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# Neuroticism and Loneliness: The Role of Social Support in the Relationship Between Emotional Instability and Perceived Loneliness

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ABSTRACT

The aim of this study is to investigate the level of association between emotional instability and loneliness, and to test the moderating role of social support and social media use on the relationship between neuroticism and loneliness. The sample consisted of 152 individuals (n = 110, 72.4% women and n = 42, 27.6% men, SD =11.87). Demographic data were collected, along with data regarding levels of neuroticism, loneliness, perceived social support and social media use. Only one hypothesis, the one concerning the relationship between neuroticism and loneliness was supported, while the rest of the hypotheses were rejected. Results suggest that although neurotic individuals benefit from social support, it does not have a perceived effect on the loneliness they experience. Moreover, despite the fact that neurotics often engagge in social comparison when using social media, this does not influence the level of loneliness they feel. Limitations and future research directions are outlined later on in the study.

**Keywords:** emotional instability, loneliness, social support, social media use, Buffer Theory, neuroticism

## 1. INTRODUCTION

### Emotional Instability

In the age of speed and continuous digitalization, loneliness has become a significant concern in the field of public health. Despite the rapid growth of virtual communication channels in recent years, many people report feeling more isolated than ever. Many people take refuge in the virtual reality of technology, seeking risk-free relationships that "starve" loneliness (Turkle, 2011). Through this paradox, the difference can be outlined between being present in the social scene and experiencing meaningful and fulfilling relationships, highlighting the urgent need to understand loneliness in modern society.

Regarding the link between loneliness and emotional instability, neuroticism is associated with increased reactivity to social stressors (Zautra et al., 2005). Moreover, individuals with a high level of neuroticism are more sensitive to social cues of rejection (Denissen & Penke, 2008). Neuroticism has also been linked to dysfunctional interpersonal behaviors, which can lead to dissatisfaction in relationships (Vater & Schröder-Abé, 2015). These personality vulnerabilities can result in feelings of loneliness (Buecker et al., 2020).

Neuroticism is defined as the tendency to frequently experience intense negative emotions associated with a perceived lack of control, seen as an inadequate coping capacity in response to stressful situations (Barlow et al., 2014). Rotter (1966) highlights that in research regarding locus of control, individuals who report an external locus of control score higher levels of neuroticism.

Neuroticism is strongly associated with a wide range of mental disorders, including comorbidities such as anxiety disorders, affective disorders, substance abuse, somatic manifestations, and eating disorders (Bagby et al., 2017; Widiger, 2009). Neuroticism represents a vulnerability factor for the development of these conditions, as well as a tendency to exaggerate their significance and a reduced capacity to respond effectively to treatment. Furthermore, neuroticism is associated with a low quality of life, including feelings of hostility, excessive worry, professional failure, and marital dissatisfaction (Ozer & Benet-Martínez, 2006).

### Loneliness

Loneliness, described as a subjective emotional experience, occurs when individuals feel that their social relationships are insufficiently satisfying either quantitatively or qualitatively (Perlman & Peplau, 1981).

Unlike physical isolation, loneliness stems from the perception of being disconnected or lacking support, regardless of actual social circumstances. This phenomenon is universal, transcending cultural boundaries, although its causes and consequences are deeply personal and closely tied to context. Research shows that a significant portion of the population experiences loneliness. Approximately 40% of adults in the United States report feeling lonely, and this percentage has increased in recent years due to factors such as social isolation, the rise in digital communication, and societal changes (Cacioppo et al., 2010).

Demographic factors such as age and gender can influence the experience of loneliness. For example, elderly individuals are often considered more vulnerable due to the loss of life partners, friends, or reduced mobility. However, young people report loneliness just as frequently, especially in the context of technology-mediated interactions (Nowland et al., 2018).

There is a vast body of research exploring the effects of loneliness as well as the role of social support. In the study conducted by Liu et al. (2016), "Social support mediates loneliness and depression in elderly people", several possible causes of loneliness were highlighted, including qualitative and quantitative deficiencies in a person's social connections. Loneliness was described as an internal and deeply subjective experience, thus differing from social isolation. One aspect of the study that differs from the present research is the way loneliness was conceptualized. While Liu et al. (2016) emphasized the existence of two types of loneliness — social and emotional — the present study focuses on global loneliness, conceptualized as a whole.

Emotional loneliness is caused by the absence of close attachment bonds with another person, often experienced by individuals who have lost loved ones or gone through separation (Liu et al., 2016). Social loneliness is caused by the lack of a social network in which interests and common activities are shared (Liu et al., 2016). Researchers have also classified social support into four distinct subtypes: emotional, instrumental, evaluative, and informational (Sarason et al., 1990). The present research will explore social support both in its physical form (friend groups, family) and through social networks.

### Consequences of Loneliness

Loneliness is increasingly recognized as a critical factor in health outcomes, with an impact comparable to smoking or obesity (Holt-Lunstad et al., 2010). According to Cacioppo and colleagues (2015), chronic loneliness can affect physical health by increasing stress levels, weakening the immune system, and heightening the risk of cardiovascular disease. This is due to the prolonged activation of the biological "fight or flight" response in the absence of adequate social support.

Furthermore, loneliness is closely linked to depression, anxiety, and other mental health disorders (Holt-Lunstad et al., 2010).

Social relationships play a crucial role in human well-being; research consistently shows the protective effects of social support and integration on morbidity and mortality rates. However, loneliness and social isolation are often overlooked despite their serious public health risks, with mortality rates comparable to well-known risk factors such as smoking, or their

alarming influence on decreased physical activity and obesity (Gerst-Emerson & Jayawardhana, 2015).

**Social Support**

Social support refers to the emotional resources that a person receives from others. This type of support may include help provided by friends, family, colleagues, or communities, being an important factor in managing stress and promoting general well-being (Cohen & Wills, 1985). Social relationships exist along a broad spectrum, from the intimacy between lovers to impersonal commercial transactions. As connections vary greatly in intensity and quality, difficulties may arise in establishing a convention or a universal understanding of the concept of social support. The concept has been influenced by various schools of thought, such as Durkheim's (1951) development of the idea of anomie, Cooley's (1909) concept of the primary group, and Bowlby's ideas on attachment (1971). It can be analyzed from the perspective of its social function for individuals, namely in terms of satisfying their needs. It also plays an important role in maintaining relationships at the societal level (Alloway & Bebbington, 1987). Social support is usually measured either in terms of the structure of a social network or as the support functions that network members provide (Willis, 1998). Structural social support, also conceptualized as social integration, encompasses a large number of social ties in which the individual is involved and the nature of all the connections they have. Social integration is globally assessed by the number of relationships and social roles a person has, the frequency of contact with network members, and the density and depth of relationships within the social group (Friedman, 2014)

**Literature Review**

Considerable effort has been devoted to researching the relationship between social support and health-promoting behaviors. Preliminary research has explored the possibility that social support positively affects people's health habits, which in turn may impact the individual's overall health. For example, links have been found between family life and a multitude of healthy habits, such as a lower likelihood of substance abuse or smoking and a higher likelihood of having a balanced diet and quality sleep (Umberson, 1987). Moreover, social support is associated with a variety of health benefits and represents a protective factor for individuals at health risk or with chronic illnesses. These include reduced complications during pregnancy (Collins et al., 1993), lower rates of myocardial infarction in diagnosed patients, and lower mortality rates for such individuals (Kulik & Mahler, 1993). In the literature, there are two main hypotheses centered on the beneficial role of social support. The first hypothesis, also called the direct effects hypothesis, claims that social support benefits physical and mental well-being equally during both stressful and non-stressful periods of a person's life. The second hypothesis, the buffering hypothesis, argues that the mental health benefits of social support are much more apparent during periods of acute stress, while in periods of mild stress its effects are not as significant (Friedman, 2014). Social support acts as a stored reserve, a resource that dampens the effects of stress and enables the individual to more effectively manage adversity (Cohen & Wills, 1985)

**The Buffer Theory**

The buffer theory postulates that social support moderates the impact of psychosocial adversity and the likelihood of triggering episodes of illness. In the research conducted by Alloway and Bebbington (1987), the impact of social support was examined in the context of psychiatric disorders, with the study focused on minor conditions such as depression or mild anxiety. The research explores social support at two levels of functioning: the preventive level, where social support can reduce the risk of developing mental disorders before the illness sets in, and the containment level, where it can prevent the worsening of symptoms after the illness appears. The study explores two levels at which social support can act. The term has been used to describe at least three types of relationships. The additive approach considers that low social support adds to the effect of adversity, since the difference in case rates under conditions of high and low adversity is greater where social support is absent. On the other hand, the multiplicative approach concludes that social support and adversity act independently on the rate of disorders: low social support doubles the proportion of cases regardless of adversity level, while adversity triples it regardless of social support level. In another example, the buffering effect is evident in both the additive and multiplicative approaches. Low social support adds to the effect of adversity in the emergence of disorders and there is also a synergy: the proportion of cases in the group with low social support and high adversity is greater than the product of proportions when only one of the risk factors is present. This points to a mutual aggravation of the two problems, with their combined effects being even greater than if they acted alone (Alloway & Bebbington, 1987). The research reveals modest correlations, with the main methodological difficulties being the diversity of definitions and measurements of the variable "social support" and the excessive number of conceptualizations of this construct in the specialized literature. Among the main limitations identified are: the evaluation of social support and possible biases in it, the weak link between social support and disorders, and the need for rigorous and improved research. The study suggests that social support should be assessed using reliable instruments, although this still relies on self-reports, which can lead to biased results.

**Social Media Use**

Social media networks are omnipresent in modern society and have changed the way people communicate with those around them. In the past two decades, social media networks have expanded exponentially, now including a variety of

websites and applications used by people of all ages around the world. Social media networks have been defined as web-based communication platforms with three distinct features, in which the platform 1) allows users to create unique profiles and content to share with other users, 2) creates a visible network of connections between users that can be explored by others, and 3) provides users with a space to broadcast content, consume information, and interact with others in a continuous flow of information (O'Day & Heimberg, 2021)

The use of social media has continued to grow significantly in recent years. Thus, in October 2024, the number of internet and social media users worldwide reached approximately 5.22 billion, representing 62.2% of the global population. These figures highlight the rapid expansion of digital platforms and their widespread adoption (Statista, 2024). Regarding Facebook, in November 2024, the platform reported a reach of 3.04 billion users in the Americas, thereby consolidating its position as the leading platform in this region. These data reflect Facebook's significant impact on users worldwide. Other social media platforms, such as Instagram and Snapchat, have become increasingly popular, especially among younger generations. 78% of young adults (aged 18 to 24) report using Snapchat, and 71% use Instagram, with most of them using these platforms daily or multiple times per day. Young adults are the generation that uses social media most frequently; 88% of individuals aged 18 to 29 indicate that they use social media in some form. Younger generations use multiple social media platforms several times a day, spending a large portion of their time online. Consequently, it is important to explore the role that social media use plays in loneliness.

## 2. METHOD

### Participants and procedure

The sample includes individuals of various ages and educational backgrounds, ranging from high school students and university students to employed persons, all from Romania. Participants were invited to complete a Google Form distributed via social media platforms such as Instagram and WhatsApp, which included a consent form at the beginning. As this was a convenience sample, the only inclusion criterion was that participants be over 18 years old. The sample consisted of a total of 152 individuals (n = 110, 72.4% women and n = 42, 27.6% men) aged between 18 and 56 years (M = 26.47, SD = 11.87), of whom 2 individuals did not provide consent to continue.

### Instruments

*Emotional stability* was measured using the Scale Factor IV [Emotional Stability] (International Personality Item Pool, n.d.). This inventory is part of the Personality domain [IPIP] and the Big-Five Factor Markers subdomain, consisting of 20 items that assess the level of emotional stability on a 5-point Likert scale (1 = "Strongly disagree" to 5 = "Strongly agree"). The version adapted for the Romanian population was used (Iliescu, Popa, & Dimache, 2015). Some example items include: "I rarely feel blue or melancholy.", "I get overwhelmed by emotions.", "I frequently experience mood swings." Previous studies have demonstrated good psychometric properties for the Factor IV [Emotional Stability] scale (e.g., Goldberg et al., 2006), which were also supported by the reliability analysis conducted in this study, using a Cronbach's alpha of .95.

*Loneliness* was measured using the UCLA Loneliness Scale – Version 3 (Russell, 1996), which consists of 20 items measured on a 4-point Likert scale (1 = "Always" to 4 = "Never"). Some example items include: "How often do you feel that you lack companionship?", "How often do you feel isolated from others?" Studies by Durak and Senol-Durak (2010) and Zarei et al. (2015) have highlighted the good psychometric properties of this scale, which were also confirmed by the reliability analysis conducted in this study, with a Cronbach's alpha of .93.

*Social support* was measured using the Perceived Social Support Scale (Russell & Cutrona, 1987). This self-report scale consists of 24 items that assess six dimensions of perceived social support (attachment, social integration, reassurance of worth, reliable alliance, guidance, and opportunity for nurturance) on a 4-point Likert scale (1 = "strongly disagree" to 4 = "strongly agree"). Each dimension includes four statements. Some example statements include: "I do not have close relationships with other people.", "I feel a strong emotional bond with at least one person in my life." (attachment); "There are no people who share my interests and concerns.", "There are people who admire me for my talents and abilities." (social integration); "I do not believe others respect what I do.", "There is no one who likes the things I do." (reassurance of worth); "I know there are people I can count on if I need help.", "If something went wrong in my life, there would be no one to help me." (reliable alliance); "There is no one I can turn to in times of stress.", "I have someone to talk to when making important decisions." (guidance); "There are people who rely on me for help.", "No one needs me." (opportunity for nurturance). Numerous previous studies have shown that the Perceived Social Support Scale has very good psychometric properties (e.g., Ross, Altmaier, & Russell, 1989; Kruger, 1997; Kruger, Struzziero, Watts, & Vacca, 1995; Russell, Altmaier, & Van Velzen, 1987; Winemiller, Mitchell, Sutliff, & Cline, 1993), a fact also supported by the reliability analysis conducted in this study, with a Cronbach's alpha of .94.

*Social media use* was measured using the Social Media Use Scale (SMUS; Tuck & Thompson, 2023). The Social Media Use Scale is a self-report questionnaire consisting of 17 items regarding the frequency of engagement in certain social media activities during the past 7 days, capturing four dimensions (image-based activity, comparison-based activity, belief-based activity, and content consumption style). It uses a 9-point Likert scale (1 = Never, 2 = 1–2 times per week, 3 = 3–4 times per

week, 4 = 5–6 times per week, 5 = Once per day, 6 = 2–5 times per day, 7 = 6–9 times per day, 8 = 10–13 times per day, 9 = Once an hour or more). The dimensions contain a varied number of items. The image-based activity dimension contains five items, including examples such as: "I edited and/or deleted my own content on social media.", "I played with photo filters/photo editing." The comparison-based dimension includes three items, such as: "I compared my life or experiences to others." The belief-based dimension is made up of four items, with examples like: "I searched for content I morally or ethically disagreed with.", "I commented in an unsupportive way or reacted negatively to someone else's post." The content consumption style dimension contains five items, including: "I browsed the pages of people I do not know (e.g., influencers or other famous people).", "I scrolled aimlessly through my feed.", "I watched videos such as memes, news content, or how-tos/recipes." The authors recommend randomizing the order of the items when administering the questionnaire. The Cronbach's alpha value calculated for the scale is .92.

**Study design**

The current study has a non-experimental, cross-sectional, and correlational design. Statistical analysis was conducted using the RStudio software (RStudio Team, 2023).

## 3. RESULTS

### Descriptive statistics

**Table 1**

*Correlations among the study variables*

| | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| 1.Neuroticism | | | | |
| 2.Loneliness | . 50*** | | | |
| 3.Social Support | . 36*** | . 76*** | | |
| 4.Social Media Use | 51*** | -.42*** | -. 35*** | |

Note: **p < .001

To test Hypothesis 1 (H1), a Pearson correlation analysis was conducted to determine whether there is a significant relationship between emotional instability (M = 62.19, SD = 0.84) and loneliness (M = 55.89, SD = 0.58). A statistically significant positive correlation was found between the two variables, r = .50, $r^2$ = .25, p < .001. The 95% confidence interval ranges between .36 and .60.

Using the ggplot2 and interactions packages, a multiple linear regression analysis was conducted (H2), implemented in R using the lm() function (linear model), to examine whether social support moderates the relationship between neuroticism (M = 62.19, SD = 0.84) and loneliness (M = 55.89, SD = 0.58). As shown in Table 2, the analysis indicated that social support does not moderate the relationship between neuroticism and loneliness. The plot in Figure 3 visually demonstrates that social support has no moderating effect on this relationship.

To test the third hypothesis (H3), a multiple regression analysis was performed using the lm() function in R to investigate whether social media use moderates the relationship between neuroticism (M = 62.19, SD = 0.84) and loneliness (M = 55.89, SD = 0.58). According to the results of this analysis (Table 2), no significant moderating effects of social media use were found in the relationship between neuroticism and loneliness. The plot in Figure 4 visually confirms that social media use does not moderate this relationship.

Social media use was measured across four dimensions: self-image-based, comparison-based, belief-based, and consumption-based use. To test the specific hypotheses, Pearson correlation analysis was conducted. A correlation of r = –.35, $r^2$ = .12, p < .001 was found between neuroticism and the self-image-based dimension. A correlation of r = –.46, $r^2$ = .21, p < .001 was found between neuroticism and the consumption-based dimension. A correlation of r = –.27, $r^2$ = .07, p < .001 was found between neuroticism and the belief-based dimension. A correlation of r = –.47, $r^2$ = .22, p < .001 was found between loneliness and the comparison-based dimension. A correlation of r = –.31, $r^2$ = .10, p < .001 was found between loneliness and the self-image-based dimension. A correlation of r = –.31, $r^2$ = .10, p < .001 was found between loneliness and the consumption-based dimension. A correlation of r = –.30, $r^2$ = .09, p < .001 was found between loneliness and the belief-based dimension. A statistically significant negative correlation was also found between neuroticism (M = 62.19, SD = .84) and the comparison-based dimension of social media use, r = –.56, $r^2$ = .31, p < .001. Since all resulting correlations are negative, none of the specific hypotheses are supported.

**Table 2**

*Correlation Between Neuroticism and Social Media Use Dimensions*

| | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| 1.Neuroticism | | | | | |
| 2.SMUS_comparison | -. 56*** | | | | |
| 3.SMUS_image | -. 35*** | . 66*** | | | |
| 4.SMUS_consumption | -. 46*** | . 71*** | . 55*** | | |
| 5.SMUS_belief | -. 27*** | . 53*** | . 54*** | . 41*** | |

*Note*: *** p < .001, SMUS = Social Media Use Scale

**Table 3**

*Correlation Between Loneliness and Social Media Use Dimensions*

| | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| 1.Loneliness | | | | | |
| 2.SMUS_comparison | -. 47*** | | | | |
| 3.SMUS_image | -. 31*** | . 66*** | | | |
| 4.SMUS_consumption | -. 31*** | . 71*** | . 55*** | | |
| 5.SMUS_belief | -. 30*** | . 53*** | . 54*** | . 41*** | |

*Note*: *** p < .001, SMUS = Social Media Use Scale

## 4. DISCUSSIONS

The aim of this study was to analyze the level of social support and the ways individuals with high levels of neuroticism and perceived loneliness use social media, as well as to examine whether perceived social support and specific patterns of social media use—across four dimensions—moderate the relationship between emotional instability and loneliness.

The results supported only one of the four hypotheses (H1). Specifically, the hypothesis stating that there is a significant relationship between emotional instability and loneliness was confirmed. However, social support did not have a statistically significant moderating effect on the relationship between neuroticism and loneliness, nor did social media use moderate this relationship. The four social media use dimensions—self-image-based, comparison-based, belief-based, and consumption-based—showed weak to moderate negative correlations with both loneliness and neuroticism, thereby refuting the specific hypotheses. These findings are consistent with previous research in the field. Emotional instability has been positively associated with loneliness (Hensley et al., 2012; Teppers et al., 2013; Vanhalst et al., 2012). Indirect evidence suggests that neuroticism is linked to heightened reactivity to social stressors (Zautra et al., 2005). Some individuals may chronically experience high or low levels of loneliness, while others may undergo more frequent fluctuations.

Such individual differences in internal variability may stem from different reactivity to the social environment (van Roekel et al., 2018). For instance, if both a more neurotic and a less neurotic person go through similar situations, but only the more neurotic person feels lonely when truly alone, they will experience greater situational fluctuations in loneliness than the less neurotic individual. Thus, different reactivity to social stress may help explain why personality traits can be associated both with average levels and with situation-based variability in loneliness (Shrestha et al., 2025).

Contrary to previous literature, no significant moderating effect of social support (H2) or social media use (H3) on the relationship between neuroticism and loneliness was found. One explanation might be that individuals with high levels of neuroticism may interpret social interactions negatively, even when those interactions are well-intentioned, thereby reducing the beneficial impact of perceived support. Moreover, the quality of social support—in terms of emotional closeness, trust, and alignment between expectations and reality—may be more important than its quantity, and the measures used in this study may not have adequately captured these qualitative aspects.

Regarding H3, which hypothesized that different ways of using social media would moderate the relationship between neuroticism and loneliness, although the analyzed dimensions of social media use (self-image-based, comparison-based, belief-based, and consumption-based) showed weak or moderate negative correlations with both neuroticism and loneliness, they did not have a significant moderating effect. This suggests that while the way individuals use social media correlates with personality traits and emotional states, these platforms do not seem to buffer or intensify the direct relationship between neuroticism and loneliness.

### Limitations

The research design was cross-sectional, therefore no conclusions regarding causality can be drawn, and it also prevents verification of response consistency over time. Additionally, the small sample size limited the accuracy of

statistical analyses. The study used a convenience sample, and the age differences among participants were large (18 years – 56 years), meaning the results cannot be generalized to the entire population. 72.4% of respondents were female and only 27.6% were male, which also limits the generalizability of the results.

**Conclusions**

This study yielded results inconsistent with the existing literature; individuals with a high level of neuroticism did not experience a reduction in feelings of loneliness through social support or social media use. Therefore, future research is needed to better explain the conditions under which social support, social media usage behaviors, emotional instability, and feelings of loneliness manifest among people.

## 5. REFERENCES


Alloway, R., & Bebbington, P. (1987). The buffer theory of social support – A review of the literature. *Psychological Medicine, 17*(1), 91–108. https://doi.org/10.1017/S0033291700013015

Bagby, R. M., Uliaszek, A. A., & Gralnick, T. M. (2017). In T. A. Widiger (Ed.), The Oxford handbook of the five factor model. Oxford University Press.

Barlow, D. H., Ellard, K. K., Sauer-Zavala, S., Bullis, J. R., & Carl, J. R. (2014). The origins of neuroticism. *Perspectives on Psychological Science, 9*(5), 481–496. https://doi.org/10.1177/1745691614544528

Bowlby, J. (1971). *Attachment and loss*: Vol. 1. Attachment. Penguin.

Buecker, S., Maes, M., Denissen, J. J. A., & Luhmann, M. (2020). Loneliness and the Big Five personality traits: A meta-analysis. *European Journal of Personality, 34*(1), 8–28. https://doi.org/10.1002/per.2229

Cacioppo, J. T., Cacioppo, S., & Boomsma, D. I. (2015). Evolutionary mechanisms for loneliness. *Cognition and Emotion, 29*(1), 3–26. https://doi.org/10.1080/02699931.2014.720411

Cacioppo, J. T., Hawkley, L. C., & Thisted, R. A. (2010). Perceived social isolation makes me sad: 5-year cross-lagged analyses of loneliness and depressive symptomatology in the Chicago Health, Aging, and Social Relations Study. *Psychology and Aging, 25*(2), 453–463. https://doi.org/10.1037/a0017216

Cohen, S., & Wills, T. A. (1985). Stress, social support, and the buffering hypothesis. Psychological Bulletin, 98(2), 310–357. https://doi.org/10.1037/0033-2909.98.2.310

Collins, N. L., Dunkel-Schetter, C., Lobel, M., & Scrimshaw, S. C. (1993). Social support in pregnancy: Psychosocial correlates of birth outcomes and postpartum depression. *Journal of Personality and Social Psychology, 65*(6), 1243–1258. https://doi.org/10.1037/0022-3514.65.6.1243

Cooley, C. H. (1909). *Social organisation: A study of the larger mind*. Charles Scribner's Sons.

Denissen, J. J. A., & Penke, L. (2008). Neuroticism predicts reactions to cues of social inclusion. *European Journal of Personality, 22*, 497–517. https://doi.org/10.1002/per.682

Durak, M., & Senol-Durak, E. (2010). Psychometric qualities of the UCLA Loneliness Scale-Version 3 as applied in a Turkish culture. *Educational Gerontology, 36*(10–11), 988–1007. https://doi.org/10.1080/03601271003756628

Durkheim, E. (1951). *Suicide: A study in sociology* (J. A. Spaulding & G. Simpson, Trans.). Free Press.

Friedman, H. S. (2014). *The Oxford handbook of health psychology*. Oxford University Press.

Gerst-Emerson, K., & Jayawardhana, J. (2015). Loneliness as a public health issue: The impact of loneliness on health care utilization among older adults. *American Journal of Public Health, 105*(5), 1013–1019. https://doi.org/10.2105/AJPH.2014.302427

Goldberg, L. R., Johnson, J. A., Eber, H. W., Hogan, R., Ashton, M. C., Cloninger, C. R., & Gough, H. C. (2006). The international personality item pool and the future of public-domain personality measures. *Journal of Research in Personality, 40*, 84–96. https://doi.org/10.1016/j.jrp.2005.08.007

Hensley, B., Martin, P., Margarett, J. A., MacDonald, M., Siegler, I. C., & Poon, L. W. (2012). Life events and personality predicting loneliness among centenarians: Findings from the Georgia Centenarian Study. *The Journal of Psychology, 146*(1–2), 173–188. https://doi.org/10.1080/00223980.2011.613874

Holt-Lunstad, J., Smith, T. B., & Layton, J. B. (2010). Social relationships and mortality risk: A meta-analytic review. *PLOS Medicine, 7*(7), e1000316. https://doi.org/10.1371/journal.pmed.1000316

Iliescu, D., Popa, M., & Dimache, R. (2015). Adaptarea românească a Setului Internaţional de Itemi de Personalitate: IPIP-Ro. *Psihologia Resurselor Umane, 13*(1), 83–112.

International Personality Item Pool: A Scientific Collaboratory for the Development of Advanced Measures of Personality Traits and Other Individual Differences. (n.d.). http://ipip.ori.org

Kulik, J. A., & Mahler, H. I. M. (1993). Emotional support as a moderator of adjustment and compliance after coronary artery bypass surgery: A longitudinal study. *Journal of Behavioral Medicine, 16*(1), 45–63. https://doi.org/10.1007/BF00844754

Liu, L., Gou, Z., & Zuo, J. (2016). Social support mediates loneliness and depression in elderly people. *Journal of Health Psychology, 21*(5), 750–758. https://doi.org/10.1177/1359105314536941

Nowland, R., Necka, E. A., & Cacioppo, J. T. (2018). Loneliness and social internet use: Pathways to reconnection in a digital world? *Perspectives on Psychological Science, 13*(1), 70–87. https://doi.org/10.1177/1745691617713052

O'Day, E. B., & Heimberg, R. G. (2021). Social media use, social anxiety, and loneliness: A systematic review. *Computers in*

*Human Behavior Reports, 3*, 100070. https://doi.org/10.1016/j.chbr.2021.100070

Ozer, D. J., & Benet-Martínez, V. (2006). Personality and the prediction of consequential outcomes. *Annual Review of Psychology, 57*, 401–421. https://doi.org/10.1146/annurev.psych.57.102904.190127

Perlman, D., & Peplau, L. A. (1981). Toward a social psychology of loneliness. In S. Duck & R. Gilmour (Eds.), *Personal relationships in disorder* (Vol. 3, pp. 31–56). Academic Press.

Ross, R. R., Altmaier, E. M., & Russell, D. W. (1989). Job stress, social support, and burnout among counseling center staff. *Journal of Counseling Psychology, 36*(4), 464–470. https://doi.org/10.1037/0022-0167.36.4.464

Rotter, J. B. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs: General and Applied, 80*(1), 1–28. https://doi.org/10.1037/h0092976

RStudio Team. (2023). *RStudio: Integrated development for R* (Version 2023.06.1) [Computer software]. Posit, PBC. https://posit.co/

Russell, D. W. (1996). UCLA Loneliness Scale (Version 3): Reliability, validity, and factor structure. *Journal of Personality Assessment, 66*(1), 20–40. https://doi.org/10.1207/s15327752jpa6601_2

Russell, D., & Cutrona, C. E. (1987). *The Social Provisions Scale: A multidimensional measure of perceived social support. Manuscript in preparation.*

Sarason, B. R., Sarason, I. G., & Pierce, G. R. (1990). *Social support: An interactional view*. Wiley.

Shrestha, S., Sigdel, K., Pokharel, M., & Columbus, S. (2025). Big Five traits predict between- and within-person variation in loneliness. *European Journal of Personality, 39*(1), 90–104. https://doi.org/10.1177/08902070241239834

Statista. (2024). *Digital population worldwide as of October 2024*. https://www.statista.com/statistics/273018/number-of-internet-users-worldwide/

Teppers, E., Klimstra, T. A., van Damme, C., Luyckx, K., Vanhalst, J., & Goossens, L. (2013). Personality traits, loneliness, and attitudes toward aloneness in adolescence. *Journal of Social and Personal Relationships, 30*(8), 1045–1063. https://doi.org/10.1177/0265407513481445

Turkle, S. (2011). *Alone together: Why we expect more from technology and less from each other*. Basic Books.

Vanhalst, J., Luyckx, K., Scholte, R. H. J., Engels, R. C. M. E., & Goossens, L. (2013). Low self-esteem as a risk factor for loneliness in adolescence: Perceived – but not actual – social acceptance as an underlying mechanism. *Journal of Abnormal Child Psychology, 41*(7), 1067–1081. https://doi.org/10.1007/s10802-013-9751-y

van Roekel, E., Verhagen, M., Engels, R. C. M. E., Scholte, R. H. J., Cacioppo, S., & Cacioppo, J. T. (2018). Trait and state levels of loneliness in early and late adolescents: Examining the differential reactivity hypothesis. *Journal of Clinical Child and Adolescent Psychology, 47*(6), 888–899. https://doi.org/10.1080/15374416.2016.1144193

Widiger, T. A. (Ed.). (2017). *The Oxford handbook of the five factor model.* Oxford University Press.

Willis, T. A., & Shinar, O. (2000). Measuring perceived and received social support. In S. Cohen, L. Underwood, & B. Gottlieb (Eds.), *Social support measurement and intervention* (pp. 86–135). Oxford University Press.