

Suicide-risk-related factors in a psychiatric patient cohort: a cross sectional study on outpatients, inpatients, and therapeutic community patients

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Summary. Background. Suicide constitutes a significant global health concern. Joiner's interpersonal-psychological theory of suicide focuses on three variables: Thwarted Belongingness (TB), Perceived Burdensomeness (PB) and Acquired Capability for Suicide. **Methods.** A sample of 90 psychiatric patients, comprising outpatients, inpatients and individuals residing in therapeutic communities, was recruited between 2021 and 2022. Scales measuring anxiety, depression, mental pain, reasons for living, TB, PB and fearlessness about death were administered. Patients with and without suicidal ideation (SI), as well as those with and without history of suicide attempt (SA) were compared and two stepwise logistic regression models were performed. **Results.** Both patients with SI and with SA had higher anxiety, depression, mental pain, PB, fearlessness about death and lower self-esteem. Notably, depression, PB and beliefs about coping strategies were strongly associated with SI, while higher fearlessness about death and PB were strongly linked to history of SA. Additionally, inpatients and therapeutic community patients were at higher risk of suicide and had higher levels of depression compared to outpatients. **Limitations.** The small sample size and the inclusion of patients with mixed psychiatric diagnoses limit the generalizability of the findings. The cross-sectional design hinders causal hypotheses about the relationship between current SI or past SA and potential risk factors. The use of self-report measures entails biases. The analyses did not include details about pharmacological treatments. **Conclusions.** SA history could be explained by fearlessness about death. Improving the ability to cope with suicidal thoughts constitutes a pivotal component of therapeutic interventions with suicidal patients.

Key words. Fearlessness about death, interpersonal-psychological theory, perceived burdensomeness, psychiatric patients, suicide.

Fattori associati al rischio suicidario in una coorte di pazienti psichiatrici: uno studio trasversale su pazienti ambulatoriali, ricoverati e di comunità terapeutica.

Riassunto. Introduzione. Il suicidio costituisce un significativo problema di salute globale. La teoria interpersonale-psicologica del suicidio di Joiner si concentra su tre variabili: Senso di Appartenenza Frustrato (SAF), Senso di Onerosità Percepita (SOP) e Capacità Acquisita di suicidio. **Metodi.** Un campione di 90 pazienti psichiatrici, composto da pazienti ambulatoriali, ricoverati e pazienti residenti in comunità terapeutiche, è stato reclutato tra il 2021 e il 2022. Sono state somministrate scale per misurare ansia, depressione, dolore mentale, ragioni per vivere, SAF, SOP e mancanza di paura riguardo alla morte. Sono stati confrontati pazienti con e senza ideazione suicidaria (IS), così come quelli con e senza storia di tentativi di suicidio (TS), e sono state eseguite due regressioni logistiche stepwise. **Risultati.** Sia i pazienti con IS che quelli con TS avevano ansia, depressione, dolore mentale, SOP, mancanza di paura riguardo alla morte più elevati e autostima più bassa rispetto ai pazienti senza IS e a quelli senza TS. In particolare, depressione, SOP e credenze riguardanti le strategie di coping erano fortemente associate all'IS, mentre più elevate mancanza di paura riguardo alla morte e SOP erano fortemente associate alla storia di TS. Inoltre, i pazienti ricoverati e quelli di comunità terapeutica avevano un rischio suicidario più elevato e livelli più alti di depressione rispetto ai pazienti ambulatoriali. **Limiti.** Le dimensioni ridotte del campione e l'inclusione di pazienti con diagnosi psichiatriche miste limitano la generalizzabilità dei risultati. Il disegno trasversale ostacola ipotesi causali sulla relazione tra IS attuale o TS passati e potenziali fattori di rischio. L'uso di misure self-report comporta dei bias. Le analisi non hanno incluso dettagli sui trattamenti farmacologici. **Conclusioni.** La storia di TS potrebbe essere spiegata dalla mancanza di paura riguardo alla morte. Migliorare la capacità di far fronte ai pensieri suicidari costituisce una componente fondamentale delle terapie con pazienti a rischio suicidario.

Parole chiave. Mancanza di paura riguardo alla morte, pazienti psichiatrici, senso di onerosità percepita, suicidio, teoria interpersonale-psicologica.

Introduction

Suicide represents a global public health challenge. Every year 703,000 people take their lives, and even more people attempt suicide¹. In 2019 suicide accounted for more than 1 in 100 deaths (1.3%) worldwide². Consequently, the World Health Organization (WHO) has prioritized suicide prevention on the global public health agenda³. In clinical practice, understanding the clinical, psychological, sociological, and biological factors associated with suicidal behavior is crucial in identifying high-risk individuals and guiding treatment strategies.

Since suicide is defined as the act of intentionally ending one's life, it is critical to explore the intrapsychic processes that drive and perpetuate the emergence and progression of suicidal ideation (SI) towards action, to make a breakthrough in suicide research. Over the years, several psychological theories have been developed to explain the suicidal process, including the Interpersonal-Psychological Theory of suicide presented by Thomas E. Joiner 2005⁴ and further expanded by Van Orden et al.⁵. According to Joiner, three necessary and jointly sufficient variables are involved in enacting a lethal suicide attempt (SA): Thwarted Belongingness (TB), Perceived Burdensomeness (PB) and Acquired Capability (AC) for a lethal self-injurious behavior. The simultaneous presence of all these domains is required for a serious self-injuring act to occur. TB describes the absence of support networks or the feeling of lacking a genuine connection with others, despite having contacts with other people. PB describes a feeling of being a burden to others, to the extent that one's death is more valuable to others than one's life. AC is associated with desensitization to the fear and pain involved in self-harm through repeated painful experiences, leading to fearlessness about death and increased physical pain tolerance.

Joiner's theory has been tested out in numerous literature studies. Chu et al. meta-analysis⁶ of 122 studies found that the interaction between TB and PB was significantly associated with SI, while the interaction between TB, PB and AC was significantly associated with a greater number of SA.

The present research aims to investigate suicide risk (measured by current SI or lifetime SA) in a sample of psychiatric patients, including inpatients, outpatients and therapeutic community patients, while examining associated variables such as sociodemographic, psychological/psychiatric factors, somatic pain and social characteristics. This investigation took place during the Covid-19 pandemic, recruiting individuals from June 7th, 2021, to October 10th, 2022.

Methods

A sample of psychiatric patients with various diagnoses (n=90) was recruited from outpatient, inpa-

tient centers, and therapeutic communities (rehab centers where patients live) in Northern Italy. The Institutional Review Boards (IRBs) of the "Maggiore della Carità" University Hospital of Novara and of the University of Milan-Bicocca approved the study (respectively, "Maggiore della Carità" University Hospital: date: 01/07/2020; protocol: CE 165/20; University of Milan-Bicocca: date: 23/4/2020; protocol: 0025172/20).

The study involved 5 facilities:

1. Psychiatric Ward, "Maggiore della Carità" University Hospital in Novara, which treats inpatients with schizophrenic psychoses, affective psychoses, personality disorders, and neuroses, as well as outpatients with depression, anxiety, and eating disorders.
2. Medium-assistance Rehabilitation Community "Il Volo" - Villa Ratti in Monticello, Lecco: the therapeutic community welcomes 18-to-35-year-old individuals of both genders with personality disorders, particularly borderline, who suffer from psychosocial distress. The community follows a cognitive-constructivist approach. The treatment and rehabilitation pathway have an average duration of 12-18 months, including pre-admission, assessment, community program, and reintegration phases.
3. High-assistance Rehabilitation Community "La Bonne Semence" in Oltre il Colle, Bergamo, specializing in young psychotic and borderline patients during their post-acute phase with a predetermined stay duration.
4. High-assistance Rehabilitation Community of Bellano in Lecco, offering rehabilitation and post-acute-phase pathways for patients aged between 18 and 65 years with severe psychopathology (psychotic disorders, personality disorders, affective disorders). The community follows a psychodynamic approach.
5. Community "Orizzonti" - High-Assistance Rehabilitation Community in Cernusco Lombardone in Lecco, catering to 24-to-44-year-old individuals with severe onset and first-phase-therapy disorders. The hospitalization can vary according to therapeutic pathways, from 18 months (high-intensity rehabilitation) to 36 months (medium-intensity rehabilitation) to post-acute-phase rehabilitation. The most frequent diagnoses are schizophrenia, delusional disorders and a low percentage of personality disorders, affective syndromes or neuroses.

To ensure a real world-setting, we decided to use as only inclusion criteria the following: 1) having a psychiatric diagnosis; 2) consent to participate in the study. Patient diagnoses were clinically made by experienced psychiatrists, based on a well-established acquaintance with the patients. Even though no exclusion criteria were set, we decided for clinical rea-

sons not to perform the research assessment in those patients for whom it could be too stressful; hence, as assessed in the context of the routine clinical interviews in each of the settings involved and according to clinicians' judgement, we did not assess patients who were not clinically stable enough, or were experiencing a current high and active suicide risk.

All participants gave their written informed consent in a consent form approved by IRBs of both "Maggiore della Carità" University Hospital of Novara and University of Milan-Bicocca.

PROCEDURE

The study was conducted as a cross-sectional study during the Covid-19 pandemic, recruiting individuals from the five facilities described above, from June 7th, 2021, to October 10th, 2022. When the study started, patients matching the inclusion criteria were asked about their willingness to participate. Assessments were then scheduled according to the availability of the researchers involved and taking into account the clinical conditions of patients, as described above.

A battery of various scales was administered by psychiatrists and/or psychologists, expert and trained in their use in the clinical setting. Socio-demographic and clinical information was collected. Included measures, selected due to their correlation (previously reported in literature or hypothesized) with the Interpersonal-Psychological Theory of suicide by Joiner, were: 1) psychological/psychiatric measures; 2) somatic pain measures; 3) social measures.

SCALES

The scales included in the battery will be described in table 1^{7,18}.

SOCIODEMOGRAPHIC AND CLINICAL FEATURES

Clinical information

At the beginning of the battery, clinical information was collected, including the period of hospitalization at the facility, facility features, the patient's current state (outpatient, inpatient, or therapeutic community residing), diagnosis, comorbidities, pharmacological therapy, previous hospitalizations, and current and past suicide risk.

SOCIODEMOGRAPHIC AND CLINICAL QUESTIONS

Additional sociodemographic and clinical information was collected, including gender, age, sexual orientation, marital status, educational qualification, profession, belief in God and religion, presence of physical illnesses, any current or past psychother-

apy pathways, and any presence of current stressful events.

PSYCHOLOGICAL AND PSYCHIATRIC DIMENSIONS

State-Trait Anxiety Inventory - STAI

STAI investigates trait (20 items) and state anxiety (20 items)⁷. Each item is rated on a four-point scale (varying from *almost never* to *almost always*). Internal consistency coefficients for the scale have ranged from 0.86 to 0.95; test-retest reliability coefficients have ranged from 0.65 to 0.75 over a two-month interval⁷. Considerable evidence attests to the construct and concurrent validity of the scale¹⁹.

Beck Depression Inventory-II - BDI-II

BDI assesses the severity of depression in the past two weeks in adult and adolescent (≥ 13 y.o.) patients with a psychiatric diagnosis²⁰. In the second edition, some items were modified, and others were reformu-

Table 1. List of the administered scales and related constructs.

| Scale | Construct |
|--|--|
| State-Trait Anxiety Inventory - STAI ⁷ | Anxiety |
| Beck Depression Inventory – II - BDI-II ⁸ | Depression |
| Rosenberg Self-Esteem Scale - RSES ⁹ | Self-esteem |
| Reasons For Living Inventory - RFLI ¹⁰ | Reasons for living |
| Suicide risk | Suicide risk, death wish, SI, SP, SA |
| Acquired Capability for Suicide Scale – Fearlessness About Death, ACSS-FAD ¹¹ | Diminished fear of death |
| Interpersonal Needs Questionnaire - INQ 15 ¹² | TB e PB |
| Mental Pain Questionnaire - MPQ ¹³ | Psychache |
| Visual Analogue Scale - VAS ¹⁴ | Acute and chronic pain |
| Pain Vigilance and Awareness Questionnaire - PVAQ ¹⁵ | Pain Vigilance and Awareness |
| Self-Awareness Questionnaire - SAQ ¹⁶ | Interoception, self-awareness of bodily sensations |
| UCLA Loneliness Scale Version 3 ¹⁷ | Loneliness and feelings of social isolation |
| Multidimensional Scale of Perceived Social Support – MSPSS ¹⁸ | Social support |

lated⁸. The 21-item test yields a total score and two subscale scores for somatic-affective dimension (loss of interest, sleep and appetite change, etc.) and for cognitive dimension (pessimism, self-criticism, etc.).

Rosenberg Self-Esteem Scale - RSES

It is a 10-item scale that measures self-esteem, assessing both positive and negative feelings about oneself⁹. RSES is unidimensional²¹. The individuals answer to each statement using a 4-point Likert scale that goes from 3 (*strongly agree*) to 0 (*strongly disagree*).

Reasons For Living Inventory - RFLI

The RFLI rates the importance of each reason for living, should suicide be considered, on a 6-point Likert scale ranging from *very insignificant* to *very important*¹⁰. Factor analyses indicated six main reasons for living: beliefs about coping strategies, responsibility towards family, concerns about children, fear of suicide, fear of social disapproval, and moral objections. Test-retest reliability, internal consistency reliability, normative data and item analysis data of the RFLI were studied in a sample of 116 college students²². The test-retest coefficients for men, women, and the total sample were moderate to high. The alpha coefficients and item-total correlations for the subscales and total inventory provided strong support for internal consistency.

SUICIDE RISK

Ad hoc items were created to measure suicide risk, death wish, SI, Suicidal Planning (SP), and SA.

During the study assessment performed by the researchers involved, patients responded with 'Yes' or 'No' to various questions concerning three distinct time periods: the period immediately preceding the Covid-19 emergency in Italy; the past 2 weeks; and their entire life course. Moreover, current SI (in the past two weeks) was investigated using a specific item from the Italian version of the BDI-II (i.e., item 9)²¹, incorporating a modified version which measures both passive and active SI²³. The item featured four response options: "I don't have any thoughts of killing myself" (0), i.e. the absence of current SI; "I feel that I would be better off if I were dead" (1), i.e. passive SI; "I have suicidal thoughts, but I would not carry them out" (2), i.e. active SI and "I would kill myself if I had the chance" (3), i.e. active SI. The variable was coded as a dichotomous measure (yes: SI > 0 / no: SI = 0). Researchers were then able to subdivide the sample according to the presence/absence of SI as by patients' answers to the questions above.

Acquired Capability for Suicide Scale - ACSS-FAD

The ACSS is a self-report scale used to assess AC for suicide²⁴. Originally, it contained 20 items derived from the AC construct⁴. Following revisions, seven items focused on fear of death remained, forming the ACSS-FAD¹¹. All items are rated on a scale from 0 (*not at all like me*) to 4 (*very like me*). Total scores for the 7-item version can range from 0 to 28.

Interpersonal Needs Questionnaire - INQ-15

It is a 15-item assessment of TB (9 items; scores range from 9 to 63) and PB (6 items; scores range from 6 to 42)¹². Individuals respond using a 7-point scale ranging from 1 (*not at all true for me*) to 7 (*very true for me*). The INQ has demonstrated robust psychometric properties, including construct validity among psychiatric outpatients^{12,25}. However, the INQ has low apparent validity as an assessment of suicide risk: Van Orden et al.¹² suggest that individuals may be more willing to disclose TB and PB than suicidal thoughts, and this has been supported by research²⁶. The cross-sectional study by Mitchell et al.²⁷ provided clear recommendations for the use of the INQ in outpatient psychiatric settings.

Mental Pain Questionnaire - MPQ

The MPQ is a clinimetric index with 10 characteristics rated as yes/no¹³. It assesses mental pain, hurt, helplessness, pain location, duration, relationship to events, emptiness, loss of life's meaning, irreversibility of pain, and SI connection. MPQ demonstrated good properties in a clinical population of 200 migraine patients, showing sensitivity to psychological distress and incremental validity²⁸.

Visual Analogue Scales - VAS

The VAS²⁹ evaluates the intensity of physical and psychological pain on a 0-10 scale (current, usual, and maximal perceived in the last 15 days). The scale also measures the intensity of current SI, on a scale from 0 to 10.

SOMATIC PAIN MEASURES

Pain Vigilance and Awareness Questionnaire - PVAQ

Developed as a comprehensive measure of attention to pain, the PVAQ consists of 16 items¹⁵. Respondents rate their vigilance and awareness of pain on a 6-point scale, ranging from 0 (*never*) to 5 (*always*) over the past two weeks. McCracken¹⁵ found good internal consistency ($\alpha=0.86$) and adequate test-retest reliability ($r=0.80$) in a sample of 80 chronic low back pain patients.

Self-Awareness Questionnaire - SAQ

The SAQ is a recently developed Italian instrument for measuring interoception¹⁶. The 28 items are grouped into 2 factors: visceral and somatosensory sensations. Individuals rate their experiences on a 5-point Likert scale from *never* to *always* and the total score ranges from 0 to 140. The SAQ demonstrated good internal consistency.

SOCIAL MEASURES

UCLA Loneliness Scale Version 3

The UCLA Version 3 is a 20-item scale measuring loneliness and social isolation¹⁷. Participants rate each item from 1 (*never*) to 4 (*often*). The scale has shown high reliability (α ranging from 0.89 to 0.94) and good test-retest reliability ($r=0.73$) over a year. Convergent and construct validity were supported by significant correlations with other loneliness measures and measures of health and well-being¹⁷.

Multidimensional Scale of Perceived Social Support - MSPSS

The MSPSS is a 12-item measure of perceived social support¹⁸. Individuals rate their agreement with each statement on a scale ranging from 1 (*very strongly disagree*) to 7 (*very strongly agree*). Three subscales with a different source of support were identified, and found to have strong factor validity: Family, Friends, and Significant Others. The MSPSS has good internal and test-retest reliability, as well as moderate construct validity³⁰.

STATISTICAL ANALYSES

After assessing the normality of continuous variables, we conducted standard tests (Chi-square, independent sample t-test or Mann-Whitney U test) to compare psychiatric patients with current SI to those without SI, and patients with a history of SA to those without SA. Nonparametric procedures were employed when the normality hypothesis was violated (Shapiro-Wilk test). Next, we selected the variables that proved to be significantly different in the two comparisons (between the groups with SI/without SI and between the groups with SA/without SA) and we assessed which of these variables were not multicollinear with each other.

We performed two stepwise logistic regression models. The first one used current SI as the dependent variable, while the second model used history of SA. To incorporate variables into the stepwise logistic regression for predicting SI, we correlated all significant measures from the comparison tables 2A, 2B, and 2C (Supplementary material available in the

online version of the paper) with the continuous variable SI. Only correlations deemed substantial (Spearman's Rho between .40 and .60) within each block of variables (psychological/psychiatric measures, somatic pain measures, and social measures) were considered. Those meeting this criterion were included in the backward (stepwise) binary logistic regression model. To include variables in the stepwise logistic regression model to predict SA, we selected, based on theory, the scales that were significantly different when comparing the two groups of patients with and without a history of SA.

Furthermore, we divided the sample into three categories based on the type of psychiatric patients (inpatients, outpatients, and therapeutic community patients). For each category, we calculated the frequency or mean \pm SD of all investigated variables. We conducted standardized tests (Chi-square, one-way ANOVA, or Kruskal-Wallis test) to identify significant differences between the three patient groups. Nonparametric procedures were adopted when the normality hypothesis was violated. To further understand the specific group differences, we performed post hoc tests (Chi-square and Mann-Whitney) for each significant value, comparing the patient categories pairwise. Post hoc statistics (Chi-square or Mann-Whitney) were performed only when the comparison statistics between the 3 groups were significant or in case a trend was present (0.06; 0.07; 0.08). The p-values obtained were 2-tailed, with a significance level set at 0.05. All statistical analyses were performed with SPSS 28.0.1.0.

Results

SAMPLE FEATURES

As shown in table 2D (available online), in our sample of psychiatric patients ($n=90$), 60% ($n=54$) were female, with a mean age of 40.7 years ($SD=15.84$). The majority (83%, $n=75$) identified as heterosexual. Regarding marital status and parenthood, 55% ($n=50$) were single, and 70% ($n=63$) reported being childless. In terms of education and profession, 50% ($n=45$) had an elementary or lower secondary school certificate, 37.8% ($n=34$) held a high school diploma, and only 12.2% ($n=11$) had a university degree. Among the participants, 72.2% ($n=65$) were unemployed (including 44.4% unemployed, 21.1% retired, and 6.7% students). Concerning religious beliefs, 58.9% ($n=53$) claimed belief in God and 65.6% ($n=59$) professed Christianity, with only 21.1% ($n=19$) actively participating in religious practices. Moreover, 41% ($n=37$) reported having experienced some physical illness during their lifetime.

Regarding recruitment sources, 43% ($n=39$) of the sample were recruited from the Psychiatry Ward of

the Maggiore della Carità University Hospital in Novara, while the remaining 56.7% (n=51) came from therapeutic communities. Specifically, the sample consisted of 28.9% (n=26) outpatients, 20% (n=18) inpatients and 51.1% (n=46) therapeutic community-dwelling patients. The length of stay in the facility varied, with 21.1% (n=19) hospitalized for less than one month, 23.3% (n=21) for a period between 1 month and 1 year, and 27.8% (n=25) admitted for over a year.

Regarding diagnostic features, 27.8% (n=25) had a personality disorder other than borderline, 23.3% (n=21) had a borderline personality disorder, 25.6% (n=23) had a mood disorder and/or anxiety disorder and 15.6% (n=14) had a psychotic disorder or eating disorder diagnosis. Additionally, 36% (n=33) reported comorbid disorders, especially substance use disorder. Psychopharmacological therapy was reported by 85% (n=77) of the participants at the time of the assessment.

Concerning hospital admissions, 64.4% (n=58) had a history of previous hospitalizations, with only 5.6% (n=5) admitted to a hospital in the last 6 months. About 34% (n=31) of the sample reported coping with stressful life events at the time of assessment. Regarding therapeutic approaches, 65.6% (n=59) were engaged in individual therapy, and 56.7% (n=51) were in group therapy at the time of assessment. According to the information given by referring clinicians, 17.8% (n=16) of the sample were considered at risk of suicide at the time of administration, 44.4% (n=40) had been at risk of suicide in the past, and 35.6% (n=32) reported previous SA. Psychological/psychiatric characteristics included 31.1% (n=28) reporting SI in the past two weeks (item 9 of the BDI-II). Moreover, 68% (n=62) reported a history of death wish, 53.3% (n=48) a history of SI, 62.2% (n=56) a history of SP, and 40% (n=36) a history of SA. Elevated levels of state anxiety, trait anxiety and depression were found in more than half of the sample.

COMPARISON BETWEEN PATIENTS WITH SI VS. WITHOUT SI AND BETWEEN PATIENTS WITH SA VS. WITHOUT SA

Regarding comparisons between patients with and without current SI, as shown in Tables 2A, 2B, 2C and 2D, it was found that patients with SI (31.1%, n=28) showed a higher prevalence of non-heterosexual orientation (bisexual, transsexual, pan sexual) ($\chi^2(1)=5.48$, $p=0.02$) than patients without SI (68.9%, n=62) and reported facing more stressful life events ($\chi^2(1)=4.83$, $p=0.03$) compared to those without SI.

Regarding suicide risk, SI patients were rated as significantly more at risk of current suicide ($\chi^2(1)=7.25$, $p=0.01$) and past suicide risk ($\chi^2(1)=11.99$, $p<0.001$) by clinicians compared to patients without SI. Questionnaires revealed that SI patients had higher lifetime suicide risk ($U=-3.75$, $p<0.001$) than those without; moreover, they had higher

SP ($\chi^2(1)=9.54$, $p=0.002$), and higher previous SA ($\chi^2(1)=13.14$, $p<0.001$) during their lifetime than patients without SI.

SI patients exhibited higher levels of state anxiety ($U=-4.82$, $p<0.001$), trait anxiety ($U=-5.17$, $p<0.001$) and depression ($U=-5.86$, $p<0.001$) compared to patients without SI. They also had lower self-esteem ($t(88)=4.47$, $p<0.001$) and lower RFLI scores ($U=-3.35$, $p<0.001$), particularly in the dimensions of beliefs about coping strategies ($U=-4.72$, $p<0.001$) and moral objections ($U=-2.1$, $p=0.03$). Regarding mental pain, SI patients reported significantly higher levels in all scales (all $p<0.001$).

As far as the questionnaires investigating the constructs theorized by Joiner are concerned, patients with SI presented significantly higher levels of PB ($U=-5.16$, $p<0.001$), TB ($t(88)=-2.51$, $p=0.01$) and fearlessness about death ($t(88)=-2.51$, $p=0.01$) than patients without SI.

In terms of somatic pain, SI patients showed significantly higher interoception ($U=-3.13$, $p=0.002$) than patients without SI. Regarding social measures, SI patients experienced higher levels of loneliness and social isolation ($t(88)=-4.31$, $p<0.001$) than patients without SI.

Concerning the comparisons between patients with a history of SA and patients without, it was found that SA patients (40%, n=36) were significantly younger ($U=-3.77$, $p<0.001$) and more likely to have non-heterosexual orientations ($\chi^2(1)=8.33$, $p=0.004$) compared to those without SA (60%, n=54). SA patients also had a religious belief of another type (atheist or pantheistic) to a significantly greater extent ($\chi^2(1)=5.64$, $p=0.02$) and less participation in religious practices ($\chi^2(1)=5.88$, $p=0.01$) than patients without SA. Moreover, SA patients were more frequently diagnosed with borderline personality disorder ($\chi^2(3)=20.59$, $p<0.001$). They also had a history of individual treatment ($\chi^2(1)=5.98$, $p=0.01$) and more lifetime hospital admissions ($\chi^2(1)=6.8$, $p=0.01$) than patients without SA.

In terms of suicide risk, SA patients were rated as significantly more at risk of current suicide ($\chi^2(1)=9.93$, $p=0.002$) and past suicide risk ($\chi^2(1)=12$, $p<0.001$) by clinicians, compared to patients without SA. Questionnaires showed higher lifetime suicide risk ($U=-8.18$, $p<0.001$), more death wishes ($\chi^2(1)=22.47$, $p<0.001$), more SI ($\chi^2(1)=46.44$, $p<0.001$), and more SP ($\chi^2(1)=31.27$, $p<0.001$) over lifetime in SA patients compared to those without SA.

SA patients also exhibited higher levels of state anxiety ($U=-2.8$, $p=0.005$), trait anxiety ($U=-3.1$, $p=0.002$) and depression ($U=-3.49$, $p<0.001$) than patients without SA. They reported lower self-esteem ($t(88)=3.54$, $p<0.001$) and lower RFLI scores ($U=-2.22$, $p=0.03$), particularly in dimensions of beliefs about coping strategies ($U=-2.1$, $p=0.03$) and moral objections ($U=-2.44$, $p=0.01$).

Regarding mental pain, SA patients scored significantly higher on all scales: MPQ ($U=-3.75$, $p<0.001$), VAS for current mental pain ($U=-2.15$, $p=0.03$), for habitual mental pain ($U=-2.52$, $p=0.01$), and for severe mental pain ($U=-3.41$, $p<0.001$).

As far as the questionnaires measuring Joiner's constructs are concerned, patients with SA presented significantly higher levels of PB ($U=-3.44$, $p<0.001$) and fearlessness about death ($t(88)=-3.8$, $p<0.001$) than patients without SA.

Regarding somatic pain, SA patients had higher interoception ($U=-2.16$, $p=0.03$) than patients without SA.

Lastly, some of the assessment scales showed no differences between the two groups of patients with and without SI, and between the two groups of patients with and without SA (e.g. the MSPSS, which measures the construct of social support).

LOGISTIC REGRESSION MODELS

In the first stepwise logistic regression model (table 3A, available online), current SI was the dependent variable (DV), and the following were independent variables (IV): trait anxiety (STAI), depression (total BDI-II without suicide item), beliefs about coping strategies (SCB, a factor in the RFLI), self-esteem (total RSES), mental pain (total MPQ), and PB (INQ). The model correctly classified 84% of SI cases. PB ($\text{Exp}(B)=1.109$, $B=0.103$, $\text{Wald}(1)\chi^2=4.07$, $p=0.04$) and depression ($\text{Exp}(B)=1.086$, $B=.082$, χ^2 of $\text{Wald}(1)=5.26$, $p=0.02$) were significant risk factors for SI. This means that a unit increase in PB and depression increases the probability of developing SI. Beliefs about one's ability to cope with adaptive life difficulties reduced the probability of developing SI ($\text{Exp}(B)=0.972$, $B=-0.029$, $\text{Wald}'s\chi^2(1)=5.1$, $p=0.02$). Consequently, the beliefs related to one's coping strategies were a protective factor for SI in our model. Depression, PB and beliefs about coping strategies explained 59.2% of the variance in current SI scores ($R^2=.592$, $\chi^2(3)=49.173$, $p<0.001$).

The second stepwise logistic regression model (table 3B) used a history of SA as DV and trait anxiety (STAI), depression (BDI-II total score without the suicide item), fearlessness about death (ACSS-FAD total score), mental pain (MPQ total), reasons for living (RFL total score), interoception (SAQ total score), and PB (INQ) as IVs. The model correctly classified 69% of SA cases. PB ($\text{Exp}(B)=1.112$, $B=.106$, χ^2 of $\text{Wald}(1)=8.6$, $p=0.003$) and fearlessness about death ($\text{Exp}(B)=1.106$, $B=.101$, χ^2 of $\text{Wald}(1)=5.42$, $p=0.02$) were significant risk factors for SA. This means that a unit increment of PB and ACSS-FAD increases the probability of having a SA. ACSS-FAD and PB explained 32.6% of the variance in SA scores ($R^2=.326$, $\chi^2(2)=24.84$, $p<0.001$).

DIFFERENCES BETWEEN OUTPATIENTS, INPATIENTS AND THERAPEUTIC COMMUNITY PATIENTS

Outpatients (OUT), inpatients (IN) and therapeutic community patients (COM) were compared with each other with respect to all variables included in the research (tables 2A, 2B, 2C).

Inpatients in a therapeutic community had a higher diagnosis of borderline personality disorder (37%, $n=17$) than those recruited in an outpatient and inpatient setting (OUT vs. COM: $\chi^2(3)=13.26$, $p=0.003$; IN vs. COM: $\chi^2(3)=8.69$, $p=0.02$). Inpatients and therapeutic community patients used significantly more psychotropic drugs than outpatients (OUT vs. IN: $\chi^2(1)=4.51$, $p=0.03$; OUT vs. COM: $\chi^2(1)=11.57$, $p<0.001$). Therapeutic community patients reported more individual (OUT vs. COM: $\chi^2(1)=13.78$, $p<0.001$; IN vs. COM: $\chi^2(1)=12.96$, $p<0.001$) and group therapy (OUT vs. COM: $\chi^2(1)=26.02$, $p<0.001$; IN vs. COM: $\chi^2(1)=35.72$, $p<0.001$) than outpatients, and more previous hospitalizations than outpatients and inpatients (OUT vs. COM: $\chi^2(1)=34.86$, $p<0.001$; IN vs. COM: $\chi^2(1)=25.87$, $p<0.001$).

Inpatients and therapeutic community patients had a more frequent history of prior SA compared to outpatients (OUT vs. IN: $\chi^2(1)=14.58$, $p<0.001$; OUT vs. COM: $\chi^2(1)=9.08$, $p=0.003$). They were rated by clinicians as significantly more at risk for current suicide than outpatients (OUT vs. IN: $\chi^2(1)=5.62$, $p=0.02$; OUT vs. COM: $\chi^2(1)=5.61$, $p=0.02$).

Inpatients and therapeutic community patients showed higher current SI levels than outpatients (OUT vs. IN: $\chi^2(1)=9.99$, $p=0.002$; OUT vs. COM: $\chi^2(1)=6.5$, $p=0.02$) and a greater lifetime suicide risk compared to outpatients (OUT vs. IN: $U=-2.4$, $p=0.02$; OUT vs. COM: $U=-3.96$, $p<0.001$). Therapeutic community patients also presented more death wishes (OUT vs. COM: $\chi^2(1)=7.25$, $p=0.01$) and SP (OUT vs. COM: $\chi^2(1)=12.02$, $p<0.001$) over their lifetime than outpatients. Inpatients reported significantly higher levels of state anxiety than outpatients and patients in therapeutic communities (OUT vs. IN: $U=-2.82$, $p=0.005$; IN vs. COM: $U=-2.15$, $p=0.03$) and significantly higher trait anxiety levels than outpatients (OUT vs. IN: $U=-2.51$, $p=0.01$). Inpatients and therapeutic community patients showed greater levels of depression than outpatients (OUT vs. IN: $U=-3.02$, $p=0.002$; OUT vs. COM: $U=-2.42$, $p=0.01$). Inpatients also had significantly lower self-esteem than outpatients (OUT vs. IN: $U=-2.46$, $p=0.01$) and higher mental pain than outpatients (MPQ: OUT vs. IN: $U=-2.89$, $p=0.004$). Inpatients showed significantly higher levels of habitual physical pain (OUT vs. IN: $U=-2.95$, $p=0.003$; IN vs. COM: $U=-3.04$, $p=0.002$) and severe physical pain (OUT vs. IN: $U=-3.16$, $p=0.002$; IN vs. COM: $U=-2.27$, $p=0.02$) than outpatients and therapeutic community patients. Lastly, inpatients

and therapeutic community patients reported significantly higher PB than outpatients (OUT vs. IN: $U=-3.37, p<0.001$; OUT vs. COM: $U=-2.81, p=0.005$).

Discussion

In this cross-sectional study, we investigated 90 psychiatric patients, assessing both those with and without current suicidal ideation (SI) or a history of suicide attempts (SA).

COMPARISON OF PATIENTS WITH AND WITHOUT CURRENT SI

The prevalence of current SI (assessed according to the patients' answers during questionnaires administration, as described above) among the participants was 31.1% ($n=28$), indicating a notable presence of this concerning symptom within the cohort. These findings are consistent with prior research, as evidenced by a previous Italian retrospective study by Berardelli et al.³¹, which similarly observed a high prevalence of current SI (31.5%) among psychiatric patients.

Patients with suicidal ideation (SI) exhibited higher scores in perceived burdensomeness (PB) and thwarted belongingness (TB), indicating a potential association between these constructs and the presence of SI.

Depression emerges as another significant risk factor for suicidal ideation (SI), as evidenced by its association with both SI and suicidal behavior in the literature. A recent meta-analysis conducted by Ribeiro et al.³² reported weighted mean odds ratios indicating the increased risk of SI and death by suicide associated with depression. Additionally, beliefs about coping strategies emerged as a crucial protective factor against SI in the regression model. Specifically, individuals' perceptions of their ability to cope adaptively with life's challenges were found to be protective against suicidal ideation. Studies by Bagge et al.²² and Bakhiyi et al.³³ demonstrated that Reasons For Living (RFLs), particularly moral objections to suicide and beliefs about coping, can mitigate suicidal ideation and suicidal behavior. This underscores the importance of developing interventions aimed at improving RFLs to prevent suicidal thoughts and behaviors and enhance coping mechanisms during times of stress.

COMPARISON OF PATIENTS WITH AND WITHOUT A HISTORY OF SA

The investigation into SA revealed that 40% ($n=36$) of the participants had experienced such behavior at some point in their lives. This finding underscores the importance of understanding the trajectory and risk factors associated with suicidal behavior among psychiatric patients. The prevalence of previous SA

aligns with existing literature, as indicated by studies referenced including those by Bai et al.³⁴, Barbeito et al.³⁵, and Chung et al.³⁶. These consistent findings emphasize the ongoing need for effective interventions and support services aimed at mitigating the risk of suicidal behavior in psychiatric populations.

Patients with a history of SA demonstrated higher scores on the Acquired Capability for Suicide Scale-Fearlessness About Death (ACSS-FAD) compared to patients without such history. This suggests that individuals who have previously attempted suicide may exhibit greater fearlessness about death, which could contribute to their increased risk for future suicidal behavior. Chu et al.⁶ further highlighted the interaction between TB and PB in association with SI, as well as the interaction between TB, PB, and AC in relation to prior SA. A meta-analysis conducted by Ribeiro et al.³² yielded weighted mean odds ratios indicating an elevated risk of suicide attempts (SA) with depression.

DIFFERENCES BETWEEN PSYCHIATRIC POPULATIONS

The literature consistently reports high suicide rates among psychiatric populations, particularly among inpatients³⁷. Our findings echo this trend, revealing that both inpatients and therapeutic community patients are the categories most susceptible to current suicidal ideation (SI) and past suicide attempts (SA). This heightened risk is likely attributed to clinicians' decision to hospitalize patients presenting with high levels of SI. Notably, inpatients and therapeutic community patients exhibited significantly higher lifetime suicide risk means ($M=18.11, SD=14.13$ and $M=18.24, SD=12.03$, respectively) compared to outpatients ($M=6.65, SD=9.08$). Additionally, a substantial percentage of inpatients (61.1%) and therapeutic community patients (50%) reported a history of lifetime SA, contrasting with only 7.7% of outpatients. These findings underscore the pervasive nature of suicidal behavior within psychiatric populations, with even therapeutic community patients displaying elevated rates of SI and prior SA.

The prevalence of high SI and past SA among therapeutic community patients may be elucidated by a significant portion of this group receiving a diagnosis of borderline personality disorder (37%). Borderline personality disorder is widely recognized as a condition associated with increased suicide risk and behavior^{38,39}. This diagnosis likely contributes to the elevated rates of SI and SA observed in therapeutic community patients, highlighting the importance of targeted interventions and support services for individuals with this specific psychiatric diagnosis. Despite receiving care in the therapeutic community rather than in inpatient settings, these patients remain vulnerable to suicidal ideation and behavior,

necessitating comprehensive and tailored approaches to suicide prevention and treatment. Regarding the psychological characteristics of the 3 categories (inpatients, therapeutic community patients, and outpatients), we found that inpatients had higher state anxiety, trait anxiety, and depression levels, followed by community patients who differed from outpatients by significantly higher levels of trait anxiety and depression. A recent cross-sectional study in China found that depression and anxiety were common psychological problems in the analyzed inpatients ($n=1,392$)⁴⁰.

In our investigation, inpatients reported the highest mental and physical pain levels in comparison to outpatients, likely due to the acute severity of their condition necessitating hospitalization. Consistent with the literature, an Italian study⁴¹ encompassing a cohort of 2,297 patients admitted to different Italian psychiatric wards, found that individuals with severe depression and mental pain also presented high levels of despair, higher frequency and lower controllability of SI, and previous SA, thereby configuring themselves as a high-risk category. Another study focused on inpatients ($n=70$) showed a heightened prevalence of physical comorbidities, with a detrimental impact on subjects' quality of life and functioning⁴².

A SINGULAR TIME: THE COVID-19 PANDEMIC

The assessment period overlapped with the public health emergency implemented to counter the spread of the Covid-19 pandemic, potentially exerting an influence on the obtained results. Within our evaluation battery, we investigated the potential impact of the pandemic on respondents' answers and the consequent alterations in patients' lives during the Covid-19 emergency, as encapsulated by two concluding questions.

As our analyses focused on suicide, it is important to understand whether there was an increase in Covid-19 pandemic-related suicide rates. Pirkis et al.⁴³ assessed the initial impact of the Covid-19 pandemic on suicide rates across 21 countries, founding no substantiated evidence of a significant increase in suicide risk. There was also evidence of a decrease in suicides when compared to the anticipated figures in 12 countries. A further study⁴⁴ extended to 33 countries found that in most of them, there was no indication of higher-than-expected suicide numbers; conversely, there was a lower-than-expected incidence of suicides.

Strengths and limitations

A relevant strength of this study is that it investigated suicide risk in a real-world population of psychiatric patients recruited in different settings

(outpatients, inpatients, and patients in therapeutic communities). Additionally, the study examined a wide range of variables, including sociodemographic, clinical, psychological/psychiatric, somatic pain, and social characteristics, revealing associations with SI and previous SA.

However, the small sample size limits the generalizability of the findings, as it may not necessarily be representative of the broader population. While the inclusion of patients with varied psychiatric diagnoses, may hinder the generalizability of results, it clearly reflects everyday clinical practice in a real-world setting. It is noteworthy to mention that suicide was assessed using ad hoc items instead of a validated instrument such as the Beck Scale for Suicide Ideation or the Columbia Suicide Severity Rating Scale – two of the most frequently cited standard tools for the clinical evaluation of individuals at risk or not at risk of suicide.

Our exclusion of patients based on clinical judgment for their potential stress susceptibility is in line with common practice in research, but may introduce a selection bias, particularly by excluding those lacking clinical stability or with a current high and active suicide risk.

The cross-sectional design hinders the formation of causal hypotheses about the relationship between current SI or past SA and potential risk factors. Future studies could benefit from using a longitudinal design or Ecological Momentary Assessment (EMA) approaches⁴⁵ to overcome this drawback. Another limitation is the use of self-report measures, which entail several biases. Furthermore, the study did not include details about the type, dosage, frequency, and duration of psychotropic treatment in the analysis.

Conclusions

This research investigated current SI and the history of SA in real-world psychiatric patients, providing insights into associated risk factors. Self-reported depression emerged as a risk factor for SI, while coping beliefs were identified as protective. Fearlessness about death emerged as one of the most significant risk factors for a history of SA, while feeling burdensome was relevant for both SI and SA. These findings align with existing literature and lend support to Joiner's interpersonal theory, specifically emphasizing that PB and TB, the constructs investigated in this research, play integral roles in the development of a death wish and passive SI, while fearlessness about death (dimension of acquired capability) is deemed necessary for engaging in SA.

These aspects should be considered in suicide prevention assessments and treatment strategies. It is essential to conduct a thorough risk assessment,

especially when dealing with a psychiatric patient population.

Conflict of interests: the authors declare that they have no financial or personal relationships with individuals or organizations that could influence the outcome of this research.

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Supplementary material.

Table 2A. Psychological/psychiatric measures.

| Variables | Total sample (n=90) | Patients with SI during the past two weeks (n=28) | Patients without SI during the past two weeks (n=62) | Statistics - Chi 2 or Mann-Whitney /t-test, Phi/r effect size (p-value) | Patients with SA during lifetime (n=36) | Patients without SA during lifetime (n=54) | Statistics - Chi 2 or Mann-Whitney /t-test, Phi/r effect size (p-value) |
|--|------------------------|---|--|---|---|--|---|
| | n (%) or Mean±SD | n (%) or Mean±SD | n (%) or Mean±SD | | n (%) or Mean±SD | n (%) or Mean±SD | |
| State-Trait Anxiety Inventory (STAI) | | | | | | | |
| Now | | | | | | | |
| State anxiety | 44.12±14.18 | 55.21±13.74 | 39.11±11.31 | -4.82 (p<0.001) | 49.3±14.35 | 40.67±13.08 | -2.8 (p=0.005) |
| Mild - moderate - severe state anxiety (> 40) | 49 (54.4%) | 23 (82.1%) | 26 (41.9%) | 12.57(1), 0.37 (p<0.001) | 26 (72.2%) | 23 (42.6%) | 7.65(1), 0.29 (p=0.006) |
| Usually | | | | | | | |
| Trait anxiety | 51.36±13.77 | 62.86±11.54 | 46.16±11.39 | -5.17 (p<0.001) | 57.06±114.08 | 47.56±12.29 | -3.1 (p=0.002) |
| Mild - moderate - severe trait anxiety (>40) | 66 (73.3%) | 27 (96.4%) | 39 (62.9%) | 11.09(1), 0.35 (p<0.001) | 31 (86.1%) | 35 (64.8%) | 5.01(1), .24 (p=0.02) |
| Beck Depression Inventory - II (BDI-II) | | | | | | | |
| BDI-II total score | 20.21±13.97 | 33.5±12.36 | 14.21±9.98 | -5.86 (p<0.001) | 27.22±15.12 | 15.54±11.01 | -3.49 (p<0.001) |
| BDI-II total score without the suicide item | 19.6±13.40 | 31.53±12.34 | 14.21±9.98 | - 5.51 (p<0.001) | 26.14±14.39 | 15.24±10.78 | -3.4 (p<0.001) |
| Mild - moderate - severe depression (>13) | 59 (65.6%) | 26 (92.9%) | 33 (53.2%) | 13.42(1), 0.39 (p<0.001) | 28 (77.8%) | 31 (57.4%) | 3.97(1), 0.21 (p=0.05) |
| Rosenberg Self-Esteem Scale (RSES) | | | | | | | |
| Total | 15.9±7.13 | 11.36±5.74 | 17.95±6.78 | t(88)=4.47, p<0.001 | 12.83±7.02 | 17.94±6.5 | t(88)=3.54, p<0.001 |
| Reasons For Living Inventory (RFLI) | | | | | | | |
| Beliefs about coping strategies (SCB) | 4.29±1.35 | 3.19±1.49 | 4.79±0.94 | -4.72 (p<0.001) | 3.78±1.65 | 4.63±0.99 | -2.1 (p=.03) |
| Responsibility towards family (RF) | 4.31±1.16 | 4.55±1.09 | 4.21±1.18 | -1.29 (p=0.2) | 4.40±1.28 | 4.26±1.08 | -0.94 (p=0.35) |
| Child-related concerns (CRC) | 3.82±2.06 | 3.26±2.21 | 4.07±1.95 | -1.48 (p=0.14) | 3.55±2.16 | 4±1.99 | -0.82 (p=0.41) |
| Fear of suicide (FS) | 2.79±1.12 | 3.02±1.1 | 2.68±1.11 | -1.07 (p=0.28) | 2.57±1.12 | 2.93±1.1 | -1.74 (p=.008) |
| Fear of social disapproval (FSD) | 2.68±1.55 | 2.57±1.65 | 2.73±1.52 | -0.7 (p=0.48) | 2.52±1.51 | 2.79±1.59 | -0.82 (p=0.41) |

(Continued)

(Continued) - Table 2A.

| Variables | Total sample (n=90) | Patients with SI during the past two weeks (n=28) | Patients without SI during the past two weeks (n=62) | Statistics - Chi 2 or Mann-Whitney /t-test, Phi/r effect size (p-value) | Patients with SA during lifetime (n=36) | Patients without SA during lifetime (n=54) | Statistics - Chi 2 or Mann-Whitney /t-test, Phi/r effect size (p-value) |
|--|------------------------|--|---|---|--|---|---|
| | n (%) or Mean±SD | n (%) or Mean±SD | n (%) or Mean±SD | | n (%) or Mean±SD | n (%) or Mean±SD | |
| Moral objections (MO) | 2.92±1.66 | 2.49±1.73 | 3.12±1.6 | -2.1 (p=0.03) | 2.45±1.6 | 3.24±1.64 | -2.44 (p=0.01) |
| Total RFL score | 3.84±0.97 | 3.28±1.06 | 4.09±0.81 | -3.35 (p<0.001) | 3.5±1.15 | 4.06±0.76 | -2.22 (p=0.03) |
| Beck Depression Inventory - II (BDI-II) | | | | | | | |
| Suicidal ideation (SI) | i28 (31.1%) | - | - | - | i19 (52.8%) | 9 (16.7%) | i13.14(1), 0.38 (p<0.001) |
| Suicide risk | | | | | | | |
| Lifetime suicide risk | 14.87±12.74 | 22.53±10.12 | 11.4±12.34 | -3.75 (p<0.001) | 28.36±3.18 | 5.87±7.72 | -8.18 (p<0.001) |
| Presence of death wish throughout the life course | 62 (68.9%) | 23 (82.1%) | 39 (62.9%) | 3.33(1), 0.19 (p=0.07) | 35 (97.2%) | 27 (50%) | 22.47(1), 0.5 (p<0.001) |
| Presence of IS | 48 (53.3%) | 23 (82.1%) | 25 (40.3%) | 13.55(1), 0.39 (p<0.001) | 35 (97.2%) | 13 (24.1%) | 46.44(1), 0.72 (p<0.001) |
| Presence of SP during lifetime | 56 (62.2%) | 24 (85.7%) | 32 (51.6%) | 9.54(1), 0.33 (p=0.002) | 35 (97.2%) | 21 (38.9%) | 31.27(1), 0.59 (p<0.001) |
| Presence of SA during lifetime | 36 (40%) | 19 (67.9%) | 17 (27.4%) | 13.14(1), 0.38 (p<0.001) | - | - | - |
| Acquired Capability for Suicide Scale-Fearlessness About Death (ACSS-FAD) | | | | | | | |
| Total ACSS-FAD score | 14.49±6.47 | 16.96±7.19 | 13.37±5.84 | t(88)=-2.51, p=.01 | 17.44±6.05 | 12.52±6.01 | t(88)=-3.8, p<.001 |
| Interpersonal Needs Questionnaire (INQ) | | | | | | | |
| Perceived Burdensomeness (PB) | 2.12±1.52 | 3.46±1.88 | 1.51±0.78 | -5.16 (p<0.001) | 2.94±1.91 | 1.57±0.84 | -3.44 (p<0.001) |
| Thwarted Belongingness (TB) | 3.37±1.29 | 3.87±1.23 | 3.15±1.27 | t(88)=-2.51, p=0.01 | 3.66±1.46 | 3.18±1.15 | t(88)=-1.73, p=0.09 |
| Total INQ score | 43.07±17.33 | 55.61±17.34 | 37.4±14.15 | -4.51 (p<0.001) | 50.58±20.59 | 38.05±12.66 | -2.85 (p=0.004) |
| Mental Pain Questionnaire (MPQ) | | | | | | | |
| Total MPQ | 3.95±3.07 | 6.75±2.84 | 2.69±2.24 | -5.47 (p<0.001) | 5.5±3.17 | 2.92±2.55 | -3.75 (p<0.001) |
| Visual Analogue Scale (VAS) on mental pain | | | | | | | |
| Current mental pain | 3.89±3.15 | 6.03±3.34 | 2.92±2.54 | -4.04 (p<0.001) | 4.78±3.37 | 3.3±2.86 | -2.15 (p=0.03) |
| High current mental pain (>=8) | 14 (15.6%) | 12 (42.9%) | 2 (3.2%) | 20.14(1), 0.51 (p<0.001) | 11 (30.6%) | 3 (5.6%) | 10.28(1), 0.34 (p=0.001) |

(Continued)

(Continued) - Table 2A.

| Variables | Total sample (n=90) | Patients with SI during the past two weeks (n=28) | Patients without SI during the past two weeks (n=62) | Statistics - Chi 2 or Mann-Whitney /t-test, Phi/r effect size (p-value) | Patients with SA during lifetime (n=36) | Patients without SA during lifetime (n=54) | Statistics - Chi 2 or Mann-Whitney /t-test, Phi/r effect size (p-value) |
|--|---------------------|---|--|---|---|--|---|
| | n (%) or Mean±SD | n (%) or Mean±SD | n (%) or Mean±SD | | n (%) or Mean±SD | n (%) or Mean±SD | |
| Habitual mental pain (past 15 days) | 4.87±3.13 | 6.86±2.78 | 3.97±2.86 | -3.94 (p<0.001) | 5.89±3.13 | 4.18±2.96 | -2.52 (p=0.01) |
| High habitual mental pain (past 15 days) (>=8) | 18 (20%) | 13 (46.4%) | 5 (8.1%) | 17.74(1), 0.44 (p<0.001) | 13 (36.1%) | 5 (9.3%) | 9.73(1), 0.33 (p=0.002) |
| Maximum mental pain (past 15 days) | 5.74±3.36 | 8±2.88 | 4.72±3.09 | -4.37 (p<0.001) | 7.22±3.03 | 4.76±3.23 | -3.41 (p<0.001) |
| High maximum mental pain (past 15 days) | 25 (27.8%) | 18 (64.3%) | 7 (11.3%) | 27(1), 0.55 (p<0.001) | 17 (47.2%) | 8 (14.8%) | 11.31(1), 0.35 (p<0.001) |

Legend: SI= suicidal ideation; SP= suicidal planning; SA= suicide attempt

Table 2B. Somatic pain measures.

| Variables | Total sample (n=90) | Patients with SI during the past two weeks (n=28) | Patients without SI during the past two weeks (n=62) | Statistics - Chi 2 or Mann-Whitney /t-test, Phi/r effect size (p-value) | Patients with SA during lifetime (n=36) | Patients without SA during lifetime (n=54) | Statistics - Chi 2 or Mann-Whitney /t-test, Phi/r effect size (p-value) |
|---|---------------------|---|--|---|---|--|---|
| | n (%) or Mean±SD | n (%) or Mean±SD | n (%) or Mean±SD | | n (%) or Mean±SD | n (%) or Mean±SD | |
| Visual Analogue Scale (VAS) on physical pain | | | | | | | |
| Current physical pain | 2.69±2.74 | 3.93±3.33 | 2.13±2.24 | -2.39 (p=0.02) | 3.25±2.97 | 2.31±2.54 | -1.46 (p=0.14) |
| High current physical pain (>2) | 42 (46.7%) | 17 (60.7%) | 25 (40.3%) | 3.22(1), 0.19 (p=0.07) | 19 (52.8%) | 23 (42.6%) | 0.9(1), 0.1 (p=0.34) |
| Habitual physical pain (past 15 days) | 3.77±2.9 | 4.64±3.1 | 3.37±2.74 | -1.86 (p=0.06) | 4.22±3.22 | 3.46±2.65 | -1.02 (p=0.31) |
| High habitual physical pain (past 15 days) (>=4) | 44 (48.9%) | 17 (60.7%) | 27 (43.5%) | 2.27(1), 0.186 (p=0.13) | 20 (55.6%) | 24 (44.4%) | 1.07(1), 0.11 (p=0.3) |
| Maximum physical pain (past 15 days) | 4.7±3.41 | 6.07±3.47 | 4.08±3.22 | -2.63 (p=0.01) | 5.58±3.67 | 4.11±3.12 | -2.02 (p=0.04) |

(Continued)

(Continued) - Table 2B.

| Variables | Total sample (n=90) | Patients with SI during the past two weeks (n=28) | Patients without SI during the past two weeks (n=62) | Statistics - Chi 2 or Mann-Whitney /t-test, Phi/r effect size (p-value) | Patients with SA during lifetime (n=36) | Patients without SA during lifetime (n=54) | Statistics - Chi 2 or Mann-Whitney /t-test, Phi/r effect size (p-value) |
|--|---------------------|---|--|---|---|--|---|
| | n (%) or Mean±SD | n (%) or Mean±SD | n (%) or Mean±SD | | n (%) or Mean±SD | n (%) or Mean±SD | |
| High maximum physical pain (past 15 days) (>=5) | 47 (52.2%) | 20 (71.4%) | 27 (43.5%) | 6.01(1), 0.26 (p=0.01) | 24 (66.7%) | 23 (42.6%) | 5.02(1), 0.24 (p=0.02) |
| Pain Vigilance and Awareness Questionnaire (PVAQ) | | | | | | | |
| Passive awareness (Items 1, 3, 4, 5, 7, 9, 11) | 15.64±6.09 | 16.46±5.89 | 15.27±6.18 | t(88)=-0.86, p=0.39 | 16.86±6.02 | 14.83±6.05 | t(88)=-1.56, p=0.12 |
| Active vigilance (Items 6, 10, 12, 13, 14, 15) | 14.4±6.95 | 15.53±7.42 | 13.89±6.73 | t(88)=-1.04, p=0.3 | 15.5±7.73 | 13.67±6.35 | t(88)=-1.23, p=0.22 |
| Total | 32.38±12.74 | 34.46±12.65 | 31.43±12.77 | t(88)=-1.04, p=0.3 | 34.83±13.05 | 30.74±12.38 | t(88)=-1.5, p=0.14 |
| Self-Awareness Questionnaire (SAQ) | | | | | | | |
| Total SAQ score | 33.9±17.04 | 41.18±14.48 | 30.61±17.19 | -3.13 (p=0.002) | 38.47±17.48 | 30.85±16.19 | -2.16 (p=0.03) |

Table 2C. Social measures.

| Variables | Total sample (n=90) | Patients with SI during the past two weeks (n=28) | Patients without SI during the past two weeks (n=62) | Statistics - Chi 2 or Mann-Whitney /t-test, Phi/r effect size (p-value) | Patients with SA during lifetime (n=36) | Patients without SA during lifetime (n=54) | Statistics - Chi 2 or Mann-Whitney /t-test, Phi/r effect size (p-value) |
|---|---------------------|---|--|---|---|--|---|
| | n (%) or Mean±SD | n (%) or Mean±SD | n (%) or Mean±SD | | n (%) or Mean±SD | n (%) or Mean±SD | |
| UCLA Loneliness Scale Version 3 | | | | | | | |
| Total UCLA | 47.97±10.91 | 54.71±11.3 | 44.92±9.32 | t(88)=-4.31, p<0.001 | 50.78±12.48 | 46.09±9.39 | t(60.71)=-1.92, p=0.06 |
| Multidimensional Scale of Perceived Social Support (MSPSS) | | | | | | | |
| Other meanings (Items 1,2,5,10) | 5.41±1.48 | 5.16±1.64 | 5.53±1.40 | -0.82 (p=0.41) | 5.3±1.7 | 5.49±1.32 | -0.01 (p=0.99) |
| Family (Items 3, 4, 8, 11) | 5.07±1.65 | 4.97±1.43 | 5.11±1.75 | -0.74 (p=0.46) | 4.87±1.73 | 5.19±1.6 | -0.9 (p=0.37) |
| Friends (Items 6, 7, 9, 12) | 4.37±2.01 | 3.89±2.19 | 4.58±1.9 | -1.44 (p=0.15) | 4.26±2.17 | 4.44±1.91 | -0.23 (p=0.81) |
| Total MSPSS | 59.4±16.17 | 56.11±17.64 | 60.89±15.38 | -1.14 (p=0.25) | 57.78±18.48 | 60.48±14.52 | -0.55 (p=0.58) |

Table 2D. Socio-demographic and clinical characteristics of the sample.

| Variables | Total sample (n=90) | Patients with SI during the past two weeks (n=28) | Patients without SI during the past two weeks (n=62) | Statistics - Chi 2 or Mann-Whitney /t-test, Phi/r effect size (p-value) | Patients with SA during lifetime (n=36) | Patients without SA during lifetime (n=54) | Statistics - Chi 2 or Mann-Whitney /t-test, Phi/r effect size (p-value) |
|---|------------------------|--|---|---|--|---|---|
| | n (%) or Mean±SD | n (%) or Mean±SD | n (%) or Mean±SD | | n (%) or Mean±SD | n (%) or Mean±SD | |
| Women | 54 (60%) | 20 (71.4%) | 34 (54.8%) | 2.21(1), 0.16 (p=0.14) | 26 (72.2%) | 28 (51.9%) | 3.73(1), 0.2 (p=0.05) |
| Age | 40.7±15.84 | 37.71±15.92 | 42.05±15.75 | -1.25 (p=0.21) | 33.44±14.18 | 45.54±15.14 | -3.77 (p<.001) |
| Sexual orientation | | | | 5.48(1), .28 (p=0.02) | | | 8.33(1), .3 (p=.004) |
| Heterosexual | 75 (83.3%) | 19 (67.9%) | 56 (90.3%) | | 25 (69.4%) | 50 (92.6%) | |
| Other ^a | 15 (16.7%) | 9 (32.1%) | 6 (9.7%) | | 11 (30.6%) | | |
| Marital state | | | | 6.04(2), 0.25 (p=0.05) | | | 0.85(2), 0.1 (p=0.71) |
| Single | 50 (55.6%) | 19 (67.9%) | 31 (50%) | | 22 (61.1%) | 28 (51.9%) | |
| In a relationship – Cohabitant–Married | 30 (33.3%) | 9 (32.1%) | 21 (33.9%) | | 11 (30.6%) | 19 (35.2%) | |
| Divorced–Separated–Widowed | 10 (11.1%) | - | 10 (16.1%) | | 3 (8.3%) | 7 (13%) | |
| Educational qualification | | | | 1.46(2), 0.12 (p=0.5) | | | 4.49(2), 0.23 (p=0.11) |
| Primary and secondary school leaving certificate | 45 (50%) | 14 (50%) | 31 (50%) | | 23 (63.9%) | 22 (40.7%) | |
| High school diploma | 34 (37.8%) | 9 (32.1%) | 25 (40.3%) | | 10 (27.8%) | 24 (44.4%) | |
| Bachelor’s degree/ Master’s degree/ Postgraduate training | 11 (12.2%) | 5 (17.9%) | 6 (9.7%) | | 3 (8.3%) | 8 (14.8%) | |
| Profession | | | | 0.82(1), 0.09 (p=0.37) | | | 3.69(1), 0.2 (p=0.05) |
| Worker | 25 (27.8%) | 6 (21.4%) | 19 (30.6%) | | 6 (16.7%) | 19 (35.2%) | |
| Unemployed/retired/student | 65 (72.2%) | 22 (78.6%) | 43 (69.4%) | | 30 (83.3%) | 35 (64.8%) | |
| Children | | | | 0.48(1), -0.07 (p=0.49) | | | 1.73(1), -0.14 (p=0.19) |
| Yes | 27 (30%) | 7 (25%) | 20 (32.3%) | | 8 (22.2%) | 19 (35.2%) | |
| No | 63 (70%) | 21 (75%) | 42 (67.7%) | | 28 (77.8%) | 35 (64.8%) | |

(Continued)

(Continued) - Table 2D.

| Variables | Total sample (n=90) | Patients with SI during the past two weeks (n=28) | Patients without SI during the past two weeks (n=62) | Statistics - Chi 2 or Mann-Whitney /t-test, Phi/r effect size (p-value) | Patients with SA during lifetime (n=36) | Patients without SA during lifetime (n=54) | Statistics - Chi 2 or Mann-Whitney /t-test, Phi/r effect size (p-value) |
|--|------------------------|--|---|---|--|---|---|
| | n (%) or Mean±SD | n (%) or Mean±SD | n (%) or Mean±SD | | n (%) or Mean±SD | n (%) or Mean±SD | |
| Belief in God | | | | 4.67(2), 0.23 (p=0.1) | | | 5.71(2), 0.25 (p=0.06) |
| Yes | 53 (58.9%) | 14 (50%) | 39 (62.9%) | | 17 (47.2%) | 36 (66.7%) | |
| No | 17 (18.9%) | 9 (32.1%) | 8 (12.9%) | | 11 (30.6%) | 6 (11.1%) | |
| I don't know/ I'd rather not answer | 20 (22.2%) | 5 (17.9%) | 15 (24.2%) | | 8 (22.2%) | 12 (22.2%) | |
| Religion | | | | 2.73(1), 0.28 (p=0.098) | | | 5.64(1), 0.37 (p=0.02) |
| Christian | 59 (65.6%) | 14 (50%) | 45 (72.6%) | | 17 (47.2%) | 42 (77.8%) | |
| Other ^b | 4 (4.4%) | 3 (10.7%) | 1 (1.6%) | | 4 (11.1%) | / | |
| Missing | 27 (30%) | 11 (39.3%) | 16 (25.8%) | | 15 (41.7%) | 12 (22.2%) | |
| Religious practices | | | 1.14(1), 0.11 (p=0.29) | | | | 5.88(1), 0.26 (p=0.01) |
| Yes | 19 (21.1%) | 4 (14.3%) | 15 (24.2%) | | 3 (8.3%) | 16 (29.6%) | |
| No | 71 (78.9%) | 24 (85.7%) | 47 (75.8%) | | 33 (91.7%) | 38 (70.4%) | |
| Physical illness | | | | 0.47(1), 0.07 (p=0.49) | | | 0.27(1), 0.05 (p=0.6) |
| Yes | 37 (41.1%) | 13 (46.4%) | 24 (38.7%) | | 16 (44.4%) | 21 (38.9%) | |
| Current residence facility | | | | 0.004(1), 0.01 (p=0.95) | | | 2.44(1), 0.16 (p=0.12) |
| Novara Centre (Piedmont) | 39 (43.3%) | 12 (42.9%) | 27 (43.5%) | | 12 (33.3%) | 27 (50%) | |
| Milan Centre (Lombardy) | 51 (56.7%) | 16 (57.1%) | 35 (56.5%) | | 24 (66.7%) | 27 (50%) | |
| Origin/type of patients | | | | 11.96(2), 0.36 (p=.003) | | | 16.57(2), 0.43 (p<.001) |
| Outpatients | 26 (28.9%) | 2 (7.1%) | 24 (38.7%) | | 2 (5.6%) | 24 (44.4%) | |
| Inpatients | 18 (20%) | 10 (35.7%) | 8 (12.9%) | | 11 (30.6%) | 7 (13%) | |
| Therapeutic community patients | 46 (51.1%) | 16 (57.1%) | 30 (48.4%) | | 23 (63.9%) | 23 (42.6%) | |
| Time period spent in the facility | | | | 5.27(2), 0.28 (p=0.08) | | | 1.65(2), 0.16 (p=0.49) |
| ≤1 month | 19 (21.1%) | 11 (39.3%) | 8 (12.9%) | | 11 (30.6%) | 8 (14.8%) | |
| > 1 month and < 1 year | 21 (23.3%) | 9 (32.1%) | 12 (19.4%) | | 13 (36.1%) | 8 (14.8%) | |
| ≥ 1 year | 25 (27.8%) | 6 (21.4%) | 19 (30.6%) | | 11 (30.6%) | 14 (25.9%) | |

(Continued)

(Continued) - Table 2D.

| Variables | Total sample (n=90) | Patients with SI during the past two weeks (n=28) | Patients without SI during the past two weeks (n=62) | Statistics - Chi 2 or Mann-Whitney /t-test, Phi/r effect size (p-value) | Patients with SA during lifetime (n=36) | Patients without SA during lifetime (n=54) | Statistics - Chi 2 or Mann-Whitney /t-test, Phi/r effect size (p-value) |
|---|------------------------|--|---|---|--|---|---|
| | n (%) or Mean±SD | n (%) or Mean±SD | n (%) or Mean±SD | | n (%) or Mean±SD | n (%) or Mean±SD | |
| Missing | 25 (27.8%) | 2 (7.1%) | 23 (37.1%) | | 1 (2.8%) | 24 (44.4%) | |
| Diagnosis | | | | 4.9(3), 0.25 (p=0.18) | | | 20.59(3), 0.5 (p<0.001) |
| Borderline personality disorder | 21 (23.3%) | 9 (32.1%) | 12 (19.4%) | | 17 (47.2%) | 4 (7.4%) | |
| Personality disorder | 25 (27.8%) | 10 (35.7%) | 15 (24.2%) | | 8 (22.2%) | 17 (31.5%) | |
| Mood disorder/ Anxiety disorder | 23 (25.6%) | 5 (17.9%) | 18 (29%) | | 5 (13.9%) | 18 (33.3%) | |
| Other ^c | 14 (15.6%) | 2 (7.1%) | 12 (19.4%) | | 3 (8.3%) | 11 (20.4%) | |
| Missing | 7 (7.8%) | 2 (7.1%) | 5 (8.1%) | | 3 (8.3%) | 4 (7.4%) | |
| Comorbidity | | | | 0.27(2), 0.06 (p=1) | | | 2.97(2), 0.3 (p=0.26) |
| Substance use | 10 (11.1%) | 4 (14.3%) | 6 (9.7%) | | 6 (16.7%) | 4 (7.4%) | |
| Substance use and other ^d | 8 (8.9%) | 3 (10.7%) | 5 (8.1%) | | 4 (11.1%) | 4 (7.4%) | |
| Other ^e | 15 (16.7%) | 5 (17.9%) | 10 (16.1%) | | 4 (11.1%) | 11 (20.4%) | |
| Missing | 57 (63.3%) | 16 (57.1%) | 41 (66.1%) | | 22 (61.1%) | 35 (64.8%) | |
| Psychotropic drugs | | | | 1(1), 0.14 (p=0.32) | | | 1.81(1), 0.14 (p=0.18) |
| Yes | 77 (85.6%) | 26 (92.9%) | 51 (82.3%) | | 33 (91.7%) | 44 (81.5%) | |
| No | 13 (14.4%) | 2 (7.1%) | 11 (17.7%) | | 3 (8.3%) | 10 (18.5%) | |
| Current individual psychotherapy pathway | | | | 3.05(1), 0.18 (p=0.08) | | | 5.98(1), 0.26 (p=0.01) |
| Yes | 59 (65.6%) | 22 (78.6%) | 37 (59.7%) | | 29 (80.6%) | 30 (55.6%) | |
| No | 31 (34.4%) | 6 (21.4%) | 25 (40.3%) | | 7 (19.4%) | 24 (44.4%) | |
| Individual psychotherapy pathway in the past | | | | 0.09(1), -0.03 (p=0.77) | | | 3.18(1), 0.19 (p=0.07) |
| Yes | 63 (70%) | 19 (67.9%) | 44 (71%) | | 29 (80.6%) | 34 (63%) | |
| No | 27 (30%) | 9 (32.1%) | 18 (29%) | | 7 (19.4%) | 20 (37%) | |
| Current group psychotherapy | | | | 0.27(1), 0.05 (p=0.6) | | | 3.99(1), 0.21 (p=0.05) |

(Continued)

(Continued) - Table 2D.

| Variables | Total sample (n=90) | Patients with SI during the past two weeks (n=28) | Patients without SI during the past two weeks (n=62) | Statistics - Chi 2 or Mann-Whitney /t-test, Phi/r effect size (p-value) | Patients with SA during lifetime (n=36) | Patients without SA during lifetime (n=54) | Statistics - Chi 2 or Mann-Whitney /t-test, Phi/r effect size (p-value) |
|--|---------------------|---|--|---|---|--|---|
| | n (%) or Mean±SD | n (%) or Mean±SD | n (%) or Mean±SD | | n (%) or Mean±SD | n (%) or Mean±SD | |
| Yes | 51 (56.7%) | 17 (60.7%) | 34 (54.8%) | | 25 (69.4%) | 26 (48.1%) | |
| No | 39 (43.3%) | 11 (39.3%) | 28 (45.2%) | | 11 (30.6%) | 28 (51.9%) | |
| Current stressful events | | | | 4.83(1), 0.37 (p=0.03) | | | 2.33(1), 0.27 (p=0.13) |
| Yes | 31 (34.4%) | 13 (46.4%) | 18 (29%) | | 12 (33.3%) | 19 (35.2%) | |
| No | 16 (17.8%) | 1 (3.6%) | 15 (24.2%) | | 2 (5.6%) | 14 (25.9%) | |
| Missing | 43 (47.8%) | 14 (50%) | 29 (46.8%) | | 22 (61.1%) | 21 (38.9%) | |
| Previous hospitalizations | | | | 0.86(1), 0.1 (p=0.48) | | | 6.8(1), 0.27 (p=0.01) |
| Yes | 58 (64.4%) | 20 (71.4%) | 38 (61.3%) | | 29 (80.6%) | 29 (53.7%) | |
| No | 32 (35.6%) | 8 (28.6%) | 24 (38.7%) | | 7 (19.4%) | 25 (46.3%) | |
| Hospitalizations during the past 6 months | | | | 0.88(1), 0.15 (p=0.35) | | 0.22(1), 0.1 (p=0.64) | |
| Yes | 5 (5.6%) | 3 (10.7%) | 2 (3.2%) | | 3 (8.3%) | 2 (3.7%) | |
| No | 85 (94.4%) | 25 (89.3%) | 60 (96.8%) | | 33 (91.7%) | 52 (96.3%) | |
| Current suicide risk | | | | 7.25(1), 0.31 (p=0.01) | | | 9.93(1), 0.33 (p=0.002) |
| Yes | 16 (17.8%) | 10 (35.7%) | 6 (9.7%) | | 12 (33.3%) | 4 (7.4%) | |
| No | 74 (82.2%) | 18 (64.3%) | 56 (90.3%) | | 24 (66.7%) | 50 (92.6%) | |
| Past suicide risk | | | | 11.99(1), 0.36 (p<0.001) | | | 12(1), 0.36 (p<0.001) |
| Yes | 40 (44.4%) | 20 (71.4%) | 20 (32.3%) | | 24 (66.7%) | 16 (29.6%) | |
| No | 50 (55.6%) | 8 (28.6%) | 42 (67.7%) | | 12 (33.3%) | 38 (70.4%) | |
| Previous suicide attempts | | | | 11.23(1), 0.35 (p<0.001) | | | 17.1(1), 0.44 (p<0.001) |
| Yes | 32 (35.6%) | 17 (60.7%) | 15 (24.2%) | | 22 (61.1%) | 10 (18.5%) | |
| No | 58 (64.4%) | 11 (39.3%) | 47 (75.8%) | | 14 (38.9%) | 44 (81.5%) | |

^aBisexual; transexual; pansexual.

^bAtheist; pantheist

^cPsychotic disorder, eating disorder.

^dBulimia nervosa and substance use disorder (alcohol, cocaine); gambling addiction, mild mental retardation and alcohol addiction; dependent personality disorder and substance use disorder (alcohol, cocaine); narcissistic personality disorder and substance use disorder (alcohol, cocaine); post-traumatic stress disorder, narcissistic personality disorder and substance use disorder (alcohol, cocaine); borderline personality disorder and substance use disorder (cocaine).

^eDelusional syndrome; Asperger type autistic traits; obsessive compulsive disorder; eating disorders; anorexia nervosa type with restrictions; complicated grief and eating disorders; postpartum depression and reactive depressive disorder; agoraphobia in remission; social phobia; histrionic personality disorder; dependent personality disorder; narcissistic personality disorder; borderline personality disorder.

Table 3A. Stepwise logistic regression model for SI over the last 2 weeks.

| | | B | S.E. | Wald | gl | p-value | Exp(B) |
|----------|--|----------|-------------|-------------|-----------|----------------|---------------|
| Phase 4* | Total BDI-II score without the suicide item | 82 | 36 | 9.21 | 1 | 0.02 | 2.26 |
| | Beliefs about coping strategies (SCB) | -29 | 13 | 6.45 | 1 | 0.02 | 972 |
| | Perceived Burdensomeness (PB) | 103 | 51 | 5.15 | 1 | 0.04 | 2.49 |
| | Constant | -3.39.00 | 10.13 | 557 | 1 | 455 | 314 |

R2=0.592, $\chi^2(3)=49.173$, $p<0.001$

*Last phase of the stepwise model. Variables entered in step 1: trait anxiety (STAI), depression (BDI-II total score without suicide item), beliefs about coping strategies (SCB), self-esteem (RSES total), mental pain (MPQ total), Perceived Burdensomeness (PB).

Table 3B. Stepwise logistic regression model for a history of previous SA.

| | | B | S.E. | Wald | gl | p-value | Exp(B) |
|----------|-------------------------------|----------|-------------|-------------|-----------|----------------|---------------|
| Phase 6* | Total ACSS- FAD score | 101 | 43 | 12.00 | 1 | 0.02 | 2.46 |
| | Perceived Burdensomeness (PB) | 106 | 36 | 8.6 | 1 | 3 | 2.52 |
| | Constant | -6.35.00 | 782 | 31.17.00 | 1 | <0.001 | 0.04 |

R2=0.326, $\chi^2(2)=24.84$, $p<0.001$

*Last phase of the stepwise model. Variables entered in phase 1: Trait anxiety (STAI), depression (BDI-II total score without suicide item), reduced fear of death (ACSS-FAD total score), mental pain (MPQ total score), reasons to live (RFL total score), Interception (SAQ total score), Perceived Burdensomeness (PB).