more strongly in conspiracy beliefs suffer a loss of social support when they abstain from being online for 24 hours”
6. At the end of the implication section, there is a typo: “addition” instead of “addiction”.

I hope you will find the reviewers' and my comments helpful in revising the manuscript further. I plan to decide on the manuscript without further consulting the reviewers in the next round and would appreciate receiving the revised manuscript within a month (i.e., by April 8, 2023).

Best,

Jonas R. Kunst

Editor-in-Chief

### **Reviewer 1:**

I served as Reviewer #1 for the original submission of this work. It is unfortunate that the authors were unable to add an experiment to the set of studies but, as I said in my previous review, I feel that the two studies presented are still sufficiently stimulating to make a novel contribution to the literature on their own. The manuscript continues to be clearly and engagingly written, and the re-organization and re-writing have improved. I do have a few suggestions for some additional revision but, overall, I am even more convinced than before that a version of this work can merit publication.

All of the recommendations that I offer at this point relate to changes in aspects of the presentation that I believe will make the work even more compelling. In general, I ask the authors to provide readers with some more specific guidance and insight in certain areas. I list these in the order in which the issue appears in the manuscript.

On the first page of the main text of the manuscript, the authors write: "Given the extent to which the internet and other social media have become an indispensable part of modern life, the question emerges how we would feel if we were to voluntarily commit to forego access to the internet for 24 hours." I believe that the work would be more compelling for readers if a sentence or two were added here about the potential importance of this work conceptually and practically. That is, how might this extend theory and inform practice or policy? This would also be a place to introduce the relevance of individual differences, in this case belief in conspiracy theories, as an innovative aspect of the current research, and maybe to foreshadow the main mediator of interest by mentioning the importance of social support for maintaining beliefs in conspiracy theories, which may not be widely accepted.

In the section on unplugging, the authors state: “In another 24-hour unplugging study among university students from 10 different countries, Roberts and Koliska (2014) reported that about half of the students were unable to complete the unplugging exercise for the full 24 hours and more negative than positive experiences were reported.” I apologize for overlooking it in my first review, but this time I noted that in the present work 16% of participants of Study 1 and 27.5% of participants in Study 2 completed the 24-hour challenge. I think that it would be useful to remind readers in the General Discussion of the mixed results of work on unplugging in the literature and situating the current work into that landscape. Then the authors might identify a few factors that they think might be accounting for different findings – for example, returning to a point they made earlier about the potential role of the degree to which participants are personally motivated to unplug. The authors might then note that their participants were less likely to complete the 24-hour unplugging challenge than did participants in other research, for example Roberts and Koliska (2014) and what that might indicate. For instance, it is possible that with improvements in technology and development of a wider range of online tools, people may be becoming more reliant on online activities, making it more difficult, and potentially more distressing, for people to unplug. In short, the Introduction of the manuscript highlights seemingly contradictory findings on this topic, and a paragraph in the General Discussion that helps integrate – even speculatively – the current state of findings in this area would be a very valuable addition to the work.

The authors devote a long first paragraph in the section on Belief in Conspiracy Theories to why people engage in conspiracy theories, such as to reduce “an individual’s feelings of uncertainty by enhancing their sense of control and protection.” While I found this to be very informative and agree that there is essential information here, it led me to anticipate a different key mediator to be studied in the present work. I recommend reducing the length and density of this first paragraph so they can get to social support issues, such as the point that “conspiracy theorists can easily get together online and [affirm, not “affirming”] their opinions in these online ‘echo-chamber’ communities strengthens their belief in conspiracy theories,” even more quickly and prominently. I also suggest alerting readers, with a brief phrase, the social support aspect is a key element of the current research.

The sentence right before Implications reads, “It may be the case that individuals with higher conspiracy beliefs rely more heavily on online conspiracy groups for social support, and that this increases their vulnerability to become more socially isolated during disconnection (Freeman & Bentall, 2017; Grzesiak-Feldman, 2013).” Here I think it would be extremely beneficial for readers if the authors could provide more concrete direction for future research that could provide more definitive information. For instance, they could discuss, in a few sentences, the value of further considering this issue, perhaps by systematically varying what kinds of online access participants refrain from (e.g., communication with others from which people receive social support versus from online news or entertainment) and testing the hypothesis experimentally by including appropriate control conditions while examining additional potential mediators (e.g., identity uncertainty).

In conclusion, I found the original version of this manuscript to be promising, and I like this version even more. The work is timely and should attract wide attention. The manuscript is engagingly written, and the findings are stimulating. The recommendations that I have offered have the objective of having the authors use their expertise to offer integrative insights into the diverse findings in this area and more concretely guide readers in the directions for future research.

**Reviewer 2:**

I appreciate the care that the authors took to respond to all reviewer comments. The manuscript has without a doubt improved from its original version. The new title more accurately reflects the contents of the paper; the introduction reads better; and some research-related details are presented more clearly and/or accurately now. All that said, the paper's main limitation —namely our inability to make causal claims given the lack of experimental design— has unfortunately not been addressed. While I do understand the authors' perspective that it wouldn't be easy to conduct a new study under their current circumstances, there is no denying that the paper's contribution remains very limited without experimental data. This keeps me from recommending the manuscript for publication in this journal.