

# Phubbed and Alone: Phone Snubbing, Social Exclusion, and Attachment to Social Media

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**ABSTRACT** Preoccupation with our cellphones has irrevocably changed how we interact with others. Despite many advantages of smartphones, they may undermine both our in-person relationships and our well-being. As the first to investigate the impact of phubbing (phone-snubbing), the present research contributes to our nascent understanding of the role of smartphones in consumer behavior and well-being. We demonstrate the harmful effects of phubbing, revealing that phubbed individuals experience a sense of social exclusion, which leads to a heightened need for attention and results in individuals attaching to social media in hopes of regaining a sense of inclusion. Although the stated purpose of technology like smartphones is to help us connect with others, in this particular instance, it does not. Ironically, the very technology that was designed to bring humans closer together has isolated us from these very same people.

Americans are obsessed with their smartphones: 68% of Americans sleep with their smartphone next to their bed, and 79% reach for their phone within 15 minutes after waking up (IDC/Facebook 2013). For many of us, our smartphone is the last thing we see before going to bed at night. The activities we perform for the approximately 15 hours we are awake are inextricably intertwined with our smartphone use: 79% of Americans keep their smartphones nearby for all but 2 hours of the day (IDC/Facebook 2013), checking it on average 221 times per day (Tecmark 2014); 25% of Americans cannot recall a time of the day that their smartphone was not within their reach. Two-thirds check their phone even when it is not vibrating or ringing (Pew Internet 2014), and 70%–80% of drivers use their smartphone while they are driving (Pinchot, Paultet, and Rota 2011). The fear of missing out drives slavish obedience to our phones.

A recent survey of college students found that females spent an average of 10 hours every day on their phones, while males spent an average of 8 hours each day on their smartphones (Roberts, Ya-Ya, and Manolis 2014). The desire to be connected is very strong in young people. This is so much so that a large survey found that 53% of millennials (those born between 1982 and 2004) would rather give up their sense of smell than lose a device connection (<https://www.scribd.com/doc/56263899/McCann-Worldgroup-Truth-About-Youth>). The present race to perpetual connection, however, is not simply an avocation of the young. A recent

study by A. C. Nielsen found that US adults spend an average of 4.7 hours per day on their smartphones (Harper 2015).

Our preoccupation with technology, smartphones in particular, has irrevocably changed how we interact with others. Despite the many advantages afforded by the portability and multifunctionality of the modern smartphone, our current obsession with smartphones comes at a cost to our real, in-person relationships. Several researchers (Mick and Fournier 1998; Lang and Jarvenpaa 2005; Turkle 2011) have observed that the near-universal availability and ever-expanding capabilities of the smartphone have led to two paradoxes: (1) the *present-absent paradox* (alone together) and the (2) *freeing-enslaving paradox*. Both of these paradoxes address how we communicate and relate with others. In the *present-absent paradox*, we are physically present for others but are really absent, preoccupied with our smartphones. In the *freeing-enslaving paradox*, smartphones allow us the freedom to communicate with others, be entertained, work from remote locations, and access information in ways undreamed of a mere 20 years ago. This freedom, however, comes at a cost. Being always on and constantly available brings with it a sense of responsibility, or even obligation, to respond in a timely fashion to our technology. We live in a world of constant distraction. The present research investigates how such distraction caused by our smartphones can negatively affect others. Specifically, our study focuses on “phone snubbing” and its impact on consumers.

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*Portmanteau* is a word whose form and meaning are the result of combining two or more distinct words. *Phubbing* is a portmanteau of the words “phone” and “snubbing.” To be *phubbed* is “to be snubbed by someone using their cellphone when in your company” (Roberts and David 2016, 134). The “phubb” could take the form of an interrupted conversation with someone when s/he attends to their smartphone or when s/he is in close proximity to you but uses her/his smartphone instead of communicating with you. It could be the furtive glances at her/his smartphone when talking with you, interrupting your conversation to take a call, respond to a text, or make a post, or simply ignoring your existence when you are together. The omnipresent nature of smartphones makes phubbing an inevitable occurrence. Consider restaurant dining, for example; it is more often than not that one person at each table is distracted by her/his phone rather than spending quality time engaging with her/his dinner partner.

Only a few studies to date have addressed phubbing-like behavior, and most of these focus specifically on romantic relationships and show that phubbing-like behaviors undermine the perceived quality of romantic relationships (Coyne et al. 2011; Lenhart and Duggan 2014; McDaniel and Coyne 2014; Roberts and David 2016). McDaniel and Coyne (2014) found that 70% of females felt that smartphones interfered in their romantic relationships. Roberts and David (2016) found that partner phubbing was a common occurrence in romantic relationships and that it created cellphone-related conflict and undermined relationship satisfaction. Despite our familiarity with and heavy use of smartphones, we still are not immune from social slights at the hands of our equally smartphone-obsessed partners. First, and foremost, humans are social beings. When our inclusion in a particular situation is threatened by such exclusionary behavior as phubbing, we immediately take steps to reestablish our inclusionary status (Kuss and Griffiths 2011; Mead et al. 2011). Our current research examines the impact of phubbing on individuals’ feelings of social exclusion and need for attention, as well as how individuals seek to regain a sense of inclusion threatened by phubbing. Our study contributes to an understanding how a common smartphone behavior, which we call “phubbing,” affects others’ sense of social exclusion and how possible attempts to regain a sense of inclusion may lead individuals to increasingly rely on social media to do so. Importantly, this research is the first to examine the effects of general (rather than romantic relationship specific) phubbing.

## OVERVIEW OF THE STUDY

The following scenario is now so commonplace that it is part of the social fabric. You are talking to a friend, a colleague, or a complete stranger, and you catch her/him glancing at her/his phone, or s/he answers a call, sends a text, or checks her/his social media feed during your conversation. Or s/he very well may snub you altogether by remaining on the phone when in close proximity to you. You have been *phubbed* (phone-snubbed). The question remains, how does such treatment affect you? This question is at the heart of the present research. Specifically, our study investigates the impact of phubbing on our sense of social exclusion and how this threat of exclusion increases our need to belong. In addition, we investigate whether this heightened need to belong may turn individuals to social media in an attempt to generate a sense of inclusion threatened by phubbing. Further, we examine the impact of phubbing on the affected individual’s well-being.

Our research contributes to the extant literature by identifying and testing one path through which individuals become attached, if not addicted, to social media. It may not be out of boredom or a desire to be entertained that so many people spend so much time on Facebook or other social media; instead, it may be that the time spent on social media is a pointed attempt to (re)gain community in a world that, paradoxically, is becoming increasingly alienated (Putnam 2000). In one of the few studies that has assessed a type of phubbing behavior, checking your phone during a conversation with another, Finkel and Kruger (2012) observed dyads dining together and discovered that individuals were more likely to take out their phone if their conversation partner did so. Results indicated that individuals were more likely to use their phone if their partner had done so in the preceding 10-second time period. The same pairs were not likely to use their cellphones simultaneously in the same time period. It appeared that cellphone use was contagious. The authors concluded that these results can be best explained by social exclusion and inclusion, such that when one person of the dyad used a phone, the other felt excluded and subsequently used a phone to restore his/her sense of inclusion. The present research provides an empirical examination of the impact of phubbing on individuals’ feelings of exclusion during in-person interactions, and it tests whether phubbed individuals turn to social media (via their phone) in an effort to gain attention and a sense of belonging.

Our research is the first to tie a specific use of smartphones (phubbing) to the well-being of others. Can turning

to social media fill the void left by a sense of social exclusion caused by phubbing? We investigate the relationships between phubbing, social media attachment, and personal well-being. We posit that, even for twenty-first-century human beings, phubbing will lead to behaviors designed to regain balance to one's sense of inclusion. Being a part of social groups is an innate desire of humans (Baumeister and Tice 1990; Mead et al. 2011; Lee and Shrum 2012), and such a desire will lead "phubbed" individuals to search elsewhere for a sense of belonging (Han, Min, and Lee 2015). In an increasingly technology-driven society, it is critical that investigation continue into how the use of such technology is affecting how we relate to one another. Indeed, and consistent with the present-absent paradox discussed above, it may be that attachment to social media and connectedness with our phones is slowly deteriorating real in-person connections.

### ***Phubbing, Social Exclusion, and the Need for Attention***

Being phubbed may engender social exclusion, which is best understood as being snubbed or ignored (mild forms of social rejection), excluded, or ostracized by other individuals. Social exclusion can be very painful, and it is likely a daily occurrence (Wan, Xu, and Ding 2014). Our need to belong is an innate part of our human programming (Baumeister and Tice 1990; Leary 1990; Mead et al. 2011). The desire for social relationships is our most fundamental and universal need as human beings (Lee and Shrum 2012). This is so much so that Baumeister and Tice (1990) place our need for social inclusion in the same group of primal fears as our inner fears of snakes, heights, and the dark. Social inclusion is important from an evolutionary perspective because it has improved our chances for survival (safety) and reproduction (Twenge, Cantanese, and Baumeister 2002; Mead et al. 2011).

It appears that our innate fear of being excluded still exists today. When we are threatened with social exclusion, certain regions of the brain that are designed to detect and regulate pain are activated, our ability to self-regulate is compromised, our ability to reason is diminished, and our perception of time is distorted (Twenge et al. 2002; Mead et al. 2011). Upon social exclusion, our desire to rebalance a sense of inclusion is immediately activated. Our primary objective is to stop the pain caused by exclusion. In an effort to replace the sense of inclusion threatened by being phubbed during in-person interactions, individuals may turn to their phones and engage with individuals

via social media. However, and as previously discussed, one's ability to regain inclusion is compromised by impaired self-control, poor reasoning, and time distortion, and thus it is likely that individuals may well become overly attached to social media.

Given the nature of phubbing, it is helpful here to consider Molden et al.'s (2009) two distinct experiences of social exclusion. The first experience is being rejected, and the other is being ignored. Being rejected is more direct and explicit, whereas being ignored is more subtle (implicit and indirect; Lee and Shrum 2012). Being phubbed is more likely an experience of being ignored. Often phubbing entails someone attending to her/his smartphone instead of communicating with the phubbed individual. More active phubbing involves interrupting a conversation to attend to one's smartphone. Even this more aggressive form of phubbing is a more implicit and indirect snub than an outright rejection. According to Lee and Shrum (2012), when people are ignored, their efficacy needs for power and control, as well as their sense of having a meaningful existence, are threatened. When an individual is ignored, that individual loses the power to attract attention from those around her/him. Being ignored is a one-sided proposition, and control is wrested from the phubbed individual unless attention can be regained. Being ignored is being treated as if the ignored individual does not exist or is invisible (Lee and Shrum 2012). When a person is ignored, s/he will attempt to regain the felt loss of power and control and reinforce that s/he is a person of value.

A common way to attempt to restore a desired inclusionary status is to gain attention from others (Lee and Shrum 2012). Thus, the feelings of being socially excluded that arise from being phubbed should lead to an enhanced need for attention. Hill's (1987) early research identified a desire for attention as one of four primary affiliation motivations. As humans, we have an innate desire to belong, to receive attention, and to feel appreciated. The social awards of attention and praise are particularly relevant to our desire for social connection. Thus, it is posited that phubbing creates a sense of social exclusion that increases an individual's need for attention or to belong. People are continually monitoring their levels of inclusion and will divert their attention resources to opportunities to connect with others when their sense of inclusion drops below an acceptable level (Mead et al. 2011). Therefore, and as discussed next, it is likely that in an effort to restore a desired level of belonging, phubbed individuals may turn to their phones and

actively engage with social media to regain the sense of social inclusion threatened by other's phubbing. Based on decades of research that has shown that humans suffer both physically and psychologically when they lack a sense of belonging (Mead et al. 2011), we posit that phubbed individuals, who suffer from impaired judgment from feeling excluded, may lose track of time while attempting to connect with others on social media and may well become addicted to their phones.

### ***Phubbing, Social Exclusion, Need for Attention, and Social Media Intensity***

It is easy to understand how we may feel excluded when we are phubbed by others, be it by romantic partners, friends, colleagues, acquaintances, and so forth. But, after being phubbed while spending time with others, how do we regain a sense of belonging? Leary (1990) provides a good argument that could help explain why people may turn to social media, rather than engage in additional in-person interactions, to get attention and gain a sense of belonging. People, argues Leary (1990), may evaluate their current inclusionary status, not by examining their inclusionary status with people or groups they are currently in contact with but by assessing their potential for inclusion/exclusion in various situations. Individuals appear to ask themselves if they would be included in a given situation with an individual or group. For example, an individual who is often phubbed by those s/he spends time with may well think that additional time spent in person with others may have a similar outcome (i.e., feelings of exclusion). Thus, it is likely that phubbing not only leads to feelings of social exclusion and an enhanced need for attention but may well also lead to individuals intensely engaging in social media and becoming attached to their smartphones.

Two theories are helpful in understanding the proposed link between phubbed individuals' need for attention and social media intensity: *Uses and Gratifications Theory* (Katz, Blumler, and Gurevitch 1973; Chen 2011; Han et al. 2015) and *Optimal Flow Theory* (Salehan and Negahban 2013). *Uses and Gratifications Theory* is a straightforward proposition arguing that people use media that is gratifying and that satisfies particular needs. For example, after being phubbed, people feel excluded and desire attention in an attempt to feel included. This need for attention finds an outlet on social media. Relatedly, *Optimal Flow Theory* argues that, for some people, the experience with Information Communication Technology (ICT), such as social media, can be so enjoyable that users grow a very intense relationship with social media

sites, including Facebook, Instagram, Twitter, and others. Research has found that a Facebook "Like," posting a photo or comment, or the familiar ring of a notification releases dopamine similar to the rush we might get from an in-person hug or smile (Soat 2015). The affected individual's need for attention brought on by a sense of social exclusion is so strong that s/he becomes highly attached, if not addicted, to social networking sites (SNS) like Facebook (Kuss and Griffiths 2011; Andreassen et al. 2012).

In sum, social exclusion threatens our need to belong and leads us to be more sensitive to social cues in hopes of regaining inclusion. Socially excluded people gravitate to social media because they are more interested in bonding with others and discovering and maintaining new places to nurture relationships than their more socially included counterparts (Wan et al. 2014). Similarly, feelings of social exclusion during time spent in person with others leads people to invest time and energy in social media in hopes of regaining a sense of inclusion. Thus, it is likely that individuals who are phubbed turn to social media (rather than to another other in-person connection, in which they would also likely be phubbed) in hopes of receiving attention and fulfilling the basic human need for belonging.

Overall, then, it is predicted that phubbing has an indirect effect on social media intensity. Specifically, phubbing leads to individuals feeling excluded in person, and these feelings of being excluded in person lead to individuals intensely engaging with social media in hopes of receiving attention and gaining a sense of belonging. We predict a sequential mediation model in which phubbing leads to exclusion, which stimulates a need for attention and results in individuals turning to social media to connect with others. Next, we present a study that tests these predictions. Through our predicted serial mediation model, we also examine whether phubbing ultimately has a negative impact on consumer well-being.

## **METHOD**

### ***Sample, Procedure, and Measures***

One hundred and eighty US adults (41% male) from Amazon Mechanical Turk participated in the study. Participants were told that the purpose of the study was to understand how individuals feel about their interactions and time spent with other people. Participants were randomly assigned to either a phubbing condition or a control condition. Participants in the phubbing condition were told that before they began the main study, we wanted to share a news clipping with them related to how people often snub individuals that

they are around by using their cellphone instead of paying attention to the person they are with. The news clip used as the phubbing prime was selected based on the results of a pretest ( $n = 69$  US adults), which showed that the phubbing prime activated specific thoughts regarding the extent to which people that they spend time with in person are distracted by their smartphones. (See appendix A for the actual prime; appendices A and B are available online.) Participants in the phubbing condition were shown the prime for 30 seconds, at which time they were asked to consider how the behaviors described in the clip are related to those that they may experience while spending time with other people. Participants in the control condition did not see the prime. Next, we assessed all participants' moods in order to test the possibility that the phubbing prime could affect individuals' moods. Specifically, participants indicated how they currently felt using two 9-point bipolar items anchored with "in a bad mood—in a good mood" and "not happy at all—very happy."

Next, the main study began, in which feelings of social exclusion during time spent with others ( $\alpha = .95$ ) were assessed by asking participants to indicate the extent to which (on a 5-point scale ranging from "not at all" to "very much"), when spending time with other people, they experience feelings of being ignored, left out, and rejected (Williams, Cheung, and Choi 2000). The Hill (1987) 6-item measure of need for interpersonal attention ( $\alpha = .96$ ) was used to assess participants' need for attention (Leary et al. 2013). Intensity of social media use ( $\alpha = .96$ ) was assessed using 6 items adapted from the Ellison, Steinfield, and Lampe (2007) measure of Facebook intensity. Example items include "Social media is part of my everyday activity," "I feel out of touch when I haven't logged onto any social media sites for a while," and "Social media sites have become part of my daily routine." Participants' well-being ( $\alpha = .93$ ) was

assessed using the 4-item measure (PHQ-4) of depression and stress developed by Kroenke and colleagues (2009) and used in related work by Roberts and David (2016). The order of the measures was rotated, and each measure was separated by a short filler task. At the end of the study, participants responded to demographic items as well as a manipulation check item. Consistent with the pretest results, the findings show that the phubbing prime worked as expected and did not have an impact on mood; specifically, participants in the phubbing (vs. control) condition were significantly more likely (on a 5-point scale) to indicate that the beginning of the study made them think about how other people snub them by being distracted by their cellphones during their time spent together ( $M_{\text{phub}} = 2.91$ ;  $M_{\text{control}} = 1.84$ ,  $t(180) = 6.95$ ,  $p < .01$ ).

**Results and Discussion**

Although phubbing was primed, the measures used in this study were obtained from the same source. Thus, we performed the Lindell and Whitney (2001) marker variable procedure to assess whether common method bias was likely to affect the results. The correlation between the marker variable item and each study measure was small and nonsignificant; thus, it is unlikely that common method bias affected the results (Lindell and Whitney 2001; Jayachandran et al. 2005). The means, standard deviations, and correlations for the marker variable and study measures are reported in table 1.

Preacher and Hayes's (2008) Model 6 was used to test the sequential mediation predictions regarding the indirect effect that phubbing has on individuals' tendencies to become intensely attached to social media. The results ( $F(1, 178) = 21.22$ ,  $p < .01$ ,  $R^2 = .11$ ) indicate that phubbing has a significant effect on individuals' tendencies to feel excluded during their time spent in person with others ( $\beta =$

Table 1. Means, Standard Deviations, and Correlations of Study Measures

	M	SD	Marker Variable	Feelings of Exclusion	Need for Attention	Social Media Intensity
Marker variable	3.84	.83				
Feelings of exclusion	2.16	.95	-.13	.90		
Need for attention	2.32	.93	.05	.19*	.92	
Social media intensity	4.26	1.34	-.06	.14	.28*	.93

Note.—Based on the results of a study of 180 US adults. Reliability coefficients are shown on the diagonal.

\*  $p < .05$ .

.62,  $p < .05$ ). The results show that feelings of exclusion have a significant effect on need for attention ( $\beta = .21$ ,  $p < .01$ ), although the direct effect of phubbing on need for attention is nonsignificant ( $F(2, 177) = 3.83$ ,  $p < .01$ ,  $R^2 = .04$ ). Next, the results show a significant effect of need for attention ( $\beta = .37$ ,  $p < .05$ ) on social media intensity, but nonsignificant direct effects of phubbing and feelings of exclusion ( $F(3, 176) = 6.27$ ,  $p < .01$ ,  $R^2 = .10$ ). Importantly, the results show support for sequential mediation ( $\beta = .05$ ; SE = .03, 95% CI: .012, .127), such that phubbing has a significant indirect effect on social media intensity via feelings of exclusion during time spent in person with others and need for attention.

Of note, additional analyses were conducted to test a serial mediation model in which the effects of phubbing do not end at social media intensity but continue a step further to have an impact on personal well-being (i.e., create feelings of stress and depression; Kroenke et al. 2009). Specifically, the PROCESS Model 6 (Preacher and Hayes 2008) was used to examine whether phubbing has a significant indirect effect on well-being. The results ( $F(4, 175) = 3.94$ ,  $p < .01$ ,  $R^2 = .08$ ) show support for sequential mediation, such that phubbing has a significant indirect effect on well-being via feelings of being ignored, need for attention, and then social media intensity ( $\beta = .01$ ; SE = .006, 95% CI: .001, .028). (Full details are provided in appendix B, available online.)

Overall, the study results provide support for the predictions that being phubbed is associated with individuals feeling excluded during their time spent with others and that these feelings of exclusion create a need for attention from others. These “phubbed” individuals then turn to social media and intensely engage with their phones in hopes of gaining a sense of belonging. Importantly, the results reveal that the negative effects of phubbing do not end with an intense attachment to social media but continue on to have an impact on individuals’ well-being. Specifically, the results reveal that phubbing has an indirect effect on individuals’ well-being, such that phubbing is ultimately associated with greater feelings of stress and depression.

## DISCUSSION

Previous research has documented the considerable amount of time people spend interacting with their cellphones (Roberts et al. 2014). Individuals from all age groups are spending an increasing amount of time interacting with their cellphones and less and less time interacting with their fel-

low humans (Pew Internet 2014; *Wall Street Journal* 2015). Although cellphones provide tremendous opportunities for connectivity with others, recent research suggests that increased connectivity with cellphones may occur at the detriment of human interaction (McDaniel and Coyne 2014; Roberts and David 2016). The present research contributes to the emerging literature on how extreme connectivity via cellphones can undermine interpersonal encounters and individual well-being.

Our study is one of a few to investigate the increasingly common behavior of phubbing and its impact on individuals. Our results indicate that being phone-snubbed results in individuals feeling socially excluded in their in-person interactions, which creates a need among these individuals for attention from others and ultimately results in these individuals turning to their smartphones for social media connection. In addition, the findings show that individuals who are phubbed also ultimately experience greater feelings of depression and lower overall well-being. Given the continuous state of connection that is now available via technology, our research fills an important gap in the literature by demonstrating how intense cellphone use, even while consumers spend time with others, can negatively affect consumer well-being.

Our research is the first to draw a link between phubbing and attachment to social media. Despite the growing use of social media, little research has focused on why social media has become so popular. Previous research has concluded that the main purpose of social media is to connect socially (Van Meter et al. 2015). The question remains, however, why is there such a need to connect socially? Presently we live in the most connected world to date. The current research suggests a possible answer to this conundrum. Despite the availability of technology, whose stated purpose is to help us connect, we may be less connected than ever. In an ironic twist, the technology designed to bring us together has isolated us from the very people we wish to connect with. Our study suggests that one such driver of our attachment to social media is the phubbing we endure as a result of individuals’ obsessions to connect via the technology presently at the top of the digital heap, the smartphone.

An additional important contribution is that we offer a model of the process by which phubbing may underline personal well-being among affected individuals. Specifically, being phubbed is associated with feelings of being socially excluded, which in turn leads to an increased need for attention. This need for attention finds a convenient outlet in

social media. A strong attachment to social media was found to be associated with higher levels of depression, anxiety, and stress. Importantly, the sequential mediation findings (Preacher and Hayes 2008) revealed that phubbing has an indirect effect on personal well-being, such that phubbing not only results in individuals feeling ignored and needing attention from others, but also leads to an intense attachment to social media and lower sense of well-being. Previous research discovered that mobile phone dependency is associated with increased levels of stress, anxiety, and depression (Augner and Hacker 2012; Lee et al. 2014). Our study is the first to examine a possible process through which such manic use of one's smartphone affects the well-being of others.

### ***Implications for Consumers, Businesses, and Public Policy Makers***

Several consumer implications can be derived from the current findings. Individuals must be sensitive to how their smartphone use affects others around them. As our results suggest, phubbing can lead others to feel socially excluded and to turn to social media for solace. A practical solution to control phubbing is to set smartphone-free zones and times where individuals should avoid checking their smartphones. A social contract between spouses, friends, family members, or coworkers can prescribe guidelines for when it is inappropriate to use one's smartphone. Another possible solution to curb hurtful smartphone use is to pit technology against itself. A plethora of smartphone apps are available that can help individuals monitor and control their smartphone use. Certain apps even allow a record of one's smartphone use to be sent to an accountability partner—a high-tech form of public shaming.

Our research also offers implications for businesses. The workplace is no exception to the ubiquitous nature of smartphone use. Given the findings herein that phubbing can result in individuals experiencing greater feelings of depression and stress, it is important for businesses to consider ways in which to mitigate the possible negative effects of workplace phubbing. For example, businesses may need to require that employees complete sensitivity training in which they learn how their behaviors, including the use of a cellphone, may negatively affect those around them. Managers and employees at all levels need to understand that they should take care not to sacrifice face-to-face interactions in order to respond at a moment's notice to communications from higher-level managers. Alternatively, businesses may need to more directly confront smartphone use

by establishing corporate policies specifying when smartphones are allowed or prohibited, as well as how they should be used while in the presence of others. Strategies such as these may help foster healthier workplace environments in which employees do not phub others and are not phubbed themselves.

The current research also offers implications for public policy makers. With a 90% mobile penetration rate and 6.5 billion mobile connections worldwide, cellphones are constantly beeping, vibrating, and whistling. They “yearn for” constant attention, even in public environments, and our findings highlight the importance of public policy regulators recognizing the extent to which individuals are using their cellphones in ways that may unintentionally harm those around them. For example, there may exist a need for laws and bans to be established surrounding public use of smartphones. Indeed, such regulations already exist across the United States (e.g., Longnecker 2014; Williams 2016). Although the key motive underlying the emergence of such regulations relates to safety concerns, our research suggests that these laws may also help to foster well-being among affected individuals.

Of note, our research provides some evidence to suggest that age and gender may be used to segment and identify individuals, workforces, and societies in which there may be an increased need to consider strategies such as those discussed above. First, the results indicate that younger individuals spend much more time on their phones than do older individuals. Specifically, in the study presented herein, we asked participants to estimate how many minutes they had spent on their phone during the past week. The results show a negative correlation between age and phone use ( $r = -.17, p < .05, n = 177$ ). Second, the results provide evidence perhaps suggesting that males (vs. females) are more likely to embrace in-person interactions. Specifically, the current study asked participants to indicate on a 5-point scale how often they hang out with friends or neighbors during an average week (response categories were “never,” “once a week,” “2–3 times a week,” “4–6 times a week,” “daily”). The results reveal that males tend to hang out in person with others more than their female counterparts ( $M_{\text{males}} = 2.73, M_{\text{females}} = 2.29, p < .05$ ). These findings may suggest that, among younger or female individuals, as well as among workforces and societies that are largely made up of younger or female individuals, there may be an increased need to consider implementing the strategies outlined above.

### *Limitations and Future Research Directions*

Although the present research serves as the first to investigate the impact of general phubbing on individuals, including their attachment to social media and their personal well-being, its results must be tempered by certain limitations. First, the research provides an initial examination of the proposed chain of effects from phubbing to feelings of social exclusion, enhanced need for attention, and ultimately social media attachment. Future research is needed to further test the underlying processes; a moderation-of-process method (Spencer, Zanna, and Fong 2005) would be particularly useful here. Second, the research presented herein is scenario based and would benefit from additional investigations that are behavior based and that focus on behavioral outcomes of phubbing, including actual use of social media. Relatedly, it would be interesting to examine whether being phubbed may lead to individuals ultimately phubbing others. In addition, the present research cannot shed light on how individuals use social media as means by which to get attention and regain a sense of belonging. This may be a fruitful area for future research. It may also be interesting to study phubbing among interpersonal dyads. For example, it could be that phone distractions are less harmful to individuals if both people are preoccupied with their phones (Ahlstrom et al. 2012). Relatedly, future research should examine phubbing from the perpetrator's (vs. victim's) perspective. It is likely that individuals do not realize the frequency with which they phubb those around them, much less the harmful impact that this behavior may have.

### *Conclusion*

All this research into phubbing would be for naught, or only an interesting story, if it were not for the intriguing conjecture, with initial empirical support, that this type of behavior may drive others' use of social media in an attempt to regain inclusion, as well as negatively affect the well-being of affected individuals. It is ironic that cellphones, originally designed as a communication tool, may actually hinder rather than foster interpersonal connectedness. The findings presented herein may suggest a cyclical effect; many individuals are obsessed with their smartphones and regularly phubb others, which results in these affected individuals turning to and likely also becoming attached to their smartphones, all to the detriment of real in-person connections, which, from an evolutionary perspective, are crucial for survival. In

summary, individuals' use of cellphones in the presence of others may have harmful effects on the well-being of those around them.

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