

**Post Social Media Use Guilt, Predispositions, and Motivations: A Correlational Study**

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### **Abstract**

Social media have the ability to connect people, make them happy, and produce negative feelings. Are those with certain personality traits more likely to feel guilt following social media use? Does a utilitarian use for social media as compared to casually checking feeds produce more guilt? Does the ability to forgive oneself more easily escape them from feeling post use guilt? Participants were given a Qualtrics survey via the Communication and Media Participant Pool asking questions about their personalities and self forgiveness tendencies, social media use, motivations for use, and feelings after media use overall. Variables were the Big 5 (Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism), self forgiveness, motivations of media use ('social', 'to pass time', 'utilitarian', and 'information/entertainment') and guilt. Results showed that there were correlations between Openness, Extraversion, and Neuroticism with self forgiveness. Results also showed that there are relationships between 'social' motivations and Neuroticism, 'social' motivations and self forgiveness, 'pass time' motivations and Neuroticism, and 'utilitarian' motivations and Conscientiousness. Lastly, lower levels of self forgiveness are associated with higher levels of post use state guilt.

*Keywords:* Social media use, self forgiveness, motivations, guilt

## **Introduction**

Have you ever had pressing obligations (e.g., school assignments, duties, meetings) but ended up spending time you didn't have on social media? Have you ever put your phone down and felt a vague sense of guilt?

Social media is a rapidly evolving field that is so ingrained in our daily lives and has grown significantly in the past 15 years. Since Pew Research Center started collecting social media use data in 2005, the percentage of the population that reported using at least one social media site has risen from 5% to 72% (Pew Research Center, 2021). There are many reasons why people use social media. In some instances, social media has the power to connect and heal (Common Sense Media, 2018). On the other hand, excessive use, self control failure, and guilt are all negative associations with social media use (Panek, 2014). Because social media is constantly at the tips of our fingers, it has many uses and implications that vary from person to person. Dispositions, or pre-existing characteristics of the mind and self, impact our preferences and choices on a daily basis (Seidman, 2013), including social media habits and motivations. These preferences and motivations may be associated with differing levels of guilt resulting from social media use.

This study will look into the links between personality traits and self forgiveness tendencies (referred to here as dispositional factors), motivations of media use, and feelings of guilt following social media use. Before data collection and analysis, review of literature in the media psychology and media effects fields are necessary.

## **Literature Review**

## **Dispositional Factors**

### ***Big 5 Factor Model of Personality***

Within psychological research, the Five Factor Model of Personality, also known as the Big 5, is a well known and established method to examine a 360 degree view of personality. This personality theory, coined by psychological researchers McCrae and Costa, describes five categories, or basic tendencies, of personality: Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism. Openness to experience, more simply known as Openness, “...is characterized by curiosity, originality, inquisitiveness, and artistic sensitivity” (Barnett et al., 2015). Individuals high in Openness are likely to have a strong motivation to learn, are goal-oriented, and are broad-minded (Barnett et al., 2015). Conscientiousness is characterized by “thoroughness, dependability, responsibility, and achievement orientation” (Barnett et al., 2015). Like Openness, Conscientiousness can include the desire and motivation to learn. Extraversion is known for being characterized by sociability but has also been said to include assertiveness and gregariousness (Barnett et al., 2015). According to Barnett and colleagues, Agreeableness includes kindness, trust, and tolerance (2015). Lastly, Neuroticism, also called emotional stability, is the degree to which one acts spontaneously, irrationally, emotionally, or anxiously. Those who are highly neurotic often have poor goal orientation (Barnett et al., 2015). These five dimensions have been criticized for trying to encompass the entirety of personality into such a generalized view (Block, 1995). Despite this, the Big 5 has been said to do a good job in encompassing all of one’s personality traits under five umbrella terms (Barnett et al., 2015). One important aspect of the Five Factor Model of Personality is its claim that these traits are shaped through biology (McCrae & Costa, 2020). Although there are exceptions to this, it backs up prior findings by McCrae, Costa, & Lockenhoff (2019) that these traits remain stable despite life

changes (McCrae & Costa, 2020). Hence, the Big 5 is one of the two dispositional factors that will be examined in study.

### ***Self Forgiveness***

The body of literature that investigates self forgiveness in psychological research is in its early stages (Woodyatt et al., 2017). Self forgiveness has been examined in varied contexts, from drug and alcohol use, to mothering, to survivors of trauma (Woodyatt et al., 2017), however it has yet to be examined in relation to social media use. According to Thompson et al. (2005), authors at the time defined forgiveness as, “the framing of a perceived transgression such that one’s response to the transgressor, transgression, and sequelae of the transgression are transformed from negative to neutral or positive.” Forgiveness can be of the self, of others, and of situations in which these objects of forgiveness are the source of a transgression (Thompson et al., 2005). Self forgiveness is two-fold: first is experiencing condemnation for an act, second is releasing the negative emotions felt (Woodyatt et al., 2017). For this study, only forgiveness of the self will be examined as a dispositional factor. Thompson et al. (2005) mention several studies in which a positive relationship between forgiveness of the self, others and high psychological well being exists. Factors of psychological well being include low levels of depression and anxiety (Hebel & Enright, 1993; Mauger et al., 1992 in Thompson et al., 2005) and low trait anger (Maltby et al., 2001 in Thompson et al., 2005). Depression and anxiety have been said to be associated with poor psychological well being and neuroticism (Aldinger et al., 2014). Prior studies have looked into associations between branches of forgiveness and the Big 5 (Ross et al., 2004; Walker and Gorsuch, 2002; Glover 2015). The first research question asks about possible correlations between self forgiveness and the Big 5.

*RQ1: Is there a correlation between self forgiveness and any of the Big 5 Factors of Personality?*

### ***Theoretical Framework and Motivations of Social Media Use***

Uses and Gratifications Theory (UGT) states that people seek out certain types of media to fulfill their needs at a point in time. With the increased volume of social media use today, this theory has been and can continue to be examined from a 21st century, mobile technology standpoint (Ruggiero, 2000). Previous research has looked at motivations of problematic social media use through a lens of UGT and personality, but still the exact uses and gratifications of social media in a quickly changing environment vary from person to person and vary by site (Kircaburun et al., 2020). Previous studies have looked into social media use motivations for certain sites and in context of the need to belong (Seidman, 2013). According to Uses and Gratifications Theory, a mediating variable in social media motivations is social and psychological factors such as personality (Perugini & Solano, 2020), which leads to the second research question assessing relationships between the Big 5, self forgiveness, and social media use motivations. Past research has assessed motivations of social media use in the context of the Big 5 but not in the context of self forgiveness.

*RQ2: Is there an association between dispositional factors and certain motivations of social media use?*

### ***Post-Use State Guilt***

Guilt has been defined as an unpleasant emotion experienced in response to a negative evaluation of one's current state (Smith and Ellsworth, 1985) often present when one feels they fell short of the standard they set for themselves (Baumeister, Stillwell, and Heatheron, 1994). It has been shown in prior research that guilt peaks right after engaging in a certain activity and

gradually goes away shortly after (Macht and Dettmer, 2006; Ramanathan and Williams, 2007; in Duke & Amir, 2019). Guilt has been said to be a ‘self-conscious’ emotion because it regards one's own specific actions resulting in taking personal responsibility. Past research has found that college students with low levels of self control spend more time on media, which led to feelings of guilt (Panek, 2014). Guilt has been found to be most associated with failure of something (i.e. not studying or not doing assignments), self regulation, dishonesty, and harm to others (Keltner & Buswell, 1996). Despite knowing much about state guilt, the process of feeling it, and dealing with it, we don’t know whether there is an association between social media and subsequent levels of state guilt when that doesn’t involve "guilty pleasure" (a slightly different phenomenon involving instant gratification and self control and is associated with certain types of media use like reality television; Panek, 2014). Because certain types of media have been said to produce guilt, the question of intentions and motivations of social media use and post use feelings of guilt is raised. If one seeks out social media to be entertained as opposed to catching up on news or seeking information, does post-use guilt differ? Past research found that increased feelings of guilt about media use were correlated with leisurely media use (Panek, 2014). Social uses and passing time motivations are closely associated with this leisurely media use that produced feelings of guilt among college students (Panek, 2014). This leads to the hypothesis that ‘social’ motivations and ‘pass time’ motivations of social media use will lead to more state guilt following use.

*H1: ‘Social’ and ‘pass time’ motivations of social media use will be more associated with post-use state guilt than ‘information/entertainment’ and ‘utilitarian’ motivations of social media use.*



Both guilt and self forgiveness involve a degree of personal responsibility: guilt involves a realization of falling short of an expectation and self forgiveness involves overcoming negative feelings produced by that realization. Because of the interconnectedness of these two variables, it is expected that those with a lower dispositional tendency to forgive themselves will be more likely to report feeling guilt in response to media use.

*H2: Lower levels of self forgiveness will be associated with higher levels of post-use state guilt.*

## **Measures**

### **Sample**

Participants were recruited via the Communication and Media Participant Pool. Undergraduates were offered credit toward class requirements in exchange for their participation in this study. The data from the original sample (n=149) was cleaned to omit participants who failed an attention check, reported not using social media, and provided nonresponse answers. The cleaned sample consisted of 120 undergraduate participants. Of this sample, 69 participants were first year students and 96 identified as female.

### **Motivations of Media Use**

Flanigan & Metzger (2001) combined a scale from three different studies and researchers to make one 22-item scale of media use motivations that was analyzed in ten clusters. Panek's analysis of these motivations in his study "Left to Their Own Devices: College Students' 'Guilty Pleasure' Media Use and Time Management " resulted in four clusters—social, information/entertainment, utilitarian, and to pass time—of 15 total relevant statements. To assess motivations of social media use, participants were asked how often they use social media for these 15 motivations on a five-point Likert scale.

## **Self Forgiveness**

Self forgiveness was measured using the 6 "self forgiveness" items from the Heartland Forgiveness Scale. These items asked participants to rate the degree to which they see themselves in the following statements: "Although I feel badly at first when I mess up, over time I can give myself some slack," "I hold grudges against myself for negative things I have done," "Learning from bad things I've done helps me get over them," "It is really hard for me to accept myself once I've messed up," "With time, I am understanding of myself for the mistakes I've made," "I don't stop criticising myself for the negative things I've done felt, thought, said, or done." Responses were on a 5-point Likert scale ranging from 'Almost always false of me' to 'Almost always true of me.'

## **Five Factor Model of Personality**

To measure personality, a modified version of the Ten Item Personality Inventory, or TIPI, was used. In this scale, each of the Big 5 personality traits was measured using only two items. It was modified to list only one adjective per item as opposed to the original two adjectives per item. This measure asks participants to rate the extent to which they think the personality traits listed represent them. Though this scale optimizes validity, it has been said to "perform poorly" in terms of internal consistency measured by Cronbach's alpha (Gosling et al., 2003).

## **State Guilt**

To measure post use state guilt, participants were asked four questions (Panek, 2014). These questions, originally about internet and television use, were modified to fit social media and online use. Participants were asked the degree to which four statements described themselves on a 5-point Likert scale from "Not at all like me" (1) to "Just like me" (5). The statements were

as follows: “I often feel guilty about the amount of social media I use,” “I often feel guilty about having engaged with certain social media content,” “I often feel guilty about the amount of time I spend online,” and “I often feel guilty about having engaged in certain activities online.” These four questions (before modifying for social media use) had adequate internal consistency ( $\alpha = .73$ ). In addition, participants were asked to rate the frequency in which they relate to the following 6 additional questions (1= Never, 5=Always): “I feel more overwhelmed after using social media,” “I regret spending time on social media,” “I feel recharged after using social media,” “I feel like social media was a good use of my time,” “I feel ready to get back to work after social media use,” “I feel like I should have been doing something else instead of using social media.” Both measures were combined and averaged to create an index for the ‘state guilt’ variable.

## Results

The first research question asked if there was any association between any of the Big 5 (Openness, Conscientiousness, Extraversion, Agreeableness, Neuroticism) and self forgiveness (Figure 3). Three significant correlations were found. Openness,  $r = .20, p < .05$ , and extraversion,  $r = .25, p < .01$ , were positively correlated with self-forgiveness, whereas there was a significant negative correlation between Neuroticism and self forgiveness,  $r = -.19, p < .05$ . Cronbach’s alpha reliability was relatively low for all measures (see Figure 2). The authors of the original 18-item version of the Heartland Forgiveness scale reported acceptable internal consistency, with  $\alpha$  being between .72 and .87 (Thompson et al., 2005). Because the modified version of the Heartland Forgiveness scale only used the self forgiveness block (6 items), Spearman-Brown’s Predicted Reliability was assessed. Spearman-Brown’s Predicted Reliability

was estimated to be .66, which is slightly lower than the reported reliability of the original measure.

The second research question asks if there is a relationship between the dispositional factors (Big 5 and self forgiveness) and four motivations of media use, ‘social,’ ‘to pass time,’ ‘utilitarian,’ and ‘information/entertainment’ (Figure 4). These motivations were previously found by Panek (2014) in a 4-cluster analysis. Neuroticism and ‘social’ motivations for media use were correlated,  $r = .20, p < .05$ , as were ‘social’ motivations of media use and self forgiveness (though this correlation was negative and small,  $r = -.05, p < .05$ ). ‘Pass time’ motivations of media use were correlated significantly with Neuroticism,  $r = .24, p < .01$ . Lastly, an inverse relationship was found between Conscientiousness and ‘utilitarian’ motivations of social media use,  $r = -.22, p < .05$ .

The first hypothesis stated that ‘social’ and ‘pass time’ motivations of social media use would be associated with higher levels of post-use guilt. None of the four motivations correlated with guilt, all  $p\text{-values} > .05$  (Figure 5).

The second hypothesis stated that higher levels of self forgiveness would be associated with lower levels of post use state guilt. There was a significant, negative correlation between self-forgiveness and guilt,  $r = -.22, p < .05$ .

## **Discussion**

The purpose of this study was to examine any associations between dispositional factors (specifically personality and self forgiveness), motivations of social media use, and post use state guilt. Findings revealed that there is some association between self forgiveness and certain personality traits as defined by the Big 5. Similarly, there is some association between certain

personality traits and certain motivations of media use. Lastly, there is an inverse relationship between levels of self forgiveness and post use state guilt.

The first research question asked if there were any associations between the dispositional factors defined: the Big 5 personality traits and self forgiveness. Three associations were found. The first of these associations is between self forgiveness and Openness. Self forgiveness, as defined earlier, is “the framing of a perceived transgression such that one’s response to the transgressor, transgression, and sequelae of the transgression are transformed from negative to neutral or positive” (Thompson et al., 2005). Openness was measured according to relatability to “openness to new experiences” and “conventional” (reverse scored item). According to the results of this study, those who reported being more open to experiences and less conventional also reported higher levels of self forgiveness. This is consistent with findings from past studies, though those findings focus on the ‘intellect’ component of Openness (Walker and Gorsuch, 2002) which was not included in the current study.

A second association was found between Extraversion and self forgiveness. Extraversion was measured by endorsement of the self-descriptors “extraverted” and “reserved” (reverse scored). Thus, those who reported being more outgoing also reported higher levels of self forgiveness. Previous research found that there were correlations between ‘friendliness’ and ‘assertiveness’ aspects of Extraversion but not reserved or introverted (Walker and Gorsuch, 2002), the two measures most closely related to the measures of Extraversion in this study.

The last of the three associations found in examining RQ1 was between Neuroticism and self forgiveness. Neuroticism was measured by endorsement of the self-descriptors “anxious” and “calm” (reverse scored). This association was negative, meaning that those who reported being more anxious and less calm reported lower levels of self forgiveness. Neuroticism, also

known as emotional stability, has been associated with anxiety and depression, mental illnesses that are often associated with negative affect/emotions (Aldinger et al., 2014) in addition to internet addiction (Zhang, 2021). This correlation supports previous research done connecting self-forgiveness and Neuroticism because those who are highly neurotic have been said to have a harder time letting things go (McCollough et al., 1998; Walker and Gorsuch, 2002). It makes sense that those who are more neurotic report having a hard time forgiving themselves. However, this sample was pulled from a college population which may mean that a majority of the students are anxious for reasons other than the fact that they are dispositionally neurotic.

Throughout these three associations, it is important to remember that these labeled ‘dispositional factors’ cannot determine causality or iron out the details of how much people are a product of their environment as opposed to a product of their genetics. With that being said, we cannot conclude the time order of how those who have certain personality traits or dispositions use social media. It is also a possibility that social media use affects people’s personality or dispositions, as opposed to personality predicting social media use. Future research could look more deeply into the direction of this relationship.

The next research question asked if there were any relationships between dispositional factors (Big 5 personality traits and self forgiveness) and the four motivations of social media use: social, to pass time, utilitarian, or information/entertainment. Correlation analysis between these variables revealed four significant relationships. The first was between Neuroticism and ‘social’ motivations for social media use. ‘Social’ motivations of media use include those who reported using social media more often than not for the following reasons: to generate ideas, to learn more about myself and others, to get to know others, to stay in touch, to gain insight about myself, to feel less lonely. Recalling that those who scored higher on Neuroticism measures were

more anxious and less calm, these participants reported using social media for social reasons (listed in the previous sentence) more often than those who were less neurotic. According to Uses and Gratifications Theory, social and psychological factors such as personality are mediating variables in social media motivations (Perugini & Solano, 2020). Findings in accordance with the Big 5 have been limited, however the most common uses of social media have been reported to be ‘pass time’, ‘social information’, and ‘sociability’ (Quan-Haase and Young, 2010). This information may be a little outdated when taking into consideration the quickly changing nature of social media use in daily life.

Similarly, those who reported higher levels of Neuroticism reported using social media for ‘pass time’ motivations, which include “to relax” and “to pass time away when bored.” This correlation was notable due to its strength and statistical significance. This could mean that, although randomness was accounted for, there could be a systematic reason for why this correlation was oddly high/significant in consideration with the sample. As previously mentioned, these behaviors and motivations are consistent with internet addiction (Zhang, 2021), although that is not directly measured in this study.

The third association between dispositional factors and motivations was between Conscientiousness and ‘utilitarian’ motivations of social media use which includes the following items: to solve problems and to make decisions. Conscientiousness was measured by the degree in which participants reported relating to the adjectives ‘dependable’ and ‘disorganized’ (reverse scored item). This makes sense that those who report being highly organized and systematic in their actions would seek to collect more information when making decisions and solving problems (Walker and Gorsuch, 2002).

Lastly, there was an association between self forgiveness and ‘social’ motivations of social media use. This correlation is a little harder to explain than the rest. Due to the limited nature of self forgiveness research in context of social media motivations, this relationship may be significant because of a third variable or connections to the Big 5.

In regards to the first hypothesis which stated that ‘social’ and ‘pass time’ motivations of social media use would lead to higher levels of post social media use guilt, there were no statistically significant relationships found. It is important to keep in mind here and for previous associations in RQ1 and RQ2 that motivations are self-reported and a product of what people tell themselves they use social media for (whether it is accurate or not). There may be something to say, however, about which personality types are more likely to report different motivations than what actually underlies. Agreeableness, for example, is linked to trustworthiness. It could be hypothesized that those who score higher in Agreeableness may be more likely to report their social media use motivations more honestly. Similarly, those who are more conscientious might be more consciously aware of their motivations (Walker and Gorsuch, 2002).

Lastly, Hypothesis 2 stated that lower levels of self forgiveness would be correlated with higher levels of post social media use guilt. This was supported based on the results of this study. It is important to keep in mind that the reliability of self-forgiveness and guilt scales were very poor ( $\alpha = .39$  and  $\alpha = .47$  respectively). This indicates that the questions asked are not consistently measuring the variables self forgiveness and guilt. Despite this, the association between self forgiveness and guilt can be explained by the degree of personal responsibility involved in both variables: guilt involves a realization of falling short of an expectation and self forgiveness involves overcoming negative feelings produced by that realization.

### **Limitations**



Like all research, this study has limitations that should be taken into consideration. First, the sample was not random. There could be similarities that are not accounted for in participants enrolled in the Participant Pool through the entry-level COMM class. Participants were mainly female which could produce biased results. Moreover, almost 90% of the participants are underclassmen (first or second year students). Similarly to the other limitations with the sample, caution must be taken in generalizing these results to a university population and beyond.

Furthermore, the alphas for all variables in this study are very low and don't meet the acceptable threshold, raising questions about the reliability of the measures used.

The state guilt variable in this study can't be narrowed down to test state guilt immediately after social media use in which case participants could report feeling guilty for reasons beyond social media use.

Lastly, this study is correlational and therefore cannot establish causality or time order. Broadly, we cannot say that dispositional factors lead to social media use motivations which leads to feelings of guilt (or lack of). For example, social media use might actually influence dispositional tendencies. Thus, these relationships cannot be noted as causal. There may also be third variables that are not accounted for in this study, such as gender differences and age differences, and/or extraneous variables such as participant interests or types of social media platforms used.

### **Conclusion**

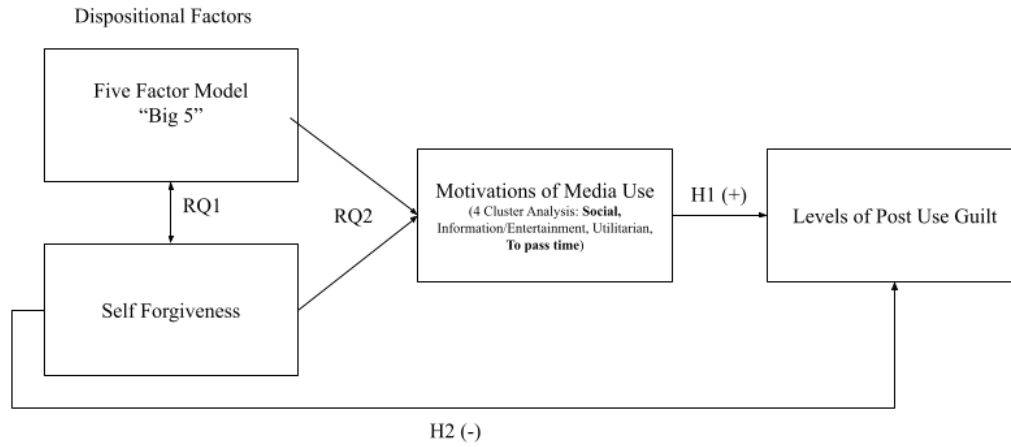
To conclude, results of this study showed that there were correlations between Openness, Extraversion, and Neuroticism with self forgiveness. Results also showed that there are relationships between 'social' motivations and Neuroticism, 'social' motivations and self forgiveness, 'pass time' motivations and Neuroticism, and 'utilitarian' motivations and

Conscientiousness. Lastly, higher levels of self forgiveness are associated with lower levels of post use state guilt. These results should be taken with a grain of salt for several reasons.

Research between dispositional factors, motivations of social media use, and post-use guilt is broad and has the potential to go several different routes going forward. One option is to explore more in depth, qualitative attitudes about post social media use feelings like guilt. Surrounding the topic of social media, the quickly evolving nature and accessibility of use is something to take into account. As time progresses, these phenomena may change.

## Tables and Figures

**Figure 1**  
*Model of Research Questions and Hypotheses*



**Figure 2**  
*Descriptive Statistics for Variables*

Variable	<i>M</i>	<i>SD</i>	<i>alpha</i>	<i>n</i>
OPENNESS	3.52	0.61	0.43	120
CONSCIENTIOUSNESS	4.10	0.71	0.49	120
EXTRAVERSION	3.30	1.1	0.40	120
AGREEABLENESS	3.19	0.64	0.40	120
NEUROTICISM	2.79	0.83	0.47	120
SELFFORGIVE	3.34	0.61	0.39	120
SOCIAL	3.08	0.73	0.33	120
PASS TIME	4.26	0.73	0.39	120
UTILITARIAN	2.10	0.90	0.34	120
INFORMATION/ENTERTAINMENT	3.13	0.73	0.29	120
GUILT	2.90	0.58	0.47	120

**Figure 3**  
*Research Question 1*

Variable	<i>M</i>	<i>SD</i>	SELFFORGIVE
OPENNESS	3.52	0.61	$r = .20^*$
CONSCIENTIOUSNESS	4.10	0.71	$r = .08$
EXTRAVERSION	3.33	1.11	$r = .25^{**}$
AGREEABLENESS	3.19	0.64	$r = .05$
NEUROTICISM	2.79	0.83	$r = -.19^*$
SELFFORGIVE	3.34	0.61	$\alpha = .39$

\* $p < .05$  \*\* $p < .01$

**Figure 4***Research Question 2*

Variable	SOCIAL	PASSTIME	UTILITARIAN	INFORMATION/ENTERTAINMENT
OPENNESS	$r = .03$	$r = -.05$	$r = -.08$	$r = -.10$
CONSCIENTIOUSNESS	$r = -.11$	$r = .06$	$r = -.22^*$	$r = -.06$
EXTRAVERSION	$r = .09$	$r = .06$	$r = .02$	$r = .08$
AGREEABLENESS	$r = .10$	$r = .17$	$r = .03$	$r = .13$
NEUROTICISM	$r = .20^*$	$r = .24^{**}$	$r = .05$	$r = -.09$
SELFFORGIVE	$r = -.05^*$	$r = .14$	$r = .08$	$r = .13$

\* $p < .05$  \*\* $p < .01$ **Figure 5***Hypothesis 1*

MOTIVATIONS	GUILT
SOCIAL	$r = .14$
PASS TIME	$r = -.09$
UTILITARIAN	$r = .04$
INFORMATION/ENTERTAINMENT	$r = -.03$

\* $p < .05$  \*\* $p < .01$

## References

- Aldinger, M., Stopsack, M., Ulrich, I. *et al.* (2014). Neuroticism developmental courses - implications for depression, anxiety and everyday emotional experience; a prospective study from adolescence to young adulthood. *BMC Psychiatry* 14, 210.  
<https://doi-org.proxy.lib.umich.edu/10.1186/s12888-014-0210-2>
- Barnett, T., Pearson, A.W., Pearson, R., & Kellermanns, F. W. (2015). Five-factor model personality traits as predictors of perceived and actual usage of technology, *European Journal of Information Systems*, 24(4), 374-390. DOI: 10.1057/ejis.2014.10
- Baumeister, R. F., Stillwell, A. M., & Heatherton, T. F. (1994). Guilt: An interpersonal approach. *Psychological Bulletin*, 115(2), 243–267.  
<https://doi-org.proxy.lib.umich.edu/10.1037/0033-2909.115.2.243>
- Block, J. (1995). A contrarian view of the five-factor approach to personality description. *Psychological Bulletin*, 117(2), 187–215.  
<https://doi-org.proxy.lib.umich.edu/10.1037/0033-2909.117.2.187>
- Costa, P., McCrae, R. R., & Lockenhoff, C.E. (2019). Personality Across the Life Span. *Annual Review of Psychology*, 70(1), 423-448.  
<https://doi.org/10.1146/annurev-psych-010418-103244>
- Duke, K. E., & Amir, O. (2019). Guilt Dynamics: Consequences of Temporally Separating Decisions and Actions. *Journal of Consumer Research*, 45(6), 1254–1273.  
<https://doi.org/10.1093/jcr/ucy049>.
- Flanagin, A., Metzger, M. (2001). Internet use in the contemporary media environment. *Human Communication Research*, 27(1), 153-181.

- Glover, N.G. (2015). The Five Factor Forgiveness Inventory: A Measure of Forgiveness from the Perspective of the Five Factor Model. *Theses and Dissertations–Psychology*. 75.  
[https://uknowledge.uky.edu/psychology\\_etds/75](https://uknowledge.uky.edu/psychology_etds/75).
- Gosling, S. D., Rentfrow, P. J., & Swann, W. B., Jr. (2003). A Very Brief Measure of the Big Five Personality Domains. *Journal of Research in Personality*, 37, 504-528.
- Jones, W. H., Schratte, A. K., & Kugler, K. (2000). The Guilt Inventory. *Psychological Reports*, 87(3\_suppl), 1039–1042.
- Keltner, D., & Buswell, B. N. (1996). Evidence for the distinctness of embarrassment, shame, and guilt: A study of recalled antecedents and facial expressions of emotion. *Cognition and Emotion*, 10(2), 155–171.  
<https://doi-org.proxy.lib.umich.edu/10.1080/026999396380312>
- Kircaburun, K., Alhabash, S., Tosuntaş, Ş.B. *et al.* (2020). Uses and Gratifications of Problematic Social Media Use Among University Students: a Simultaneous Examination of the Big Five of Personality Traits, Social Media Platforms, and Social Media Use Motives. *Int J Ment Health Addiction* 18, 525–547.  
<https://doi-org.proxy.lib.umich.edu/10.1007/s11469-018-9940-6>
- McCullough, M. E., Rachal, K. C., Sandage, S. J., Worthington, E. L., Jr., Brown, S. W., & Hight, T. L. (1998). Interpersonal forgiving in close relationships: II. Theoretical elaboration and measurement. *Journal of Personality and Social Psychology*, 75(6), 1586–1603. <https://doi-org.proxy.lib.umich.edu/10.1037/0022-3514.75.6.1586>
- McCrae, R. R., & Costa, P. T. (2020). Understanding persons: From Stern’s personalistics to Five-Factor Theory. *Personality and Individual Differences*, 109816.  
<https://doi.org/10.1016/j.paid.2020.109816>

- Panek, E. (2014). Left to Their Own Devices: College Students' "Guilty Pleasure" Media Use and Time Management. *Communication Research*, 41(4), 561–577.  
<https://doi.org/10.1177/0093650213499657>
- Perugini, M. L. L., & Solano, A. C. (2020). Normal and Maladaptive Personality Traits as Predictors of Motives for Social Media Use and Its Effects on Well-Being. *Psychological Reports*. <https://doi.org/10.1177/0033294120922495>
- Pew Research Center. (2021, April 14). *Demographics of Social Media Users and Adoption in the United States*. Pew Research Center: Internet, Science & Tech.  
<https://www.pewresearch.org/internet/fact-sheet/social-media/>.
- Quan-Haase, A., & Young, A. L. (2010). Uses and gratifications of social media: A comparison of Facebook and instant messaging. *Bulletin of Science, Technology & Society*, 30(5), 350–361.
- Ross, S. R., Kendall, A. C., Matterns, K. G., Rye, M. S. & Wrobel, T. A. (2004) A Personological Examination of Self- and Other-Forgiveness in the Five Factor Model. *Journal of Personality Assessment*, 82(2), 207-214. DOI: 10.1207/s15327752jpa8202\_8
- Ruggiero, T. E. (2000). Uses and Gratifications Theory in the 21st Century. *Mass Communication and Society*, 3(1), 3-37. [https://doi.org/10.1207/S15327825MCS0301\\_02](https://doi.org/10.1207/S15327825MCS0301_02)
- Seidman, Gwendolyn. (2013). Self-presentation and belonging on Facebook: How personality influences social media use and motivations. *Personality and Individual Differences*, 54(3), 402-409. <https://doi.org/10.1016/j.paid.2012.10.009>
- Smith, C. A., & Ellsworth, P. C. (1985). Patterns of cognitive appraisal in emotion. *Journal of Personality and Social Psychology*, 48(4), 813–838.  
<https://doi-org.proxy.lib.umich.edu/10.1037/0022-3514.48.4.813>

*Social Media, Social Life: Teens Reveal Their Experiences, 2018: Common Sense Media.*

Common Sense Media: Ratings, reviews, and advice. (2018, September 10).

<https://www.commonsensemedia.org/research/social-media-social-life-2018>.

Thompson, L. Y., Snyder, C. R., Hoffman, L., Michael, S. T., Rasmussen, H. N., Billings, L. S., Heinze, L., Neufeld, J. E., Shorey, H. S., Roberts, J. C., & Roberts, D. E. (2005).

Dispositional Forgiveness of Self, Others, and Situations. *Journal of Personality*, 73(2), 313–360. <https://doi.org/10.1111/j.1467-6494.2005.00311.x>

Walker, D. F. and Gorsuch, R. L. (2002). Forgiveness within the Big Five personality model.

*Personality and Individual Differences*, 32(7), 1127-1137.

[https://doi-org.proxy.lib.umich.edu/10.1016/S0191-8869\(00\)00185-9](https://doi-org.proxy.lib.umich.edu/10.1016/S0191-8869(00)00185-9)

Woodyatt L., Worthington E.L., Wenzel M., Griffin B.J. (2017) Orientation to the Psychology of Self-Forgiveness. In: Woodyatt L., Worthington, Jr. E., Wenzel M., Griffin B. (eds)

Handbook of the Psychology of Self-Forgiveness. Springer, Cham.

[https://doi-org.proxy.lib.umich.edu/10.1007/978-3-319-60573-9\\_1](https://doi-org.proxy.lib.umich.edu/10.1007/978-3-319-60573-9_1)

Zhang, Y. (2021). Direct and Indirect Effects of Neuroticism on Internet Addiction in College Students: A Structure Equation Modeling Analysis. *Psychological Reports*, 124(2),

611–626. <https://doi.org/10.1177/0033294120918806>