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Conflicting Norms Around Mobile Media Dis/Connection and State Awareness: A Vignette Experiment

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ABSTRACT

Contemporary mobile media users are facing expectations of being available anytime and anywhere, but sill using mobile media in moderation. It is unclear, however, how these conflicting norms of availability and disconnection unfold their effects in daily life. This study examines the effects of situation-salient norms on affective responses, perceived decisional conflict, intention to use one's smartphone, and how state awareness serves as a resource to handle conflicting expectations. We conducted a vignette-based 2 (availability norm: salient vs. non-salient) × 2 (disconnection norm: salient vs. non-salient) × 2 (state awareness: low vs. high) experiment (N = 1,509). The results suggest that situation-salient norms of availability are more influential than norms of disconnection, but when disconnection norms are salient as well, the influence of availability norms is reduced. State awareness did not mitigate the effects of conflicting norms, although it associated with lower decisional conflict to use the smartphone. Our findings point to important theoretical and practical implications of studying normative influences on mobile media use in situational contexts.

Mobile media have become an integral part of contemporary everyday life. However, although mobile media allow for "anytime, anywhere" connectivity, they also challenge people's "digital well-being"—an optimal balance in the benefits and drawbacks perceived from mobile media use (Vanden Abeele, 2021)—and thus motivate them to disconnect from time to time. People's mobile media uses, but also their deliberate efforts to disconnect from mobile media, are in part shaped by the social norms that people perceive about online dis/connectivity (Geber, Nguyen & Büchi, 2024; Hall et al., 2014; Wang, 2015). Norms of availability (i.e., being available at all times) can influence the extent to which they feel the need to hold their smartphone within reach.

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Conversely, norms of disconnection, such as not using the smartphone during social gatherings, can influence the extent to which people want to limit their mobile media use (Leuppert & Geber, 2020; Schneider & Hitzfeld, 2021). Drawing on theories of normative influences (Cialdini et al., 1990; Rimal & Real, 2005), this study examines how social norms of digital availability and disconnection interact with each other and influence affective responses, perceived decisional conflict, and intention to use mobile devices in everyday situations.

In dealing with the tensions between norms of digital availability and disconnection, scholars have increasingly pointed to and theorized the role of mindfulness as a personal resource that can help people cope with managing mobile media use (Hefner & Freytag, 2024; Hefner et al., 2017; Owen et al., 2018; Schneider et al., 2022; Vanden Abeele & Nguyen, 2022). Mindfulness can affect how people "perceive, appraise, act on, and make sense of" different external stimuli stemming from mobile media (Schneider et al., 2022). One essential aspect of mindfulness that may be particularly relevant in handling conflicting mobile media situations, is maintaining *awareness* of the present moment. Although past theorizing and empirical work has focused on the role of mindfulness as a personal trait that can help people (Hallauer et al., 2022; Owen et al., 2018; Schneider et al., 2022), it is also useful to know whether state awareness (as a subdimension of mindfulness)—a temporary experience of being attentive in a particular situation—can have beneficial effects in managing conflicting norms around digital availability and disconnection. Arguably, from an intervention perspective, state awareness can be more easily influenced than its trait counterpart (Sousa et al., 2021), with, for instance, brief interventions or message cues in particular situations (Liu et al., 2022). Thus, in this study, we aim to examine if induced state awareness can help people cope with conflicting norms around digital availability and disconnection.

This study takes a situational approach that investigates how norms of digital availability and disconnection, as well as someone's mindfulness, unfold their effects in concrete, daily situations of mobile media use. Based on an experimental vignette study presenting daily situations of mobile media use (N = 1509 smartphone users), we examine how conflicting norms of digital availability and disconnection influence people's affective responses, perceived decisional conflict about one's smartphone use, and the intention to use one's smartphone. Next, we examine the role of state awareness to mitigate effects of conflicting norms around smartphone use. In doing so, this study adds the situational context to propositions of theories of normative influences and of mindfulness as a personal resource, which seems particularly appropriate to understand how people manage mobile media use taking place anytime, anywhere.

Constant Connectivity and Mobile Media Disconnection

The ubiquitous nature of mobile media and possibility to connect anywhere, anytime has contributed to a "permanently online, permanently connected" (POPC) mind-set (Klimmt et al., 2017). This state of online vigilance is characterized by the habitualization of mobile media cognitions and behaviors, where users are preoccupied with mobile functions and communication, respond promptly to mobile stimuli and messages, and continuously observe one's digital environment (Klimmt et al., 2017). A POPC mind-set might bring one's mobile media uses in conflict with other activities or goals that one has (e.g., automatically reaching for your phone during in-person social situations), with consequences that users deem unwanted or consider to be negative for their well-being (Klimmt et al., 2017; Meier, 2022).

Disconnecting—often referring to one's smartphone—is frequently seen by individuals as a solution to limit one's unwanted media use and engage with media in a more conscious manner (Nguyen, 2021). Digital disconnection, as an umbrella term, generally refers to the voluntary nonuse of digital media (e.g., devices, platforms, features, interactions/messages) for various periods of time, often with the goal to regain control over one's everyday life and sense of well-being (Nassen et al., 2023; Nguyen, 2021; Syvertsen & Enli, 2019; Vanden Abeele & Mohr, 2021). Disconnection can take on different forms in people's mobile media routines, but as smartphones have become integral to organize and navigate everyday life, people often resort to more nuanced micro-strategies (e.g., putting the phone away in specific situations) that they apply in concrete everyday situations rather than to abandon use completely (Nguyen, 2021). Recognizing that extended breaks from mobile media might not be preferable, nor feasible, in our current digital society, this study defines disconnection from mobile media as the conscious choice of limiting one's use thereof.

Situation-Salient Availability and Disconnection Norms

In today's digital society both mind-sets—the POPC one. as well as the one of a more conscious mobile media use—come along with certain expectations, or norms, that mobile media users experience in their daily lives. Social norms are informal rules that "either prescribe or proscribe behaviors that members of a group can enact" (Rimal & Real, 2003, p. 185). In behavioral theories considering normative influences, such as the theory of planned behavior (TPB; Ajzen, 1991), theory of normative social behavior (TNSB; Rimal & Real, 2005), and focus theory of normative conduct (FTNC; Cialdini et al., 1990), social norms are conceptualized as perceptions of what relevant others do (i.e., descriptive norms) and approve of (i.e., injunctive norms). These normative perceptions are supposed to influence individual behavior because

of people's motivation to do the right thing and for affiliation with relevant others.

In the context of mobile media use, two conflicting types of social norms have been theoretically discussed (Bayer et al., 2016) and empirically found (Geber, Nguyen & Büchi, 2024; Halfmann, 2021; Schneider & Hitzfeld, 2021) to be an important factor of people's behavior: availability and disconnection norms. Availability norms resonate with the POPC mindset and refer to perceptions about the prevalence and social approval of being available anytime and anywhere (Geber, Nguyen & Büchi, 2024). Here, everyday contacts—the people with whom one is in regular contact—are the most relevant referents, as being not accessible heavily affects these contacts by disrupting their ability to coordinate and interact with the person in question (Ling, 2014). Disconnection norms correspond to the trend toward more conscious mobile media use and refer to the perceived prevalence and social approval of the conscious self-regulation of mobile media use among one's social circle (Geber, Nguyen & Büchi, 2024). Significant others (e.g., friends, family, colleagues) are supposed to be the relevant reference group in this regard, because they are people whom one trusts and identifies with (Legros & Cislaghi, 2020; Shulman et al., 2017), and because disconnecting from implies interacting more attentively with them face-to-face (Winkelmann & Geber, 2022). Empirical research shows that both norms of availability and disconnection exert influences on (dis) connection behavior and that a conflict between these norms in their influences might occur, especially among younger mobile media users (Geber, Nguyen & Büchi, 2024).

Currently, there is a lack of understanding of how norms of digital availability and disconnection break down into concrete situations of mobile media use. Yet, decisions of mobile media use—and thus decisions about disconnection—are made in concrete daily situations, such as while waiting for the bus or the food order in a takeaway or at the checkout line in a grocery shop. Although most theories on normative influences (e.g., TPB, TNSB) refer to normative influences on behavior as general—that is, situation-invariant—influences, the FTNC proposes a situation-specific approach to the understanding of normative influences. Specifically, it theorizes that social norms "should not be seen as uniformly in force at all times and all situations" (Cialdini et al., 1990, p. 1015); rather a social norm needs to be in focus (focus theory of normative conduct) or, in other words, salient in a given situation to unfold its effects on behavior. Thus, based on FTNC, norms of digital availability and disconnection need to be salient in a given situation to influence mobile media behaviors. Specifically, this means that if the availability norm is salient—for instance, because people are awaiting a message—the intention to use one's smartphone will be higher in a given situation (compared to when this norm is not salient). Comparably, it is likely that when the disconnection

norm is made salient in a given situation—for instance, by a recent conversation with friends about this topic—the intention to use one's smartphone will be lower (compared to when this norm is not salient). We thus state the following two hypotheses[1]:

H1: When the availability norm is salient (compared to not salient), people's intention to use one's smartphone will be higher.

H2: When the disconnection norm is salient (compared to not salient), people's intention to use one's smartphone will be lower.

Conflicting situation-Salient Availability and Disconnection Norms

According to the FTNC, a conflict between norms of availability and disconnection is likely to occur in a situation in which both norms are salient. Such a conflict has not only implications for the intention to use one's smartphone, but also, and in first instance, on smartphone users' perceived decisional conflict in this situation (O'Connor, 1995). Theories on normative influences (Ajzen, 1991; Cialdini et al., 1990; Rimal & Real, 2005) explain how social norms shape behavior or the intention to act. However, in situations where norms are in conflict, predicting behavior becomes more difficult. In such cases, individuals must assess which behavior to prioritize, in other words: Which norm will they conform to and which norm will they deviate from? This assessment of which behavior to prioritize might lead to the experience of decisional conflict. Previous research has shown that a discrepancy between one's own views and perceived social norms increases decisional conflict (Reid et al., 2020). A similar effect is likely when conflicting social norms compete for adherence, yet this remains an overlooked area in the literature. As such, we argue that perceived decisional conflict is a relevant outcome that plays an important role in how people navigate conflicting norms related to mobile media use.

Conflicts in mobile media use can be a source of stress (Halfmann et al., 2024). As such, we argue that the salience of conflicting norms also influences affective responses, such as negative (i.e., nervousness) and positive (i.e., attentiveness) affect (Peeters et al., 1996; Thompson, 2007). Affect, from an arousal-based perspective, refers to an individual's psychological state of activation (Kuppens et al., 2013). Despite the relevance of affect in social and behavioral processes (Isen, 1987), there is a notable gap in theoretical and empirical work on how normative conflicts shape affective responses. Recent research implies that affective responses are an important outcome of normative influences, suggesting that conformity to, and deviation from, norms can

elicit emotions such as pride and guilt (Packard & Schultz, 2023). However, concrete theorizing on the relationship between norms—especially conflicting norms—and emotional and affective responses remains underdeveloped. Our study addresses this gap by examining how conflicting norms impact affective responses in the context of mobile media use.

Likely, normative conflicts induce affective arousal because they create psychological tension, requiring individuals to cope with competing social expectations. For example, when people face conflicting norms—such as the expectation to be constantly available versus the norm of digital disconnection—they must make a decision about which norm to follow and which to disregard. Furthermore, conforming to one norm likely means deviating from another, which might also lead to discomfort. As such, conflicting normative expectations can trigger stress-related psychological responses, manifesting as affective arousal in the form of heightened activation (i.e., positive affect) or increased nervousness (i.e., negative affect).

Based on the current state of literature on normative conflicts, we expect that when both norms of availability and disconnection are salient in a given situation, meaning that when mobile media users realize that disconnection is regarded as a desirable behavior but, at the same time, feel the expectation to be online available, they will experience a conflict in their decision to use the smartphone. Given that tensions between digital availability and disconnection can be stressful and induce arousal, we expect that conflicting norms may heighten negative and lower positive affect. Last, it is unclear how the salience of conflicting norms will affect the intention to use the smartphone. We thus state the following two directional hypotheses regarding mobile media users' decisional conflict and affective state and a unidirectional hypothesis on the intention to use the smartphone.

H3: When both availability and disconnection norms are salient (compared to when only one or none of these norms are salient), people will experience a) higher decisional conflict and b) a higher negative affect and lower positive affect; furthermore, c) people's intention to use one's smartphone will be influenced, but it is unclear whether this intention will be lower or higher.

Awareness as a Personal Resource to Mitigate Effects of Conflicting Norms

Recent research has drawn attention to the role of mindfulness as an individual resource to better manage and establish a "healthy" relationship with mobile media (Hefner & Freytag, 2024; Hefner et al., 2017; Owen et al., 2018; Schneider et al., 2022; Vanden Abeele & Nguyen, 2022). Mindfulness is the practice of maintaining present-moment awareness while observing thoughts, feelings, and experiences without

judgment (Bishop et al., 2004). Mindfulness has shown to be especially relevant in the context of managing mobile media use (Hefner & Freytag, 2024). The IM3UNE model posits that people's sense of coherence—which is determined partly by one's trait mindfulness—plays a role in how people "perceive, appraise, act on, and make sense of" different external stimuli stemming from mobile media (Schneider et al., 2022). Greater mindfulness has been linked to less problematic use of mobile devices overall (Hefner & Freytag, 2024; Regan et al., 2020), as well as in specific situations where mobile media use is undesired, such as while driving a car (Koppel et al., 2022). Similarly, users who experience greater mindfulness are less likely to use social media compulsively (Meynadier et al., 2023), which may be associated with lower stress (Apaolaza et al., 2019).

Much of theoretical and empirical work on mindful media use has focused on the role of mindfulness as a personal trait (Hallauer et al., 2022; Owen et al., 2018; Schneider et al., 2022). However, research has shown that state mindfulness—a temporary experience of being mindful in a particular situation—might also be relevant for people's mobile media behaviors. Brief mindfulness interventions have been able to increase state mindfulness, self-control, and reduce self-reported problematic smartphone use (Liu et al., 2022). Similarly, more extensive mindfulness training programs have shown to be effective at reducing mobile phone connectedness and overall stress (Hefner & Freytag, 2024).

A key component of mindfulness is the self-regulation of attention to immediate experiences, also referred to as awareness (Bishop et al., 2004). Such awareness may be particularly relevant in situations of normative conflict, as it enables individuals to engage with external mobile media stimuli in a more conscious and intentional manner. By fostering awareness, individuals may better navigate the tension between digital availability and disconnection norms, reducing decisional conflict and mitigating stress-related affective responses. As such, we focus on whether state awareness, a key dimension of mindfulness, can mitigate effects of conflicting norms around digital availability and disconnection.

We particularly expect that when norms of digital availability and disconnection are in conflict with each other, those experiencing a high state awareness will perceive lower decisional conflict overall, as well as lower negative affect and higher positive affect. We also expect that in situations of conflicting expectations about being available and disconnecting, people who experience greater awareness will less likely use their smartphone. Given that the role of awareness is mainly relevant for situations in which both norms of digital availability and disconnection are salient and thus in conflict, we formulate hypotheses for this scenario only.

H4: When both availability and disconnection norms are salient in a state of high awareness (compared to a state of low awareness), people will experience a) lower decisional conflict and b) lower negative affect and higher positive affect, and c) one's intention to use one's smartphone will be lower.

Methods

We conducted an online vignette experiment to examine the effect of conflicting social norms around digital availability and disconnection, as well as the moderating role of state mindfulness in daily situations of mobile media use. Specifically, we tested a 2 (availability norm: non-salient vs. salient) × 2 (disconnection norm: non-salient vs. salient) × 2 (state awareness: low vs. high) design, resulting in 8 conditions. The outcome variables of interest are perceived decisional conflict, positive and negative affect, and behavioral intention of smartphone use. The design, including hypotheses, measures, and analytical plan, is preregistered and can be found here: https://osf.io/f8agd.[2] Data, analysis code, and appendices are available on OSF: https://osf.io/sem32.

Sampling and Design

As part of a larger study on people's mobile media use, participants were recruited through an online research company. Respondents were Dutch digital media users over the age of 18. We used quota sampling to ensure a diverse sample with people from different gender identifications, ages, and levels of education. After giving written informed consent, participants first filled out a series of questions about their digital media use (these questions are not part of this article, except for those we describe under covariates). Next, we instructed participants that they would have to imagine a scenario that would be described on the following page and that they would receive questions about the scenario after. Participants were randomly allocated to one of eight conditions and exposed to the scenario. After having read the scenario, participants were asked, in the following order, questions about: positive and negative affect, decisional conflict to use the smartphone, behavioral intention to use the smartphone, and manipulation checks. They received a standard compensation of the research company upon completion of the study. The overall procedure of the study encompassed a pretest followed by the main study, both including a series of checks (i.e., realism, manipulation).

Participants

The final sample consists of 1,509 participants, which is enough to detect small-sized effects based on our power calculations (see preregistration).[3] We measured gender identifications with three categories (female, male, other), and recoded this into a dichotomous variable reflecting female participants (53.1%). There were two participants who identified as "other." The average age was 50 years (SD = 15.46, range 18–80 years). Level of education was recoded into a binary variable reflecting higher (i.e., comparable to an international Bachelor's degree) and lower education. Forty percent of the sample had completed a higher education.

General Norms (non-Manipulated)

We first measured general norms around digital availability and disconnection to be included in the analyses at covariates, as these could influence how people act when the norms are made salient in the situations described in the vignette (i.e., manipulated). In line with extant social norms research (Ajzen, 1991; Cialdini et al., 1990; Rimal & Real, 2005), we distinguish between the descriptive and the injunctive norm here. We formulated the items for our behavior of interest (i.e., being digitally available, and disconnection) based on established guidelines for measuring social norms (Ajzen, 2006). An exploratory factor analysis of the general norms items, followed by a confirmatory factor analysis, showed empirical support for the theoretical distinction between descriptive and injunctive norms for both general availability and disconnection norms (see Appendix C).

General availability norm

We measured the descriptive and injunctive availability norm of everyday contacts with three items each on a five-point Likert scale. An item example of the descriptive norm is: "My everyday contacts are always reachable for others." An example of the injunctive norm is: "My everyday contacts find it important to always be reachable for others." For each, we created a mean index score that reflects people's descriptive (Cronbach's α = .87; M = 3.33, SD = 0.91) and injunctive (Cronbach's α = .86; M = 3.19, SD = 0.90) availability norm.

General disconnection norm

We measured the descriptive and injunctive disconnection norm of the friends with three items each on a five-point Likert scale. We focused on friends as a reference group, because this aligns with the vignette that we developed (see "Independent Variables (Manipulation)"). An item example of the descriptive norm is: "Many of my friends deliberately use digital media less." An example

of the injunctive norm is: "My friends find it important to deliberately use digital media less." For each, we created a mean index score that reflects people's descriptive (Cronbach's α = .92; $M = 2.48$, $SD = 0.94$) and injunctive (Cronbach's α = .90; $M = 2.60$, $SD = 0.93$) disconnection norm.

Independent Variables (manipulation)

In the vignettes, we manipulated the (1) availability norm (salient vs. non-salient), (2) disconnection norm (salient vs. non-salient), and (3) state awareness (low vs. high). This resulted in eight different conditions. To increase the ecological validity of our findings, we created three different everyday life situations of mobile media use for these vignettes: walking to the station and waiting for the bus, ordering food at a takeaway restaurant and waiting for the order, and going grocery shopping and waiting in line at the checkout. These different everyday situations, however, were not considered as a factor in our analysis. Overall, this resulted in $8 \times 3 = 24$ different vignettes. Please see Appendix A for the construction of the vignettes as well as examples.

Availability norm salience

To probe the availability norm, we mentioned in the vignette that "You are expecting a message from someone." In the counter condition, where the availability norm salience was not salient, there was no mention of this. We modeled this after a study by Halfmann et al. (2021).

Disconnection norm salience

To make the disconnection norm salient, we mentioned in the vignette a conversation with friends that took place just prior to the waiting situation where disconnection was a topic. Specifically, this part of the vignette was as follows: "During a social gathering with your friends, you talked about the idea of using your smartphone less in everyday life." In the counter condition, where the disconnection norm was not salient, the vignette was as follows: "During a social gathering with your friends, you talked about everyday life."

State awareness

To manipulate people's state awareness, we included a sentence in the vignette that reflected their state of consciousness in the given situation. In the condition of low state awareness, we mentioned that: "You feel rushed, and you are unaware of what is happening in your surroundings." In the condition of high state awareness, we stated that: "You do not feel rushed, and you are aware of what is happening in your surroundings."

Dependent Variables

Positive and negative affect

We measured positive and negative affect with three items each, adapted from the I-PANAS-SF (Peeters et al., 1996; Thompson, 2007). These items were upset, nervous, determined, attentive, afraid, and active. We created a mean index for positive (Cronbach's $\alpha = .75$, $M = 3.03$, $SD = 0.91$) and negative affect (Cronbach's $\alpha = .87$, $M = 1.84$, $SD = 0.96$) separately.

Perceived decisional conflict

Perceived decisional conflict was measured with three items on a five-point Likert scale, based on the decisional conflict scale (O'Connor, 1995). The items started with the phrase "In this situation, . . . " and were followed by: "I find it difficult to decide if I will use my smartphone," "It is clear for me whether using the smartphone is the right choice" (reverse coded), and "I am unsure in deciding whether I will use the smartphone." We decided to remove the second item to increase the internal reliability of the scale from (Cronbach's $\alpha = .45$ to $\alpha = .77$; $M = 2.12$, $SD = 1.03$).

Behavioral intention

We measured behavioral intention with three items on a five-point Likert scale, which we formulated based on Ajzen (1991). Specifically, we asked: "In this situation, how likely would it be for you to use/look on/take your smartphone?" We created a mean index to reflect people's overall intention to use their smartphone (Cronbach's $\alpha = .96$; $M = 3.24$, $SD = 1.36$).

Pretest and Experimental Checks

We pretested our vignettes among $N = 208$ participants, which were recruited through the same research company. People who participated in the pretest were not invited for the main study to prevent an overlap in the sample. In the pretest (see Appendix B), we tested the vignettes regarding perceived realism and self-reported engagement (i.e., realism check) and whether they are able to manipulate the disconnection norm salience, availability norm salience, and state mindfulness (i.e., manipulation check). In the main study, we included again a manipulation check.

Manipulation check (pretest and main study)

We included a manipulation check question for each independent variable: one for disconnection norm salience, one for availability norm salience, and one for state mindfulness. The manipulation check item, measured on a five-point Likert scale, started with the phrase "In this situation, I felt . . . ," and continued with "like I should not use my

smartphone" (disconnection norm), "like I should be reachable for others" (availability norm), and "aware of what was happening in my surroundings" (state awareness).

Our manipulations in the pretest (see Appendix B) and main study were successful. In the main study, those in the condition where the availability norm was made salient also had higher perceptions of an availability norm (M = 2.93, SD = 1.28), as compared to those who were in the non-salient condition (M = 2.41, SD = 1.24; $t(1502) = -7.95$, $p < .001$, Cohen's d = 0.41). Participants in the condition where the disconnection norm was made salient had, indeed, higher perceptions of such a norm (M = 2.78, SD = 1.26), compared to those who received a message without this prompt (M = 2.45, SD = 1.27; $t(1506) = -5.09$, $p < .001$, Cohen's d = 0.26). Participants who were in the high awareness condition reported greater awareness of their surroundings in the described situation (M = 3.87, SD = 1.01), compared to those in the low awareness condition (M = 2.88, SD = 1.28; $t(1435) = -16.68$, $p < .001$, Cohen's d = 0.86).

Statistical Analyses

For the main analyses, we conducted ANCOVAs (Type III Sums of Squares) for each dependent variable (i.e., positive affect, negative affect, perceived decisional conflict, behavioral intention). In all models, we considered general disconnection and availability norms as covariates, as well as gender, as gender was unequally distributed across the availability norm salience conditions (X^2 (1,N = 1509) = 4.69, p = .030). Assumptions of linearity and normality of residuals were met. Assumptions of homogeneity of variances were met for all models (Levene's test), except for the model predicting negative affect. We adjusted for this by estimating an ANCOVA that relies on a heteroscedasticity-corrected coefficient covariance matrix. One of our models (i.e., perceived decisional conflict) did not meet the assumption of homogeneity of within-group regression slopes (i.e., there should be no interaction between the independent variable and the covariate). Specifically, there were significant interaction effects between the general disconnection norm and the disconnection norm salience. Thus, in our final analyses reported in this article (see Table 1 for all ANCOVAs), we extended this model with interaction terms between the general disconnection norms (i.e., measured at baseline) and situational disconnection norm salience (i.e., manipulated; see also "Exploratory Analyses") to account for this. A correlation matrix with all dependent variables is reported in Appendix D. All analyses were conducted in R (version 4.2.1).

Table 1. Effects of availability norm salience, disconnection norm salience, and state awareness (ANCOVA).

	Intention to Use Smartphone			Positive Affect			Negative Affect			Perceived Decisional Conflict		
	F (1,1496)	*p*	η_p^2	*F* (1,1496)	*p*	η_p^2	*F* (1,1496)	*p*	η_p^2	*F* (1,1494)	*p*	η_p^2
Disconnection Norm Salience	0.88	.347	.001	0.58	.447	.000	1.88	.171	.001	0.45	.503	.008
Availability Norm Salience	20.85***	< .001	.014	0.74	.389	.001	0.03	.873	.000	0.17	.679	.000
State Awareness	1.57	.210	.001	77.47***	< .001	.050	150.08***	< .001	.090	5.05*	.025	.003
Disconnection Norm (Descriptive)	6.57*	.010	.004	1.08	.299	.001	6.74**	.010	.005	1.51	.219	.001
Disconnection Norm (Injunctive)	0.91	.341	.001	2.89	.089	.002	0.02	.895	.000	2.93	.087	.002
Availability Norm (Descriptive)	2.79	.095	.002	3.09	.079	.002	2.31	.129	.001	0.77	.381	.001
Availability Norm (Injunctive)	0.15	.696	.000	2.40	.122	.002	11.77***	< .001	.007	6.73**	.010	.004
Female	2.37	.124	.002	0.46	.496	.000	1.23	.267	.001	0.53	.465	.000
DNS × ANS	10.80**	.001	.007	0.53	.465	.000	0.00	.999	.000	1.94	.163	.001
DNS × AWN	0.00	.974	.000	1.20	.273	.001	0.04	.851	.000	10.87***	< .001	.007
ANS × AWN	4.52*	.034	.003	3.08	.079	.002	0.00	.966	.000	0.87	.351	.001
DNS × ANS × AWN	1.52	.218	.001	1.17	.281	.001	1.68	.195	.001	1.29	.256	.001
DNS × DN-D										4.05*	.044	.003
DNS × DN-I										4.68*	.031	.003

Note. DNS=Disconnection norm salience. ANS=Availability norm salience. AWN=State awareness. DN-D=Descriptive disconnection norm. DN-I=Injunctive disconnection norm.

Results

Main Effects of General Availability and Disconnection Norms

In general, people perceived a moderately high availability norm with respect to their everyday contacts (descriptive: $M = 3.33$, $SD = 0.91$; injunctive $M = 3.19$, $SD = 0.90$), and a relatively lower disconnection norm among their friends (descriptive: $M = 2.48$, $SD = 0.94$; injunctive $M = 2.60$, $SD = 0.93$). Throughout our analyses, we found that these norms affect perceived decisional conflict and intention to use the smartphone, independently of whether they have been made salient or not in specific situations. Injunctive availability norms increased perceived decisional conflict (B = 0.14; $F(1,1494) = 6.73$, $p = .010$, $\eta_p^2 = .004$). Descriptive disconnection norms (i.e., descriptive) negatively influenced the intention to use the smartphone (B = –0.19; $F(1,1496) = 6.57$, $p < .010$, $\eta_p^2 = .004$).

Main Effects of situation-Salient Availability and Disconnection Norms (H1-H2)

The first and second hypotheses predicted that availability norm salience would increase the intention to use one's smartphone (H1); disconnection norm salience would reduce such intention (H2). An ANCOVA revealed a significant main effect of availability norm salience on the intention to use the smartphone ($F(1,1496) = 20.85$, $p < .001$, $\eta_p^2 = .014$). When the availability norm was made salient, participants were more likely planning to use their smartphone ($M = 3.40$), compared to when this norm was not made salient ($M = 3.09$). Thus, H1 was supported. However, there was no significant main effect of disconnection norm salience on the intention to use the smartphone ($F(1,1496) = 0.88$, $p = .347$, $\eta_p^2 = .001$), thus H2 is rejected.

Interaction Effects of situation-Salient Availability and Disconnection Norms (H3)

H3 predicted that when both availability and disconnection norms were made salient (compared to when only one, or none, of these norms are salient) and thus in conflict, people will experience (a) higher decisional conflict and (b) lower positive affect and higher negative affect. An ANCOVA showed that there were no significant interaction effects between availability and disconnection norm salience for perceived decisional conflict ($F(1,1494) = 1.94$, $p = .163$, $\eta_p^2 = .001$), thus H3a was not supported. We also did not find a significant interaction between availability and disconnection norm salience on positive affect ($F(1,1496) = 0.53$, $p = .465$, $\eta_p^2 = .000$) and negative affect ($F(1,1494) = 0.00$, $p = .999$, $\eta_p^2 = .000$), therefore rejecting H3b. Finally, H3c predicted that when both the

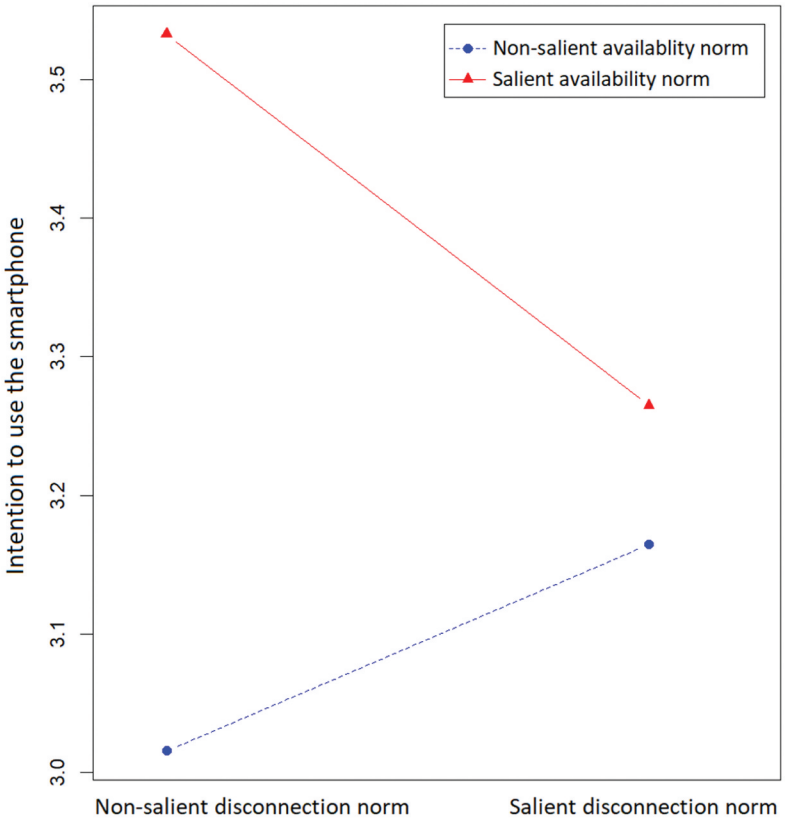

Figure 1. Disconnection × availability norm salience on intention.

availability and disconnection norm would be salient (compared to the other three conditions), people's intention to use their smartphone would be influenced, albeit unclear in which direction. An ANCOVA revealed a significant interaction effect between availability and disconnection norm salience on intention ($F(1,1496) = 10.80$, $p = .001$, $\eta_p^2 = .007$; see Figure 1). Simple effects analysis showed that when the disconnection norm is not salient, the availability norm salience (vs. not salient) leads to greater intention to use the smartphone ($M = 3.53$ vs. $M = 3.02$; $p < .001$). This effect of the availability norm salience is however not present when the disconnection norm is salient ($M = 3.26$ vs. $M = 3.16$; $p = .800$). Thus, H3c is confirmed.

Interaction Effects of State Awareness, situation-Salient Availability and Disconnection Norms (H4)

H4 predicted that when both availability and disconnection norms are salient, and thus are theoretically in conflict, people will experience (a) lower

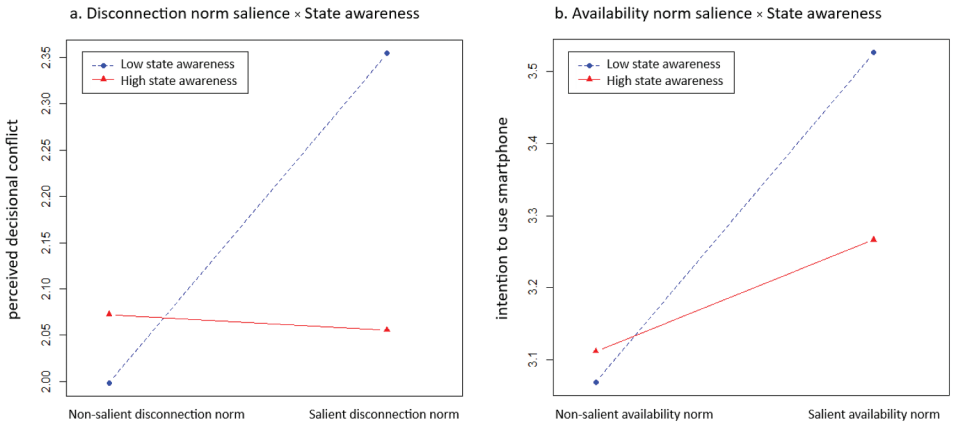

Figure 2. Interaction effects of state awareness.

decisional conflict, (b) higher positive affect and lower negative affect, and (c) lower intention to use the smartphone, when they are in a state of high awareness (compared to a state of low awareness). An ANCOVA showed that there were no significant three-way interaction effects between disconnection norm salience, availability norm salience, and state awareness for decisional conflict ($F(1,1494) = 1.29$, $p = .256$, $\eta_p^2 = .001$), thus H4a was not supported. For positive and negative affect, the ANCOVAs revealed no significant three-way interactions for positive affect ($F(1,1496) = 1.17$, $p = .281$, $\eta_p^2 = .001$) and negative affect ($F(1,1496) = 1.68$, $p = .195$, $\eta_p^2 = .001$). With respect to intention to use the smartphone, an ANCOVA showed no significant three-way interaction effect ($F(1,1496) = 1.52$, $p = .218$, $\eta_p^2 = .001$). Overall, hypothesis 4, which stated that high levels of state awareness could mitigate the effects of conflicting disconnection and availability norm salience, is rejected.

Although there were no hypothesized three-way interaction effects, it is worth noting that our analyses did reveal that state awareness has main effects on smartphone-use related cognitions. Specifically, a higher sense of state awareness (vs. lower state awareness) lowered the perceived decisional conflict to use one's smartphone ($F(1,1494) = 5.05$, $p = .025$, $\eta_p^2 = .003$). State awareness did not predict the intention to use the smartphone ($F(1,1496) = 2.45$, $p = .118$, $\eta_p^2 = .001$).

Our findings also revealed that state awareness moderated the effect of disconnection norm salience on perceived decisional conflict ($F(1,1496) = 10.87$, $p < .001$, $\eta_p^2 = .007$). Specifically, respondents experienced more decisional conflict when the disconnection norm was made salient (vs. not salient) under conditions of low awareness. The disconnection norm did not contribute to greater decisional conflict under conditions of high awareness. Thus, higher state awareness mitigated the effect of disconnection norm salience on

perceived decisional conflict (see Figure 2a). State awareness also moderated the effect of availability norms on the intention to use the smartphone (F (1,1496) = 4.52, p = .034, η_p^2 = .003). Specifically, under conditions of low state awareness, availability norm salience led to greater intentions to use the smartphone. This pattern was less pronounced for those high in state awareness. Thus, state awareness mitigated the effect of availability norm salience on intention to use the smartphone (see Figure 2b).

Interactions Between General Availability and Disconnection Norms and situation-Salient Norms (exploratory)

As explained earlier, we extended one ANCOVA model with interactions between the general disconnection norm and its situational salience. For perceived decisional conflict, the results show a significant interaction effect between the general descriptive disconnection norm and the situation-specific disconnection norm salience (F(1,1494) = 4.05, p = .044, η_p^2 = .001). Specifically, the friends' descriptive disconnection norm increases perceived decisional conflict to use one's smartphone when the disconnection norm is not made salient, unlike when it is made salient. Conversely, the injunctive disconnection norm increases perceived decisional conflict when the disconnection norm is made salient, unlike when it is not made salient. These results suggest that general *descriptive* disconnection norms (i.e., what people think their friends are doing) are mostly influential when situational disconnection norms are not experienced, but general injunctive disconnection norms (i.e., what people think their friends approve of) are mostly influential when situational disconnection norms are communicated.

Discussion

This study aimed to examine how conflicting social norms of digital availability and disconnection unfold in people's mobile media uses in concrete, daily situations, and how state awareness can help people deal with such conflicting expectations. Our results show that norms of availability have a stable influence on smartphone use behaviors, but the effects of these norms are diminished when disconnection norms are also made salient in specific situations. Although a higher state of awareness did not help people to cope with conflicting salient norms specifically, it did overall reduce people's decisional conflict regarding smartphone use. Overall, our study highlights the importance of studying social norms of digital availability and disconnection, as well as the role of awareness—a key dimension of mindfulness, in specific situational contexts. In the following, we will discuss the main findings in more detail.

Normative perceptions of digital availability are more prevalent than those of digital disconnection in our contemporary permanently online, permanently connected society. Normative perceptions to digitally disconnect (both descriptive and injunctive) were relatively low (i.e., around the midpoint of the scale), which points to the fact that people do not perceive strong expectations from their close environment to use mobile devices less. Perceived norms to be digitally available (both descriptive and injunctive), however, were relatively high (i.e., above the midpoint of the scale). This means that people experience stronger expectations from their connected circle to be digitally available at all times. Thus, being digitally available is still the dominant norm regarding mobile media uses among our Dutch population sample. However, the prevalence and importance of normative perceptions around digital availability and disconnection for the way people use mobile media might shift in the future if more and more people experience challenges of ubiquitous connectivity and digital disconnection becomes more widespread. This is also further supported by research that shows that disconnection practices, as well as norms of digital disconnection are mostly prevalent and influential among younger mobile media users (Nguyen et al., 2022; Geber, Nguyen & Büchi, 2024).

In addition to the finding that norms of digital availability are higher among contemporary mobile media users, we also find that these norms exert more influence on people's mobile media cognitions and behaviors than norms of digital disconnection, although effect sizes were generally small. General norms of availability (especially injunctive norms about what others find important) increased people's experience of decisional conflict about whether to use their smartphone or not in specific situations. Additionally, we found an effect of the increased salience of this norm: When users were made aware of the availability norm in a specific situation, they had stronger intentions to use their smartphone. Conversely, although general norms of disconnection (especially descriptive norms about what others do) reduced people's intention to use their smartphone in specific situations, making this norm salient in these situations did not have a further effect on their anticipated mobile media uses. This might be partly explained by the relatively low perceived disconnection norm in the sample (i.e., around the midpoint value). Given that there was not a strong perceived expectation from others to disconnect from mobile devices, emphasizing this norm and making it salient likely does not result in a higher intention to disconnect in a given situation. This makes sense, as, according to theories of normative influence, norms need to be well-established to exert their influence, and thus making salient a not well-established norm is likely ineffective at influencing behavior (Cialdini et al., 1990).

Although disconnection norms and their salience had little influence on the hypothesized outcomes by itself, we did find that situation-salient disconnection norms reduce the strength of availability norm salience with respect to smartphone use. Specifically, the salience of the disconnection norm mitigated the effect of a salient availability norm and lowered the intention to use the smartphone, in contrast to situations in which the availability norm is salient and the disconnection norm is not. It is noteworthy that conflicting normative perceptions around digital availability and disconnection did not influence people's affective responses, nor their perceived decisional conflict in our sample. Nonetheless, our findings means that the presence of cues of disconnection as an effective and socially approved behavior to achieve digital well-being can help people cope with expectations of digital availability. These findings are a helpful starting point for interventions promoting digital well-being, such as posters presenting disconnection as normative in places where people tend to struggle with their mobile media use.

Implications for Theory and Practice

This study took a situation-specific approach to deepen the understanding of how conflicting norms of digital availability and disconnection interact with each other, and exert their influence on people in daily situations of mobile media use. This perspective is in line with the current discussion of the meaning of the situation in communication research (Schnauber-Stockmann et al., 2025) and expands the theoretical understanding of normative influences on mobile media use and complements theoretical propositions of established behavioral theories (TPB; Ajzen, 1991; TNSB; Rimal & Real, 2005) as well as theories that discuss mindfulness as a personal resource to manage digital well-being (IM3UNE model; Schneider et al., 2022).

Normative influences on mobile media use were found to be both situation-invariant (as indicated by the main effects of the general disconnection and availability norm) and situation-specific (as revealed in the effects of the situational salience of norm, as well as the interactions between general and salient norms). In theoretical terms, this highlights the need to go beyond theoretical propositions that explain behaviors on a general, situation-independent level, such as those made in TPB and TNSB (Ajzen, 1991; Rimal & Real, 2005), and to consider concrete situations in which the behavior is enacted as proposed by FTNC (Cialdini et al., 1990). This is of particular interest in the study of mobile media use, as this is a behavior that—because of the anywhere, anytime presence of mobile media use—is highly situation-specific. It is noteworthy, however, that this discussion has already taken place in the TPB tradition in relation to other behaviors around the "effect of measurement context" (Ajzen, 2011, p. 1118) and the notion of the "principle

of compatibility" (Ajzen, 2020, p. 314), recognizing that (normative) beliefs are activated depending on the specific context of a behavior and the need to define constructs at the same level of generality/specificity. Although this discussion has been predominantly methodological, we argue for moving this discussion to a theoretical level and combining the lines of thinking of more general behavioral theories, such as the TPB and TNSB (Ajzen, 1991; Rimal & Real, 2005), with more situation-specific theories, such as the FTNC (Cialdini et al., 1990), particularly in the context of mobile media use. In methodological terms, this implies that studies on normative influences on mobile media use need to incorporate a situational perspective; this might range from including a series of items covering various situations to vignettes describing concrete situations of mobile media use to adding observational data of mobile media use in concrete situations to survey data (e.g., through data donations).

By studying the role of state awareness—a key dimension of mindfulness—as a personal resource to deal with conflicting expectations around mobile media use, our study confirms and extends theories on mobile media use and well-being, such as the IM3UNE model that proposes how users perceive, make sense of, and respond to external mobile media stimuli based on their sense of coherence, which includes mindfulness (Schneider et al., 2022). A first contribution is that our study empirically confirms that awareness can help people deal with perceptions of decisional conflict in using one's smartphone, albeit with a small effect size. Moreover, awareness reduced the effects of salient availability norms on smartphone use intentions, as well as that of salient disconnection norms on perceived decisional conflict. Although awareness might not directly support people with managing conflicting expectations around mobile media use, it does present a helpful resource to reduce uncertainty about using the smartphone or not in particular situations. Second, our study shows that state awareness—a temporary, situational experience that might fluctuate—can also function as a personal resource in reducing decisional conflict around smartphone use. This points toward the role of mindfulness as a promising personal resource to balance mobile connectivity in a "permanently online, permanently connected" society (Klimmt et al., 2017). Brief interventions aimed at increasing people's mindfulness of the present situation might be a promising way to help people maintain their digital well-being (Liu et al., 2022).

Overall, the findings of our study offer concrete starting points for interventions that aim to safeguard people's digital well-being. In ambiguous situations where mobile media users are known for struggling with managing their smartphones (e.g., when it could interfere with their goals or responsibilities), it could be a possibility to communicate and make salient a norm to disconnect from digital devices. Indeed, our findings showed that when disconnection norms are salient, the effect of availability norm salience on

people's intention to use the smartphone is lower, compared to when this disconnection norm is not salient. Thus, communicating a disconnection norm could be a way to help mobile media users in feeling less obligated to be available online for others, and thus help them to manage their digital well-being. Salience of norms can be increased by observing others displaying certain behaviors, such as using a smartphone or deliberately disconnecting from one's phone in particular situations. To this end, in situations where many people consider mobile media use undesirable, or find it difficult to manage their mobile media use, it would be good practice if we—as users of mobile devices—also carry a responsibility to not contribute to a higher salience of the availability norm in everyday life.

Limitations

The situational approach taken in this study resonates well with the anytime, anywhere facets of today's mobile media use. However, our study also has limitations that need to be discussed. First, the vignette experiment can only serve as a proxy for examining situational mobile media use, and it remains questionable how much our findings translate to real-world situations where more external factors are at play that could influence mobile media cognitions and behaviors. Nonetheless, we pre-tested our vignettes carefully on their perceived realism and engagement, and these were relatively high. That said, it remains a possibility that social desirability played a role in people's responses on the manipulation check and outcome variables, given that the topic of our study addressed social norms (i.e., what is morally the right thing to do). Future research in laboratory (Halfmann et al., 2024) or real-life settings are warranted to confirm the ecological validity of our findings. Second, it is important to note that the overall effects that we find remain small, although this is common in communication and media research (Meier & Reinecke, 2021). Our manipulations of the availability and disconnection norm salience, and state awareness, do show moderate to large effect sizes. Although our study was sufficiently powered with a large enough sample size, the question remains how much of our findings translate to real-life situations.

Overall, we found that availability norms have a stronger influence on mobile media behaviors than disconnection norms. One possible explanation is that our manipulation of disconnection norm salience was less situationally concrete than that of availability norms. Specifically, the availability norm could be directly assessed in the moment (i.e., whether one responds or not), whereas adherence to the disconnection norm was less observable. Although the disconnection norm was discussed within the friend group, others would not know whether an individual actually followed it in the given scenario. In our vignette, we attempted to make the disconnection norm as situational as possible by framing it within a hypothetical scenario where participants had

recently discussed the norm before encountering the availability cue. However, the difference in situational social control may have influenced our findings, potentially explaining why availability norms exerted a stronger influence than disconnection norms in situations of normative conflict.

We highlight that our study only focused on and manipulated one dimension of mindfulness, namely awareness as the self-regulation of attention to experiences in the present moment. Our focus on this particular dimension of mindfulness is particularly relevant for studying mobile media behaviors in specific situations. However, future research should explore how mindfulness, a multi-dimensional construct encompassing both present-moment awareness and nonjudgemental observation (Bishop et al., 2004), further shapes mobile media behaviors in conflicting situations.

With respect to our dependent variables, our study focused on intention to use the mobile phone as the behavior in question. Although putting the mobile phone away temporarily is a relevant strategy for people to disconnect, other disconnection behaviors might also be relevant in dealing with conflicting norms (e.g., turning off social features). Future research could look into how conflicting expectations around availability and disconnection might drive such micro-strategies of disconnection (Nguyen, 2021).

Our study serves as an important first step in examining affective responses to conflicting normative perceptions, specifically within the context of mobile media use, a domain where such norms frequently clash. Notably, some of the items used to measure affect focused on arousal (e.g., attentiveness) rather than its valence (e.g., positive or negative). This could potentially explain the main effects of our manipulation of awareness (a key dimension of mindfulness) on affect arousal (which is made up of related constructs, such as attentiveness; Giluk, 2009). Future research could expand on our work by examining both arousal-based and valence-based affective responses to conflicting normative perceptions in mobile media use. Our study also explored affective responses as a result of conflicting norms regarding mobile media use. However, it is possible that these responses stem from the decisional conflict individuals experience due to these conflicting norms. Future research could further investigate this by directly manipulating decisional conflict related to mobile media use, providing deeper insight into how conflicting norms and decisional conflict contribute to affective responses. Overall, as scholarship on normative influences on affective responses, such as that of emotions, is still in developing stages (Packard & Schultz, 2023), this presents a promising avenue for further research in the context of communication and media.

Conclusion

Drawing on a vignette-based experiment, this study shows that normative perceptions of digital availability are more prevalent and exert greater influence on people's smartphone use behaviors and cognitions compared to norms of disconnection. However, when norms of disconnection are made salient, this can reduce the effects of situation-salient norms of availability, leading to lower intentions to use one's smartphone. Our findings also point to state awareness—a key dimension of mindfulness—as a promising individual resource to cope with uncertainty about whether to use one's smartphone or not in a given situation. Overall, this study adds a situational perspective to current propositions of theories of normative influences in the context of mobile media use and theories that discuss mindfulness as a personal resource to manage digital well-being. The study findings are also a useful starting point for developing interventions aimed at promoting digital well-being.

Notes

1. In the preregistration the hypotheses are listed in a different order, but are, in substance, the same. The wording of H4 in this article refers to "awareness," whereas the preregistration uses "mindfulness;" however, both refer to the same construct and operationalization.
2. In the preregistration, we refer to "state mindfulness." We reformulated this to "state awareness" in this article to better reflect the operationalization of our concept.
3. Our sample size calculation is based on an anticipated small effect size of f = .10, instead of f = .15 mentioned in the preregistration. Our expectation of a small effect size is based on previous research on normative influences in media use Halfmann et al. (2024), and media effect research more generally (Meier & Reinecke, 2021; Valkenburg & Peter, 2013).

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Open Scholarship

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