Journal of Affective Disorders 395 (2026) 120711

Contents lists available at ScienceDirect

Journal of Affective Disorders

journal homepage: www.elsevier.com/locate/jad

Research paper

Suicidal behavior and professional help-seeking among university students in Spain: A gender perspective

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ARTICLE INFO

Keywords:
Suicidal behavior
Gender
University students
Help-seeking
Psychological distress
Resilience
Family/social support

ABSTRACT

Background: Gender differences in suicidal behavior and professional help-seeking remain critical issues among university students. This study examined these differences and analyzed the role of psychological distress, resilience, and family and social support. It also explored how these variables relate to help-seeking.
Methods: A cross-sectional survey was completed by 2212 students at the University of Malaga (Spain) between March 3 and April 5, 2021. Validated instruments were used to measure suicidal behavior, psychological distress, resilience, and perceived support. A subsample of 733 students who reported suicidal behavior was selected to analyze professional help-seeking.
Results: Female students reported more frequent death wishes than males (32.3 % vs. 26 %) but there were no significant gender differences in suicidal ideation, planning, or attempts. Psychological distress resilience and family and social support predicted 22.7 % of the variance in suicidal behavior, and psychological distress ($\beta = 0.325$, $p < .001$), emerged as the strongest risk factor for suicidal behavior, whereas family and social support ($\beta = -0.189$, $p < .001$) and resilience ($\beta = -0.113$, $p < .001$) were protective. Regarding help-seeking, male students had 35.9 % lower odds of seeking professional support ($OR = 0.641$; $p = .013$) and tended to avoid it unless experiencing high distress.
Limitations: Data collection during the COVID-19 pandemic may have influenced findings on suicidal behavior and professional help-seeking. Due to its cross-sectional nature, the study cannot determine causal relationships.
Conclusions: These findings underscore the importance of mental health strategies that strengthen protective resources and promote help-seeking with attention to gender-sensitive approaches.

1. Introduction

Suicide is a significant public health concern and one of the leading external causes of death globally. According to the World Health Organization (WHO, 2024), an estimated 726,000 people die by suicide each year, corresponding to a global age-standardized suicide rate of 9.0 per 100,000 population. However, suicide rates vary widely across countries. In Spain, the National Statistical Institute (INE) reported 4116 deaths by suicide in 2023, resulting in a rate of 8.5 per 100,000 population and an average of more than 11.6 suicides per day (INE, 2024).

From a gender perspective, suicide affects men and women differently. According to WHO (2019), standardized suicide rates are higher in males (12.6 per 100,000) compared to females (5.4 per 100,000). In Spain, mortality rates were 12.98 per 100,000 for males and 4.33 per 100,000 for females (INE, 2024). This gender disparity in suicide mortality has been partially attributed to the use of more lethal methods and the higher prevalence of externalizing disorders among males, while females more frequently use less lethal methods and exhibit a greater prevalence of internalizing disorders (Boyd et al., 2015; Mergl et al., 2015).

Suicide must be distinguished from nonlethal suicidal thoughts and behaviors, hereafter called *suicidal behavior,* categorized into suicidal ideation, suicide plans, and suicide attempts (Posner et al., 2014). Carrasco-Barrios et al. (2020) identified several factors associated with an

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https://doi.org/10.1016/j.jad.2025.120711
Received 31 July 2025; Received in revised form 9 October 2025; Accepted 14 November 2025
Available online 16 November 2025
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increased risk of nonlethal suicidal behavior, including being female gender, age below 65, and conditions such as adversity, affective disorders, anxiety, and stress, among others. Gender differences in suicidal behavior rates are often referred to as the *Gender Paradox*, characterized by females exhibiting higher rates of suicidal ideation and behavior, yet lower mortality from suicide compared to males (Qu et al., 2024).

The previous data emphasizes the relevance of suicide among young population, leading the third external cause of death among individuals aged 15–29 years globally (WHO, 2024). In 2023, Spain recorded 354 deaths by suicide in this group, with a suicide rate of 4.8 per 100,000 inhabitants (INE, 2024). Research has identified several risk factors for suicidal thoughts and behaviors in young people, such as childhood adversities, mental health disorders, and recent stressful life experiences; and protective factors such as positive childhood relationships, coping skills, and family and social support (Daniel et al., 2017; Drum et al., 2017; Liu et al., 2014; Mackin et al., 2017; Nock et al., 2013; Tang and Qin, 2015).

Similarly, the prevalence of suicidal behavior among university students remains consistently high (Blasco et al., 2018; Miranda-Mendizabal et al., 2019b). This period is characterized by an increased risk of mental health challenges as depression, anxiety, and substance use disorders (Auerbach et al., 2018), all of which are strongly associated with suicidal thoughts and behaviors (Auerbach et al., 2019). Gender significantly affects psychological resilience levels, with results favoring males (Erdogan et al., 2015; Gök and Yılmaz Koğar, 2021); while female students had a better perception of social support compared to males (Siddiqui et al., 2019; Talwar et al., 2013).

In order to study mental health needs of university students, the World Health Organization developed the World Mental Health International College Student project (WMH-ICS; Harvard Medical School, 2015). A meta-analysis by Mortier et al. (2018) found that suicidal thoughts and behaviors are prevalent among university students. In Spain, the UNIVERSAL project, part of the WMH-ICS initiative, reported a 12-month prevalence of suicidal ideation at 9.9 % among college students (Blasco et al., 2018). This study, conducted in five Spanish universities (Blasco et al., 2016), also revealed gender-specific rates: 9.9 of suicide ideation (9.2 male; 10.4 female), 5.6 of suicide plans (4.8 male; 6.3 female), and 0.6 of suicide attempts (0.9 male; 0.5 female). In addition, a recent study conducted at the University of Málaga (Ramos-Martín et al., 2023) reported semester prevalences of 30.4 % for death wishes, 14.7 % for suicidal ideation, 13.6 % for suicide plans, 5.0 % for nonsuicidal self-injury, and 0.5 % for suicide attempts. In this cohort, suicide risk—regardless of gender—was associated with psychological distress and levels of family and social support (Ramos-Martín et al., 2023).

Gender also significantly influences the role in the inclination to seek professional help for mental health problems (Haavik et al., 2017). In general, help-seeking tends to be less visible among males attributed to greater difficulty in expressing emotions and seeking mental health support, often due to feelings of shame associated with externalizing what may be perceived as a weakness (Millán et al., 2014; Wendt and Shafer, 2017). Nevertheless, a protective factor for female is the fact that they tend to seek help more often (Barroso, 2019; Mok et al., 2020). Despite this, evidence indicates that most individuals experiencing suicidality do not seek professional help. Among European adolescents, a high prevalence of current suicidality has been found, but most of these displayed limited help-seeking behavior (Cotter et al., 2015). There has been limited systematic investigation into the factors that influence this variable (Han et al., 2017).

Recent data underscore the significance of suicidal behavior among young individuals aged 15 to 29, revealing marked gender differences. However, research addressing suicidal behavior from a gender perspective among university students in Spain remains limited. In this context, it is essential to examine the role of gender and related factors such as psychological distress, resilience, and family and social support. Furthermore, given the paucity of studies on professional help-seeking in this population, it is relevant to explore how suicidal behavior and these associated factors influence the likelihood of seeking professional support.

To address these gaps, this study was structured in two parts. The first part analyzed a sample of university students and aimed to: 1) estimate prevalence of suicidal behavior stratifying by gender; and 2) assess the association between gender, psychological distress, resilience, and family and social support on suicidal behavior. The second part focused on a subsample of students who reported at least one suicidal behavior —death wishes, suicidal ideation, suicide plans, suicide attempts, or nonsuicidal self-injury— within the past six months. The objective of this second part was 3) to determine the likelihood of seeking professional help as influenced by gender, suicidal risk, psychological distress, resilience, and family and social support.

In line with these objectives, this study tested the following hypotheses: 1) female students would present higher prevalence of suicidal behavior compared to male students; 2) greater psychological distress would be positively associated with suicidal behavior, whereas resilience and family and social support would be inversely associated; and 3) among students with suicidal behavior, male students would be less likely to seek professional help, mediated by other variables.

2. Methods

2.1. Participants and procedure

A cross-sectional and observational study was conducted at the University of Malaga (UMA) using an online questionnaire developed on the *Limesurvey* platform. Data collection took place from March 3 to April 5, 2021. Participants were asked to report on suicidal behaviors occurring in the preceding six months.

According to the UMA website, 36,498 students were enrolled in September 2020. The inclusion criteria for the study were a) participants aged 18–30, b) enrollment in the 2020/2021 academic year at the UMA, and c) provision of informed consent. Recruitment strategies included inviting faculty deans through the University Service of Diffusion, coordinated by the study organizers; employing a "snowball sampling" method to maximize voluntary participation; and utilizing social networks for broader outreach. For more details, refer to the article by Ramos-Martín et al. (2023). For the second part of the study, the inclusion criterion for defining the subsample was an affirmative response (yes) to at least one of the five types dichotomously assessed suicidal behaviors—death wishes, suicidal ideation, suicide plans, suicide attempts, or nonsuicidal self-injury—within the previous six months.

The study was approved by the Ethics Committee for Experimentation of the University of Malaga (CEUMA: 6-2021-H).

2.2. Measures

2.2.1. Dependent variables

2.2.1.1. Suicidal behavior. To assess suicidal behavior, two instruments were used: the Self-Injurious Thoughts and Behaviors Interview (SITBI; Nock et al., 2007), adapted for Spanish speakers by García-Nieto et al. (2013); and the Columbia Suicide Severity Rating Scale (C-SSRS; Posner et al., 2011), adapted to Spanish by Al-Halabí et al. (2016). The SITBI comprises five modules that assess the presence and frequency of five types of self-injurious thoughts and behaviors: a) suicidal ideation, b) suicide plans, c) suicide gestures, d) suicide attempts, and e) nonsuicidal self-injury (Nock et al., 2007). On the other hand, the C-SSRS assesses the severity of suicidal ideation and suicidal behavior. Following Blasco et al. (2018), a combination of items of both instruments, which assessed the absence or presence (0 or 1) of death wishes, suicidal ideation, suicide plans, suicide attempts, and nonsuicidal self-injury within the previous six months were selected in this research. A total score was

obtained by summing the dichotomous responses, ranged *from 0,* if the participant did not report any suicidal behavior, *to 5*, if the participant reported all suicidal behaviors. Therefore, this variable was treated as continuous, and indicated the severity level of suicidal behaviors.

2.2.1.2. Professional help-seeking. An ad hoc questionnaire was used to gather help-seeking information as a dependent variable in this study. The questionnaire included a principal item on whether participants had ever sought professional help with a yes/no response format: *Have you ever sought professional help (*e.g.*, psychologist, psychiatrist, family doctor…) for a mental health problem?* Additionally, free-text questions were included to gather details about where participants seek help and the services they are aware of.

2.2.2. Independent variables

2.2.2.1. Sociodemographic characteristics. Gender was considered as an independent variable in this study to examine its potential impact on suicidal behavior. Participants self-reported their gender using predefined categories: male or female. A detailed description of the rest of sociodemographic and academic variables included in the study is provided in the article by Ramos-Martín et al. (2023).

2.2.2.2. Psychological distress. The General Health Questionnaire 12-item version (GHQ-12; Goldberg et al., 1997), adapted to Spanish by Sánchez-López and Dresch (2008), was designed to detect minor mental disorders in the general population. Responses are recorded on a 4-point Likert scale (0 to 3), and a total score can be obtained between 0 and 36. A score of 12 or higher indicates the presence of psychological distress, with higher scores reflecting greater severity (Ruiz et al., 2017). The GHQ-12 has demonstrated good reliability in Spanish samples (α = 0.76). In this study, its internal consistency proved to be excellent (α = 0.89).

2.2.2.3. Resilience. The Brief Resilience Scale (BRS; Smith et al., 2008), adapted to Spanish by Rodríguez-Rey et al. (2016), evaluates resilience as a unidimensional construct, defined as the capacity to recover from disruptive life experiences. The scale consists of six Likert-type items with five response options. Three items are reverse-scored, and the total score is divided by six to yield a final score ranging from 1 to 5. Resilience levels are interpreted as low (<3), normal (3–4.30), or high (>4.30) (Smith et al., 2013). The scale adapted by Rodríguez-Rey et al. (2016) has demonstrated good internal consistency (α = 0.83), which was α = 0.82 in the present study.

2.2.2.4. Family and social support. The Family and Friends Scale (Blaxter, 1990) measures perceived support through relations with family and friends. It comprises 7 Likert type items with 3 response options with a maximum score of 21, in which higher scores indicate greater levels of this support. According to Bellón et al. (2008), the Spanish version provides a good internal consistency index (α = 0.88). This study shows an internal consistency of α = 0.87.

2.2.2.5. Suicide risk. This variable was assessed only in the second part of the study, based on the defined subsample. For individuals meeting the inclusion criteria, a total score was obtained by summing the affirmative responses, ranged from 1 to 5 and indicating the severity level of suicidality. Accordingly, from this point forward in the study, any affirmative response to one or more of the five suicidal behavior categories was interpreted as indicative of a certain level of *suicide risk* (Ramos-Martín et al., 2023; Huertas et al., 2020).

2.3. Data analysis

Descriptive statistics for independent variables were performed, obtaining absolute and relative frequencies stratified by gender. Prior to hypothesis testing, the normality of the data was assessed using the Shapiro-Wilk test ($p < .05$). For variables that did not meet this criterion, normality was further evaluated by examining skewness and kurtosis (Curran et al., 1996).

To explore associations between categorical variables, such as gender, contingency tables were constructed to assess the distribution of responses across male and female participants. In this analysis, gender was treated as the independent variable, and the different categories of suicidal behavior were considered dependent variables. Pearson's chi-square test was used to determine whether the associations between gender and suicidal behaviors were statistically significant ($p < .05$). Phi and Cramér's V coefficients were calculated to assess the strength of these associations.

In addition, a multiple linear regression analysis was conducted to examine the combined effects of gender, psychological distress, resilience, and family and social support on suicidal behavior, which was treated as the dependent variable. The t-statistic was used to test the significance of each predictor, identifying those with a statistically meaningful contribution. Standardized Beta coefficients were reported to indicate the relative strength and direction of each effect.

Finally, 'within the subsample of university students who reported at least one suicidal behavior (i.e., those endorsing at least one of the five suicidal behaviors), a binary logistic regression analysis was conducted to examine the influence of gender, suicidal risk, psychological distress, resilience, and family and social support on the likelihood of seeking professional help. Odds ratios (OR) were used to quantify the strength and direction of associations. In addition, separate logistic regression analyses were performed for male and female participants to explore the influence of these predictors within each gender group.

3. Results

3.1. Participants

During the 2020/2021 academic year, a total of 2845 enrolled at the University of Málaga (UMA) completed the questionnaire. Following the application of the inclusion and exclusion criteria, 144 students were excluded, 8 declined to provide informed consent, and 489 did not complete the full assessment. As a result, the final sample for the first part of the study, addressing objectives 1 and 2, comprised 2212. For the second part of the study, addressing objective 3, the sample was reduced to a subsample of 733 male and female students who reported at least one affirmative response to any of the five categories of suicidal behavior (see Fig. 1).

The results of the sociodemographic characteristics showed that most students were Spanish (94.9 %), with a mean age of 21.28 years (SD = 2.51). In terms of gender, female students were overrepresented in the total sample (n = 1540; 69.6 %) compared to 672 male students (n = 672; 30.4 %). For further details on sociodemographic and academic variables, refer to the article by Ramos-Martín et al. (2023).

Regarding the other independent variables, the majority of participants presented psychological distress (n = 1983; 89.6 %), including 577 males (85.9 %) and 1406 females (91.3 %). The overall mean scored for resilience was 2.83 (SD = 0.79), with male students reporting a higher average (M = 3.06, SD = 0.77) than females (M = 2.73, SD = 0.77). For perceived family and social support, the total sample reported a mean score of 19.32 (SD = 2.52), with similar scores for males (M = 19.19, SD = 2.62) and females (M = 19.37, SD = 2.47) (Table 1).

3.2. Gender and prevalence of suicidal behavior

From the total sample of UMA participants (N = 2212), Table 2 presents the results for each gender group (672 males, 30.4 %; 1540 females, 69.6 %), regarding suicidal behavior over the past six months. Cross-tabulation and chi-square tests revealed statistically significant

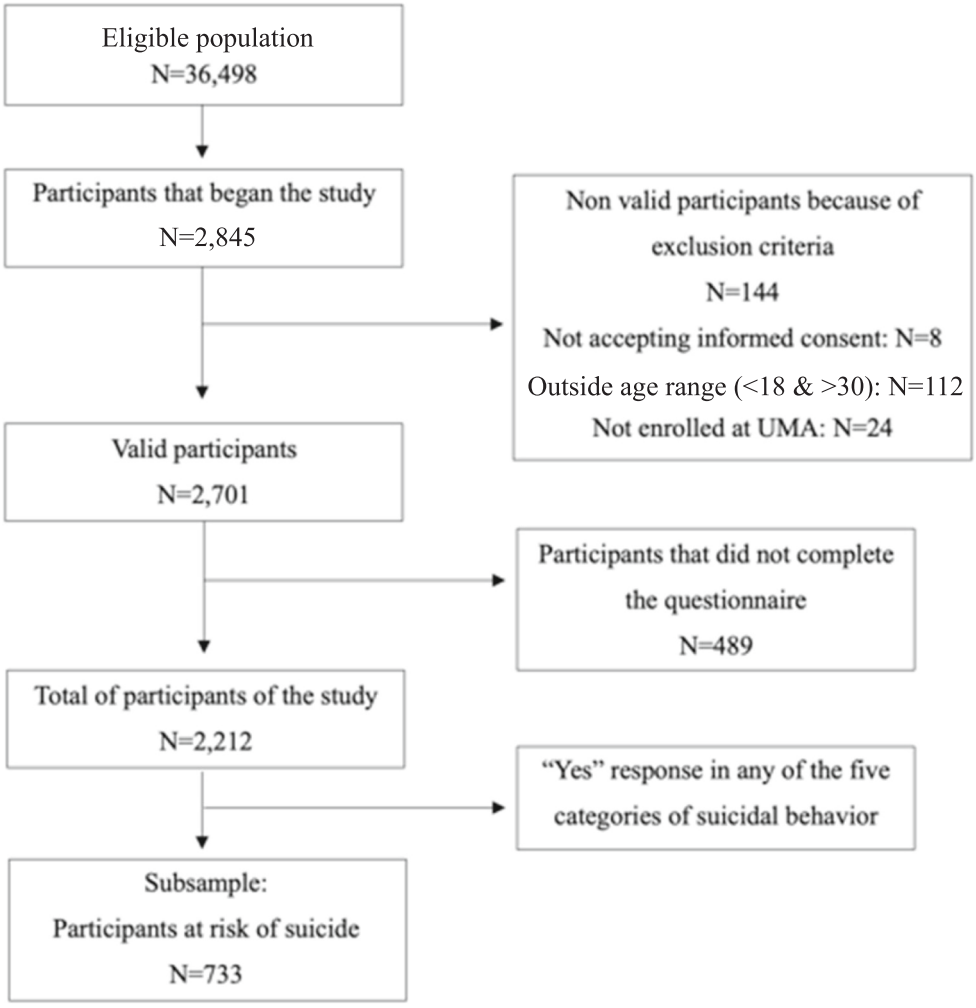

Fig. 1. Flow chart of the eligible population.

Table 1
Psychological distress, resilience, and family/social support variables.

	Total *n* = 2212 100 %	Males *n* = 672 30.4 %	Females *n* = 1540 69.9 %
	n (%)	*n (%)*	*n (%)*
Psychological distress [a]	1983 (89.6)	577 (85.9)	1406 (91.3)
	M (SD)	*M (SD)*	*M (SD)*
Resilience [b]	2.83 (0.79)	3.06 (0.77)	2.73 (0.77)
Family/social support [c]	19.32 (2.52)	19.19 (2.62)	19.37 (2.47)

[a] Cut-off point: >12.
[b] Ranges: Low (<3); Medium (3–4.30); High (>4.30).
[c] Range: 7–21.

gender differences only in death wishes ($\chi^2(1) = 8.761$, $p = .003$, $V = 0.063$). Female students reported a higher prevalence of death wishes than male students (32.3 % versus 26 %), though the effect size was small ($V < 0.3$).

No significant gender differences were found for suicide ideations, suicide plans, suicide attempts or self-injurious behaviors.

3.3. Correlates of suicidal behavior

The results presented in Table 3 demonstrated the association of gender, psychological distress, resilience, and family and social support on suicidal behavior. The overall model was statistically significant, $F(4,$

Table 2
Prevalence of suicidal behavior in the last six months by gender ($N = 2212$).

	Total *n* = 2212 100 %	Males *n* = 672 30.4 %	Females *n* = 1540 69.9 %	Pearson's chi-square test		
	n (%)	*n (%)*	*n (%)*	χ^2	*p-value*	*Cramér's V*
Death wishes						
Yes	673 (30.4)	175 (26)	498 (32.3)	8.761	.003	0.063
No	1539 (69.6)	497 (74)	1042 (67.7)			
Suicidal ideation						
Yes	325 (14.7)	105 (15.6)	220 (14.3)	0.670	.413	0.017*
No	1887 (85.3)	567 (84.4)	1320 (85.7)			
Suicide plans						
Yes	300 (13.6)	93 (13.8)	207 (13.4)	0.063	.802	0.005*
No	1912 (86.4)	579 (86.2)	1333 (86.6)			
Suicide attempts						
Yes	11 (0.5)	4 (0.6)	7 (0.5)	0.187	.665	0.009*
No	2201 (99.5)	668 (99.4)	1533 (99.6)			
Nonsuicidal self-injury						
Yes	111 (5.0)	25 (3.7)	86 (5.6)	3.411	.065	0.039*
No	2101 (95.0)	647 (96.3)	1454 (94.4)			

Statistically significant p-values are shown with *.

Table 3
Association between gender, psychological distress, resilience, and family/social support on suicidal behavior ($N = 2212$).

	Multiple linear regression				
	B	*Std. Error*	*β*	*t*	*p-value*
Gender	0.049	0.045	0.021	1.084	.279
Psychological distress	0.048	0.003	0.325	14.915	<.001*
Resilience	−0.157	0.030	−0.113	−5.267	<.001*
Family/social support	−0.082	0.008	−0.189	−9.701	<.001*

Statistically significant p-values are shown with *.

2207) = 163.23, $p < .001$, accounting for approximately 22.7 % of the variance in suicidal behavior ($R^2 = 0.227$). Among the independent variables, psychological distress ($\beta = 0.325$, $p < .001$), resilience ($\beta = -0.113$, $p < .001$), and family and social support ($\beta = -0.189$, $p < .001$) were significant predictors. Gender, however, was not statistically associated with suicidal behavior ($\beta = 0.021$, $p = .279$). These findings indicate that higher psychological distress is positively associated with any suicidal behavior, whereas greater resilience and perceived social support are negatively associated with any suicidal behavior, independently of gender.

3.4. Correlates of professional help-seeking in students with suicidal behavior

Help-seeking behaviors was analyzed in the subsample of university students who reported suicidal behavior ($N = 733$), comprising 199 males and 534 females. Among them, 327 students (44.6 %) reported having ever sought professional help, including 72 males (36.2 %) and 255 females (47.8 %).

Related to objective 3, a logistic regression was performed to examine the effects of gender, suicide risk, psychological distress, resilience, and family and social support, on the likelihood of seeking professional help (Table 4). The overall model was statistically significant ($\chi^2(8) = 63.01$, $p < .001$) explaining 11 % of the variance in help-seeking behavior (Nagelkerke $R^2 = 0.11$) and correctly classified 63.3 % of cases.

Among the five predictor variables, only three were statistically significant: gender ($OR = 0.641$; $p = .013$), resilience ($OR = 0.795$; $p = .040$), and suicide risk ($OR = 1.414$; $p \leq .001$). Male students had 35.9 % lower odds of seeking professional support compared to females. Higher resilience was associated with a lower likelihood of seeking help ($B = -0.230$), whereas greater suicide risk increased the likelihood of help-seeking ($B = 0.346$).

The logistic regression model for the female subsample was statistically significant, $\chi^2(4) = 30.68$, $p < .001$. The model explained 7.4 % of the variance in help-seeking behavior (Nagelkerke's R^2) and correctly classified 61.2 % of cases. Of the four predictor variables included, only two reached statistical significance: resilience ($OR = 0.764$; $p = .041$) and total suicide risk ($OR = 1.477$; $p \leq .001$). Higher levels of resilience were associated with a reduced likelihood of seeking professional help, whereas greater suicide risk was associated with an increased likelihood (Table 5).

Table 4
Associations between gender, suicide risk, psychological distress, resilience and family/social support on professional help-seeking in the subsample ($N = 733$).

Binary logistic regression				
	B	*OR*	*95 % CI*	*p-value*
Gender	−0.445	0.641	0.452–0.910	.013*
Suicide risk	0.346	1.414	1.214–1.646	<.001*
Psychological distress	0.022	1.022	0.993–1.051	.139
Resilience	−0.230	0.795	0.639–0.990	.040*
Family/social support	0.030	1.030	0.978–1.086	.261

Statistically significant p-values are shown with *.

Table 5
Association between gender, suicide risk, psychological distress, resilience and family/social support on professional help-seeking among female university students ($N = 733$).

Binary logistic regression Females				
	B	*OR*	*95 % CI*	*p-value*
Psychological distress	0.005	1.005	0.971–1.040	.772
Resilience	−0.270	0.764	0.590–0.989	.041*
Family/social support	0.003	1.003	0.944–1.066	.916
Suicide risk	0.390	1.477	1.235–1.765	<.001*

Statistically significant *p*-values are shown with *.

In contrast, the logistic regression model for the male subsample was statistically significant ($\chi^2(4) = 12.25$, $p = .016$). The model accounted for 8.2 % of the variance in help-seeking behavior (*Nagelkerke's* R^2) and correctly classified 68.8 % of cases. Among the four predictor variables included in Table 6, only psychological distress reached statistical significance ($OR = 1.063$; $p = .027$). Higher levels of psychological distress were associated with an increased likelihood of seeking professional help.

4. Discussion

Recognizing suicide as a major public health concern, particularly among young individuals aged 15–29, this study examined suicidal behavior and professional help-seeking in university students in Malaga (Spain). To our knowledge, this is the first study in Spain to analyze suicidal behavior in this group from a gender perspective, incorporating its association with help-seeking. This work expands upon the findings of Ramos-Martín et al. (2023) by including the entire university population and introducing a variable not addressed in the original research: professional help-seeking.

4.1. First part. Gender and suicidal behavior

Regarding objective 1 -to estimate prevalence of suicidal behavior stratifying by gender- it was notable that, contrary to findings from numerous European and national studies (Castillejos et al., 2020), no significant gender differences were observed in severe forms of suicidal behavior, such as ideation, planning, or attempts. Female students only reported a higher prevalence of death wishes, thus partially confirming the initial hypothesis. These findings are consistent to some extent with previous literature, suggesting that women tend to verbalize emotions and exhibit internalizing symptoms, which may contribute to higher rates of death wishes without progression to more structured suicidal behavior (Boyd et al., 2015; Miranda-Mendizabal et al., 2019a). The subjective interpretation of death wishes may also differ by gender: for women, they may reflect a call for support, whereas in men, psychological distress may be expressed through silence or impulsivity (Canetto and Sakinofsky, 1998). The absence of gender differences in ideation and planning could reflect growing mental health awareness among

Table 6
Association between gender, suicide risk, psychological distress, resilience and family/social support on Professional Help-Seeking among Male University Students ($N = 733$).

Binary logistic regression Males				
	B	*OR*	*95 % CI*	*p-value*
Psychological distress	0.061	1.063	1.007–1.122	.027*
Resilience	−0.125	0.883	0.579–1.346	.563
Family/social support	0.106	1.112	0.998–1.240	.055
Suicide risk	0.265	1.303	0.961–1.766	.088

Statistically significant p-values are shown with *.

male students or the influence of social desirability biases (Wendt and Shafer, 2017). In addition, some analyses have shown the high stigma associated with revealing mental health issues, especially among men, as well as the influence of gender norms on the disclosure of distress (Brown et al., 2018).

In relation to objective 2—to assess the association between gender, psychological distress, resilience, and family and social support on suicidal behavior—results from the multiple linear regression analysis indicated that psychological distress had the strongest explanatory power for suicidal behavior, supporting the hypothesis that greater distress is associated with any suicidal behavior. This is consistent with previous studies that identified depression and anxiety as key correlates of suicidal behavior in young people (Auerbach et al., 2018; Blasco et al., 2018). Additionally, resilience and family and social support emerged as significant protective factors, reinforcing evidence that these variables buffer the effects of psychological distress and reduce suicidal ideation (Liu et al., 2014; Mackin et al., 2017; Tang and Qin, 2015). Conversely, gender was not a significant predictor in the regression model, which aligns with the absence of gender differences in most suicidal behavior categories, with the exception of death wishes.

4.2. Second part. Professional help-seeking in students with suicidal behavior

To address objective 3—to determine the likelihood of seeking professional help as influenced by gender, suicidal risk, psychological distress, resilience, and family and social support— logistic regression analyses were conducted on a subsample of students who reported at least one suicidal behavior in the preceding six months. The results revealed significant gender differences in help-seeking behavior. Female students were more likely to seek professional support, whereas male students showed greater reluctance, confirming previous findings (Barroso, 2019; Mok et al., 2020). Among female participants, both suicide risk and resilience significantly predicted help-seeking; higher risk increased the likelihood, while higher resilience decreased it. As expected, greater resilience means that the person is better prepared to face adversities, and **develops more adaptive** coping styles and self-reliance, **which may lead them to believe** that it is not necessary to receive any kind of psychological help. These findings are consistent with previous research on the effect of resilience on suicidal ideation in college students (Selak et al., 2024) and add to the range of contexts in which its protective function may operate against help-seeking, particularly among female students. For male students, only psychological distress emerged as a significant predictor of help-seeking. Suicide risk did not increase the likelihood of seeking help, aligning with research indicating that traditional masculinity norms discourage emotional expression and promote self-reliance (Addis and Mahalik, 2003; Millán et al., 2014). More than half of the students reporting suicidal thoughts or self-harm injuries did not seek help or receive mental health support during their time at university, with rates being lower among men (Barnett et al., 2024). These gendered norms are further reinforced by internal and external barriers such as fear of judgement, family related concerns, stigma surrounding suicide and a perceived lack of need for treatment (Han et al., 2017; Paramo and Herrera, 2022). Systemic barriers and limited awareness of available resources may also reduce help-seeking (Hunt and Eisenberg, 2010). This pattern may partly explain why most individuals experiencing suicidal behavior do not seek professional support (Cotter et al., 2015) and may also be related to the higher levels of resilience reported among men (Erdogan et al., 2015; Gök and Yılmaz Koğar, 2021).

4.3. Limitations and strengths

This study presents several limitations that should be interpreted with caution. First, data collection occurred during the COVID-19 pandemic, a period that may have significantly affected levels of psychological distress, suicidal behavior, and decisions related to professional help-seeking. However, the data addressing a clear correlation between suicidal behavior and the pandemic outbreak remain controversial (Barlattani et al., 2023). Notably, 97.9 % of participants reported that the pandemic had impacted their lives in some way (Ramos-Martín et al., 2023), which raises concerns about the generalizability of the findings to non-pandemic contexts.

The generalizability of the findings is limited by methodological constraints related to sampling. First, the snowball recruitment strategy may have introduced self-selection bias, inflating the observed rates and compromising the representativeness of the sample. Second, the marked overrepresentation of women (69.6 %) produced an unbalanced distribution, reducing the applicability of the results.

Other limitations should also be noted. The reliance on self-report measures may have increased the risk of social desirability bias, particularly in relation to sensitive issues such as suicide and mental health. The cross-sectional design precludes causal inference and does not allow for the evaluation of changes over time. Moreover, gender was treated as a binary variable, and other potentially influential factors—such as recent stressful life events, substance use, or comorbid mental disorders—were not considered (Ramos-Martín et al., 2023).

A particularly important limitation concerns the second part of the study. The temporal mismatch between outcomes further restricted interpretability: suicidal behaviors were assessed for the past six months, whereas professional help-seeking was measured as a lifetime event, which may reflect experiences unrelated to recent suicidal behaviors. However as the sample was young people, lifetime help-seeking could be refer to recent event. Help-seeking was also assessed as a binary variable, without detail on frequency, duration, or type of support. Finally, while the statistical models yielded significant associations, their explanatory power was modest.

To strengthen the relevance of these findings, future studies should replicate the research with updated data, particularly given the global impact of the COVID-19 pandemic on mental health. The psychosocial effects—including prolonged isolation, academic uncertainty, and heightened psychological vulnerability—likely influenced both the prevalence of suicidal behaviors and the willingness to seek professional support. In the current context, increased visibility of psychological well-being and institutional efforts to destigmatize mental health issues and promote access to care may have contributed to shifting attitudes, especially among male students, who in this study were less likely to seek help. Longitudinal studies are recommended to determine whether this apparent decrease in gender differences persists beyond the post-pandemic period.

A methodological strength of this study was the use of a subsample comprising students who reported recent suicidal behavior, referred to us suicide risk (Huertas et al., 2020; Ramos-Martín et al., 2023). An important feature of our research lies in its contribution to identifying psychological and sociodemographic factors that influence the likelihood of seeking professional help among individuals at risk of suicide. This allowed for a focused analysis of factors associated with professional help-seeking and provided valuable insights for tailoring clinical interventions according to risk level and gender.

5. Conclusions

Although the results indicate a trend toward convergence between male and female students in most manifestations of suicidal behavior, maintaining a gender perspective remains essential in designing mental health promotion and suicide prevention strategies. The lack of professional support continues to be a critical factor in the persistence of psychological distress and the lethality of suicidal behavior (Ashrafioun et al., 2016; Auerbach et al., 2018; Han et al., 2017; INE, 2024; Miranda-Mendizabal et al., 2019b; WHO, 2025).

These findings highlight the importance of expanding mental health awareness and promoting help-seeking particularly among young men,

who are consistently identified as a highly vulnerable group and who make limited use of mental health services. In this context, it is essential to implement targeted interventions within university services aimed at reducing stigma, encouraging the use of professional care, and enhancing resilience and social support, without discouraging formal care.

By adopting an empirical approach grounded in gender analysis, this study provides critical insights for developing more effective and targeted prevention and intervention strategies tailored to the specific needs and vulnerabilities of diverse student populations.

CRediT authorship contribution statement

Lucía Jiménez-Feo: Writing – review & editing, Writing – original draft, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Jesús Oliver:** Writing – review & editing, Writing – original draft, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Javier Ramos-Martín:** Writing – review & editing, Writing – original draft, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Berta Moreno-Küstner:** Writing – review & editing, Writing – original draft, Supervision, Methodology, Investigation, Data curation, Conceptualization.

Funding

None.

Declaration of competing interest

The authors declare the following financial interests/personal relationships which may be considered as potential competing interests:

Authors with no competing interests to declare should select the option “I have nothing to declare”.

The resulting Word document containing your declaration should be uploaded at the “attach/upload files” step in the submission process. It is important that the Word document is saved in the .doc/.docx file format. Author signatures are not required. If there are other authors, they declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Acknowledgement

None.

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