

The Mediating Roles of Neuroticism and Extraversion in the Relationship Between Thwarted Belongingness and Suicidal Ideation Among College Students

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The Asian Conference on the Social Sciences 2026
Official Conference Proceedings

Abstract

Suicide has long been recognized as a significant public health concern across countries worldwide. Although it has been extensively studied over the years, the World Health Organization (WHO, 2025) disclosed that the availability and quality of data on suicide and self-harm is poor. The present study examined the mediating roles of extraversion and neuroticism in the relationship between thwarted belongingness and suicidal ideation among university students. A total of 354 respondents from various colleges and universities in Metro Manila, Philippines, completed standardized questionnaires. Using mediation analysis via PROCESS Model 4 (Hayes, 2022), findings revealed that both personality traits served as partial mediators between thwarted belongingness and suicidal ideation. As expected, neuroticism heightened vulnerability to suicidal ideation, consistent with its established role as a risk factor. Surprisingly, extraversion which typically considered a protective trait was also found to have a positive association with suicidal ideation. This unexpected finding provides insight into why some individuals who appear happy, sociable, and energetic when surrounded by others may still harbor hidden suicidal thoughts and, in some cases, take their own lives.

Keywords: extraversion, neuroticism, suicidal ideation, thwarted belongingness

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Introduction

Suicide has long been recognized as a significant public health concern across countries worldwide. In fact, in the Philippines the suicide rate was 2.5 per 100, 000 population in 2019 (Department of Health, 2019). And in recent data from World Health Organization , roughly 720, 000 people between 15–29 years old die due to suicide every year (WHO, 2025).

The American School Counselor Association (ASCA) recognizes responding to and intervening in youth suicidal behavior as a critical responsibility of school counselors. This aligns with the position of the National Educators Academy of the Philippines (NEAP), which emphasizes the importance of suicide prevention and the promotion of positive mental health within school settings.

It is important to note that suicide attempts often stem from suicidal ideation. According to Thomas Joiner's Interpersonal Theory of Suicide (2005), understanding the development of suicidal ideation involves recognizing the interaction of three critical components. First is thwarted belongingness, which refers to a deep sense of isolation or the absence of meaningful social connections. Second is perceived burdensomeness, or the belief that one's existence is a burden to others and that they are more of a problem than a help. Lastly, acquired capability for suicide develops over time through repeated exposure to pain or traumatic experiences, which reduces a person's fear of death and increases their tolerance for physical or emotional suffering.

The Centers for Disease Control and Prevention (2024) stated that suicide is seldom the result of just one event or circumstance. Instead, it is influenced by a combination of individual, relationship, community, and societal risk factors. Thus, the current study examined the mediating roles of these personality traits, specifically neuroticism and extraversion. Thereby assessing polarities of personality traits which known as a risk factor (neuroticism) and resiliency factor (extraversion) in relation to mental health outcomes.

Literature Review

Five-Factor Model by Robert McCrae and Paul Costa Jr. is one of the most influential frameworks in personality psychology. Healthy personality profiles are generally characterized by low levels of neuroticism and high levels of extraversion, conscientiousness, agreeableness, and openness (Belidorn et al., 2020; Struijs et al., 2021).

Meanwhile, individuals high in neuroticism are often anxious, self-critical, tense, irritable, and emotionally unstable, while those low in neuroticism—or emotionally stable—tend to be calm, confident, and resilient. Numerous studies have shown that neuroticism is closely associated with heightened negative emotional responses, which may contribute to prolonged emotional distress (Silverman et al., 2019).

In addition, individuals high in neuroticism may be more likely to engage in unhealthy coping strategies such as substance abuse, which further elevates their risk of suicidal thoughts and behaviors (Johansen, C., 2019).

However, not all findings portray neuroticism solely as a risk factor. Rappaport et al. (2017) suggested that high neuroticism might also serve a protective function against suicide attempts.

They argued that the increased emotional awareness associated with neuroticism could foster introspection and caution, potentially preventing the transition from ideation to action.

On the other hand, extraversion is linked to positive emotions, but also to emotional resource depletion, which can lead to exhaustion. According to the Conservation of Resource theory, when people lack emotional resources, they experience exhaustion (Li & Xu, 2020).

There were studies that supported the claim that extraversion could dramatically lower suicide ideation levels; among people with strong extraversion scores, ideation levels could drop by up to 14%. It was believed that the social networks and positive emotional experiences of extraverted people were the source of this protective effect (DeShong et al., 2015).

The interplay of extraversion and neuroticism is an important factor in understanding the development of suicidal ideation. While neuroticism generally predicts higher suicidal ideation, extraversion can mitigate its impact by fostering resilience through social support and positive emotional experiences (McDaniel et al., 2022). This highlights the importance of considering both traits in understanding and addressing suicide risk.

Problem Statement

The purpose of this study was to examine the development of suicidal ideation by investigating the mediating roles of neuroticism and extraversion within the present context. Specifically, the study aimed to understand how these personality traits influenced the relationship between thwarted belongingness and suicidal thoughts, with an emphasis on contemporary factors such as social isolation and emotional regulation.

By exploring how neuroticism and extraversion shaped an individual's vulnerability to suicidal ideation in the current socio-cultural environment, this research sought to deepen our understanding of the psychological mechanisms underlying suicide risk and inform more tailored interventions.

Research Questions

This study explored and understand the linkages of the following variables by answering these questions:

1. What is the level of thwarted belongingness, suicidal ideation, extraversion, and neuroticism among first year and second year college students?
2. Does Thwarted Belongingness predict Suicidal Ideation among college students?
3. Does Neuroticism and Extraversion mediate the relationship between Thwarted Belongingness and Suicidal Ideation?

Hypotheses

The researcher presented the following hypothesis, in accordance with the study's primary objective:

1. Individuals with high levels of thwarted belongingness will report higher levels of suicidal ideation compared to those with lower levels.
2. Neuroticism and Extraversion mediates the relationship between Thwarted Belongingness and Suicidal Ideation.

Methodology

The study utilized mediation analysis to explore the underlying mechanisms linking thwarted belongingness to suicidal ideation, specifically focusing on the mediating roles of neuroticism and extraversion.

Mediation analysis, as described by Hayes (2022), is a statistical technique that tests whether the relationship between an independent variable (X) and a dependent variable (Y) is explained, in part or in full, by a third variable called a mediator (M). The PROCESS macro for SPSS, developed by Andrew Hayes, was employed to conduct this analysis. This method enabled the quantification of both direct and indirect effects, offering deeper insight into how personality traits influence the relationship between social disconnection and suicidal thoughts.

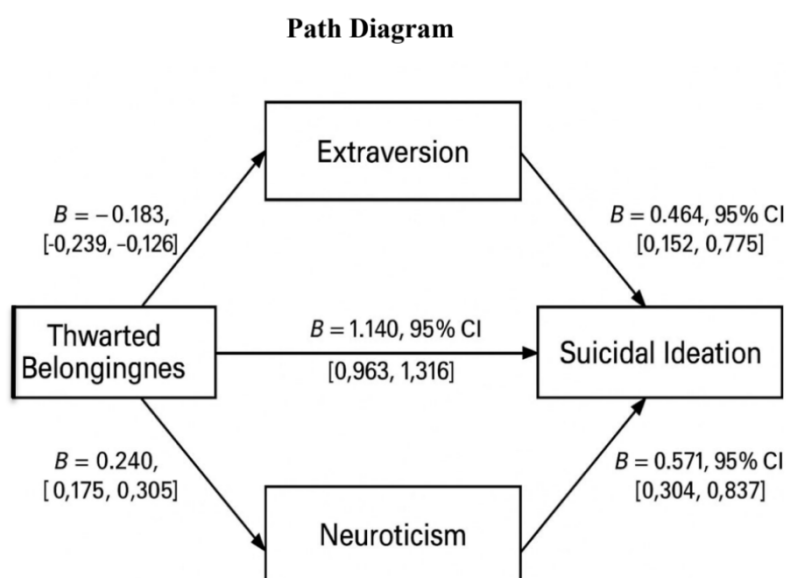
Population and Sample

The sample included 354 students drawn from public and private universities. A random sampling method was used to ensure diversity. The study employed a set of reliable and validated questionnaires, including the Big Five Personality Test (BFPT), the Thwarted Belongingness Scale (TBS), and the Suicidal Ideation Questionnaire (SIQ). The data collection process ensured informed consent from all participants, with additional psychological resources provided. The data were analyzed using SPSS and the PROCESS Model 4, with bootstrapping employed to confirm the significance of the mediation effects. Ethical considerations were rigorously followed, ensuring participant welfare and confidentiality throughout the study.

Results and Discussion

Figure 1

Path Model Showing the Mediating Roles of Extraversion and Neuroticism in the Relationship Between Thwarted Belongingness and Suicidal Ideation



Level of the Variables and Its Implications

The results indicate that respondents experience a notable sense of social disconnection, suggesting that some may feel isolated or lack meaningful interpersonal relationships. This finding is important because a weakened sense of belonging can increase vulnerability to emotional distress. The variability observed in suicidal ideation further suggests that while some respondents report few or no suicidal thoughts, others may be experiencing higher levels of psychological strain, highlighting the need for continued mental health support and monitoring.

In terms of personality traits, respondents demonstrated a moderate level of extraversion, indicating a general willingness to engage in social interactions and build relationships with others. However, the elevated level of neuroticism suggests that many respondents may be more prone to stress, anxiety, and emotional fluctuations. Taken together, these findings emphasize the importance of fostering supportive social environments and promoting emotional coping skills to enhance overall well-being.

The Direct Effect of Thwarted Belongingness to Suicidal Ideation

The findings suggest that college students who experience greater feelings of social disconnection and lack of belonging are more likely to report higher levels of suicidal ideation. This relationship highlights the important role of social connectedness in protecting students' mental health and is consistent with previous studies in the literature.

The Interplay of the Variables

The findings suggest that personality traits help explain how thwarted belongingness is related to suicidal ideation. Specifically, individuals who feel more socially disconnected tend to exhibit higher levels of neuroticism, which may make them more vulnerable to stress, anxiety, and negative emotions. As a result, they may be more likely to experience suicidal thoughts.

Interestingly, extraversion was also associated with higher suicidal ideation. Although extraversion is often viewed as a protective trait, this finding suggests that individuals who value social interaction may be more affected when they feel disconnected from others.

Overall, the results indicate that both emotional vulnerability (neuroticism) and unmet social needs among more sociable individuals (extraversion) may strengthen the link between social disconnection and suicidal ideation.

Conclusion

The findings of this study highlight the important role of social connectedness and personality traits in understanding suicidal ideation among college students. The results showed that many students experience feelings of social disconnection, elevated emotional vulnerability, and varying levels of suicidal thoughts. Furthermore, students who reported greater feelings of not belonging were more likely to experience suicidal ideation, emphasizing the importance of fostering supportive and inclusive environments within higher education institutions.

The study also demonstrated that neuroticism and extraversion influence how thwarted belongingness relates to suicidal ideation. Specifically, emotional instability and individual

differences in sociability help explain why socially disconnected students may be more vulnerable to suicidal thoughts. Overall, these findings suggest that suicide prevention efforts in colleges should focus not only on strengthening students' sense of belonging but also on promoting emotional well-being and providing support that considers individual personality characteristics.

In the Filipino context, this result may be partly understood through the concept of *pakikipagkapwa*, a core value in Filipino psychology that emphasizes shared identity, harmonious relationships, and concern for others. Because Filipinos are socialized to maintain interpersonal connections and prioritize group harmony, individuals may continue to appear socially engaged and approachable even while experiencing significant emotional struggles. As a result, sociability may not always reflect psychological well-being, as some individuals may conceal their distress to avoid burdening others, disrupting relationships, or causing concern within their social networks. This highlights the importance of looking beyond outward social behavior and fostering environments where individuals feel safe expressing emotional difficulties and seeking support when needed.

Declaration of Generative AI and AI-Assisted Technologies in the Writing Process

The author declares that Grammarly, ChatGPT, and Scibbr, an AI-assisted writing software, was used in proofreading and refining the language used in the manuscript. The usage was limited to correcting grammatical and spelling errors and rephrasing statements for accuracy and clarity. The author further declares that, apart from Grammarly, no other AI or AI-assisted technologies have been used to generate content in writing the manuscript. The ideas, design, procedures, findings, analyses, and discussion are originally written and derived from careful and systematic conduct of the research.

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