

Questions from the Audience - Project AWeSome Webinar

Thank you all for your interest in our webinar. We have received many questions. Some showed some overlap and have been combined. We have made a selection and posted their answers on below. We will also address some of your questions in our next webinars.

Below you can find an answer to the most frequently asked questions asked during our Winter Webinar. Other questions will be addressed in our upcoming webinars.

- 1. In the Beyens et al. 2020 article that your talk is based on, I love how the word "nuances" was used when describing what needs to be researched to tease apart the effects that specific social media use has on an individual adolescent's well-being. How nuanced do you think research should get? For example, both passive and active browsing are such large terms that are made up of many different activities that can have both positive and negative associations with well-being. Are there other nuances researchers should be interested in?**

We indeed found in our latest research (Beyens et al., 2020b; Valkenburg, Beyens, et al., 2021b) that passive social media use (i.e., browsing) may lead to increases in well-being among some individuals, but that it leads to decreases in well-being among other individuals. We therefore definitely believe that we should look further than adolescents' type of social media use, for example by taking the content of their social media use and subjective experiences into account.

- 2. I'm curious if your experience with person-specific effects, and the nuances that they demonstrate, have caused you to question many media effects theories that are built on empirical results that are produced with between-person methods?**

Media effects encompass the short- and long-term within-person changes in cognitions, emotions, attitudes and behavior as a result of a person's media use (Valkenburg et al., 2016). As media effects occur within person, they should be examined at a within-person level instead of a between-person level. Our own research, as well as studies from other scholars have shown that within-person effects and between-person associations often differ in sign and strength. We therefore do not know to what extent media effect theories that are built on between-person methods are valid. It is therefore important to verify existing media effect theories with within-person methods and to develop novel theories.

- 3. What are your thoughts about long-term effects. Your studies show large variability in momentary associations between social media use and wellbeing. Do you also expect such a large variation for long-term effects, i.e., when using less intensive data across a longer time span? Will you also examine this in the future?**

We do not know yet how short-term effects of social media use on psychosocial functioning are related to longer-term effects. Based on dynamic theories on adolescent development (Granic, 2005; Keijsers & van Roekel, 2019) it could be that short-term effects of social media use on well-being may unfold into longer-term change. However,

such effects may not follow the logic of a linear system. For example, due to feedback loops, negative short-term effects of social media use on friendship closeness may motivate some adolescents to invest more in their relationships, which may lead to positive effects at the longer term. However, amongst others, short-term negative effects may lead to longer-term negative effects. We are planning to investigate how short-term effects unfold into changes in friendship closeness across multiple months. However, as our study only covers a time span of 8 months, we are not able to investigate the longer-term effects across multiple years.

4. Was any consideration given to the type of content the adolescents were engaging with online when they reported how they were feeling?

In some studies we investigate the differential effects of different types of social media use on psychosocial functioning (e.g., active vs. passive use) (Beyens et al., 2020a, 2020b; Valkenburg, Beyens, et al., 2021b). In addition, we are planning to examine the content of adolescents' social media use by means of digital trace data. A subsample of 104 adolescents shared their Instagram Data Download Archive, which includes digital trace data of their active Instagram use (e.g., their Instagram posts). We are currently developing new methods to analyze these data. This enables us to link adolescents' momentary assessments of well-being (assessed in the ESM surveys) to their active use of Instagram in our future research.

5. Have you explored (or have you any plans to explore) the quality of teens' experiences as they engage with different social media platforms and how those experiences relate to various dimensions of their well-being?

We have conducted two studies on the valence and enjoyment of adolescents' social media experiences (Valkenburg, Beyens, et al., 2021b; Valkenburg, Pouwels, et al., 2021). Both factors seem to be related to the effects of social media use on adolescents' psychosocial functioning. We have not measured how meaningful or satisfying their experiences are, but that will be definitely an important factor to take into account in future research.

6. What can you say about the direction of the effects with the presented analyses in Beyens et al (2020), Pouwels et al. (2021) and Valkenburg et al. (2021)?

In the self-esteem study, we did control for adolescents' level of self-esteem 2 hours before each assessment (Valkenburg, Beyens, et al., 2021a). By including these so-called autoregressive effects of self-esteem across a time interval of two hours, we were able to investigate the effects of social media on relative changes in self-esteem.

In our studies on the association of social media use with well-being (Beyens et al., 2020a) and friendship closeness (Pouwels et al., 2021) we examined cross-sectional associations of social media use in the previous hour with current levels of well-being and friendship closeness, respectively. While temporal precedence is a necessary assumption for causality, causality can be more or less assumed in our findings, since the questions refer to different timespans (i.e., adolescents' social media use in the hour

before the measurement occasion versus well-being/friendship closeness “right now”; see McNeish and Hamaker, 2020).

- 7. What do you think of the accuracy of the ‘time spent’ social media variables that you’ve been gathering through self-report? Even retrospectively on a day-scale, recalling use accurately is tricky. Do you think this may have implications for the results you found, and if so, what could those look like?**

We investigated how accurate adolescents are in estimating their time spent on social media (Verbeij et al., 2021). Findings showed that, on average, adolescents overreport the time they spent using social media in the previous hour. Moreover, the within-person correlation of self-reported ESM estimates of time spent using social media with more objective digital trace estimates is only moderately strong. Therefore, it could be that the effects of digital trace estimates of time spent using social media on well-being may differ from the effects of self-reported estimates. We are planning to investigate this question in our future studies.

- 8. Could an explanation focused on varying experiences rather than varying individual susceptibility at least partially account for your findings? For example, if we consider online aggression, we would expect that someone experiencing this would have a negative reaction regardless of who they are (at least to some extent). This would then explain why individual participants had different associations across moments; they were having differencing experiencing. Does combining these perspectives provide the strongest approach?**

This is an interesting point of view and our findings indeed show that it may be interesting to combine these perspectives. We have published a preprint that taps into the valence of social media experiences and adolescents’ self-esteem (Valkenburg, Pouwels, et al., 2021). We found that the valence of adolescents’ social media experiences is a stronger predictor of their state self-esteem than their time spent on social media. Across all ESM observations of the valence of adolescents’ SM experiences, 55% of these experiences were positive, 18% negative, and 27% neutral. We found that among some adolescents, the valence of social media experiences is a stronger predictor of their self-esteem than for others. 78% of adolescents experienced a positive within-person effect of the valence of SM experiences on self-esteem, 19% no to very small effects, and 3% a negative effect. These sizeable differences in person-specific effects could be explained by adolescents’ trait self-esteem instability, and their tendency to base their self-esteem on peer approval.

- 9. A terminology question I have is the use of the term "passive" media. In television research, passive media is often used to describe how it impacts outcomes. Observational learning, however, is very powerful. The mind may be working even if the body is still. I have switched to using observational versus interactive media, with the nuance that the degree of involvement varies even within what we think of as interactive media (which you are exploring). I just think**

the terms passive, active, and interactive become loaded and need to be more nuanced.

We fully agree with this idea. We address this issue and challenge the passive social media use hypothesis in one of our latest preprints (Valkenburg, Beyens, et al., 2021b): "In fact, both selective exposure (Knobloch-Westerwick, 2015) and media effects theories reject the notion of "passive" media use (for a review, see Valkenburg, Peter, & Walther, 2016). These theories consider the reception of media messages as active, in the sense that recipients have autonomy over the way they select, process, and interpret media messages. These theories argue that (a) people can only attend to a limited number of media messages out of the constellation of messages that can potentially attract their attention, (b) they select media messages in response to a variety of social, psychological, and situational antecedents, and (c) only those messages they select have the potential to influence them (Valkenburg et al., 2016)."

10. Could you reflect upon the practical implications of your findings. I would like to know your thoughts - from your approach -how best to guide parents and teens themselves about their use of social media, other than saying -know your child, or know yourself? And how can we implement your findings in a public health approach in which we tend to look for interventions for improving population level health?

We believe that personalized interventions may have stronger impact than general interventions at the population level. Person-specific findings may provide a scientific basis for personalized advice on how each adolescent's social media use may contribute to his or her well-being. For example, based on our time series plots, we can explain certain adolescents' that their well-being decreases after they spent more time using social media in active ways.

11. Is there a minimum number of participants to do a person specific analysis? Or can I do a time series analysis with say 300 probes for one individual?

The power for time series analyses depends both on the number of participants and the number of assessments per participant. It is possible to conduct $N = 1$ time series analyses for one single individual based on 50 to 100 assessments (Chatfield, 2016; Voelkle et al., 2012).

References

- Beyens, I., Pouwels, J. L., van Driel, I. I., Keijsers, L., & Valkenburg, P. M. (2020a). The effect of social media on well-being differs from adolescent to adolescent. *Scientific Reports*, 10, 10763, Article 10763. <https://doi.org/10.1038/s41598-020-67727-7>
- Beyens, I., Pouwels, J. L., van Driel, I. I., Keijsers, L., & Valkenburg, P. M. (2020b). *Social media use and adolescents' well-being: Developing a typology of person-specific effect patterns*. PsyArXiv. <https://doi.org/10.31234/osf.io/ftyqp>
- Chatfield, C. (2016). *The analysis of time series: An introduction* (6th ed.). CRC.

- Granic, I. (2005). Timing is everything: Developmental psychopathology from a dynamic systems perspective. *Developmental Review*, 25(3), 386-407. <https://doi.org/10.1016/j.dr.2005.10.005>
- Keijsers, L., & van Roekel, E. (2019). Longitudinal methods in adolescent psychology: Where could we go from here? And should we? In L. B. Hendry & M. Kloep (Eds.), *Reframing adolescent research* (pp. 56-77). Routledge.
- Knobloch-Westerwick, S. (2015). The selective exposure self- and affect-management (SESAM) model: Applications in the realms of race, politics, and health. *Communication Research*, 42(7), 959-985. <https://doi.org/10.1177/0093650214539173>
- McNeish, D., & Hamaker, E. L. (2020). A primer on two-level dynamic structural equation models for intensive longitudinal data in Mplus. *Psychological methods*, 25(5), 610-635. <https://doi.org/10.1037/met0000250>
- Pouwels, J. L., Valkenburg, P. M., Beyens, I., van Driel, I. I., & Keijsers, L. (2021). Social media use and friendship closeness in adolescents' daily lives: An experience sampling study. *Developmental Psychology*, 57(2), 309-323. <https://doi.org/10.1037/dev0001148>
- Valkenburg, P. M., Beyens, I., Pouwels, J. L., van Driel, I. I., & Keijsers, L. (2021a). Social media and adolescents' self-esteem: Heading for a person-specific media effects paradigm. *Journal of Communication*, 71(1), 56-78. <https://doi.org/10.1093/joc/jqaa/039>
- Valkenburg, P. M., Beyens, I., Pouwels, J. L., van Driel, I. I., & Keijsers, L. (2021b). *Social media browsing and adolescent well-being: Challenging the "Passive Social Media Use Hypothesis"*. PsyArXiv. <https://doi.org/10.31234/osf.io/gzu3y>
- Valkenburg, P. M., Peter, J., & Walther, J. B. (2016). Media effects: Theory and research. *Annual Review of Psychology*, 67, 315-338. <https://doi.org/10.1146/annurev-psych-122414-033608>
- Valkenburg, P. M., Pouwels, J. L., Beyens, I., van Driel, I. I., & Keijsers, L. (2021). *Adolescents' experiences on social media and their self-esteem: A person-specific susceptibility perspective*. Psyarxiv. <https://doi.org/10.31234/osf.io/hcnez>
- Verbeij, T., Pouwels, J. L., Beyens, I., & Valkenburg, P. M. (2021). *The accuracy and validity of self-reported social media use measures among adolescents*. PsyArXiv. <https://doi.org/10.31234/osf.io/p4yb2>
- Voelkle, M. C., Oud, J. H. L., von Oertzen, T., & Lindenberger, U. (2012). Maximum likelihood dynamic factor modeling for arbitrary N and T using SEM. *Structural Equation Modeling: A Multidisciplinary Journal*, 19(3), 329-350. <https://doi.org/10.1080/10705511.2012.687656>