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Belongingness Needs, Personality, and the Influence of Virtual Socialization

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Departmental Honors Thesis  
The University of Tennessee at Chattanooga  
Psychology

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**Abstract**

Social belongingness is a part of everyday life. The purpose of this study was to learn more about how personality and the use of virtual socialization interact with feelings of belongingness and subjective well-being. The findings of this study indicate that belongingness and well-being are significantly and positively correlated with extraversion. We also found that belongingness and social media used for maintaining friendships were significantly correlated. Further, in a regression analysis, extraversion consistently and significantly positively predicted perceived belongingness. These findings suggest that personality and modality of socializing interact with perceived belongingness.

*Keywords:* belongingness, extraversion, social media, virtual socialization

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### **Belongingness Needs, Personality, and the Influence of Virtual Socialization**

All people experience varying levels of belongingness in their day-to-day lives. Between school, work, family events, and hanging out with friends, there are many opportunities for people to feel that they are socially connected to their important others. Experiencing belongingness generally looks like sustaining a minimum number of important relationships that include positive and genuine interactions (Baumeister & Leary, 1995). Nevertheless, many people continue to experience feelings of loneliness and a lack of belongingness despite these opportunities for, and the importance of, belongingness-related needs. This may be due, in part, to evidence suggesting that multiple factors impact a person's perceived belongingness, such as a person's environment, past experiences socializing, and frequency and quality of social interactions (e.g., Geen, 1984; Collisson, 2013; Lee et al., 2001).

The frequency and positive qualities of a person's social interactions have been found to affect belongingness, but these social interactions are often driven by that person's level of extraversion, or their tendency to be talkative, assertive, and sociable. Someone who is high in extraversion is naturally more inclined to engage with others and have an increased number of social interactions (McCabe & Fleeson, 2012). Therefore, it logically follows that those who are higher in extraversion will also experience increased perceived belongingness due to their innate drive to pursue more social interactions.

Another way social interactions may vary across people pertains to the environment in which they are socializing; these socialization events take place in face-to-face settings (the classroom, the workplace, restaurants) or virtual settings (social media, Zoom, text, call). In recent years, socializing virtually has become a convenient and prevalent way of interacting with important others. The onset of the COVID-19 pandemic escalated the use of virtual socialization

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through the popularization of remote working/learning and the increased motivation to connect virtually rather than in-person. For example, Facebook, Instagram, and Whatsapp usage rose at an increased rate during this time (Noyes, 2020) and Zoom participants increased by 2900% between 2019 (10 million) and the end of 2020 (350 million) (Iqbal, 2021).

Existing research focuses mainly on the effects of socialization within a close physical proximity (i.e., face-to-face) rather than taking into account the way virtual socialization might impact perceptions of belongingness (Baumeister & Leary, 1995; Collisson, 2013; Mellor et al., 2008; Milek et al., 2018; Sandstrom & Dunn, 2014). To our knowledge, no previous research has specifically studied the effect of virtual socialization on belongingness or the correlation between extraversion and belongingness. Therefore, the general purpose of the present research is to explore whether (and how) virtual socialization impacts perceptions of belongingness, and further, the role that the personality trait of extraversion plays in this relationship.

### **Belongingness Needs**

Research suggests that, as humans, we have a fundamental need to belong, or an innate drive to develop and maintain a minimum number of close interpersonal relationships (Baumeister & Leary, 1995). Within the psychological need satisfaction literature, perceived belongingness is defined as the degree to which an individual feels accepted into those personal relationships (Malone et al., 2012). For instance, Baumeister and Leary (1995) postulate that belongingness is a basic human need, placing it just above basic needs such as food and water, and they argue that belongingness is evolutionarily adaptive (e.g., reproduction, hunting and fighting in groups, and even the desire for power gained through acceptance).

Indeed, Collisson (2013) concluded that forming relationships is human nature after conducting a study in which participants rated their own belongingness needs, their preferences

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on a variety of issues, and their dominant personality traits. They then rated other unknown people on these constructs - group one rated a person described to be similar to themselves and group two rated a generic person. This study found that participants generally projected their own belongingness needs onto the other person, priming them for forming a relationship with that person.

This innate drive to form relationships could be due to evidence suggesting that the degree to which belongingness needs are satisfied has an impact on various aspects of a person's well-being. Results suggested that when a person's need to belong is not satisfied, there are negative physical and psychological consequences. Any form of socialization in our daily lives appears to be effective in boosting well-being, including interactions with acquaintances (Sandstrom & Dunn, 2014). Additional evidence for the role of belongingness needs in contributing to people's overall well-being comes from research examining people who are lonely or in social isolation. For instance, people experiencing loneliness, especially those living alone, can experience depressive symptoms and a decreased life satisfaction (Mellor et al., 2008; Lee et al. 2001). High feelings of loneliness early on in life can lead to a lasting sense of not being connected throughout life, and experiencing extreme loneliness can lead to a higher fear of rejection (Lee et al., 2001). Past research suggests that these feelings of loneliness can increase the risk of suicidal behavior over several demographics - those who live alone, those without a sense of community, those isolated from their community (e.g. college students over the summer, fans of an eliminated sports team)(Van Orden et al., 2008; Trovato, 1998). In other words, previous research suggests that deficits in social belongingness (whether due to frequency or quality of social interactions at any point in life) can negatively impact well-being. This indicates that a person's social interactions strongly influence their perceived belongingness and

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therefore, their well-being. Based on these findings, in the present study, we aim to replicate this finding, and propose *Hypothesis 1*: There will be a positive relationship between perceived belongingness and subjective well-being.

### **Virtual Socialization**

Engaging socially with others does not guarantee belongingness will be achieved. There are many different environments in which we socialize; this leads to varying qualities of socialization. The two major modalities of socialization are face-to-face and virtual. Face-to-face socialization is any instance of interacting with peers in-person, be it in class, at work, the grocery store, or any other physical environment. Virtual socialization is the interaction that takes place through technology. This can be on social media (e.g., Instagram, Facebook, Reddit, Snapchat), online communications (e.g. Zoom, email), or offline communications (e.g. call, text). Bonds-Raacke and Raacke (2010) describe three primary reasons for using social media - friendship, connection, and information. In their study, those who used social media for friendship were focused on talking to old and current peers. Those who used social media for connection were focused on meeting new people. Those who used social media for information were focused on finding events to go to, presenting information about themselves including events they knew about, looking at/posting pictures, and for academic purposes.

Virtual socialization is ubiquitous in modern society. For instance, research suggests that the majority of Facebook, Snapchat, Instagram, and Youtube users open their accounts at least once a day (Auxier & Anderson, 2021). Therefore, although virtual socialization deviates from the traditional face-to-face socialization, virtual socialization is still a major modality through which people stay connected to others. Seidman, Langlais, and Havens (2019) found a relationship between the reason people use social media and their belongingness needs. Those

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with unmet belongingness needs turned towards social media as a way to fulfill those needs. Those who were socially connected already still used social media but used it as a means to continue those connections rather than develop them (Seidman et al., 2019). This means belongingness can be either a prerequisite for or the anticipated result of using social media.

Past research on virtual socialization indicates that people generally behave the same socializing virtually as they do in-person (Nadkarni & Hofmann, 2012). However, no research to our knowledge has studied the direct relationship between people's reasons for using virtual socialization (through social media) and whether those reasons are uniquely related to their perceptions of social belongingness. Studying how virtual socialization impacts the critical feeling of belongingness became especially important during the COVID-19 pandemic while cities were in lockdown and socializing face-to-face was not a widely available option. Based on previous research and taking into account how using social media for friendship and connection promotes direct social interactions while using social media for information does not, we propose *Hypothesis 2a*: Using virtual socialization for friendship will be associated with greater perceived belongingness, and general well-being, respectively, *Hypothesis 2b*: Using virtual socialization for connection will be associated with greater perceived belongingness, and general well-being, respectively, and *Hypothesis 2c*: Using virtual socialization for information will be unrelated to perceived belongingness, and general well-being, respectively.

### **Extraversion**

A person's perception of the importance of socializing face-to-face is influenced by internal forces, namely, their personality. Personality is composed of various individual differences that define who a person is. According to the Big Five Factor model of personality, there are five broad dimensions of personality - openness to experience, conscientiousness,



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extraversion, agreeableness, and neuroticism (John & Srivastava, 1999). For the purposes of this study, we will focus on extraversion. Those high on the trait extraversion are characterized by being talkative, bold, spontaneous, sociable, dominant, and energetic (McCabe & Fleeson, 2012). This means people who trend higher in extraversion seek out more social interactions and prefer more social stimulation. Those high in extraversion also have a higher threshold for stimulation compared to that of introverts (Geen, 1984). This means extraverted people are comfortable with more physical stimulation (i.e., louder sounds, brighter lights) as well as social stimulation (Geen, 1984; Ludvigh & Happ, 1974). This implies that people lower on extraversion would prefer less physical and social stimulation. Personality is a spectrum, so all people have different levels of tolerance and desire for socializing and, therefore, different thresholds to reach a feeling of belongingness (and thereby, a satisfaction of belongingness needs).

Research suggests that extraversion can impact perceived belongingness, but perceived belongingness can also influence extraverted behaviors. Previous research supports that someone might display the bold behaviors of a leaning extraverted person because they are trying to make a positive impression on someone (McCabe & Fleeson, 2012). Further, one way research has found that extraversion connects to belongingness needs are the adaptive behaviors that emerge when belongingness needs are unmet. For instance, Collisson (2013) found that unmet belongingness needs led to an increased social drive, a higher regard for people who present the opportunity for a potential relationship, and increased social adaptive behaviors. All of these factors point to increased extraverted behavior as being related to higher levels of belongingness.

Because extraverted behaviors increase when belongingness needs are threatened, it logically follows that trait levels of extraversion should be related to the degree to which a person feels their belongingness needs are being met. To our knowledge, no previous research

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has studied the direct relationship between a person's trait extraversion and their perceived belongingness. Therefore, we propose *Hypothesis 3*: There will be a positive relationship between perceived belongingness and extraversion.

Further, because of the nature of extraversion (talkative, dominant, high stimulation tolerance) and the nature of virtual socialization (waiting for a peer to reply, little physical stimulation involved in virtual socialization), it also logically follows that extraverted people would prefer face-to-face socialization because socializing virtually would not satisfy their belongingness needs as effectively as face-to-face socializing. No research to our knowledge has studied how virtual socialization moderates the relationship between extraversion and perceived belongingness. Thus, we propose *Hypothesis 4a*: Virtual socialization for friendship will moderate the relationship between extraversion and perceived belongingness, such that as virtual socialization used for friendship increases, the relationship between extraversion and perceived belongingness becomes weaker; *Hypothesis 4b*: Virtual socialization for connection will moderate the relationship between extraversion and perceived belongingness such that as virtual socialization used for connection increases, the relationship between extraversion and perceived belongingness becomes weaker; and *Hypothesis 4c*: Virtual socialization for information will moderate the relationship between extraversion and perceived belongingness such that as virtual socialization used for information increases, the relationship between extraversion and perceived belongingness becomes weaker.

### **The Present Study**

The purpose of the present study is to investigate the role of virtual socialization and personality (specifically extraversion) in explaining perceived belongingness and subjective well-being. As described above, previous research has examined how belongingness is correlated

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to well-being. Therefore, the purpose of the present research is to contribute to the literature on perceived belongingness and subjective well-being by considering how belongingness is impacted by the current prevalence of virtual socialization and how the individual difference trait of extraversion influences perceived belongingness. By doing so, we hope to define how virtual socializing may influence perceived belongingness and well-being. We also hope to find how people may feel a higher sense of belongingness as a result of internal traits.

### **Method**

#### **Participants**

Participants were recruited from The University of Tennessee at Chattanooga's research participation system (SONA system) and through snowball sampling methods by posting to social media platforms (e.g., Instagram). Students who participated through SONA received either partial credit or extra credit points for an eligible psychology course. There were 160 participants from the psychology participant pool sample and four participants recruited through snowball sampling. Due to the small sample size for participants recruited through snowball sampling methods, all participants were condensed into the same dataset.

Participants ( $N = 164$ ) were majority female ( $n = 136$ , 82.9%) with 11.7% identified as male ( $n = 18$ ). Ten respondents elected not to respond. Further, 79.9% ( $n = 131$ ) identified their gender as women, with 11.7% ( $n = 18$ ) identifying as men, and 1.2% ( $n = 2$ ) identifying as genderqueer/non-binary/non-conforming; three respondents preferred to self-describe, and 10 respondents elected not to respond. Most of the participants were heterosexual/straight ( $n = 113$ , 68.9%), followed by bisexual ( $n = 23$ , 14%), questioning, ( $n = 6$ , 4.3%), and lesbian/gay ( $n = 4$ , 2.4%) (six respondents preferred to self-describe, one preferred not to say, and 10 respondents elected not to respond). The majority of the participants were White ( $n = 113$ , 75.6%), with the

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remainder reporting their race/ethnicity as Black/African American ( $n = 26$ , 15.9%), Hispanic or Latinx/e ( $n = 13$ , 7.9%), or other ( $n = 12$ , 7.3%).

**Measures and Procedure**

**Subjective Well-Being.** Participants' overall well-being was measured using the BBC Subjective Well-Being scale (Pontin et. al., 2013). This scale consisted of 24 items assessing subjective well-being. Example items include “*Are you happy with your physical health?*” and “*Do you feel you have a purpose in life?*”. Participants were asked the extent to which each statement applied to them on a scale of 1 (*Never*) to 5 (*Always*). All items were averaged into a composite score of well-being, with higher scores indicating greater levels of subjective well-being ( $M = 3.60$ ,  $SD = .57$ ,  $\alpha = .92$ ).

**Extraversion.** Personality was measured using the Big 5 Factor Model of personality (John & Srivastava, 1999). This scale consisted of 44 items assessing each personality dimension (Openness to Experience, Conscientiousness, Extraversion, Agreeableness, and Neuroticism). For the purposes of this study, we only explore extraversion as a dimension of personality. Items assessing extraversion included “*I see myself as someone who is talkative*” and “*I see myself as someone who has an assertive personality.*” Participants were asked how much they agreed with each statement on a scale of 1 (*Disagree Strongly*) to 5 (*Agree Strongly*). Items were averaged to create a composite score of extraversion, with higher scores indicating greater levels of extraversion ( $M = 3.06$ ,  $SD = .80$ ,  $\alpha = .89$ ).

**Belongingness.** Perceived belongingness was measured using the General Belongingness scale (Malone, Pillow & Osman, 2012). This scale consisted of 12 items assessing perceived belongingness. An example item is “*I feel connected with others.*” Participants were asked how

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much they agree with each statement on a scale of 1 (*Disagree Strongly*) to 7 (*Agree Strongly*) ( $M = 4.95$ ,  $SD = 1.08$ ,  $\alpha = .92$ ).

**Virtual Socialization.** Degree of virtual socialization was measured using the Social Media Measure (Bonds-Raacke & Raacke, 2010). This measure consisted of a filter question - “Do you have one or more social media accounts (e.g., Facebook, Instagram, Snapchat, Twitter, Reddit, Tik Tok, Pinterest)?” - to which participants responded ‘yes’ ( $n = 153$ ) or ‘no’ ( $n = 2$ ). If ‘no’ was selected, the participant was directed to the next measure. If ‘yes’ was selected, 11 total items were displayed assessing three components of social media use: information, friendship, and connection. Five questions loaded onto the information dimension, three questions loaded onto the friendship dimension, and three questions loaded onto the connection dimension. Participants were asked to indicate the degree to which each statement applied to them on a scale of 1 (*Does not apply to me*) to 7 (*Definitely applied to me*). An example of the information component is using social media “to share information about yourself” ( $M = 23.06$ ,  $SD = 5.47$ ,  $\alpha = .65$ ). An example of the friendship component is using social media “to keep in touch with old friends” ( $M = 15.85$ ,  $SD = 3.84$ ,  $\alpha = .69$ ). An example of the connection component is using social media “to make new friends” ( $M = 12.07$ ,  $SD = 4.23$ ,  $\alpha = .68$ ).

**Procedure**

Participants completed this study online through the Qualtrics survey platform. This study consisted of a single 30-minute survey taken voluntarily and in one sitting. Participants completed quantitative validated measures of subjective well-being, extraversion, belongingness, and engagement with virtual socialization. After completing these measures, participants provided demographic information, and were thanked for their participation. At this time,

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students recruited through SONA received partial course credit in exchange for their participation.

### Results

The results are structured as follows. First, we tested hypotheses involving bivariate correlations among variables (see Table 1 for all bivariate correlations between variables). Then, we tested hypotheses regarding the interactions between extraversion and virtual socialization dimensions (information, friendship, and connection) as they predict general belongingness and subjective well-being, respectively.

### Correlations

*Hypothesis 1* stated that perceived belongingness and subjective well-being will be positively correlated. To test this hypothesis, we conducted a bivariate correlation between subjective well-being and perceived belongingness. Each of these variables were normally distributed, with skewness and kurtosis values within the acceptable range of +/- 2. Further, there were no outliers present for either variable by inspection of a boxplot. From an examination of a scatterplot, perceived belongingness and subjective well-being appear to be linearly related. Therefore, all assumptions were met to conduct this analysis. The correlational analysis revealed a statistically significant positive relationship between general belongingness and subjective well-being,  $r(153) = .57, p < .001, r^2 = .32$ . Therefore, *Hypothesis 1* was supported, such that higher levels of perceived belongingness were associated with higher levels of subjective well-being in life.

*Hypotheses 2a-2c* address the relationship between reasons for using social media for virtual socialization and perceived belongingness. Using virtual socialization for a) information, b) friendship, and c) connection were each normally distributed (all Skewness and Kurtosis

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values in the acceptable range of +/- 2). By examination of a boxplot, there were no outliers present for using virtual socialization for information or for connection. However, there was one outlier for using virtual socialization for friendship. As such, this case was filtered out (all analyses remain the same with the outlier included and excluded from analyses). Further, by examination of scatterplots, all virtual socialization variables appear to be linearly related to perceived belongingness. There was a significant positive correlation between using virtual socialization for friendship and perceived belongingness,  $r(149) = .21, p < .05, r^2 = .03$ . However, there was no significant relationship between using virtual socialization for information and perceived belongingness,  $r(150) = .10, p < .05, r^2 = .01$ . Additionally, there was no significant relationship between using virtual socialization for connection and perceived belongingness,  $r(150) = -.13, p < .05, r^2 = .02$ . Therefore, hypotheses 2a and 2c, but not 2b were supported.

*Hypothesis 3* stated that extraversion and perceived belongingness would be positively correlated. Extraversion was normally distributed, with skewness and kurtosis values within the acceptable range of +/- 2. Further, there were no outliers present for extraversion by inspection of a boxplot. From an examination of a scatterplot, extraversion and perceived belongingness appear to be linearly related. Therefore, all assumptions were met to conduct this analysis. The correlational analysis revealed a statistically significant positive relationship between extraversion and general belongingness,  $r(154) = .43, p < .001, r^2 = .18$ . Therefore, *Hypothesis 3* was supported, such that people higher on levels of extraversion were also more likely to be higher in perceived belongingness.

### **Table 1**

#### *Bivariate Correlations Among Variables*

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	1	2	3	4	5	6
1. Belongingness	--					
2. Extraversion	.43**	--				
3. Well-being	.57**	.33**	--			
4. Virtual socialization - information	.10	.12	.18*	--		
5. Virtual socialization - friendship	.21**	.12	.20*	.40**	--	
6. Virtual socialization - connection	-.13	-.07	-.06	.35**	.30**	--

Note. \*  $p < .05$ , \*\*  $p < .001$

### Regression Analyses

To address *Hypotheses 4a-4c*, we conducted a series of three regression analyses predicting perceived belongingness based on levels of extraversion, virtual socialization (analysis 1: VS for Information; analysis 2: VS for friendship; analysis 3: VS for connection), and their interaction. For the first regression analysis, assumptions of normality, outliers, and linear relationship were met (as described in previous correlational analyses). Further, examination of a histogram of the residuals appears approximately normally distributed, suggesting no issues with heteroscedasticity. The model explained a significant amount of variability in perceived belongingness,  $F(3, 148) = 14.68, p < .001, R^2 = .23$  (see Table 2 for regression coefficients and other relevant information). Extraversion significantly positively predicted perceived belongingness. However, VS Information was not statistically significant, and neither was the interaction between VS Information and extraversion.

**Table 2**

*Regression Analysis 1: The effect of VS\_Info and Extraversion on Belongingness*

	B(SE)	95% CI	$r^2$ Partial
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VS_Info	.07(.06)	[-.01, .18]	0.1
Extraversion	1.07(.43)*	[.22, 1.93]	0.2
VS_Info X Extraversion	-.02(.02)	[-.06,.02]	-0.09

Notes. VS\_Info denotes using social media for informational purposes. \*  $p < .05$ , \*\* $p < .001$

For the second regression analysis, using VS Friendship, assumptions of normality, outliers, and linear relationship were met (as described in previous correlational analyses). Further, examination of a histogram of the residuals appears approximately normally distributed, suggesting no issues with heteroscedasticity. The model explained a significant amount of variability in perceived belongingness,  $F(3, 153) = 15.77$ ,  $p < .001$ ,  $R^2 = .24$  (see Table 3 for regression coefficients and other relevant information). Extraversion significantly positively predicted perceived belongingness. However, VS Friendship was not statistically significant, and neither was the interaction between VS Friendship and extraversion.

**Table 3**

*Regression Analysis 2: The effect of VS\_Friend and Extraversion on Belongingness*

	B(SE)	95% CI	$r^2$ Partial
VS_Friend	.12(.08)	[-.04, .27]	0.12
Extraversion	1.03(.45)*	[.14, 1.92]	0.18
VS_Friend X Extraversion	-.03(.03)	[-.08, .03]	-0.08

Notes. VS\_Friend denotes using social media for friendship purposes. \*  $p < .05$ , \*\* $p < .001$

For the third regression analysis, using VS Connection, assumptions of normality, outliers, and linear relationship were met (as described in previous correlational analyses). Further, examination of a histogram of the residuals appears approximately normally distributed, suggesting no issues with heteroscedasticity. The model explained a significant amount of

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variability in perceived belongingness,  $F(3, 150) = 14.19, p < .001, R^2 = .22$  (see Table 4 for regression coefficients and other relevant information). Extraversion significantly positively predicted perceived belongingness. However, VS Connection was not statistically significant, and neither was the interaction between VS Connection and extraversion. Therefore, *Hypotheses 4a-4c* were not supported – it doesn't appear that virtual socialization moderates the relationship between extraversion and perceived belongingness. However, extraversion does appear to be consistently positively related with perceived belongingness above and beyond virtual socialization variables.

**Table 4**

*Regression Analysis 3: The effect of VS\_Connect and Extraversion on Belongingness*

	B(SE)	95% CI	r2Partial
VS_Connect	-.04(.08)	[-.19, .11]	-0.04
Extraversion	.58(.29)*	[.003, 1.15]	0.16
VS_Connect X Extraversion	.01(.02)	[-.04, .05]	0.01

Notes. VS\_Connect denotes using social media for connection purposes. \*  $p < .05$ , \*\* $p < .001$

### Discussion

The purpose of the present study was to investigate the relationship between virtual socialization, extraversion, perceived belongingness, and subjective well-being. We found a significant positive correlation between subjective well-being and belongingness, further supporting past research (Mellor et al., 2008). We also found that extraversion correlated with belongingness in a correlational analysis. Further, while all dimensions of social media usage did not relate to levels of belongingness, high levels of extraversion were consistently correlated with belongingness in a regression analysis. The interaction between social media usage and

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extraversion did not significantly predict belongingness under any of the three categories for using social media.

Despite social media use failing to explain variability belongingness or well-being in the regression models, social media used for friendship did correlate significantly with belongingness at the bivariate level. This correlation could be explained by the fact that social media is used as a way to maintain belongingness in people who do not feel isolated (Seidman et al., 2019). The absence of a correlation between social media used for connection and belongingness could mean that people who use social media in hopes of achieving connection with others (and thus, social belongingness), are not successful in the endeavor. This suggests that social media may be effective in supporting relationships, but may not be sufficient for developing them. Social media used for information also did not correlate with belongingness or well-being, supporting *Hypothesis 2c*. This logically follows as using social media for seeking out information does not necessarily involve social connectedness.

Previous literature states that people high in extraversion seek out more socialization and tend to be more talkative and energetic (McCabe & Fleeson, 2012). People who do not naturally possess these qualities will adaptively display more extraverted behaviors when attempting to increase their sense of belongingness (McCabe & Fleeson, 2012; Collisson, 2013). Consistent with these findings, the present study provided evidence that levels of extraversion are highly correlated with belongingness such that those higher in extraversion will experience a higher sense of belongingness.

While this study did not show significant correlations between belongingness or well-being and social media use, it is also important to evaluate how the use of virtual socialization is related to people's perceived belongingness and well-being. These findings may be explained by

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the fact that the majority of the participants were raised in a world where technology was present and social media was in its beginnings. Of this sample used for this study, even those who have more extraverted qualities, though they may be expected to prefer face-to-face socialization (Geen, 1984), are still comfortable using virtual socialization presumably because that's what they have always known. Therefore, virtual socialization may not be related to their belongingness or well-being because these participants developed their sense of belongingness around the use of virtual socialization in addition to face-to-face socialization. Future research could address the possibility of a generational difference in how social media achieves or does not achieve belongingness by surveying both people who were raised around virtual socialization (e.g., Generation Z, Millennials) and people who were raised without easy access to socializing virtually (e.g., Generation X, Baby Boomers).

This research is important in addressing the question of why some people feel a greater sense of belongingness than others. The present study concluded that the personality trait of extraversion plays an active role in feelings of belongingness and that social media used for friendship coincides with feelings of belongingness. This information is useful in everyday life as all people fluctuate in their feelings of belongingness. This research potentially aids in understanding factors (i.e., trait extraversion) that might have an impact on a person's experience with isolation or loneliness. This information is also useful for those aiding people experiencing low belongingness such as counselors and college campuses. College is often a time of loneliness for students as they are isolated from their families and social networks (Van Orden et al., 2008). Therefore, college administrators could use this research to better understand these feelings of isolation and how to help students.

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This study contained several limitations that inform directions for future research. First, the demographic characteristics of the sample in this study were majority white, female, college students. This is a limitation because the experiences of a singular demographic cannot always be generalized to other demographics. Future research can address this limitation by targeting a larger audience outside of the university setting and gathering data from a more diverse population. The majority of participants in this study also indicated that they had one or more social media accounts, making comparisons between the traits and the outcomes of those with and without social media accounts not possible. Future studies can address this limitation by targeting a more balanced number of participants with and without social media accounts. This could be done by targeting an older population and using in-person recruitment methods.

Another limitation of this study is that it used correlational data to test for relationships between variables. This means no cause-and-effect conclusions can be drawn between variables. Future studies can address this limitation by creating an experimental study. A potential experimental study could manipulate its participants' access to virtual socialization (e.g., one condition could socialize over Zoom, one condition could socialize on social media, and one condition could socialize in-person) and test for a difference in their feeling of belongingness and well-being. Further, this study focused on motives for using social media, which may not capture the full range of a person's socialization activities. Future studies may want to focus on hours spent on social media versus hours spent socializing in-person for a more detailed understanding of how the participants naturally choose to socialize and how this relates to their perceived belongingness and levels of extraversion. Future studies could achieve this through utilizing daily documentation of the number of hours participants spend socializing both on social media

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and in person to gain a more accurate understanding of how much time they spend socializing face-to-face and virtually.

While this study did not discuss the relationship between extraversion and well-being, these variables were significantly correlated. Future studies could further research the possible relationship between these variables and discuss the implications of such a correlation. For example, future studies could run a more focused correlation using an extraversion scale and various well-being scales (e.g., subjective well-being, satisfaction with life). Studies could also recruit people going through various events that might positively or negatively impact their well-being and measure the participants' extraverted behaviors.

### **Conclusion**

Socializing is an important part of everyday life (Collisson, 2013; Baumeister & Leary, 1995; Malone et al., 2012). Without socializing, people experience negative symptoms due to a reduced sense of belongingness and a lack of basic needs met. Biological predisposition through trait-level extraversion correlates to a person's sense of belongingness as does their social media use when used for friendship. These factors significantly relate to one's well-being, making belongingness a critical component to living a happy life and an important area of psychological research.

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