

## Mediating Role of Emotion Regulation on the Relationship between Fear of Negative Evaluation, Thwarted Belongingness, Perceived Burdensomeness, and Suicidal Ideation

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### Abstract

Suicide prevention research is extensive, yet studies that specifically examine the role of emotion regulation as a mediator remain limited. Therefore, this study aimed to explore the mediating role of emotion regulation on the relationship among fear of negative evaluation (FNE), thwarted belongingness (TB), perceived burdensomeness (PB), and suicidal ideation. The study adopted a cross-sectional study design. The participants were 291 (148 males (50.86%) and 143 females (49.14%)) undergraduate students selected using a convenience sampling technique. Their ages ranged from 18-30 years (*Mean age* = 22.38, *SD* = 2.90). The Suicide Ideation Scale-Revised, the Interpersonal Needs Questionnaire, the Brief Fear of Negative Evaluation Questionnaire, and the Brief Emotion Regulation Scale (cognitive reappraisal and expressive suppression subscales) were used for data collection. Data were analysed using Model 4 of the Hayes PROCESS Macro in SPSS version 25. The findings of the study showed that FNE, TB, PB, and expressive suppression were positively associated with suicidal ideation, while cognitive reappraisal was negatively associated with suicidal ideation. Expressive suppression partially mediated the relationship among FNE, TB, and suicidal ideation. Cognitive reappraisal partially mediated the relationship among FNE, PB, and suicidal ideation. The findings of the study have a strong implication for mental health providers and anti-suicide advocates, as they contribute to the understanding of factors that exacerbate suicidal ideation among undergraduate students. The study also highlights the need for familiarising students with more adaptive coping mechanisms to face the pressures of university life.

**Keywords:** emotion regulation, fear of negative evaluation, perceived burdensomeness, suicidal ideation, thwarted belongingness

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## Introduction

Suicide is both a national and an international phenomenon. Every year, despite all the efforts of clinicians and researchers to prevent or reduce suicidal ideation and attempts, its rate is on the rise (Levi-Belz et al., 2019). Suicidal ideation can be defined as thoughts, ideas, or preoccupations about ending one's life. These range from fleeting considerations to detailed planning, but they do not involve the act of attempting suicide (Muela et al., 2024). Suicidal individuals typically feel that suicide is the best solution to their difficulties (Harmer et al., 2024). Suicidal ideation is a significant indicator of psychological distress and a risk factor for suicide attempts and completion. It is often associated with mental health conditions such as depression, anxiety disorders, substance use disorders, and interpersonal or situational crises (Andersson et al., 2022; Harmer et al., 2024). One of such interpersonal or situational crisis that triggers suicidal ideation is the fear of negative evaluation (FNE).

FNE concerns fear of other people's judgment, distress of being judged poorly by them, avoidance of situations to be judged, and expectancy that others will judge the self negatively (Ann Riya, 2024). The Cognitive Theory of Social Anxiety (Clark & Wells, 1995) argues that this fear could result from skewed information processing or maladaptive appraisal of social situations, specifically when an unsettling incident grows nearby. This fear can be particularly acute for students due to the academic and social pressures in educational settings (Downing et al., 2020). FNE may be exacerbated among students through frequent assessments, competitive grading systems, critical or unsupportive public feedback, peer competition for grades, scholarships, recognition, bullying, and pervasive use of social media platforms (Preston et al., 2023). One potential consequence of FNE can be suicidal ideation.

The interpersonal theory of suicide (Joiner, 2005; Van Orden et al., 2010) posits that the absence of a sense of belonging or the perception of one's existence as burdensome can lead to substantial increases in the likelihood of suicidal thoughts and actions. The theory explains suicidal ideation through two main psychological states: thwarted belongingness (TB) and perceived burdensomeness (PB).

TB, which is a psychological fundamental need for connectedness, is characterised by two primary components: loneliness and the absence of reciprocal care (Van Orden et al., 2010). Loneliness refers to the subjective perception of being alone or isolated. At the same time, the absence of reciprocal care means the lack of relationships where individuals feel that others genuinely care about them and their well-being. This social disconnection can be particularly pronounced among students navigating complex social landscapes and developmental challenges (Milloria et al., 2024). This feeling of not being an integral part of a social group can be caused by a lack of supportive connections, feelings of exclusion, or difficulties forming meaningful interpersonal bonds (Shen et al., 2022). This disconnection is extremely important for undergraduate students since social relationships at this stage are crucial to their emotional and psychological stability. Such TB may stem from strained relations with peers, feelings of rejection, or an inability to form or sustain close bonds (de Grandpre et al., 2024; Glenn et al., 2022).

On the other hand, PB is a concept often associated with feelings and thoughts of not wanting to burden those around oneself. This concept has been examined extensively in the field of psychology, particularly about suicidality and mental health challenges (Arafat et al., 2022; Perez et al., 2024). This perception stems from distorted thinking, where a person believes that their life is a significant emotional, financial, or social burden to immediate relationships in one's life or society. Founded upon feelings of low self-estimation and worthlessness, PB brings about estrangement—the sense of detachment and never being wanted by others (Van Orden et al., 2010). It signals their subjective presence in the feelings

of negativity that the object of an individual's consciousness does not represent objective reality but is just the internalisation of negative estimates. Among vulnerable groups, such as undergraduate students, PB might emanate from academic struggles, unmet familial expectations, or financial dependency, all of which would increase the likelihood of mental health challenges (Luvira et al., 2023; Valdés et al., 2022). Moreover, cultural expectations in certain contexts—say, in Nigeria—would further heighten these perceptions because of the strong societal emphasis on family and community obligations (Alabi & Olonade, 2022).

Further, emotion regulation is a critical aspect of mental health that has been extensively studied within the field of psychology. It refers to monitoring, evaluating, and modifying one's emotional responses to cope with life stressors effectively (Aldao et al., 2010). McLaughlin et al. (2011) state that people are constantly exposed to potentially arousing stimuli; inappropriate, intense, or unregulated emotional responses to such events may impair effective social integration. Gross and John (2003) identified two aspects of emotion regulation: expressive suppression and cognitive reappraisal.

Expressive suppression is a common coping mechanism used to regulate emotions by inhibiting outward expression. This strategy involves consciously controlling one's emotions, thoughts, and behaviours to conform to societal norms or personal beliefs. On the other hand, cognitive reappraisal is a powerful emotion regulation strategy that involves changing how we think about a situation to alter our emotional response. It can challenge and re-evaluate maladaptive beliefs and thought patterns (Troy et al., 2018). By reframing the situation as less threatening or catastrophic, individuals can reduce the intensity of their emotional response and approach the situation more confidently and with composure.

Emotion regulation is a modifiable psychological construct, making it an actionable target for interventions aimed at preventing suicidal ideation. Studies (Colonnello et al., 2024; Kshtriya et al., 2022; Scafuto et al., 2024) suggest that identifying emotion regulation as a mediator could guide more personalised clinical care. Research further highlights that deficits in emotion regulation—such as difficulties in identifying and managing emotional responses—play a pivotal role in shaping suicidal thoughts (Mittermeier et al., 2024; Rogante et al., 2024; Turton et al., 2021). By targeting specific domains of emotion dysregulation, such as nonacceptance of emotional responses or lack of access to effective regulation strategies, clinicians can provide tailored interventions that address root causes rather than superficial symptoms. This targeted focus not only mitigates the immediate risk of suicide but also equips individuals with long-term emotional resilience. Hence, incorporating emotion regulation into treatment frameworks will ensure a more comprehensive and impactful approach to managing and preventing suicidal ideation among undergraduate students.

Furthermore, previous studies have extensively documented the relationships between FNE, TB, PB, and suicidal ideation among undergraduate students in Nigeria (Aroyewun et al., 2022; Iweama et al., 2024). More so, research has consistently demonstrated that difficulties in emotion regulation – such as poor emotional clarity, impulsivity, and a lack of effective coping strategies – are closely linked to suicidal ideation in this student population (Akpunne et al., 2022; Chukwuemeka & Obi-Nwosu, 2021). However, these studies primarily focus on the direct effects of these variables, leaving a significant gap in understanding the underlying mechanisms that connect them to suicidal ideation. By addressing this gap, this study contributes novel insights that extend beyond documenting direct relationships. Examining the mediating role of emotion regulation provides an opportunity to delve into why and how these psychosocial stressors translate into suicidal thoughts, offering a more comprehensive understanding of these relationships. This insight is essential to move beyond simplistic associations and into the realm of nuanced, process-based explanations.

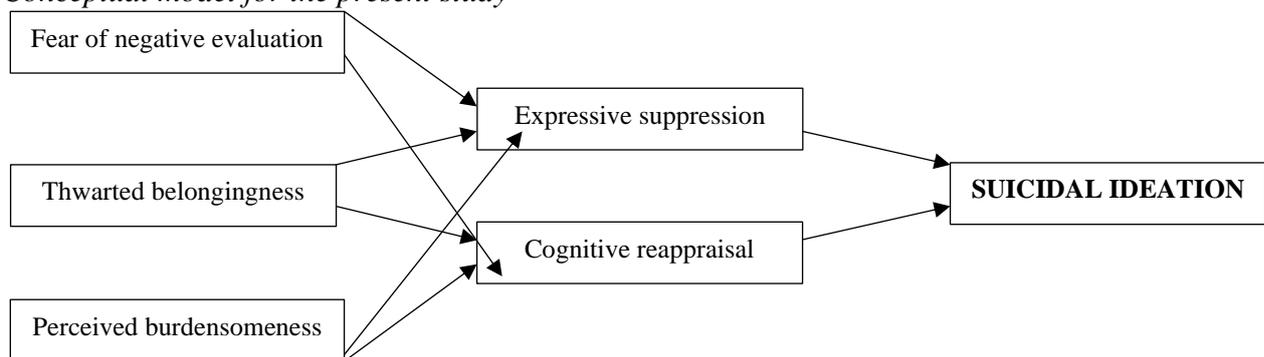
In light of the existing literature on suicidal ideation, it becomes evident that emotional regulation plays a crucial role in understanding the complex relationships between social stressors and suicidal thoughts.

### Theoretical background and development of hypotheses

According to Lazarus' (1966) cognitive-appraisal theories of emotion, a series of thoughts must occur before the experience or regulation of emotions. In this view, emotions are only elicited after an individual assesses an event or situation; that is to say, that individual reacts to experiences cognitively first, emotionally, and then physically. This posits that a situation's subsequent actions or emotions are not contingent on the situation itself but rather on an individual's subjective assessment of the circumstance. In addition, Lazarus (1966) asserted that individuals assess an event's insignificance, danger, or inconsequential nature concerning their well-being and capacity to contend with it. Folkman and Lazarus' (1988) stress and coping model explained that after a situation has been appraised, the individual uses strategies to either regulate the distressing emotion or change the problem causing such emotions. However, these strategies could be either adaptive or maladaptive. In application to the present study, after an individual assesses a series of events, they may develop feelings of FNE, TB or PB. As a means of coping, they may engage in maladaptive coping strategies such as suicidal ideation. The aim of the present study is summarised in the conceptual model presented in Figure I.

Figure 1.

*Conceptual model for the present study*



### *Fear of negative evaluation, thwarted belongingness, perceived burdensomeness, and suicidal ideation*

Individuals who experience high levels of FNE may be more likely to engage in suicidal ideation (Preston et al., 2023). This fear can lead to feelings of worthlessness, shame, and inadequacy, which may contribute to thoughts of self-harm or ending one's life (Lee et al., 2022). Individual's susceptible to negative evaluation may internalise these judgments and view themselves in a harsh and critical light (Rogier et al., 2023). This negative self-concept can fuel feelings of hopelessness and despair, increasing the likelihood of suicidal ideation as a means of escaping these painful thoughts and emotions. Moreover, FNE can also contribute to feelings of social isolation and loneliness (Shahul et al., 2022), which are known risk factors for suicidal ideation.

Moving on to TB, one of its key contributors among students is the prevalence of social rejection and bullying in academic settings (Brailovskaia et al., 2020; Liu et al., 2022). Students who are ostracised or bullied by their peers may internalise feelings of worthlessness and isolation, leading to an increased risk of suicidal ideation. Additionally, academic pressure and

competition can exacerbate feelings of inadequacy and social isolation, contributing to TB (Zhao & Ye, 2019). The intense pressure to perform academically can lead to feelings of inadequacy and isolation, especially if students perceive themselves as failing to meet expectations. This pressure can be compounded by a lack of support systems within educational institutions, where the focus on performance overshadows emotional and psychological well-being (Jiang et al., 2022). Furthermore, students with mental health issues may be more susceptible to suicidal ideation as they struggle to find a sense of belonging and purpose in their lives (Ambale et al., 2022; Kaur & Kang, 2020).

On the other hand, Iweama et al. (2024) discovered that PB was a significant predictor of suicidal ideation among a sample of college students. Undergraduate students experiencing PB often internalise feelings of worthlessness, inadequacy, and guilt, which can escalate into hopelessness—a major predictor of suicidal thoughts (Iweama et al., 2024). A study by Pérez et al. (2024) found that PB, when combined with feelings of TB, significantly predicted suicidal thoughts in young adults. Research in collectivist societies such as Nigeria highlights how perceived failure to meet family expectations or contribute to one's community can result in feelings of being a burden, leading to self-deprecating thoughts and increased vulnerability to suicidal ideation (Gleason, 2003; Jidong et al., 2024). This relationship remains strong even after controlling for depressive symptoms, underscoring the unique role of PB in predicting suicidal outcomes.

Despite the negative connotations associated with PB, it is essential to recognise that these feelings do not necessarily reflect reality. Individuals who perceive themselves as burdensome may not significantly burden others. Research has shown that individuals who are struggling with mental health difficulties may be a source of strength and support for their loved ones (Ong et al., 2021). Individuals can build healthier and more supportive relationships by reframing the narrative around PB and challenging negative beliefs about one's worth and value. One way of achieving this is through adequately regulating one's emotions.

Although these relationships have been investigated by previous studies as reviewed, the present study hopes to replicate the findings to strengthen scientific reliability by verifying whether the original study's results are consistent and reproducible, thereby providing a stronger empirical basis for theory development and intervention design. Additionally, replication allows researchers to test the stability of relationships between variables over time or in different contexts (Iso-Ahola, 2020). Populations such as undergraduate students may experience unique stressors (e.g., academic pressure and social expectations) that fluctuate across semesters or academic years. By repeating the study, this paper examines whether the psychological constructs of interest continue to predict suicidal ideation consistently. Hence, the present study tested the following hypotheses:

Hypothesis 1: There will be a significant positive relationship between FNE and suicidal ideation

Hypothesis 2: There will be a significant positive relationship between TB and suicidal ideation.

Hypothesis 3: There will be a significant positive relationship between PB and suicidal ideation.

### ***Emotional regulation as a mediator***

Studies have shown a strong association between emotion dysregulation and suicidal ideation (Akpunne et al., 2022; Chukwuemeka & Obi-Nwosu, 2021; Turton et al., 2021), suggesting that individuals who have difficulty regulating their emotions are at a higher risk of experiencing suicidal thoughts. Individuals who struggle with controlling their emotions may

feel overwhelmed by intense negative feelings, such as shame, guilt, or hopelessness (Nandish & Vimala, 2023; Vatan et al., 2014). These emotions can become so distressing that the individual may begin to entertain thoughts of suicide as a way to escape or alleviate their pain.

While expressive suppression can be effective in certain situations, research has consistently shown that it may negatively affect one's mental and physical well-being (Sikka et al., 2022; Vally & Ahmed, 2020). For instance, it tends to increase physiological arousal, leading to elevated stress and anxiety levels (Szczygieł & Maruszewski, 2015). When individuals suppress their emotions, they expend energy and cognitive resources to keep their feelings in check, which can result in heightened sympathetic nervous system activity and the release of stress hormones (Chu et al., 2024). Over time, this chronic state of arousal can have detrimental effects on one's health, including an increased risk of cardiovascular disease, weakened immune function, and mental health disorders. Research has also shown that individuals who engage in cognitive reappraisal when faced with a feared social situation can reinterpret the event in a more positive light, leading to decreased adverse outcomes (Spyropoulou & Giovazolias, 2024).

Individuals who struggle with FNE may have difficulty regulating their emotions in social situations. This fear can lead to feelings of anxiety, self-doubt, and low self-esteem, making it harder for individuals to manage their emotions effectively. This can impact their ability to engage in social interactions and form meaningful relationships. Neurocognitive theories posit that FNEs might result from inappropriate strategies for regulating emotions, which could be attributed to compromised top-down regulation of negative affect by structures in the prefrontal cortex (Brühl et al., 2011; Brühl et al., 2013; Etkin, 2010). Moreover, those highly sensitive to negative evaluation may engage in avoidant behaviours to protect themselves from criticism or rejection, further exacerbating their emotional distress (Nutbrown et al., 2022).

Also, research in the field of psychology has consistently shown that individuals who experience cognitive distortions such as TB and PB are more likely to struggle with emotion regulation difficulties (Eaddy, 2017; Nutbrown et al., 2022). This is likely because social connections and relationships can serve as a source of support and validation, which in turn can help individuals regulate their emotions more effectively. When individuals lack a sense of belongingness and connection or feel like a burden to others, they may be more prone to experiencing intense and overwhelming emotions, as they do not have the necessary support system to help them manage these emotions.

One of the fundamental mechanisms through which TB and PB can impact emotion regulation is the activation of the stress response system (Mikkelsen et al., 2020). When individuals feel socially disconnected and isolated, their bodies may perceive this as a threat to their well-being, leading to increased levels of stress and anxiety. Chronic stress can profoundly impact one's ability to regulate emotions, as it can disrupt the normal functioning of the brain regions involved in emotion regulation, such as the prefrontal cortex and the amygdala (Mikkelsen et al., 2020). This can result in heightened emotional reactivity and difficulties effectively managing and controlling one's emotions.

In addition to the physiological association of emotion regulation with TB and PB, psychological and cognitive factors are also at play. For example, individuals who lack a sense of belongingness or feel like a burden to others may have negative beliefs and expectations about themselves and their relationships (Velez-Grau et al., 2023), which can contribute to a cycle of negative emotions and maladaptive coping strategies. These negative beliefs and expectations can further undermine one's ability to regulate emotions, which can intensify emotional distress and impair one's ability to cope effectively with stressors. Moreover, when

individuals lack a sense of belongingness and connection or feel like a burden to others, they may be less likely to seek help and support from others when experiencing emotional distress (Velez-Grau et al., 2023).

Undergraduate students are in a transitional stage of life, typically between adolescence and early adulthood, characterised by heightened emotional sensitivity and evolving emotion regulation skills (Park et al., 2020). The prefrontal cortex, critical for regulating emotions, is still developing, which makes this group more susceptible to emotional dysregulation and its psychological consequences, including suicidal ideation. Hence, investigating emotion regulation among undergraduate students is particularly crucial because of their heightened susceptibility to emotional dysregulation (Rufino et al., 2022) and the high prevalence of suicidal ideation in this group (Ladi-Akinyemi et al., 2023; Nkwuda et al., 2020).

Effective emotion regulation strategies, such as cognitive reappraisal, allow individuals to reinterpret distressing social experiences in a less threatening way, thereby reducing their emotional intensity. For instance, students with strong emotion regulation skills may reframe a negative comment from a peer as constructive feedback rather than personal criticism, mitigating the anxiety and self-deprecation often linked to FNE. Conversely, poor emotion regulation exacerbates rumination and emotional distress, increasing the likelihood of suicidal ideation. Given the above argument, the following hypotheses were tested:

Hypothesis 4: Expressive suppression will significantly mediate the relationship between FNE and suicidal ideation.

Hypothesis 5: Expressive suppression will significantly mediate the relationship between TB and suicidal ideation.

Hypothesis 6: Expressive suppression will significantly mediate the relationship between PB and suicidal ideation.

Hypothesis 7: Cognitive reappraisal will significantly mediate the relationship between FNE and suicidal ideation.

Hypothesis 8: Cognitive reappraisal will significantly mediate the relationship between TB and suicidal ideation.

Hypothesis 9: Cognitive reappraisal will significantly mediate the relationship between PB and suicidal ideation.

## **Method**

### ***Participants***

Participants of this study were 291 undergraduate students, comprising 148 (50.86%) males and 143 (49.14%) females, selected using a simple random technique from different departments in the Alex Ekwueme Federal University, Ndufu Alike, Ikwo (AE-FUNAI). The participants' ages ranged from 18-30 years (Mean age = 22.38, SD = 2.90). The inclusion criteria were being at least 17 years old, an undergraduate AE-FUNAI student, and willing to participate in the study.

### ***Instruments***

Participants were asked to provide information about their age, gender, and level of education.

### *Suicide Ideation Scale*

The 10-item Suicidal Ideation Scale (Rudd, 1989) assesses the presence and intensity of suicidal thoughts. A sample item on the scale is "I have been thinking of ways to kill myself". Items on the scale are scored on a 5-point rating scale ranging from 1 (Never) to 5 (Always)—total scores on the scale range from 10 to 50, with higher scores indicating severe suicidal thoughts. Luxton et al. (2011) reported a high Cronbach's alpha of .91 on the scale.

### *Interpersonal Needs Questionnaire*

The 15-item Interpersonal Needs Questionnaire (Van Orden et al., 2012) assesses an individual's need for inclusion, social connections and interactions. It assessed two dimensions of social needs: thwarted belongingness (TB) and perceived burdensomeness (PB). TB comprises nine items, for example, "These days, I often feel like an outsider in social gatherings". PB comprises six items, for example, "These days, the people in my life would be better off if I were gone". Items are scored on a 7-point Likert scale ranging from 1 (Not at all true for me) to 7 (Very true for me), where items 7, 8, 10, 13, 14 and 15 are reverse coded. Higher scores on each of the dimensions indicate greater TB and PB. Mitchel et al. (2020) reported a strong Cronbach's alpha of .91 and .94 for the TB and PB dimensions, respectively.

### *Brief Fear of Negative Evaluation Scale*

The 12-item Brief Fear of Negative Evaluation Scale (Leary, 1983) assesses an individual's fear of being negatively evaluated by others. An example of items on this scale is "I am afraid others will not approve of me". Items are scored on a 5-point Likert scale ranging from 1 (Not at all characteristics of me) to 5 (Extremely characteristics of me). Items 2, 4, 7 and 10 are reverse-scored. Higher scores on the scale indicate greater FNE. Carleton et al. (2007) reported a high Cronbach's alpha of .97 on the scale.

### *Emotion Regulation Questionnaire*

The Emotion Regulation Questionnaire (Gross & John, 2003) is a widely used tool that assesses an individual's ability to regulate emotions effectively. The questionnaire consists of 10 items that assess two main emotion regulation strategies: cognitive reappraisal and expressive suppression. Cognitive reappraisal involves changing one's thoughts about a situation to regulate the emotions it evokes. It comprises six items, for example, "When I want to feel more positive emotion, I change the way I am thinking about the situation." Expressive suppression involves inhibiting the outward expression of one's emotions. It comprises four items, for example, "I control my emotions by not expressing them." Participants are asked to rate how frequently they use each strategy on a Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree), with higher scores indicating higher use of such strategy.

## **Procedure**

This research was approved by the AE-FUNAI Ethics Committee. Guidelines and protocols for the ethical collection and management of the data were followed. Participants were provided with an information sheet outlining the research objectives and explained how to respond to the data. The questionnaires also emphasised the participants' rights to decline participation or withdraw from the study at any point. Each participant was required to tick a consent statement, which was contained on the first page of the questionnaire, before proceeding to fill out the study questionnaires. The researcher distributed 300 copies of questionnaires to the participants and recovered two hundred and ninety-one copies. Seven copies of the questionnaires were missing, while two were filled incorrectly.

## Data analysis

Data collected was analysed using model 4 of the Hayes PROCESS Macro in version 25 of the Statistical Package for Social Sciences (SPSS). The Hayes PROCESS Macro model used in this study for the test of mediation hypotheses has been employed in previous studies (e.g., Ndukaihe & Chukwuekezie, 2022; Ogbonnaya et al., 2023).

## Results

The correlations of the demographic variables and main variables of the study are shown in Table 1, while findings of the Hayes PROCESS macro for the mediation analysis are shown in Tables 2 and 3.

Table 1.

Correlation matrix of demographic variables, predictors, and dependent variable

Variables	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9
1 Gender	-	-	-								
2 Age	22.38	2.90	.03	-							
3 Level of education	-	-	.02	.01	-						
4 Fear of negative evaluation	26.21	2.57	.10	.03	-.18**	-					
5 Thwarted belongingness	22.49	5.05	.14*	.03	.21**	.16**	-				
6 Perceived burdensomeness	18.41	4.72	.07	.01	.06	-.08	.17**	-			
7 Expressive suppression	14.12	3.66	.02	-.03	-.10	.08	.26**	.16**	-		
8 Cognitive reappraisal	22.14	5.65	-.06	-.02	.10	-.16**	-.13*	-.34*	.05	-	
9 Suicidal ideation	11.72	1.45	.15**	.02	.16**	.27*	.58**	.57**	.14*	-.35**	-

Note:  $N = 291$ , \* =  $p \leq .05$  (two-tailed), \*\* =  $p < .01$  (two-tailed), \*\*\* =  $p < .001$  (two-tailed). *M* = Mean, *SD* = Standard Deviation. Gender was coded 1 = male, 2 = female. Level of education was coded as 1 = 100, 2 = 200, 3 = 300, 4 = 400, 5 = 500, 6 = 600.

In Table 1, it was shown that females had higher TB ( $r = .14$ ,  $p < .05$ ) and suicidal ideation ( $r = .15$ ,  $p < .01$ ). Level of education was negatively associated with FNE ( $r = -.18$ ,  $p < .01$ ) and positively associated with TB ( $r = .21$ ,  $p < .01$ ) and suicidal ideation ( $r = .16$ ,  $p < .01$ ). FNE was positively associated with TB ( $r = .16$ ,  $p < .01$ ) and suicidal ideation ( $r = .27$ ,  $p < .05$ ) and negatively associated with cognitive reappraisal ( $r = -.16$ ,  $p < .01$ ). TB was positively associated with PB ( $r = .17$ ,  $p < .01$ ), expressive suppression ( $r = .26$ ,  $p < .01$ ), and suicidal ideation ( $r = .58$ ,  $p < .01$ ), while it was negatively associated with cognitive appraisal ( $r = -.13$ ,  $p < .05$ ). PB was positively associated with expressive suppression ( $r = .16$ ,  $p < .01$ ) and suicidal ideation ( $r = .57$ ,  $p < .01$ ) and negatively associated with cognitive appraisal ( $r = -.34$ ,  $p < .05$ ). Expressive suppression was positively associated with suicidal ideation ( $r = .14$ ,  $p < .05$ ). Cognitive reappraisal was negatively associated with suicidal ideation ( $r = -.35$ ,  $p < .01$ ).

Table 2.

Hayes PROCESS results of expressive suppression mediating the relationship between FNE, TB, PB, and suicidal ideation

Variables	<i>B</i>	<i>SE</i>	<i>t</i>	<i>P</i>	95% <i>CI</i>
Fear of negative evaluation	.91	.07	12.94	.000	[.77, 1.05]
Thwarted belongingness	1.17	.04	29.25	.000	[1.09, 1.25]
Perceived burdensomeness	.04	.10	.43	.008	[.13, .25]
Expressive suppression	.63	.17	3.73	.000	[.30, .96]
FNE →ES → Suicidal ideation	.00	.00			[.02, .08]
TB →ES → Suicidal ideation	.02	.01			[.00, .05]
PB →ES → Suicidal ideation	.00	.00			[-.01, .01]

Note: \* =  $p \leq .05$  (two-tailed), \*\* =  $p < .01$  (two-tailed), \*\*\* =  $p < .001$  (two-tailed). FNE = Fear of negative evaluation; TB = Thwarted belongingness; PB = Perceived burdensomeness; ES = Expressive suppression

Table 2 of the mediation model showed that FNE ( $B = .91, p < .001$ ), TB ( $B = 1.17, p < .001$ ), PB ( $B = .04, p < .01$ ), and expressive suppression ( $B = .63, p < .001$ ) were positively associated with suicidal ideation. Expressive suppression partially mediated the relationship between FNE and suicidal ideation, as the 95% bias-corrected bootstrap *CI* did not contain zero when the indirect effect of FNE on suicidal ideation via expressive suppression was tested ( $B = .00$ ; 95% *CI* = .02, .08). Also, expressive suppression partially mediated the relationship between TB and suicidal ideation, as the 95% bias-corrected bootstrap *CI* did not contain zero when the indirect effect of TB on suicidal ideation via expressive suppression was tested ( $B = .02$ ; 95% *CI* = .00, .05). However, expressive suppression did not significantly mediate the relationship between PB and suicidal ideation, as the 95% bias-corrected bootstrap *CI* contained zero when the indirect effect of PB on suicidal ideation via expressive suppression was tested ( $B = .00$ ; 95% *CI* = -.01, .01).

Table 3.

Hayes PROCESS results of cognitive reappraisal mediating the relationship between FNE, TB, PB, and suicidal ideation

Variables	<i>B</i>	<i>SE</i>	<i>t</i>	<i>P</i>	95% <i>CI</i>
Fear of negative evaluation	.26	.13	.92	.056	[.52, .01]
Thwarted belongingness	.07	.02	3.43	.001	[1.09, 1.25]
Perceived burdensomeness	.03	.12	.21	.033	[.23, .35]
Cognitive reappraisal	-.11	.03	-4.16	.000	[.30, .96]
FNE →CR →Suicidal ideation	-.12	.00			[-.09, -.02]
TB →CR → Suicidal ideation	.19	.06			[-.07, .05]
PB →CR → Suicidal ideation	-.16	.01			[-.12, -.03]

Note: \* =  $p \leq .05$  (two-tailed), \*\* =  $p < .01$  (two-tailed), \*\*\* =  $p < .001$  (two-tailed). FNE = Fear of negative evaluation; TB = Thwarted belongingness; PB = Perceived burdensomeness; CR = Cognitive reappraisal

Table 3 showed that FNE ( $B = .26, p < .05$ ), TB ( $B = .07, p < .01$ ), and PB ( $B = .03, p < .05$ ) were positively associated with suicidal ideation, while cognitive reappraisal ( $B = -.11, p < .001$ ) was negatively associated with suicidal ideation. Cognitive reappraisal partially mediated the relationship between FNE and suicidal ideation, as the 95% bias-corrected bootstrap *CI* did not contain zero when the indirect effect of FNE on suicidal ideation via cognitive reappraisal was tested ( $B = -.12$ ; 95% *CI* = -.09, -.02). Cognitive reappraisal did not significantly mediate the relationship between TB and suicidal ideation, as the 95% bias-corrected bootstrap *CI* contained zero when the indirect effect of TB on suicidal ideation via

cognitive reappraisal was tested ( $B = .19$ ; 95%  $CI = -.07, .05$ ). However, cognitive reappraisal partially mediated the relationship between PB and suicidal ideation, as the 95% bias-corrected bootstrap  $CI$  did not contain zero when the indirect effect of PB on suicidal ideation via cognitive reappraisal was tested ( $B = -.16$ ; 95%  $CI = -.12, -.03$ ).

## Discussion

The present study examined the mediating role of emotion regulation on the relationship between FNE, TB, PB and suicidal ideation among undergraduate students. The results of the analyses indicated that FNE, TB, PB and the two dimensions of emotion regulation (expressive suppression and cognitive reappraisal) were significantly associated with suicidal ideation. These findings are similar to previous studies consistently showing significant associations between the study variables across various populations (Neacsiu et al., 2018; Turton et al., 2021; Van Orden et al., 2010). People who have a fear of negative evaluation often have low self-esteem and struggle with feelings of inadequacy, which can contribute to feelings of hopelessness and despair. When individuals believe that they are unworthy or unlovable, they may be more likely to consider suicide as a way to escape the pain of rejection and humiliation.

Also, the findings of this study agree with the Interpersonal Theory of Suicide (Joiner, 2005), which suggests that individuals are more likely to engage in suicidal ideation when they feel like they do not belong and are a burden to others. Also, when individuals consistently suppress their emotions, they may experience a sense of emotional numbing and detachment from their feelings. These individuals may struggle to cope with the burdens of their suppressed emotions, leading them to internalise their distress and experience an overwhelming sense of emotional pain that can manifest as suicidal thoughts. However, individuals who can effectively engage in cognitive reappraisal may be less likely to experience suicidal ideation, as they can reframe their thoughts and focus on reasons for living rather than reasons for wanting to die.

The findings of the study further showed that expressive suppression significantly mediated the relationship between FNE, TB and suicidal ideation but not between PB and suicidal ideation. These findings agree with Charania and Krishnaveti (2021), who reported a positive association between expressive suppression and FNE in their study. Difficulties with emotion regulation using strategies such as expressive suppression can contribute to or worsen the fear of negative evaluation, the feeling of lack of belongingness, as well as suicidal ideation. Individuals may engage in expressive suppression to avoid potential criticism or rejection from others. In a social setting, for example, someone may suppress their feelings of anger or sadness in order to maintain a positive image and avoid conflict. This fear of negative evaluation can be powerful and may lead individuals to prioritise social acceptance over authentic emotions.

More so, when individuals suppress their emotions, they are less likely to engage in genuine and meaningful interactions. This can create a barrier to forming deep and meaningful connections with others, thus contributing to feelings of thwarted belongingness. In turn, feeling a sense of thwarted belongingness can lead individuals to suppress their emotions even further, as they may fear rejection or judgment from others. Swee et al. (2020) suggest an inter-relationship between thwarted belongingness and emotion regulation strategies. While expressive suppression may offer temporary relief from social discomfort, it can have detrimental effects on mental health in the long term, such as suicidal ideation. This is because the act of suppressing emotions can be physically and mentally taxing, leading to feelings of exhaustion and emotional numbness. Moreover, the fear of negative evaluation can exacerbate these negative emotions, as individuals may constantly worry about how others perceive them

and fear rejection or criticism. This can create a vicious cycle in which expressive suppression and TB reinforce each other, leading to a downward spiral of mental health challenges such as suicidal ideation.

It was also found that cognitive reappraisal significantly mediated the relationship between FNE, PB and suicidal ideation but not between TB and suicidal ideation. Previous research has shown that cognitive reappraisal can be a highly effective strategy for managing fear of negative evaluation. In a study by Keil et al. (2022), participants who received training in cognitive reappraisal techniques showed a significant decrease in social anxiety and fear of negative evaluation compared to a control group. This suggests that cognitive reappraisal can help individuals overcome their fear of negative evaluation and improve their psychological well-being, hence reducing the chances of suicidal ideation. Individuals who engage in cognitive reappraisal are more likely to have a more positive and balanced view of themselves and their interactions with others. By changing their cognitive appraisals of situations, individuals can also challenge and modify negative beliefs about themselves, such as perceived burdensomeness. This can lead to a more adaptive and healthier mental set, enhancing emotional well-being and interpersonal relationships. By reframing and interpreting situations more positively, individuals can reduce the likelihood of believing they are a burden to others.

### **Implications of the Study**

Prominent frameworks like the Interpersonal Theory of Suicide (Joiner, 2005; Van Orden et al., 2010) highlight TB and PB as proximal risk factors for suicidal ideation but do not explicitly integrate the role of emotion regulation. Including emotion regulation as a mediator in this context allows for the expansion of existing theories, enriching their explanatory power. Hence, the findings of this study could refine the theoretical model, making it more dynamic and applicable to real-world scenarios. It positions emotion regulation not just as an ancillary factor but as a core component in understanding suicide risk.

Furthermore, by identifying emotion regulation (expressive suppression and cognitive reappraisal) as a mediating factor, this study provides clarity on the complex interplay between psychosocial stressors and suicidal ideation. This nuanced understanding can help clinicians and researchers move beyond surface-level risk factors to identify more profound, process-oriented vulnerabilities. For example, recognising that heightened expressive suppression can exacerbate the effects of FNE and TB could lead to earlier and more precise identification of at-risk individuals. This deeper insight equips stakeholders with the knowledge to prioritise interventions targeting emotion regulation deficits.

Emotion regulation is a modifiable skill, making it an ideal target for therapeutic interventions. Evidence-based therapies such as Dialectical Behaviour Therapy and Emotion-Focused Therapy are designed to improve emotion regulation, fostering healthier coping mechanisms. Since cognitive reappraisal and expressive suppression were significant mediators of FNE, TB, and PB on suicidal ideation, there is a necessity to incorporate emotion regulation training into suicide prevention programs. For example, individuals experiencing high levels of FNE, TB, or PB could benefit significantly from structured interventions that teach them how to manage emotional distress more effectively, ultimately reducing their vulnerability to suicidal ideation.

Undergraduate students face unique challenges, including academic pressure, social adjustment, and identity formation, making them particularly vulnerable to psychosocial stressors like FNE, TB, and PB. These challenges often coincide with critical developmental periods where emotion regulation skills are still maturing. Understanding the role of emotion regulation in mediating the effects of these stressors on suicidal ideation can inform the development of campus-based mental health initiatives. Such programs could include

workshops, counselling, or peer support groups focused on building emotion regulation skills and creating a supportive environment that addresses students' psychological and social needs. Additionally, psychoeducation programs that raise awareness about the risks of expressive suppression and promote emotional openness may create a more supportive environment where students feel safe to share their struggles.

### **Limitations of the study and suggestions for further research**

While the results provide valuable insights into the mediating roles of expressive suppression and cognitive reappraisal, the sample size was limited to 291 undergraduate students, which is not a fair representation of undergraduate students in Nigeria. While caution should be applied in generalising these findings, future studies could replicate the findings across a larger study sample. Also, the cross-sectional design limits the ability to infer causality. Future studies should employ longitudinal designs to explore temporal relationships. Suicidal ideation is a very critical topic which needs to be examined using more in-depth approaches such as interviews or focused group discussions. Finally, other studies could investigate additional mediators, such as emotional clarity or social support.

### **Conclusion**

The relationship between emotion regulation and suicidal ideation is complex and multifaceted. Individuals who struggle with regulating their emotions are at a higher risk of experiencing suicidal thoughts, especially in the presence of trauma or adverse experiences. Mental health professionals must assess and address emotion regulation difficulties in individuals who present with suicidal ideation, using evidence-based interventions such as cognitive behavioural therapy and dialectical behaviour therapy. By enhancing emotion regulation skills, promoting self-care practices, and addressing underlying mental health conditions, we can better support undergraduate students in managing their emotions and reducing the risk of suicidal ideation.

## References

- Akpunne, B. C., Akinnawo, E. O., Akpunne, S. I., & Kumuyi, D. O. (2022). Suicidal behaviour among Nigerian undergraduates: Associations with gambling disorder and emotional dysregulation. *Health Scope, 11*(2), e121797. <https://doi.org/10.5812/jhealthscope-121797>.
- Alabi, O. J., & Olonade, O. Y. (2022). Complexities, dynamism, and changes in the Nigerian contemporary family structure. In *Families in Nigeria: Understanding their diversity, adaptability, and strengths* (Vol. 18, pp. 99-112). Emerald Publishing Limited. <http://dx.doi.org/10.1108/S1530-353520220000018008>
- Aldao, A., Nolen-Hoeksema, S. & Schweizer, S. (2010). Emotion-regulation strategies across psychopathology: A meta-analytic review. *Clinical Psychology Review, 30*, 217–237. <https://doi.org/10.1016/j.cpr.2009.11.004>
- Ambale, K. C., Ouda, J. B., & Otieno, K. (2022). Mental health and suicidal ideation among students of public secondary schools in Kenya. *African Research Journal of Education and Social Sciences, 9*(3), 1-12,
- Andersson, H. W., Lilleeng, S. E., Ruud, T., & Ose, S. O. (2022). Suicidal ideation in patients with mental illness and concurrent substance use: analyses of national census data in Norway. *BMC Psychiatry, 22*(1), 1. <https://doi.org/10.1186/s12888-021-03663-8>
- Ann Riya, C. J. (2024). Fear of negative valuation and social appearance anxiety among young adults. *International Journal of Indian Psychology, 12*(1), 1853-1869. DOI: 10.25215/1201.170
- Arafat, S. M. Y., Hussain, F., Zaman, M. S., Tabassum, T., Islam, M. K., Shormi, F. R., Khan, A. R., Islam, M. R., Redwan, A. S. M., Giasuddin, N. A., Mubashir, A., & Khan, M. A. S. (2022). Thwarted belongingness, perceived burdensomeness, and acquired capability for suicide among university students of Bangladesh: Scales validation and status assessment. *Frontiers in Psychiatry, 13*, 1025976. <https://doi.org/10.3389/fpsy.2022.1025976>
- Aroyewun, B. A., Oyogho, O. V., & Kazeem, H. T. (2022). Suicidal ideation among undergraduates: The predicting role of learned helplessness, fear of negative evaluation, and impaired family relationship. *Contemporary Journal of Applied Psychology, 7*(1), 1-14.
- Brailovskaia, J., Ujma, M., Friedrich, S., & Teismann, T. (2020). Thwarted belongingness and perceived burdensomeness mediate the association between bullying and suicide ideation. *Crisis, 1*, 1-5.
- Brühl A. B., Herwig, U., Delsignore, A., Jäncke, L., & Rufer, M. (2013). General emotion processing in social anxiety disorder: neural issues of cognitive control. *Psychiatry Research, 212*, 108–115. 10.1016/j.psychres.2012.05.006
- Brühl, A. B., Rufer, M., Delsignore, A., Kaffenberger, T., Jäncke, L., & Herwig, U. (2011). Neural correlates of altered general emotion processing in social anxiety disorder. *Brain Research, 1378*, 72–83. 10.1016/j.brainres.2010.12.084

- Carleton, R. N., Collimore, K. C., & Asmundson, G. J. (2007). Social anxiety and fear of negative evaluation: construct validity of the BFNE-II. *Journal of Anxiety Disorders, 21*, 131-141.
- Chu, B., Marwaha, K., Sanvictores, T., Awosika, A. O., & Ayers, D. (2024). *Physiology, stress reaction*. In StatPearls [Internet]. StatPearls Publishing. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK541120/>
- Chukwuemeka, N. A., & Obi-Nwosu, H. (2021). The moderating role of emotion regulation on the relationship between depression and suicidal ideation among students. *Practicum Psychologia, 11*(1), 98-118. <http://journals.aphriapub.com/index.php/pp>
- Clark, D. M., & Wells, A. (1995). A cognitive model of social phobia. In: Heimberg RG, Liebowitz MR, Hope DA, Schneier FR, eds. *Social phobia: diagnosis, assessment and treatment*. Guilford.
- Colonnello, V., Castellano, P., Mazzetti, M., & Russo, P. M. (2024). Specific emotion regulation difficulties mediate the relationship between personal distress and depressive symptoms in medical students. *Frontiers in Psychology, 15*, 1432318. <https://doi.org/10.3389/fpsyg.2024.1432318>
- de Grandpre, E., Suurd, R. C., & Hiller, E. (2024). Thwarted belongingness and empathy's relation with organisational culture change. *Frontiers in Psychology, 15*, 1287769. doi: 10.3389/fpsyg.2024.1287769
- Downing, V. R., Cooper, K. M., Cala, J. M., Gin, L. E., & Brownell, S. E. (2020). Fear of negative evaluation and student anxiety in community college active-learning science courses. *CBE—Life Sciences Education, 19*(2), ar20. <https://doi.org/10.1187/cbe.19-09-0186>
- Eaddy, M. E. (2017). *Emotion dysregulation and the interpersonal theory of suicide in adolescents*. Doctoral dissertation.
- Etkin A. (2010). Functional neuroanatomy of anxiety: a neural circuit perspective. *Current Topics in Behavioral Neurosciences, 2*, 251–277. [https://doi.org/10.1007/7854\\_2009\\_5](https://doi.org/10.1007/7854_2009_5)
- Folkman, S., & Lazarus, R. S. (1988). Coping as a mediator of emotion. *Journal of Personality and Social Psychology, 54*, 466-475. <http://dx.doi.org/10.1037/0022-3514.54.3.466>
- Gleason, M. R. (2003). *Cultural models of individualism and collectivism in a development context: Self-efficacy versus interdependency in rural Senegal*. Doctoral dissertation, University of Georgia.
- Glenn, C. R., Kleiman, E. M., Kandlur, R., Esposito, E. C., & Liu, R. T. (2022). Thwarted belongingness mediates interpersonal stress and suicidal thoughts: an intensive longitudinal study with high-risk adolescents. *Journal of Clinical Child and Adolescent Psychology, 51*(3), 295–311. <https://doi.org/10.1080/15374416.2021.1969654>
- Gross, J. J., & John, O. P. (2003). Individual differences in two emotion regulation processes: Implications for affect, relationships, and well-being. *Journal of Personality and Social Psychology, 85*(2), 348–362. <https://doi.org/10.1037/0022-3514.85.2.348>

- Harmer, B., Lee, S., Rizvi, A., & Saadabadi, A. (2024). *Suicidal ideation*. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2024 Jan-. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK565877/>
- Iso-Ahola S. E. (2020). Replication and the establishment of scientific truth. *Frontiers in Psychology*, 11, 2183. <https://doi.org/10.3389/fpsyg.2020.02183>
- Iweama, C. N., Agbaje, O. S., Lerum, N. I., Igbokwe, C. C., & Ozoemena, L. E. (2024). Suicidal ideation and attempts among Nigerian undergraduates: Exploring the relationships with depression, hopelessness, perceived burdensomeness, and thwarted belongingness. *SAGE Open Medicine*, 12, 20503121241236137. <https://doi.org/10.1177/20503121241236137>
- Jiang, M. M., Gao, K., Wu, Z. Y., & Guo, P. P. (2022). The influence of academic pressure on adolescents' problem behaviour: Chain mediating effects of self-control, parent-child conflict, and subjective well-being. *Frontiers in Psychology*, 13, 954330. <https://doi.org/10.3389/fpsyg.2022.954330>
- Jidong, D. E., Ike, T. J., Husain, N., Francis, C., Husain, M. O., Mwankon, S. B., ... & Nwoga, C. N. (2024). Perspectives on self-harm and suicidal ideation in Nigeria: a mixed-methods study of patients, family caregivers, clinicians, and the public. *Archives of Suicide Research*, 28(4), 1-15. <http://dx.doi.org/10.1080/13811118.2024.2314520>
- Joiner, T. E. (2005). *Why People Die by Suicide*. Harvard University Press.
- Kaur, A., & Kang, T. K. (2020). Relationship of mental health with suicidal ideation among adolescents. *Indian Journal of Health and Well-being*, 11(1-3), 35-39. <http://dx.doi.org/10.15614/IJHW.v11i01.9>
- Keil, V., Tuschen-Caffier, B., & Schmitz, J. (2022). Effects of cognitive reappraisal on subjective and neural reactivity to angry faces in children with social anxiety disorder: Clinical controls with mixed anxiety disorders and healthy children. *Child Psychiatry and Human Development*, 53(5), 886–898. <https://doi.org/10.1007/s10578-021-01173-y>
- Kshtriya, S., Lawrence, J., Kobezak, H. M., Popok, P. J., & Lowe, S. (2022). Investigating emotion regulation strategies as mediators of occupational stressors and mental health outcomes in first responders. *International Journal of Environmental Research and Public Health*, 19(12), 7009. <https://doi.org/10.3390/ijerph19127009>
- Lazarus, R. S. (1966). *Psychological stress and the coping process*. McGraw-Hill.
- Leary, M. R. (1983). A brief version of the FNE Scale. *Personality and Social Psychology Bulletin*, 9, 371- 375.
- Lee, A., Chan, W., & Ng, J. C. K. (2022). The role of fear of negative evaluation on the effects of self-control on affective states and life satisfaction: a moderated mediation analysis. *Current psychology (New Brunswick, N.J.)*, 1–14. Advanced online publication. <https://doi.org/10.1007/s12144-022-04130-7>
- Levi-Belz, Y., Gvion, Y., & Apter, A. (2019). Editorial: the psychology of suicide: from research understandings to intervention and treatment. *Frontiers in Psychiatry*, 10, 214. <https://doi.org/10.3389/fpsyg.2019.00214>

- Liu, Y., Wang, R., Chang, R., Wang, H., Xu, L., Xu, C., Yu, X., Liu, S., Chen, H., Chen, Y., Jin, L., Wang, Y., & Cai, Y. (2022). Perceived burdensomeness, thwarted belongingness, and social exclusion in transgender women: Psychometric properties of the Interpersonal Needs Questionnaire. *Frontiers in Psychology, 13*, 787809. <https://doi.org/10.3389/fpsyg.2022.787809>
- Luvira, V., Nonjui, P., Butsathon, N., Deenok, P., & Aunruean, W. (2023). Family background issues as predictors of mental health problems for university students. *Healthcare (Basel, Switzerland), 11*(3), 316. <https://doi.org/10.3390/healthcare11030316>
- Luxton, D. D., Rudd, M. D., Reger, M. A., & Gahm, G. A. (2011). A psychometric study of the suicide ideation scale. *Archives of Suicide Research, 15*(3), 250–258. <https://doi.org/10.1080/13811118.2011.589720>
- McLaughlin, K. A., Hatzenbuehler, M. L., Mennin, D. S. & Nolen-Hoeksema, S. (2011). Emotion dysregulation and adolescent psychopathology: A prospective study. *Behaviour Research and Therapy, 49*, 544–554.
- Mikkelsen, M. B., Tramm, G., Zachariae, R., Gravholt, C. H., & O'Toole, M. S. (2020). A systematic review and meta-analysis of the effect of emotion regulation on cortisol. *Comprehensive Psychoneuroendocrinology, 5*, 100020. <https://doi.org/10.1016/j.cpnec.2020.100020>
- Milloria, B. R. B., Marzon, A. M. D., & Moral, R. V. (2024). Disconnected in a connected world: examining social isolation and social media use among college students at St. Cecilia's College-Cebu. *American Journal of Education and Evaluation Studies, 1*(4), 1-6. <http://dx.doi.org/10.13140/RG.2.2.16743.25765>
- Mitchell, S. M., Brown, S. L., Roush, J. F., Tucker, R. P., Cukrowicz, K. C., & Joiner, T. E. (2020). The interpersonal needs questionnaire: Statistical considerations for improved clinical application. *Assessment, 27*(3), 621–637. <https://doi.org/10.1177/1073191118824660>
- Mittermeier, S., Seidel, A., Scheiner, C., Kleindienst, N., Romanos, M., & Buerger, A. (2024). Emotional dysregulation and its pathways to suicidality in a community-based sample of adolescents. *Child and Adolescent Psychiatry and Mental Health, 18*(1), 15.
- Muela, A., García-Ormaza, J., & Sansinenea, E. (2024). Suicidal behaviour and deliberate self-harm: A major challenge for youth residential care in Spain. *Children and Youth Services Review, 158*, 107465. <https://doi.org/10.1016/j.childyouth.2024.107465>
- Nandish, P., & Vimala, M. (2023). Irrational procrastination, emotional regulation and hopelessness among students of psychology. *International Journal of Indian Psychology, 11*(3), 268-279. DOI:10.25215/1103.024.
- Ndukaihe, I., & Chukwuekezie, P. (2022). Associations between friendship networks and internet addictive behaviors: Relationship quality as a mediator. *Nigerian Journal of Social Psychology, 5*(1), 42–57.
- Nkwuda, F. C. N., Ifeagwazi, C. M., Nwonyi, S. K., & Oginyi, R. C. (2020). Suicidal ideation among undergraduate students: Academic stress and self-esteem as predictive factors. *Nigerian Journal of Psychological Research, 16*(1), 55-64.

- Nutbrown, S. L. (2022). *Don't fake it if you want to make it: The relationship between need to belong, emotion regulation strategy choice, and loneliness at work*. Doctoral dissertation at The University of Auckland.
- Ogbonnaya, C. E., Oginyi, R. C. N., Ndukaihe, I. L.G., Arinze, N. C., & Ukeje, I. O. (2023). Mediating role of resilience on the link between gratitude and purpose in life among university undergraduates. *Journal of Psychology and Allied Disciplines*, 2(1), 89–102.
- Ong, H. S., Fernandez, P. A., & Lim, H. K. (2021). Family engagement as part of managing patients with mental illness in primary care. *Singapore Medical Journal*, 62(5), 213–219. <https://doi.org/10.11622/smedj.2021057>
- Park, C. L., Williams, M. K., Hernandez, P. R., Agocha, V. B., Lee, S. Y., Carney, L. M., & Loomis, D. (2020). Development of emotion regulation across the first two years of college. *Journal of Adolescence*, 84, 230–242. <https://doi.org/10.1016/j.adolescence.2020.09.009>
- Pérez, S., Layrón, J. E., Barrigón, M. L., Baca-García, E., & Marco, J. H. (2024). PB, TB, and hopelessness as predictors of future suicidal ideation in Spanish university students. *Death Studies*, 48(5), 454-464. <http://dx.doi.org/10.1080/07481187.2023.2235569>.
- Pérez, S., Layrón, J. E., Barrigón, M. L., Baca-García, E., & Marco, J. H. (2024). Perceived burdensomeness, thwarted belongingness, and hopelessness as predictors of future suicidal ideation in Spanish university students. *Death Studies*, 48(5), 454–464. <https://doi.org/10.1080/07481187.2023.2235569>
- Preston, E. G., Villarosa-Hurlocker, M. C., Raposa, E. B., Pearson, M. R., Bravo, A. J., & Protective Strategies Study Team (2023). Fear of negative evaluation and suicidal ideation among college students: The moderating role of impulsivity-like traits. *Journal of American College Health*, 71(2), 396–402. <https://doi.org/10.1080/07448481.2021.1891919>
- Rogante, E., Cifrodelli, M., Sarubbi, S., Costanza, A., Erbutto, D., Berardelli, I., & Pompili, M. (2024). *The role of emotion dysregulation in understanding suicide risk: A systematic review of the literature*. In *Healthcare* (Vol. 12, No. 2, p. 169). MDPI. <https://doi.org/10.3390/healthcare12020169>
- Rogier, G., Muzi, S., Morganti, W., & Pace, C. S. (2023). Self-criticism and attachment: A systematic review and meta-analysis. *Personality and Individual Differences*, 214, 112359. <https://doi.org/10.1016/j.paid.2023.112359>
- Rudd, M. D. (1989). The prevalence of suicidal ideation among college students. *Suicide Life and Threatening Behaviour*, 19(2), 173-183.
- Scafuto, F., Quinto, R. M., Ghiroldi, S., Montecucco, N. F., Presaghi, F., Iani, L., & De Vincenzo, F. (2024). The mediation role of emotion regulation strategies on the relationship between mindfulness effects, psychological well-being and distress among youths: findings from a randomised controlled trial. *Current Psychology*, 1-13. <https://doi.org/10.1007/s12144-024-06081-7>
- Shahul, A., Sreedevi, K. M., Thomas, S. S., Thaha, V. K., & John, J. M. (2022). Fear of negative evaluation and emotional/social loneliness in young adults. *International*

*Journal of Engineering Technology and Management Sciences*, 6(5), 505-509.  
DOI:10.46647/ijetms.2022.v06i05.078

- Shen, H., Li, M., & Li, L. (2022). Influence of social exclusion on the inferiority feeling of community youth. *Iranian Journal of Public Health*, 51(7), 1576–1584. <https://doi.org/10.18502/ijph.v51i7.10091>
- Sikka, P., Stenberg, J., Vorobyev, V., & Gross, J. J. (2022). The neural bases of expressive suppression: a systematic review of functional neuroimaging studies. *Neuroscience & Biobehavioral Reviews*, 138, 104708. <https://doi.org/10.1016/j.neubiorev.2022.104708>
- Spyropoulou, E., & Giovazolias, T. (2024). Cognitive reappraisal moderates the longitudinal relationship between adolescents' peer victimisation and self-esteem. A latent interaction model. *Child Psychiatry & Human Development*, 1-13. <https://doi.org/10.1007/s10578-024-01688-0>
- Swee, G., Shochet, I., Cockshaw, W., & Hides, L. (2020). Emotion regulation as a risk factor for suicide ideation among adolescents and young adults: The mediating role of belongingness. *Journal of Youth and Adolescence*, 49(11), 2265–2274. <https://doi.org/10.1007/s10964-020-01301-2>
- Szczygieł, D., & Maruszewski, T. (2015). Why expressive suppression does not pay? Cognitive costs of negative emotion suppression: The mediating role of subjective tense-arousal. *Polish Psychological Bulletin*, 46(3), 336-349. DOI - 10.1515/ppb-2015-0041
- Troy, A. S., Shallcross, A. J., Brunner, A., Friedman, R., & Jones, M. C. (2018). Cognitive reappraisal and acceptance: Effects on emotion, physiology, and perceived cognitive costs. *Emotion (Washington, D.C.)*, 18(1), 58–74. <https://doi.org/10.1037/emo0000371>
- Turton, H., Berry, K., Danquah, A., & Pratt, D. (2021). The relationship between emotion dysregulation and suicide ideation and behaviour: A systematic review. *Journal of Affective Disorders Reports*, 5, 100136. <https://doi.org/10.1016/j.jadr.2021.100136>
- Valdés, J. M., Díaz, F. J., Christiansen, P. M., Lorca, G. A., Solorza, F. J., Alvear, M., Ramírez, S., Nuñez, D., Araya, R., & Gaete, J. (2022). Mental health and related factors among undergraduate students during SARS-CoV-2 pandemic: a cross-sectional study. *Frontiers in Psychiatry*, 13, 833263. <https://doi.org/10.3389/fpsy.2022.833263>
- Vally, Z., & Ahmed, K. (2020). Emotion regulation strategies and psychological well-being: Examining cognitive reappraisal and expressive suppression in an Emirati college sample. *Neurology, Psychiatry and Brain Research*, 38, 27-32. <https://doi.org/10.1016/j.npbr.2020.09.001>
- Van Orden, K. A., Cukrowicz, K. C., Witte, T. K., & Joiner, T. E. (2012). Thwarted belongingness and perceived burdensomeness: Construct validity and psychometric properties of the Interpersonal Needs Questionnaire. *Psychological Assessment*, 24(1), 197-215.
- Van Orden, K. A., Witte, T. K., Cukrowicz, K. C., Braithwaite, S. R., Selby, E. A., & Joiner, T. E. (2010). The interpersonal theory of suicide. *Psychological Review*, 117(2), 575-600.
- Vatan, S., Lester, D., & Gunn III, J. F. (2014). Emotion dysregulation, problem-solving, and hopelessness. *Psychological Reports*, 114(2), 647-651. <http://dx.doi.org/10.2466/20.02.PR0.114k23w3>

- Vélez-Grau, C., Magan, I. M., & Gwadz, M. (2023). The burden of not belonging: a qualitative study of the applicability of the interpersonal theory of suicide constructs of belongingness and burdensomeness to ethnocultural minoritised youth. *Behaviour Therapy, 54*(5), 777-793.
- Zhao, S., & Ye, J. (2019). Effects of feelings of inadequacy on life events, social avoidance and distress among impoverished undergraduates. *American Journal of Applied Psychology, 8*(1), 19-26. <http://dx.doi.org/10.11648/j.ajap.20190801.14>