Research Collection School of Social Sciences

School of Social Sciences

10-2024

Experimental evidence of Instagram influencers' impact on well-being

KIMBERLY T'NG YITING
Singapore Management University, kimberlytng.2012@socsc.smu.edu.sg

Kai Qin CHAN

Andree HARTANTO
Singapore Management University, andreeh@smu.edu.sg

Citation

Experimental evidence of instagram influencers' impact on well-being

Kimberly T'ng[1] · Kai Qin Chan[1] · Andree Hartanto[2]

Abstract

With Instagram influencers holding significant sway over public perception, their presumed psychological impact on young adults has gathered public attention. It has been claimed that influencers, known for showcasing enviable lifestyles, have the potential to affect their followers' well-being. However, these claims have been based on correlational data that focuses on diffused indicators of social media consumption rather than specific features of Instagram. This limits our insight into the direct effects of Instagram on well-being. We experimentally investigated the effects of a brief exposure to Instagram influencers on the well-being. Our results showed that viewing profiles of demographically similar social media influencers is sufficient to increase envy and upward social comparison but has negligible effects on self-esteem and well-being. However, after statistical adjustments are made, we found no evidence that exposure to influencer impacts well-being. Past claims that Instagram influences well-being may have been overstated.

Keywords Social media · Well-being · Envy · Self-esteem · Instagram · Influence

Instagram is an influential social media platform that allows people to share their own lives using photographs and videos, allowing one to get a glimpse into other people's lives rapidly, constantly, and endlessly. In recent years, there have been concerns about the effects of Instagram on various aspects of wellbeing. The narrative that social media is harmful for consumers' well-being has been supported by some researchers (Appel et al., 2020; Ivie et al., 2020). That said, others have been more reserved, estimating that the negative impact of Instagram on well-being to be very small (e.g., Mathes et al., 2020). Some have even found small positive effects (e.g., Lowe-Calverley et al., 2019). It is clear that the evidence of social media on well-being is mixed (Meier & Johnson, 2022).

It is worth noting that studies on the effects of Instagram are typically correlational. Even when causal modeling is attempted (e.g., Jiang & Ngien, 2020), ascertaining causality is problematic (see Hartanto et al., 2021, for review), especially when dealing with large datasets with vast analytical flexibility (Orben & Przybylski, 2019). This suggests that, beyond the large datasets that already exist, extant literature needs more studies that examine Instagram's effects on well-being through systematic, careful experiments (Ferguson, 2024; Faelens et al., 2021).

Experimental research on the effects of Instagram on well-being have examined the frequency of posting (e.g., Krause et al., 2023), type of posts viewed (e.g., Meier et al., 2020; Rounds & Stutts, 2021), and having a complete break from Instagram (e.g., Hanley et al., 2019). Here we focused on a specific element of the Instagram environment – *influencers*. Influencers are a special type of everyday individuals, typically posting about an aspirational lifestyle and material standard of living, monetizing their exposure. Many Instagram users "follow" influencers, perhaps because of the influence of marketing or a sense of psychological affiliation where they occupy a unique social position-being similar enough to many of us, but seem to be having "better" lives (Chae, 2018).

The similarity between influencers and users is an element that has not been tested in social media research. If there are any effects of well-being when using Instagram (Stapleton et al., 2017), such effects are likely to be stronger if the target is seen as similar to the comparer (Festinger, 1954). Because viewers are unlikely to share the curated lifestyle influencers portray, we expected that viewing influencers who are similar will have direct effects of increasing

Kimberly T'ng
kimberly@ardellepsychology.com

1   James Cook University, Singapore, Singapore

2   Singapore Management University, Singapore, Singapore

Table 1 Descriptive statistics and t-test results

Variables	Mean (SD)		t-test	P	95% CI$_{diff}$	d
	Similar	Dissimilar				
Psychological identification	3.43 (1.74)	2.09 (1.40)	$t(74.6) = 3.79$	0.001	[0.63, 2.04]	−0.86
Upward social comparison	2.55 (1.15)	2.00 (0.91)	$t(73.85) = 2.37$	0.02	[0.08, 1.01]	0.54
Downward social comparison	1.68 (0.62)	1.73 (0.82)	$t(78) = -0.31$	0.76	[-0.38, 0.27]	0.07
Envy	2.58 (1.41)	1.98 (1.14)	$t(78) = 2.08$	0.04	[0.03, 1.17]	−0.47
State self-esteem	3.03 (0.67)	3.06 (0.56)	$t(78) = -0.26$	0.80	[-0.31, 0.24]	0.06
Satisfaction with life	4.2 (1.11)	4.33 (1.25)	$t(78) = -0.49$	0.62	[-0.66, 0.40]	0.11

The Bonferonni-corrected alpha would be $p \leq .013$

envy and social comparison but decreasing state self-esteem and life satisfaction. We focused on direct effects, rather than indirect effects, to offer a straightforward interpretation of the effects of Instagram that is uncontaminated by analytic flexibility.

We recruited 80 Chinese female Singaporean participants ($M = 21.48$, $SD = 2.33$) from James Cook University, Singapore. Participants reported spending an average of 71 mins on Instagram daily ($SD = 65.5$, min $= 0$, max $= 360$), and 77.5% of them followed influencers on their personal accounts. Participants were randomly assigned to view 20 Instagram profiles of influencers who are either similar or dissimilar to themselves in terms of both gender and race. Each influencer profiles had "endless" number of posts and had more than 10,000 followers. For the Similar condition, participants viewed Chinese female influencers. In the Dissimilar condition, participants viewed male, non-Chinese influencers. After viewing the profiles, participants responded to questionnaires measuring social identification, social comparison, state self-esteem, envy, life satisfaction and the success of our manipulation.

The results of our analyses are shown in Table 1. The manipulation of similarity was successful as all participants classified the influencers' gender correctly. Our 5000-boot-strapped independent samples t-tests revealed that participants more readily identified with influencers who shared demographic traits, envied and engaged in upward social comparison more when they shared demographic similarities with the influencers. If Bonferroni corrections were applied, even envy and upward social comparison would not reach statistical significance. Lastly, there were no direct effects of viewing influencers on state self-esteem or life satisfaction.

In summary, our study found that brief exposure to demographically similar influencers increased upward social comparison and envy but had no impact on state self-esteem or general life satisfaction. However, these effects were nullified after adjusting for multiple comparisons. These direct effects offer more balance to the existing narrative about the impact of social media. Current claims of social media's harm, particularly Instagram, may have been overstated, especially when considering the lack of direct impact on self-esteem and life satisfaction found in our study. Even if there are short-term effects on social comparison, the broader assumptions about social media's impact on overall well-being may not be as robust as previously thought, possibly explaining why people continue to follow influencers.

Our mixed findings align with experimental results in the field. Rüther et al. (2023) found that social media influencers boosted overall self-esteem but decreased self-esteem in social and appearance-related aspects due to upward social comparison. This underscores the need for experimental studies to investigate indirect effects and the complex interplay of factors, either by manipulating mediators (Spencer et al., 2005) or using causal modeling. Although our dataset allows for some flexibility in modeling indirect effects, we have chosen not to pursue this here. The dataset is available for anyone interested in causal modeling.

One limitation of our study is that it is unknown if these short-term effects will persist long-term, hence more longitudinal designs are needed (Faelens et al., 2021). Additionally, our study focused only on visible demographic markers, but other forms of similarity (e.g., hobbies, nationality, language, support for specific causes) could also be relevant (see Hogg, 2000). Future research should explore how different types of similarity between users and influencers impact well-being. Finally, our study's use of Chinese Singaporean participants may limit the applicability of the findings to other cultural contexts.

References

Appel, M., Marker, C., & Gnambs, T. (2020). Are social media ruining our lives? A review of meta-analytic evidence. *Review of General Psychology*, *24*, 60–74. https://doi.org/10.1177/1089268019880891

Chae, J. (2018). Explaining females' envy toward social media influencers. *Media Psychology*, *21*(2), 246–262. https://doi.org/10.1080/15213269.2017.1328312

Faelens, L., Hoorelbeke, K., Cambier, R., Van Put, J., Van de Putte, E., De Raedt, R., & Koster, E. H. (2021). The relationship between Instagram use and indicators of mental health: A systematic review. *Computers in Human Behavior*, *4*, 100121. https://doi.org/10.1016/j.chbr.2021.100121

Ferguson, C. J. (2024). Do social media experiments prove a link with mental health: A methodological and meta-analytic review. *Psychology of Popular Media*. https://doi.org/10.1037/ppm0000541

Festinger, L. (1954). A theory of social comparison processes. *Human Relations*, *7*, 117–140. https://doi.org/10.1177/001872675400700202

Hanley, S. M., Watt, S. E., & Coventry, W. (2019). Taking a break: The effect of taking a vacation from Facebook and Instagram on subjective well-being. *Plos One*, *14*, e0217743. https://doi.org/10.1371/journal.pone.0217743

Hartanto, A., Quek, F. Y., Tng, G. Y., & Yong, J. C. (2021). Does social media use increase depressive symptoms? A reverse causation perspective. *Frontiers in Psychiatry*, *12*, 641934. https://doi.org/10.3389/fpsyt.2021.641934

Hogg, M. A. (2000). Social identity and social comparison. In J. Suls, & L. Wheeler (Eds.), *Handbook of social comparison*. Springer. https://doi.org/10.1007/978-1-4615-4237-7_19

Ivie, E. J., Pettitt, A., Moses, L. J., & Allen, N. B. (2020). A meta-analysis of the association between adolescent social media use and depressive symptoms. *Journal of Affective Disorders*, *275*, 165–174. https://doi.org/10.1016/j.jad.2020.06.014

Jiang, S., & Ngien, A. (2020). The effects of Instagram use, social comparison, and self-esteem on social anxiety: A survey study in Singapore. *Social Media + Society*, *6*(2). https://doi.org/10.1177/2056305120912488

Krause, H. V., große Deters, F., Baumann, A., & Krasnova, H. (2023). Active social media use and its impact on well-being—an experimental study on the effects of posting pictures on Instagram. *Journal of Computer-Mediated Communication*, *28*, 1–12. https://doi.org/10.1093/jcmc/zmac037

Lowe-Calverley, E., Grieve, R., & Padgett, C. (2019). A risky investment? Examining the outcomes of emotional investment in Instagram. *Telematics and Informatics*, *45*, 101299. https://doi.org/10.1016/j.tele.2019.101299

Matthes, J., Karsay, K., Schmuck, D., & Stevic, A. (2020). Too much to handle: Impact of mobile social networking sites on information overload, depressive symptoms, and well-being. *Computers in Human Behavior*, *105*, 106217. https://doi.org/10.1016/j.chb.2019.106217

Meier, A., & Johnson, B. K. (2022). Social comparison and envy on social media: A critical review. *Current Opinion in Psychology*, *45*, 101302. https://doi.org/10.1016/j.copsyc.2022.101302

Meier, A., Gilbert, A., Börner, S., & Possler, D. (2020). Instagram inspiration: How upward comparison on social network sites can contribute to well-being. *Journal of Communication*, *70*, 721–743. https://doi.org/10.1093/joc/jqaa025

Orben, A., & Przybylski, A. K. (2019). Screens, teens, and psychological well-being: Evidence from three time-use-diary studies. *Psychological Science*, *30*, 682–696. https://doi.org/10.1177/0956797619830329

Rounds, E. G., & Stutts, L. A. (2021). The impact of fitspiration content on body satisfaction and negative mood: An experimental study. *Psychology of Popular Media*, *10*, 267. https://doi.org/10.1037/ppm0000288

Rüther, L., Jahn, J., & Marksteiner, T. (2023). #influenced! The impact of social media influencing on self-esteem and the role of social comparison and resilience. *Frontiers in Psychology*, *14*, 1216195. https://doi.org/10.3389/fpsyg.2023.1216195

Spencer, S. J., Zanna, M. P., & Fong, G. T. (2005). Establishing a causal chain: Why experiments are often more effective than mediational analyses in examining psychological processes. *Journal of Personality and Social Psychology*, *89*, 845–851. https://doi.org/10.1037/0022-3514.89.6.845

Stapleton, P., Luiz, G., & Chatwin, H. (2017). Generation validation: The role of social comparison in use of Instagram among emerging adults. *Cyberpsychology Behavior and Social Networking*, *20*, 142–149. https://doi.org/10.1089/cyber.2016.0444