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Articles

The Mediating Role of Purpose in Life in the Relationship between Hopelessness, Depression, and Suicide Risk

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Abstract

Introduction: depression is a proximal factor associated with suicide risk. However, depression alone does not imply a risk of suicidal behavior. Various studies have demonstrated the significant role of hopelessness in contributing to suicidal behavior. Nonetheless, the probability of engaging in suicidal behavior can also be diminished in the presence of other factors known as protective, as purpose of life.

Aim: to analyze the interactions among depression, hopelessness, and purpose in life, and their impact on suicidal risk in a young population. The hypotheses were: 1) suicide risk is directly correlated with depression and hopelessness and inversely correlated with purpose in life, and 2) purpose in life mediates the effect of hopelessness and depression in explaining suicide risk.

Method: a quantitative, non-experimental, cross-sectional study was conducted. Through non-probabilistic convenience sampling, 340 university students were recruited from two main cities in Colombia. The Plutchik Suicide Risk Scale, Beck Depression Inventory, Beck Hopelessness Scale, and Purpose in Life Test were used.

Results: a high prevalence of suicidal risk was identified. The group at risk of suicide exhibited higher scores in depression and hopelessness and lower scores in life purpose compared to the non-risk group. Moderate and strong correlations were observed among the variables. Path diagrams constructed using structural equation modeling revealed that purpose in life reduces the effect of hopelessness and depression on suicidal risk.

Discussion: The importance of purpose in life as a resilience factor against suicidal risk is emphasized. Purpose in life plays a pivotal role in reducing suicidal risk as it cultivates a positive orientation towards the future, amplifies motivation for action, reshapes the perception of challenges, counteracts learned helplessness, and bolsters resilience. These findings corroborate contemporary theories concerning the interplay among purpose in life, hopelessness, depression, and suicidal risk. A purpose-centered intervention program can reduce suicide risk among university students. It helps students reflect on their values, goals, and aspirations, and teaches them skills to cope with stress and overcome challenges, thereby increasing their capacity for adaptation.

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1. Introduction

Each year, over 700.000 lives are lost to suicide, a harsh reality that permeates every stage of life. In 2019, suicide claimed the fourth spot as the leading cause of death among individuals aged 15 to 29 worldwide. It is particularly concerning to highlight that over 77% of global suicides took place in low- and middle-income countries during that year (World Health Organization, 2023). In Colombia, the highest incidence of suicide and suicide attempts is found among young people aged 14 to 24 years old (OMEG, 2023). According to a report by Colombia's National Institute of Legal Medicine and Forensic Sciences (NILMFS), suicides had a 10.9% increase between 2022 and 2023 (NILMFS, 2023). In 2022, Colombia had a suicide mortality rate of 6 per 100.000 inhabitants (DANE, 2023).

Suicide risk refers to the likelihood that an individual may intentionally self-harm with the intention of ending their own life. The probability of such behavior is heightened by specific factors (Turecki et al., 2019). Predisposing or distal factors encompass familial genetic predispositions, which are inherited independently of psychopathology (DiBlasi et al., 2021) and early adverse experiences, such as affective neglect or physical and sexual abuse (Zatti et al., 2017). Additionally, mediating, or developmental factors contribute to increased vulnerability to proximal factors, including emotional and personality traits like anxiety, aggressiveness, and impulsivity (Yen et al., 2009). Proximal factors, also known as precipitators or facilitators, involve life events (e.g., previous suicide attempts) (Bostwick et al., 2016), mental disorders (Brådvik, 2018), substance abuse (Rizk et al., 2021), and cognitive traits (e.g., problem-solving difficulties, memory biases, and rumination). A proximal factor refers to a variable or condition that is directly related or close to a phenomena.

Depression is a proximal factor associated with suicide risk (Melhem et al., 2019; Orsolini et al., 2020; Witte et al., 2009). Whether manifested as a depressive disorder or depressive symptomatology, this affective disturbance significantly heightens the risk of suicidal ideation, attempts, or completions. Individuals with depressive symptoms often harbor negative perceptions, persistent rumination, and uncontrollable thoughts about themselves, their surroundings, and their future. Those experiencing depression or related symptoms exhibit a biased emotional information processing that automatically responds to certain stimuli. These perceptual, attentional, memory, and interpretative biases contribute to sustaining a sense of despondency, thereby amplifying suicide risk (Gotlib & Joormann, 2010; LeMoult & Gotlib, 2019).

College students, as part of the general young population, are susceptible to symptoms associated with depression (Beiter et al., 2015; Gómez, 2020). University academic life is not

devoid of concerns and challenges (Restrepo et al., 2023). On the contrary, it can serve as a continual source of stress and anxiety, potentially leading to depression (Fernández-Rodríguez et al., 2019; Ramón-Arbués et al., 2020). Factors such as exams, time management, and an overwhelming volume of study material have been identified as contributors to heightened academic stress, subsequently linked to anxiety and depression. When academic stressors coincide with low self-esteem, limited optimism, and a diminished sense of self-efficacy, the impact on the mental well-being of young students may be more profound (Saleh et al., 2017), elevating the risk of suicidal behavior.

However, depression alone does not imply a risk of suicidal behavior. For instance, Restrepo et al. (2018) found no association (r = .015, p = .736) between depressive symptomatology and suicidal ideation in college students. Hence, not all individuals with depression exhibit suicidal behavior, and not all those engaging in suicidal behavior necessarily have depression (Joo et al., 2016; Sanati, 2009). As mentioned, there are numerous factors contributing to suicide risk, and while depression can have a substantial influence, it is not determinative. Nevertheless, when combined with other risk factors, depression can magnify its negative impact on the likelihood of suicidal behavior.

This seems to occur when depressive symptomatology is accompanied by a profound sense of hopelessness. While certain elements of hopelessness are inherent in the cognitive triad of depression, it has been proposed that hopelessness can be considered a distinct dimension deserving classification as a cohesive and independent syndrome, applicable to both clinical and nonclinical populations (Joiner et al., 2001; Liu et al., 2015). This syndrome, defined as hopeless depression, should be acknowledged as a separate entity from depressive symptomatology lacking this feature. The hopelessness theory of depression (Abramson et al., 1989) posits that negative life events are interpreted through negative inferential styles, creating a feeling of being trapped without envisioning potential solutions or harboring positive expectations for the future (Liu et al., 2015). Additionally, Abramson et al. (2000) advanced a hopelessness theory of suicide. Hopelessness emerges from the perception of losing control over life or circumstances. Sensing that one has little to no control over events also exerts a negative impact on mood and may predispose individuals to depression (Alloy & Abramson, 1982; Myles et al., 2020; Myles & Merlo, 2022).

Various studies have demonstrated the significant role of hopelessness in contributing to suicidal behavior (Hirsch et al., 2021; Li et al., 2020). Qiu et al.'s (2017) study indicates that hopelessness serves as a predictor of suicidal ideation. Hopelessness was markedly more pronounced among prospective suicidal individuals (M = 12.53, SD = 5.87) compared to non-suicidal controls (M = 9.06, SD = 4.96), indicating a significant difference (p = .003; d = .64).

When distinguishing between hopelessness as a state (a transient emotional experience linked to anxiety and depression) and as a trait (a more enduring pattern associated with personality), Burr et al. (2018) found that trait hopelessness predicted both suicidal ideation (B = .137, p < .001) and attempts (B = .125, p = .001). Addressing college students, Lamis et al. (2016) reported that both depressive symptoms (r = .50, p < .001) and hopelessness (r = .51, p = .736) were positively associated with the severity of suicidal ideation. Overall, a connection between depression, hopelessness, and suicidal risk has been proposed (Alsalman & Alansari, 2016; Ribeiro et al., 2018).

However, the probability of engaging in suicidal behavior can also be diminished in the presence of other factors known as protective factors. Suicide research has identified various protective factors that enhance an individual's ability to cope with challenging situations, thereby reducing the likelihood of suicidal behavior (Holman & Williams, 2022). Humanistic psychological schools and theories have attributed significant importance to the concept of purpose in life within their philosophical and anthropological approaches to human existence. The purpose of life is connected to perceptions and experiences of self-determination, self-fulfillment, and the attainment of life goals. Generally, it encompasses a positive outlook on life, the future, and oneself, grounded in confidence in one's abilities and possibilities, along with the belief in the implicit meaning of existence (Frankl, 1994).

Certainly, purpose in life is a psychological construct contrasting with depression and hopelessness (Boreham & Schutte, 2023; Butt et al., 2020; Garcia-Alandete et al., 2009; Perez Rodriguez et al., 2017). There is evidence suggesting that purpose in life serves as a resilience factor against suicidal behavior. Kleiman and Beaver (2013) previously discovered that the presence of purpose in life correlated with decreased levels of suicidal ideation over time and was linked to a reduced likelihood of lifetime suicide attempts (b = -.08, p < .001). A systematic literature review has reported ample evidence indicating that meaning in life, or reasons for living, acts as a protective factor against suicidal ideation and other suicidal behaviors (Bakhiyi et al., 2016).

Few studies on this topic have specifically targeted young college students. A considerable portion of existing research has been conducted with clinical populations or older adults. Young adults, aged between 18 and 29, hold a significant position of interest in the fields of psychology and mental health as they navigate a crucial phase in defining and developing their life trajectories. The initiation of university life, the establishment of affective relationships, work responsibilities, and other social factors constitute stressors that can contribute to feelings of hopelessness and depression.

The undeniable risk of suicidal behavior in this age group motivates this study to analyze the interactions among depression, hopelessness, and purpose in life, and their impact on suicidal risk in a young population. Expanding the theoretical understanding of these interactions will facilitate its ongoing progress by formulating applied approaches to promote mental health and preventing suicidal behavior. Our hypotheses are as follows: 1) suicide risk is directly correlated with depression and hopelessness and inversely correlated with purpose in life, and 2) purpose in life mediates the effect of hopelessness and depression in explaining suicide risk.

2. Materials and Methods

2.1 Participants

A quantitative, non-experimental, cross-sectional study was conducted. Non-probabilistic convenience sampling was used to recruit young people between the ages of 18 and 30. This population was selected since the highest rates of suicide and suicide attempts occur among young university students between the ages of 18 and 30 (Arango et al., 2021; Gómez, 2020; Gómez-Tabares et al., 2019; Núñez et al., 2023). In addition, some of the highest suicide rates in Colombia among this population are reported in the cities of Manizales and Medellín. For this study, priority was given to young people between the ages of 18 and 30.

The sample size was chosen considering the number of observations required for each parameter estimated for the path analysis. For each observed variable, 20 observations were estimated (Wolf et al., 2013), so the minimum sample size is 80 participants. Given the above, 456 university students between the ages of 18 and 30 from two universities in Medellín and Manizales were invited to complete the instruments through a web platform. The participation rate was 74.56%, resulting in a final sample of 340 young people.

This study involved 340 university students from two major cities in Colombia: Medellín (n = 187) and Manizales (n = 153). Participants ranged in age from 18 to 30 years (M = 22.15; SD = 3.32). The majority (81.5%) were young adults between 18 and 25 years old. The sample included 270 women (79.4%) and 70 men (20.6%). Most participants were single (92.1%) and belonged to a lower-middle socioeconomic status (80.3%). Of the participants, 54.1% indicated they were employed, while the remaining 45.9% reported otherwise. The instruments were completed by participants through a Google form that also included the informed consent form. The project underwent an exhaustive review and received approval from the ethics committee of the Universidad Católica Luis Amigó (65450).

2.2 Measures

Plutchik's Suicide Risk Scale (SRS). This scale, developed by Plutchik and Van Praag (1989), assesses the level of risk for a suicide attempt, as well as feelings associated with hopelessness and depression. Comprising 15 items with "yes" or "no" response options, the scale assigns one point for each affirmative response, yielding a maximum total of 15 points. The Spanish validation conducted by Rubio et al. (1998) demonstrated robust psychometric properties, including a test-retest reliability of .89, internal consistency of .90, and a sensitivity and specificity of 88% for a cut-off point of 6. Factorial validation with Colombian population revealed a two-factor model: one factor assessing depressive symptoms and another evaluating suicidal risk. The internal consistency, estimated by Cronbach's alpha, was .72 for the depressive symptomatology factor and .80 for the suicide risk factor. Additionally, internal consistency analysis using McDonald's omega yielded values of .82 for depression and .94 for suicide risk (Suárez et al., 2019). Construct validity was demonstrated in a university population in Colombia, with satisfactory indications of goodness of fit for a unifactorial model (χ 2 / df = 2.948, GFI = .979, AGFI = .966, RMSEA = .037) (Nuñez et al., 2023).

Beck Depression Inventory (BDI-II). Developed by Beck et al. (1979), assesses the presence and severity of depression in both adolescence and adulthood. Comprising 21 items, the scale evaluates the severity of affective, cognitive, physiological, and behavioral symptoms of depression during the previous week. Responses to each item are on a scale of 0 to 3, with total scores ranging from 0 to 63. The cut-off scores are categorized as follows: 0-9 for mild or minimal depression, 10-16 for mild depression, 17-29 for moderate depression, and 30-63 for severe depression. In the Spanish validation conducted by Sanz and Vásquez (1998), test-retest reliability coefficients ranged between .60 and .90, and internal consistency reliability coefficients were reported at .83. The inventory has also been validated in Colombia among university students, where a reliability with Cronbach's alpha of .91 was reported. Furthermore, item-test correlations were found to range between .31 and .67 (Maldonado et al., 2021). Construct validity was demonstrated in a university population in Colombia, with satisfactory indications of goodness of fitting for a unifactorial model (χ *2 /df* = 2.843, GFI = .967, AGFI = .956, RMSEA = .037) (Nuñez et al., 2023).

Beck Hopelessness Scale (BHS). Developed by Beck et al. (1974), comprises 20 items with true and false response alternatives designed to measure negative attitudes toward the future. In 11 of the items, respondents must react to pessimistic statements, while in the remaining nine items, they respond to optimistic statements regarding the future. The total score ranges from 0 to 2, with higher scores indicating greater hopelessness. In Colombia, González (2009) utilized

the Spanish translation by Bobes et al. (2002), revealing a moderate reliability of .83 and identifying five different dimensions through factor analysis. Another study conducted with the Colombian population, as presented by Rueda et al. (2016), reported a total internal consistency of .88 based on the Kuder-Richardson coefficient 20. Specific Kuder-Richardson values for each dimension were: .81 for the first factor (expectations towards the future), .70 for the second factor (motivation), .65 for the third factor (pessimism about the future), and .64 for the fourth factor (individual perception of the future). Regarding predictive validity, the value was .78. The BHS in Colombian population exhibits dimensions similar to the original version and demonstrates adequate reliability (Rueda et al., 2016). Construct validity was demonstrated in a university population in Colombia, with satisfactory indications of goodness of fit for a unifactorial model (χ 2 / df = 2.767, GFI = .967, AGFI = .958, RMSEA = .036) (Nuñez et al., 2023).

Purpose in Life Test (PIL). Created by Crumbaugh and Maholick (1964), it is designed to explore the meaning of life or existential emptiness through a qualitative and quantitative framework. For this research, Part A, corresponding to the quantitative section, was utilized, as Parts B and C are qualitative and exclusively intended for clinical use. Part A consists of 20 Likert-type items, each with seven response options that feature different anchor points. For instance, item 4, "my existence is...," presents response options ranging from 1 "meaningless and purposeless" to 7 "full of meaning and purpose." Similarly, item 18, "my life is...," offers response options from 1 "out of my hands and controlled by external factors" to 7 "in my hands and under my control," with 4 being the neutral item.

In the Spanish-adapted version conducted by Gottfried (2016), reliability was assessed with Cronbach's alpha for the 20 items, resulting in a coefficient of .89—a score consistent with those reported by Magaña et al. (2004) and Noblejas (1999). The adaptation of the PIL for the Colombian population by Martínez-Ortiz et al. (2012) identified three factors: "sense from the ability to set goals," composed of nine items with a Cronbach's alpha of .89; "sense from the hedonic element of life," composed of seven items with an alpha of .87; and "sense from the feeling of achievement," composed of four items with an alpha of .87.

In addition, "sense from the sense of accomplishment" comprised four items with a Cronbach's alpha of .87, and "sense from the feeling of achievement" consisted of three items with a Cronbach's alpha of .89. The unidimensionality of the construct of the Spanish version of the PIL was also reported in two independent groups of young university students, showing satisfactory fit indicators for both the first sample (CFI = 1.00, TLI = 1.00; NFI = 1.00, RMSEA = .004) and the second sample (CFI = 1.00, TLI = 1.001, NFI = 1.01, RMSEA = .000) (Weber et al., 2022).

2.3 Data Analysis

The Kolmogorov-Smirnov test indicated that the variables were not normally distributed ($p > .05$), prompting the use of nonparametric tests. The Mann-Whitney U test was employed to compare scores of the variables related to the sense of life, depression, and hopelessness between groups of young people with and without suicidal risk. A p-value of less than 0.05 was considered statistically significant. The effect size of significance in the comparative analyses was assessed using the eta-squared statistic ($\eta 2$), following the procedure and interpretation established by Fritz et al. (2012): small effect (0.01), medium effect (0.06), large effect (0.14).

Subsequently, a correlation analysis (Spearman's Rho) was conducted to examine the relationships between the study variables. Finally, several structural equation models were proposed to investigate the direct and indirect effects of depression and hopelessness, considering the mediating role of the purpose in life on suicidal risk. Reported fit indicators included chi-squared ($\chi 2/df$), goodness-of-fit index (GFI $\geq$ 0.90), its corresponding adjusted goodness-of-fit index (AGFI $\geq$ 0.90), Tucker-Lewis index (TLI $\geq$ 0.90), comparative fit index (CFI $\geq$ 0. 90), Bentler-Bonett normalized fit index (NFI $\geq$ 0.90), incremental fit index (IFI $\geq$ 0. 90), and root mean square residual of approximation (RMSEA $\leq$ 0.08) (Byrne, 2016; McArdle & Nesselroade, 2014). GFI, AGFI, TLI, CFI, NFI, and IFI values equal to or greater than 0.90 and a value equal to or less than 0.08 in RMSEA are appropriate (Byrne, 2016; McArdle & Nesselroade, 2014).

The statistical procedures described above are appropriate to test the hypotheses, and SEM path analysis is indicated to analyze the direct and indirect effects of the study variables. All data analyses were conducted using SPSS v. 25 and AMOS v. 24 software.

3. Results

The analysis of Plutchik's Suicide Risk Scale revealed that 43.8% of the participants exhibited signs of suicidal risk. Insights from the history form indicated that 24.7% reported a family history of suicide, 33.5% of the young individuals had contemplated self-harm in the last year, and 5.3% reported actual suicide attempts during the same period. Table 1 provides detailed descriptive statistics and a comparative analysis between the groups without risk and those with suicidal risk concerning depression, hopelessness, and sense of life. Participants at risk for suicide had higher scores on depression and hopelessness and lower scores on purpose in life compared to the group who is not at risk for suicide. Differences between the groups were statistically significant ($p < .001$) with large effect sizes ($\eta 2 \geq .14$).

Table 1. Descriptive statistics and mean comparisons between groups

	No Suicidal Risk				Suicidal Risk				Test statistics		
	M	*SD*	*Mr*	*Me*	*M*	*SD*	*Mr*	*Me*	*z*	*p*	η^2
Depression	10.67	7.77	116.84	9.0	25.57	11.06	239.29	26.0	-11.402	< .001	0.38
Hopelessness	2.66	3.23	130.08	2.0	7.07	5.87	222.32	5.0	-8.651	< .001	0.22
Purpose in life	104.14	17.14	217.79	106.0	82.58	17.62	109.88	82.0	-10.045	< .001	0.30

M: Mean; *SD*: Standard deviation; *Mr*: Mean range; *Me*: Median.

Table 2 reports the results of the Spearman correlation test between variables. Suicidal risk demonstrated a strong (positive) correlation with depression, a moderate (positive) correlation with hopelessness, and a moderate (negative) correlation with the purpose in life. Depression exhibited a moderate (positive) correlation with hopelessness and strong (negative) correlations with purpose in life. Furthermore, hopelessness showed a strong (negative) correlation with sense of life. All correlations were statistically significant at a p level < .001.

Table 2. Correlation coefficients

	Suicidal Risk	Depression	Hopelessness	Purpose in life
Suicidal Risk	1	.768*	.561*	- .662*
Depression	.768*	1	.686*	- .773*
Hopelessness	.561*	.686*	1	- .742*
Purpose in life	- .662*	- .773*	- .742*	1

*$p < .001$

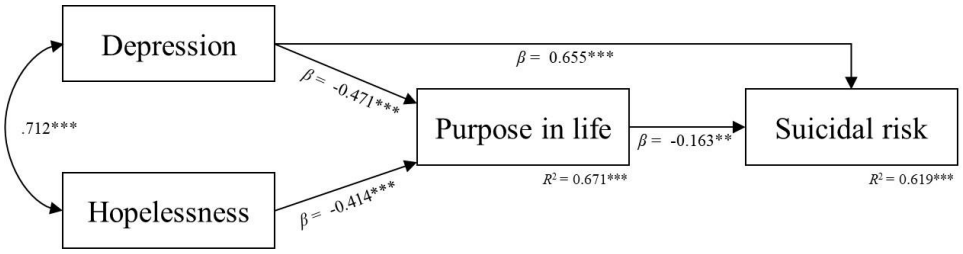
To examine the various direct and indirect effects of the independent variables—depression, hopelessness, and purpose in life—on suicide risk, two structural equation models were estimated using the generalized least squares method. In Model 1, the purpose in life was positioned as a mediator of suicidal risk, while in Model 2, both purpose in life and depression were considered as mediators of suicidal risk. The models yielded favorable goodness-of-fit indicators (see Table 3).

Table 3. Goodness-of-fit statistics for structural models predicting suicidal risk

Model	χ^2/df	IFI	CFI	NFI	TLI	GFI	AGFI	RMSEA
1	0.176	1.005	1.000	0.999	1.029	1.000	0.997	0.000
2	0.176	1.005	1.000	0.999	1.029	1.000	0.997	0.000

Models 1 and 2 demonstrated that depression, hopelessness, and purpose in life accounted for 62% of the variance in suicidal risk (R^2 = .619; *95% CI* = .541 – .682; p = .001). In Model 1 (refer to Figure 1), it was observed that depression and hopelessness exerted significant negative effects on purpose in life (R^2 = .671; *95% CI* = .609 – .725; p = .001). Moreover, purpose in life

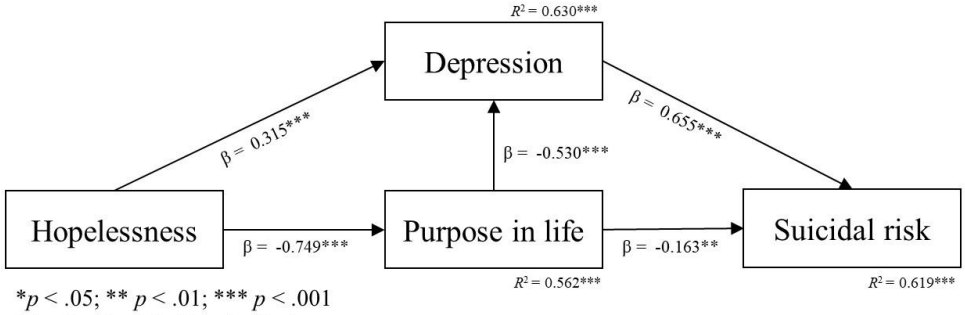
mediated the impact of depression and hopelessness on suicidal risk, with their standardized indirect effects proving to be significant ($p < .01$).



*$p < .05$; ** $p < .01$; *** $p < .001$
Standardized indirect effects:
Hopelessness on Suicidal risk ($\beta = .068$; *95% CI* = .017 – .131; $p = .005$).
Depression on Suicidal risk ($\beta = .077$; *95% CI* = .023 – .133; $p = .004$).

Figure 1. Path diagram for Model 1

Because suicide is a multifactorial and complex phenomenon, it was considered relevant to analyze more complex patterns of associations between the variables under study and to provide theoretical alternatives regarding the interactions between depression, hopelessness, and purpose in life and their effects in explaining suicide risk in young people. In Model 2 (refer to Figure 2), more intricate interaction patterns became apparent. Hopelessness was identified to have a significant negative effect on the purpose in life ($R^2 = .562$; *95% CI* = .481 – .636; $p = .001$). Simultaneously, hopelessness and the purpose in life contributed with significant effects, explaining 63% of the variance in depression ($R^2 = .630$; *95% CI* = .548 – .692; $p = .001$). The purpose in life acted as a mediator between hopelessness and depression, on one hand, and hopelessness and suicidal risk, on the other. Additionally, depression moderated the association between the purpose in life and suicidal risk. The indirect effects of hopelessness and the purpose in life were statistically significant ($p < .01$).



*$p < .05$; ** $p < .01$; *** $p < .001$
Standardized indirect effects:
Hopelessness on Depression ($\beta = .367$; *95% CI* = .321 – .480; $p = .001$).
Hopelessness on Suicidal risk ($\beta = 0.588$; *95% CI* = .526 – .642; $p = .002$).
Purpose of life on Suicidal risk ($\beta = -0.347$; *95% CI* = -.443 – -.265; $p = .0001$).

Figure 2. Path diagram for Model 2

4. Discussion

A pivotal finding in this study was the alarming prevalence of suicidal risk among college students, reaching 43.8%. Additionally, a significant proportion of young individuals (33.5%) reported experiencing suicidal thoughts at least once in the past year. This subgroup exhibited higher scores in depression and hopelessness and lower scores in the purpose in life compared to their counterparts without suicidal risk. Overall, a strong positive correlation was observed between depression and suicidal risk, along with substantial negative correlations between purpose in life and both depression and hopelessness. The two structural equation models revealed that depression and hopelessness exerted negative effects on the sense of life. However, purpose in life played a mitigating role by reducing the negative impact of these variables on suicidal risk. Collectively, these three factors accounted for 62% of the suicidal risk observed in this sample.

According to the models, a persuasive connection exists between depression and hopelessness. Hopelessness is characterized by negative inferential styles that individuals employ when cognitively evaluating their interactions with the world. These styles are rooted in the inference of stable and global causes (as opposed to unstable and specific ones) of events, the inference of negative consequences resulting from events, and the inference of negative self-characteristics. In the presence of negative life events, individuals with these cognitive styles are at an increased risk of developing hopelessness and depression. Thus, this aspect of the hopelessness theory essentially aligns with a diathesis-stress model of depression (Liu et al., 2015).

The presence of hopelessness is not a constant factor in all cases of depression. Not all depressive episodes are characterized by the presence of negative inferential styles of this nature. However, in cases of hopeless depression, particularly exacerbated by symptoms such as self-blame, low self-esteem, loss of self-confidence, and suicidal behavior are observed. In the hopelessness theory of suicide (Abramson et al., 2000), suicidality is considered a central symptom of hopeless depression. According to the models, depression (combined with hopelessness) exerted a strong effect on suicidal risk.

This result is consistent with studies that have explored the relationship between depression, hopelessness, and suicidal risk in young individuals. Recently, Keshoofy et al. (2023) reported that the odds of feeling hopeless in the past year were 20 times higher for individuals who had seriously contemplated suicide in the past two weeks compared to those who had never thought about suicide. According to their findings, hopelessness was also linked to negative health

outcomes such as loneliness and depression. Similarly, Lima et al. (2021) identified an association between hopelessness and suicidal ideation in college students.

Moreover, Lima et al. (2021) reported a positive correlation between the level of hopelessness and low academic performance. Among the factors associated with hopelessness, they identified not being in the desired course, harboring insecurities about their professional future, engaging in alcohol, cigarette, and other drug consumption, having a history of suicide, experiencing depressive mood, and being a victim of bullying. Keshoofy et al. (2023) also identified grade point average (GPA) as a reliable predictor of hopelessness among college students. According to them, academic success is a paramount achievement, and failure to attain satisfactory results has a substantial negative impact on self-esteem, subsequently influencing academic, career, and job expectations adversely.

The essence of meaning in life lies in an optimistic perception of oneself, one's existence, and the future. Individuals with high levels of meaning in life feel that their existence has purpose, and their actions, values, and goals are firmly aligned. Purpose in life is a sensation, a feeling—a positive emotional experience that engenders a state of acceptance and satisfaction with life. It is also a project, an idea, a purpose. Purpose in life as purpose refers to the pursuit and achievement of personal goals and objectives that give meaning to existence. The emotions and basis inherent in the purpose in life contribute significantly to psychological well-being and mental health. Both models indicated negative effects of hopelessness and depression on meaning in life. The second model revealed a strong negative effect of hopelessness on the sense of life.

These results align with findings from analogous studies (Veysi et al., 2014). Hedayati and Khazaei (2014) identified a moderate negative correlation between depression and meaning in life in college students with a mean age of 22 years. Parra (2020) reported a similar result among college students. Kleftaras and Psarra (2012) concluded that individuals with a higher sense of meaning in life are less likely to develop depressive symptomatology. Through a longitudinal study conducted in various countries, Disabato et al. (2017) were able to demonstrate that meaning in life contributes to an increase in positive life events, leading, in turn, to a decrease in depression.

At the core of meaning in life concept lies the notion of positive thinking and the hope that circumstances can improve. Positive emotions play a crucial role in shaping the sense of life. In contrast, hopelessness and depression represent the opposite end of the spectrum. Therefore, expecting negative associations between these variables is logically sound. Individuals experiencing depressive symptomatology and hopelessness are likely to face a significant

hindrance to their sense of life. Apathy, anhedonia, and sadness diminish the capacity to discover meaning and purpose in life. Similarly, hopelessness adversely affects the positive assessment of self, existence, and prospects (Sun et al., 2022) by undermining self-confidence, self-esteem, and self-efficacy. Hopelessness dampens motivation for the pursuit of adaptive coping strategies.

Nonetheless, the reverse scenario is also plausible: that purpose in life reduces the quantity or intensity of depressive symptomatology and alleviates hopelessness. This positive influence of the purpose in life on depression is evident in Model 2. Despite the negative impact of depression and hopelessness on the sense of life, it acts as a moderator of suicidal risk. The standardized indirect effects in both models support this assertion. In Model 1, the direct effect of depression on suicidal risk was $\beta = 0.655$ ($p < .001$). However, the indirect effect of depression on suicidal risk, mediated by the sense of life, was $\beta = 0.077$ ($p < .004$). The same pattern was observed for hopelessness.

Sun et al. (2022) recently conducted a comparable analysis using the same variables, and our findings are in line with theirs. According to the results, purpose in life was directly associated with a decrease in depression and, through depression, indirectly linked to a reduction in suicidal ideation. Lew et al. (2020) similarly reported that purpose in life acted as a mediator (buffer or suppressor) between hopelessness and suicidal behavior in college students. Evidence supports the idea that purpose in life functions as a resilience factor against suicidal behavior by decreasing, over time, levels of suicidal ideation and attempts (Kleiman & Beaver, 2013).

Purpose in life plays a pivotal role in reducing suicidal risk as it cultivates a positive orientation towards the future, amplifies motivation for action, reshapes the perception of challenges, counteracts learned helplessness, and bolsters resilience (Sher, 2019). Consequently, individuals can develop an optimistic attitude and outlook about themselves, their life, and their future, motivating them to take proactive steps to attain goals and aspirations. An optimistic perspective on the future serves as a motivational stimulus, as individuals envision promising possibilities and are inspired to exert efforts to achieve them. In this manner, individuals can actively pursue adaptive coping strategies.

Having a purpose in life can also increase the sense of perceived control, which could contribute to reducing feelings of hopelessness and depressive symptoms (Myles et al., 2021). Young people who believe that the circumstances and events in their lives are beyond their control are more likely to experience feelings of hopelessness and depression. When an individual has a well-defined life purpose, they are more likely to feel empowered and capable of exerting influence over their environment and the events that surround them. This sense of purpose can

enhance the perception of personal control, indicating that the individual believes they have the capacity to make decisions and impact their life and surroundings significantly. The convergence of life's purpose and an internal locus of control can function as resilient factors, serving to attenuate the susceptibility or likelihood of suicide (Aviad & Cohen-Louck, 2021).

The primary limitations identified encompass the sample size, self-selection bias in sample composition, and the reliance on cross-sectional and self-report measures. Although the sample size is sufficient for this type of analysis, undoubtedly a much larger size could help determine whether the effects reported here persist, intensify, or, conversely, diminish. The composition of the sample is a sensitive issue because studies of this nature may attract individuals who already exhibit these psychological characteristics. It would have been interesting to evaluate the models by distinguishing between those at risk of suicide and those who were not, or between those with depressive symptoms and those without, to determine if the effects varied or remained consistent.

Notwithstanding these constraints, these results offer valuable insights to shape mental health promotion, prevention, and intervention programs specifically tailored for university students. University life is often linked to alcohol and substance consumption, which can heighten the risk of mental health issues and risky behaviors, including suicide (Restrepo et al., 2018). The discovery that having a sense of purpose in life serves as a protective factor against hopelessness, depression, and suicide risk represents a significant step forward in advocating for promotion and intervention programs that address this issue. A purpose-centered intervention program can reduce suicide risk among university students. It helps students reflect on their values, goals, and aspirations, and teaches them skills to cope with stress and overcome challenges, thereby increasing their capacity for adaptation (Gómez-Tabares et al., 2022).

5. Conclusions

A fundamental finding in this study was the alarming prevalence of suicidal risk among college students. A strong positive correlation was observed between depression and suicidal risk, along with substantial negative correlations between purpose in life and both depression and hopelessness. The two structural equation models revealed that depression and hopelessness exerted negative effects on the sense of life. However, purpose in life played a mitigating role by reducing the negative impact of these variables on suicidal risk.

Ethic Statement

The project underwent an exhaustive review and received approval from the ethics committee of the Universidad Católica Luis Amigó (65450).

Conflict of Interest Statement

The authors declare that the research was conducted in the absence of any potential conflict of interest.

Authors' Contribution

ASGT reviewed the document, collected data, drafted the manuscript, analyzed the data, and conducted the final review.

JERC reviewed the document, drafted the manuscript, verified the statistical analysis, conducted the final review, and made final revisions.

NHA collected data and provided drafting support

AGP collected data and provided drafting assistance.

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