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Effectiveness of a tailored psycho-educational program in reducing self-loathing, dissociation, and suicidal behavior among patients with psychiatric disorders

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Abstract

Background Suicidal behavior is not the result of a single cause or event, but rather reflects interacting clinical and psychosocial factors. Potential facilitators include dissociation and self-hate. This study assessed the association between a tailored psychoeducational program and changes in self-loathing, dissociation, and suicidal behavior among patients with psychiatric disorders.

Methods A quasi-experimental, non-randomized controlled design was utilized (study and control groups with follow-up). The study was conducted at the Psychiatric Health Hospital and Addiction Treatment, Benha City, Qalubia Governorate. A purposive sample of 60 patients was recruited. Data were collected using a structured sociodemographic and clinical questionnaire, a self-loathing scale, the Dissociative Experiences Scale (DES), and a suicidal behavior scale.

Results Total dissociation scores in the study group decreased from baseline (2.20 ± 0.71) to post-intervention (1.60 ± 0.67) and remained unchanged at follow-up (1.60 ± 0.67), whereas the control group remained stable across assessments (2.30 ± 0.70). Mixed repeated-measures ANOVA showed a significant group $\times$ time interaction for total dissociation ($F = 43.50$, $p < 0.001$, $\eta^2 p = 0.60$). Significant group $\times$ time interactions were also observed across all dissociation dimensions (all $p < 0.001$). In addition, self-loathing and suicidal behavior improved significantly in the study group across post-intervention and follow-up assessments compared with the control group ($p < 0.001$).

Conclusions The psychoeducational program was associated with improved self-loathing, dissociation, and suicidal behavior outcomes over time among psychiatric patients in this setting. Given the non-randomized design, causal inference should be made cautiously, and further studies using stronger designs and longer follow-up are recommended.

Clinical trial number Not applicable.

Keywords Self-loathing, Dissociation, Suicidal behavior, Psychiatric disorder

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Introduction

Psychologists reflect humans as combined beings made up of psychological, biological, and social components that are continually adapting and evolving. However, psychological disorders can disrupt this adaptive balance [1]. Psychiatric conditions encompass a broad spectrum of disorders, including schizophrenia (SZ) and other primary psychotic disorders; mood disorders such as bipolar disorder (BD) and major depressive disorder (MDD); anxiety and related fear-based disorders; obsessive-compulsive and related conditions; as well as personality disorders [2]. Among the various factors observed in life-course models, psychiatric disorders are identified as having the most important impact on suicide rates [3].

Self-loathing denotes a deeply negative attitude toward oneself, noticeable by feelings of dislike and dissatisfaction, in addition to persistent, harsh, and degrading self-criticism. Over time, this mindset causes individuals to view themselves as damaged or inadequate, believing they are lower than others and that their efforts are meaningless or futile. They come to see themselves as deficient in skill, capability, and competence in all aspects of life [4]. Therefore, self-loathing can be understood as a dangerous form of self-criticism, marked by severe and degrading self-judgments and a persistent tendency to view oneself negatively. This mindset exaggerates feelings of worthlessness, helplessness, despair, inadequacy, and both real and perceived powerlessness. A key attribute often seen in individuals with high levels of self-loathing is a strong tendency to negative self-talk and internal criticism that is harsh and belittling. This frequently stems from experiences of trauma, self-betrayal, or significant life dissatisfactions and shocks [5].

Dissociation is a phenomenon observed in many mental health conditions, such as depression, anxiety, panic disorder, paranoia, excessive worry, and sleep problems, but it often remains unnoticed or underrecognized [6]. It frequently occurs in individuals receiving psychotherapy and involves a disruption in the normal integration of consciousness, emotions, perception, memory, identity, bodily awareness, motor control, and behavior. Additionally, dissociation, understood as a partial separation between mind and body, may play a role in increasing the risk of suicidal behavior [7]. Dissociation is often marked by a reduced sensitivity to physical pain and a detached attitude toward the body, which can allow various forms of self-inflicted harm, plus suicidal behavior [8]. In such states, individuals may begin to perceive their body more as an object than as a personal or integral portion of themselves, leading to feelings of numbness and emotional disconnection. This detachment can make it psychologically easier to impose harm, as damaging an object feels less distressing than harming a living being. Research has constantly shown strong links between

dissociative symptoms and behaviors such as self-injury, suicidal thoughts, and suicide attempts [9].

The term “suicidal behavior” includes a wide range of actions, as well as self-injury, suicide attempts, completed suicides, planning, and suicidal thoughts [10]. Suicide is extensively recognized as a preventable cause of death. Many initiatives and policies have been implemented to decrease suicide rates, focusing on strategies such as raising awareness and reducing the stigma surrounding mental health, one of the main risk factors for suicide. Efforts likewise include combating discrimination and social exclusion connected to mental illness and substance use, training gatekeepers to recognize high-risk individuals early, establishing crisis intervention services and helplines, decriminalizing attempted suicide, and preparing young people with skills to manage everyday stressors [11].

Suicide prevention is deeply interrelated to overall emotional well-being, rather than being a separate objective. Psycho-education plays a crucial role in this context, offering an accessible and effective means of enhancing mental health by training individuals with knowledge, skills, and resources to better understand and manage their emotional experiences. Research shows that psycho-educational interventions can reshape individuals’ mental frameworks, helping to decrease the stigma surrounding mental health and increasing awareness of both personal and societal risks connected to suicide. By providing consistent information on mental health issues and warning signs of suicide risk, psychoeducation raises greater understanding, supports the creation of additional empathetic and informed social environments, improves suicide prevention efforts, and reinforces individuals’ ability to handle mental health challenges [12].

Psychoeducational programs can induce positive shifts in behavior, attitudes, and personal as well as social concepts related to mental illness and suicidality. These programs, which concentrate on cognitive, biological, and sociological processes, are identified as preventive and transformational in nature, as they improve individuals’ quality of life and increase autonomy [13]. These programs for individuals provide them with effective techniques for understanding, coping with, and taking control of their mental illness. Furthermore, psychoeducation plays a part in prevention as it raises individuals’ consciousness of risk factors, early symptoms, and successful strategies for coping with those factors, further promoting careful management of their own well-being, as well as a positive attitude towards coping with and recovering from their circumstances [14].

Together, psychiatric and general healthcare settings, including primary care centers, share the responsibility of stopping suicide. Amongst healthcare professionals, nurses are frequently on the front lines when it comes to

identifying and responding to individuals at risk. They play a vital part in suicide prevention, with expectations to closely observe and monitor patients showing suicidal tendencies. However, many nurses may lack the necessary knowledge, skills, or suitable attitudes required for effective suicide prevention [15].

Significance of the study

Suicide is a complex matter influenced by a variety of factors, including biological, social, psychological, and genetic components. It is also shaped by socio-cultural and environmental influences, making it a complicated phenomenon closely linked to suicidal behavior. Universally, suicide remains a major public health challenge, with an estimated 700,000 deaths happening each year, according to the World Health Organization [16]. Over 90% of persons who die by suicide are found to have an underlying psychiatric illness. According to WHO data, 7,881 people died by suicide in Egypt in 2022, a significant rise from 3,022 recorded cases in 2019. Egypt's suicide rate is fewer than 5.0 per 100,000 people, which is less than the global average of 9.0 per 100,000 [16].

Individuals experiencing suicidal thoughts should be reinforced with a clear and practical action plan. To help alleviate stress, Egyptians stressed with feelings of worthlessness are encouraged to share in social activities and seek early mental health support. Furthermore, mental health professionals in Egypt, particularly psychologists and psychiatrists, should take a proactive role in reducing the suicide burden within the community. This includes raising awareness about suicide and disseminating accurate, reliable mental health information through social media platforms [17].

A vital goal of psycho-education programs is to improve participants' understanding of the subject matter [18]. Furthermore, these programs aim to equip individuals with important skills to manage and cope with symptoms similar to stress [19]. Psychoeducational interventions are specifically recommended for patients with severe and devastating conditions, as they help encourage help-seeking behaviors and address challenges connected to treatment adherence. According to rules from the National Institute for Health and Care Excellence (NICE), psychoeducation includes an interactive exchange of information about the illness, treatments, and cognitive-behavioral strategies for managing and coping [20]. So, this study seeks to evaluate the effect of a psycho-educational program on self-loathing, dissociation, and suicidal behavior among patients with psychiatric disorders.

Aim of the study

To evaluate the effect of a psycho-educational program on self-loathing, dissociation, and suicidal behavior among patients with psychiatric disorders.

Methods

Design

A quasi-experimental two-group design was utilized (study, control group, and follow-up) to evaluate the effect of the psycho-educational program on self-loathing, dissociation, and suicidal behavior among patients with psychiatric disorders.

Setting

The study was conducted at the Mental Health and Addiction Treatment Hospital in Benha City, Qalyubia Governorate, which is associated with the General Secretariat of Mental Health in Egypt. This hospital includes seven inpatient psychiatric departments: five for men, one for women, and one dedicated to addiction treatment. Also, it operates six outpatient clinics, involving two psychiatric clinics, one addiction clinic, one children's clinic, one epilepsy clinic, and one geriatric clinic.

Sample

A purposive sample of 60 psychiatric patients was recruited from the previously mentioned setting. Participants who met the inclusion criteria and agreed to participate were allocated into either the study group ($n = 30$) or the control group ($n = 30$) using convenience allocation rather than randomization. Both groups were comparable at baseline in terms of sociodemographic and clinical characteristics. Baseline equivalence between groups was assessed statistically to minimize selection bias. Inclusion criteria included patients aged 18–55 years, of both sexes, who were receiving prescribed psychiatric medications and were able to participate in the psycho-educational program.

Instruments

The following study instruments were used to gather data:

Instrument 1: A socio-demographic data structured interview sheet

It was developed by the researchers. It included data about patients and elicited socio-demographic data such as age, sex, marital status, occupation, education level, income, residence, and clinical data such as medical diagnosis, onset of illness, number of hospital admissions, type of admission, and period of hospitalization. A purposive sample of 60 psychiatric patients was recruited from the above-mentioned setting and allocated into two groups (study and control) using a convenience

allocation approach; participants were not assigned by randomization. The participants who agreed to participate in this study were assigned to the study or control group using convenience allocation rather than randomization, and met the following inclusion criteria: patients aged between 18 and 55 years old, of both genders, and taking medication as prescribed by their doctors.

Instrument 2: Self-hate scale (SHS)

The Self-Hate Scale (SHS), developed by Turnell et al. [21], was used in its original English version to assess the degree of self-hatred over the past year. The scale consists of 7 items rated on a 7-point Likert-type scale ranging from 1 (not at all true for me) to 7 (very true for me). Item scores were averaged to obtain a total mean score, with higher scores indicating greater levels of self-hatred. The scale has demonstrated good psychometric properties in previous studies. For descriptive presentation in the figures, self-loathing scores were categorized into low, moderate, and high levels according to the predetermined score ranges used in the study.

Instrument 3: Dissociative experiences scale (DES)

The Dissociative Experiences Scale (DES) was developed by Bernstein and Putnam [22], and updated by Carlson, & Putnam [23]. The DES is a self-report instrument originally scored on a 0–100% scale for each item, assessing dissociative experiences. For this study, each item was recoded into a 3-point ordinal scale (1 = low, 2 = moderate, 3 = high) to simplify scoring and facilitate statistical analysis with our modest sample size ($n = 60$). Internal consistency for the recoded scale was satisfactory (Cronbach's $\alpha = 0.95$). While this recoding may reduce sensitivity to small differences and limit variance, it allowed for more interpretable comparisons across time points. It is a 28-item self-report questionnaire used to assess dissociative experiences. This instrument represents one of the most widely used paper-and-pencil measures of dissociation. Dimension scores and the total DES score were calculated as the mean of the relevant item scores, producing a possible range from 1 to 3, 1 (low = 1–28), 2 (moderate = 29–57), and 3 (high = 58–86), where higher scores indicate more frequent dissociative experiences.

Instrument 4: The paykel suicide scale (PSS)

The Paykel Suicide Scale (PSS) was developed by Paykel et al. [24] to assess suicidal ideation and related behaviors. Due to its binary nature, it may be less sensitive to small changes over short intervals. Despite this limitation, it was chosen for its simplicity, rapid administration, and established validity in clinical screening. Changes in the PSS were analyzed alongside other outcome measures to provide a broader assessment of clinical improvement, including definite plans and/or previous suicide attempts.

It measures ideas about death (items 1–2), suicidal thoughts (items 3–4), and suicide attempt (item 5). The PSS is a five-item yes/no self-report scale. Responses are coded Yes = 1 and No = 0, and summed to yield a total score from 0 to 5, with higher scores indicating greater suicidal ideation and risk. For interpretation, a total score of 0 indicates no suicidal thoughts or behaviors, scores of 1–2 indicate increasing suicidal thoughts and possible intent, and scores of 3–5 indicate severe suicidal ideation. For descriptive presentation in the figures, suicidal behavior scores were categorized into low, moderate, and high levels according to the predetermined score ranges used in the study.

Instruments' validity and reliability

To maintain the authenticity of the original validity, the questionnaire was then back-translated into Arabic. A jury composed of five professionals from the nursing sector, covering expertise involving psychiatry, community health, and administration, reviewed the instruments. The survey was then assessed for accuracy, understanding, completion, and relevance. It was shown that these instruments have validity, and changes were implemented if necessary. The Cronbach's alpha values for the SHS, DES, and Paykel Suicide Scale were 0.96, 0.95, and 0.84, respectively.

A pilot study

To determine the transparency and relevance of the instrument and the duration of completion for the questionnaire, a pilot research study was conducted on 10% of psychiatric patients. Some questions were adapted based on the findings obtained from the pilot research study. The total sample collection for the current research excluded the sample gathered for the pilot research to check if the responses were consistent.

Procedure of data collection

The current study started its conduction with an extensive review of the literature, selection and preparation of data collection tools, and a review of the related literature that covers various aspects of the problem and the designed program. This was carried out using accessible books, journals, and the internet in order to get familiar with the research problem and program. An agreement for conducting the current study and program from the scientific research ethics committee of the faculty of nursing, Benha University, was obtained. Also, the written permission for conducting the study and program was obtained from the administrator of the hospital. An explanation of the objectives of the study was provided to the participants, and they were asked to read the informed consent to participate in the program. Prior to the actual data collection, all the questions were

discussed and sorted out. Each participant signed a written consent after being properly informed of all the stages of the program and intervention. Data collection took two months, from the beginning of January 2025 to the end of February 2025, with follow-up after 3 months. The researchers went to the previously mentioned setting once a week, from 9 am to 11 am. The intervention consisted of eight sessions; each session was 40–50 min long.

Phase 1: Assessment

Before data collection, informed consent was obtained from all participants after the purpose and objectives of the study were explained. Baseline data (pre-test) were collected using the study instruments to assess self-loathing, dissociation, and suicidal behavior among psychiatric patients. Interviews were conducted in subgroups of 15 participants, each lasting approximately 40–50 min. Data collection was performed once a week over a period of eight weeks.

Phase 2: Program design

In this phase, a psycho-educational program was developed in Arabic based on a review of recent literature. The program aimed to address self-hatred, dissociation, and suicidal behavior, and to introduce participants to the benefits and strategies of psycho-educational interventions. Various teaching techniques were integrated, including open discussion, group brainstorming, demonstrations, teamwork, and role-playing. Supporting materials included brochures, handouts, and PowerPoint presentations, while evaluation methods incorporated oral questions, demonstrations, and practical tests.

Phase 3: Program implementation

The psycho-educational program was implemented over eight weekly sessions, each lasting 40–50 min, in the recreation rooms within inpatient wards. Participants were divided into two subgroups of 15. Sessions began with a review of the previous session, followed by the presentation of new objectives. The content was delivered in a manner suitable for all psychiatric patients, emphasizing clarity and simplicity. Modeling and demonstration were employed throughout to enhance learning and skill acquisition. At the end of the sessions, participants were encouraged to seek clarification on any points they did not fully understand.

The program sessions covered the following topics

Session 1: Introduction, establishing group boundaries, and explaining the definition and societal impact of suicide, including risk and protective factors.

Session 2: De-stigmatization of mental health, dismantling myths about suicide, and exploring the patient's life values and decision-making using a conceptual matrix.

Multimedia tools such as videos and PowerPoint were used.

Session 3: Overview of major psychiatric disorders associated with suicide risk, including depression, bipolar disorder, and anxiety disorders.

Session 4: Self-evaluation of suicidal thoughts and coping strategies, including acceptance, distress tolerance, personal aid tools, and emergency care planning.

Session 5: Education on the stress-diathesis model of suicidal behavior, cognitive skills such as diffusion, and identification of valued actions.

Session 6: Identification of stress factors, resilience building, present-moment anchoring, and learning to recognize personal vulnerabilities and social support systems.

Session 7: Physical exercises, including 10 min of relaxation and breathing, and 10–15 min of muscle strengthening to reduce impulsivity and enhance cognition and affect.

Session 8: Summary and consolidation of learned skills, planning for continued practice, and obtaining feedback on relaxation techniques and coping strategies.

Phase 4: evaluation

Post-test data were collected immediately following the completion of the program using the same instruments as in the pre-test (Tools II, III, and IV) to assess the impact of the psycho-educational program on self-loathing, dissociation, and suicidal behavior.

Statistical analysis

All data were coded, tabulated, and analyzed using IBM SPSS Statistics (version 25). Descriptive statistics were used to summarize the sample characteristics and study variables, including frequencies, percentages, means, and standard deviations. Chi-square (χ^2) tests were used to compare categorical variables and the distribution of outcome levels between groups and/or across assessment points, as presented in the figures. Pearson correlation coefficients were used to examine associations between continuous total scores. Independent-samples *t* tests were used to compare two-group variables, whereas one-way ANOVA was used for variables with more than two categories. Mixed repeated-measures ANOVA was conducted to examine the effects of group, time, and group $\times$ time interaction across the three assessment points. Linear regression analysis was used to examine the influence of covariates. A *p*-value < 0.05 was considered statistically significant, and *p* < 0.001 was considered highly statistically significant.

Table 1 Frequency distribution of the studied sample's socio-demographic characteristics among the control and study groups

Items	Control group (n = 30)		Study group (n = 30)	
	No	%	No	%
Age				
18 - <28	3	10.0	3	10.0
28 - <38	5	16.7	9	30.0
38 - <48	15	50.0	8	26.7
48 - ≥ 55	7	23.3	10	33.3
Mean ± SD	41.3 ± 9.8		40.8 ± 10.0	
Sex				
Male	20	66.7	18	60.0
Female	10	33.3	12	40.0
Marital status				
Married	6	20.0	5	16.7
Divorced	19	63.3	12	40.0
Widowed	4	13.3	10	33.3
Separated	1	3.4	3	10.0
Educational level				
Illiterate	4	13.4	5	16.7
Read and write	9	30.0	11	36.6
Primary	9	30.0	9	30.0
Secondary	7	23.2	3	10.0
University	1	3.4	2	6.7
Occupation				
Work	17	56.7	15	50.0
Not work	13	43.3	15	50.0
Income				
Not enough	17	56.7	13	43.3
Enough	11	46.6	15	50.0
Enough and save	2	6.7	2	6.7
Residence				
Rural	16	53.3	17	56.7
Urban	14	46.7	13	43.3

Note: Data are presented as numbers (%) unless otherwise stated. Mean ± SD is reported for age. Abbreviations: SD, standard deviation

Results

Sociodemographic characteristics

Among the control group, the largest age category was 38 to less than 48 years (50.0%), while in the study group, it was 48 years and older (33.3%) (Table 1). Mean age was similar between groups (control 40.8 ± 10.0 vs. study 41.3 ± 9.8). Males predominated in both groups (66.7% control, 60.0% study). Divorce was more frequent in the control group than the study group (63.3% vs. 40.0%). Read-and-write education was common (30.0% control, 36.6% study), and about half of the participants were working (56.7% control, 50.0% study). Income was reported as not enough by 56.7% of the control group and 43.3% of the study group. Rural residence was slightly more common in both groups (53.3% control, 56.7% study).

Table 2 Frequency distribution of the studied sample regarding clinical data among the control and study groups

Items	Control group (n = 30)		Study group (n = 30)	
	No	%	No	%
Medical diagnosis				
Schizophrenia	5	16.7	5	16.7
Depression	14	46.7	16	53.3
Bipolar disorders	11	36.6	9	30.0
Onset of the disease				
15-<20	5	16.7	5	16.7
20-<25	17	56.6	16	53.3
25-<30	8	26.7	9	30.0
Number of hospital admissions				
1 time	4	13.4	8	26.7
2 times	16	53.3	13	43.3
≥ 3 times	10	33.3	9	30.0
Type of admission				
Voluntary	11	36.6	13	43.3
Involuntary	19	63.4	17	56.7
Period of hospitalization				
< 3 years	21	70.0	18	60.0
3-5 years	8	26.7	10	33.3
> 5 years	1	3.3	2	6.7

Note: Data are presented as numbers (%). Abbreviations: SD, standard deviation

Clinical characteristics

Depression was the most frequent diagnosis (46.7% control, 53.3% study), followed by bipolar disorder (36.6% control, 30.0% study) and schizophrenia (16.7% in both groups). Age at onset was most commonly 20 to less than 25 years (56.6% control, 53.3% study). Two prior admissions were most frequent (53.3% control, 43.3% study). Involuntary admission was more common than voluntary admission (63.4% control, 56.7% study). Most participants had a hospitalization period of less than three years (70.0% control, 60.0% study) (Table 2).

Self-loathing, dissociation, and suicidal behavior levels over time

In the study group, self-loathing shifted from a moderate level pre-program (46.7%) to a low level post-program (50.0%) and at follow-up (53.3%) (Fig. 1). Dissociation in the study group shifted from a moderate level pre-program (53.3%) to a low level post-program and follow-up (46.7%) (Fig. 2). Suicidal behavior in the study group shifted from a moderate level pre-program (46.7%) to a low level post-program (50.0%) and at follow-up (46.7%) (Fig. 3).

Dissociation dimensions (DES) across time

In the study group, total DES score decreased from baseline to post-intervention and remained improved at follow-up (2.20 ± 0.71 to 1.60 ± 0.67, maintained at follow-up). A mixed repeated-measures ANOVA revealed a significant group × time interaction for dissociation

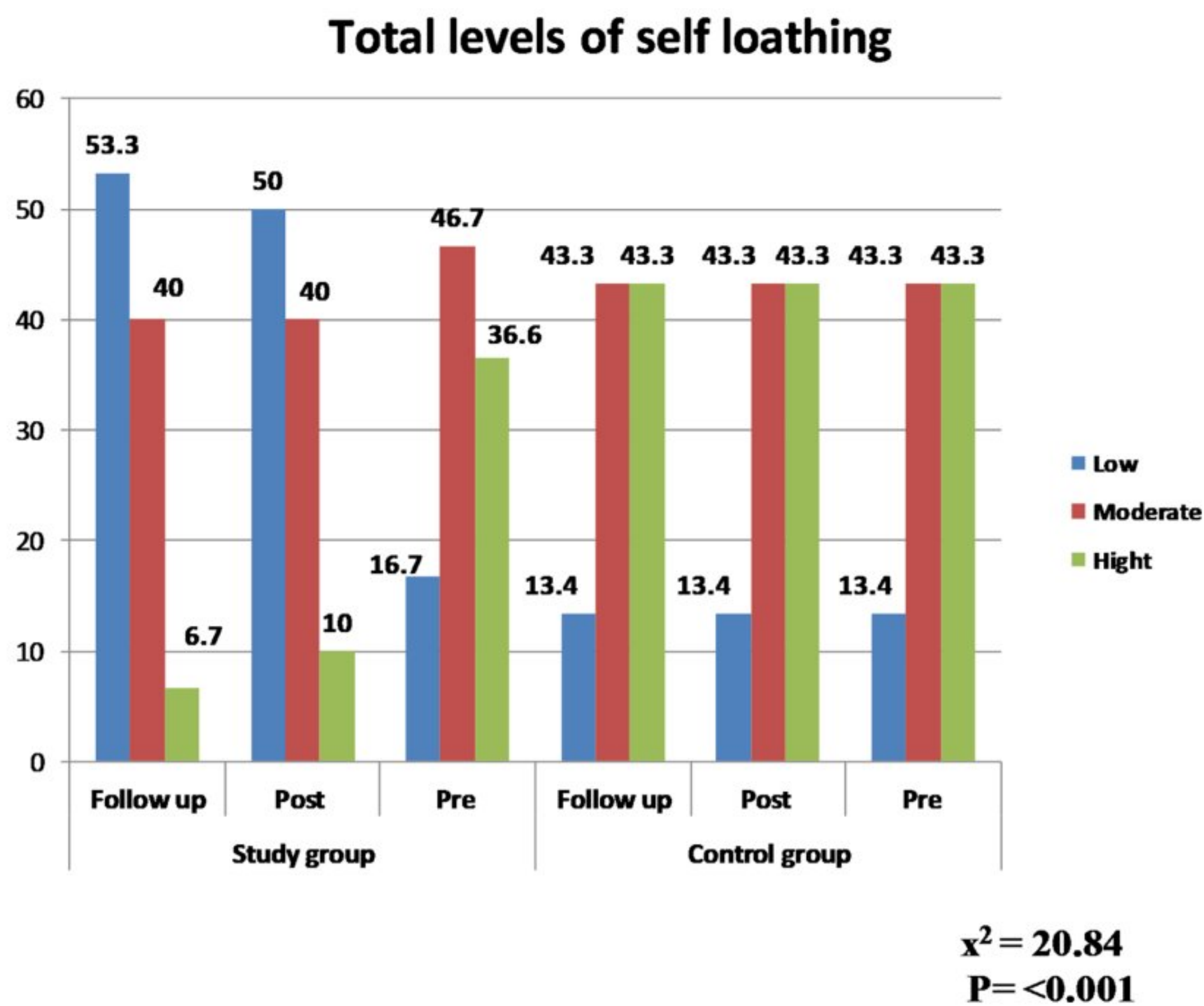


Fig. 1 Distribution of the studied sample's total levels of self-loathing pre, post, and follow-up program implementations among both groups. Note: Self-loathing levels were categorized into low, moderate, and high according to the score ranges described in the Methods section

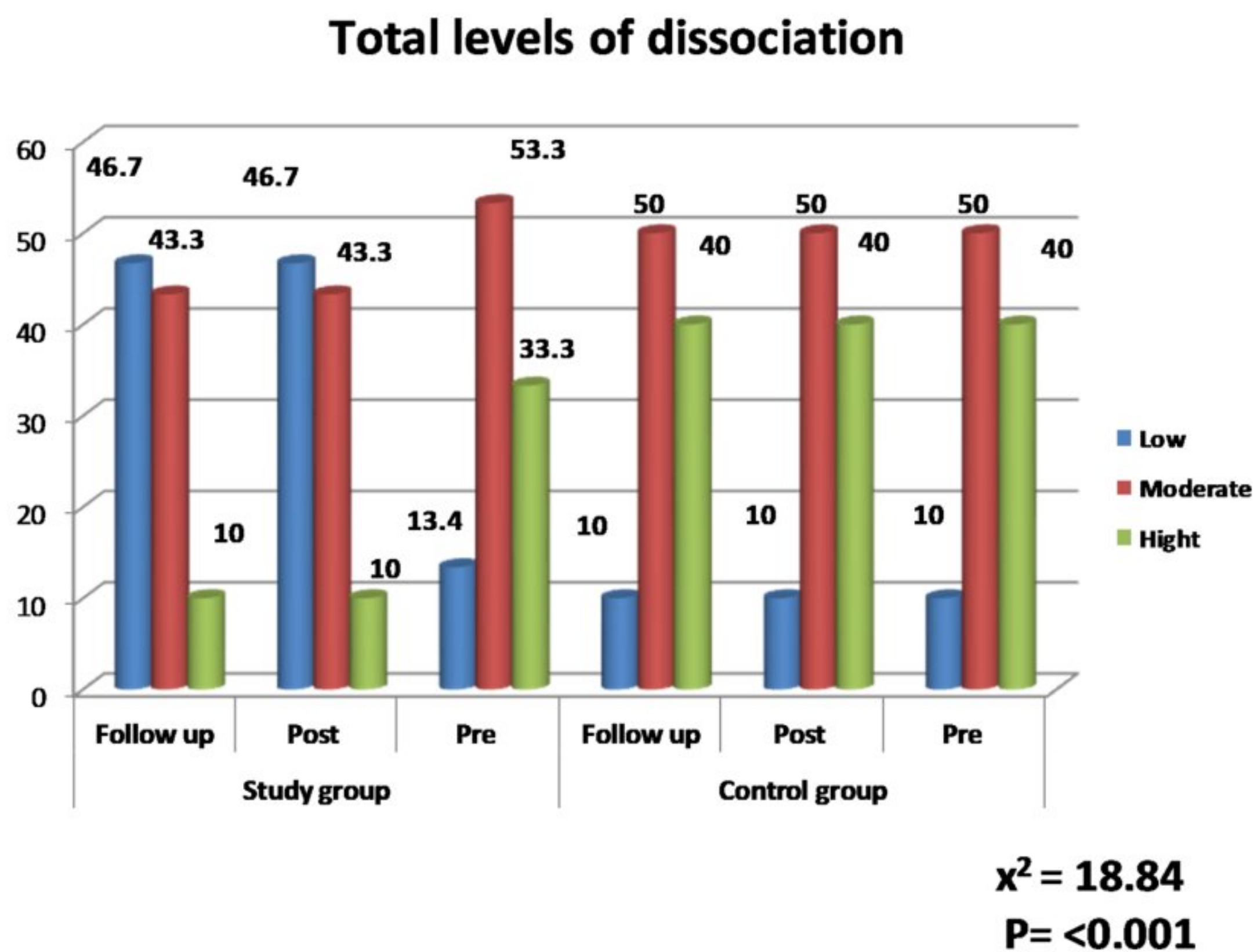


Fig. 2 Distribution of the total sample dissociation pre, post, and follow-up program implementations among both groups

Total levels of suicidal behavior

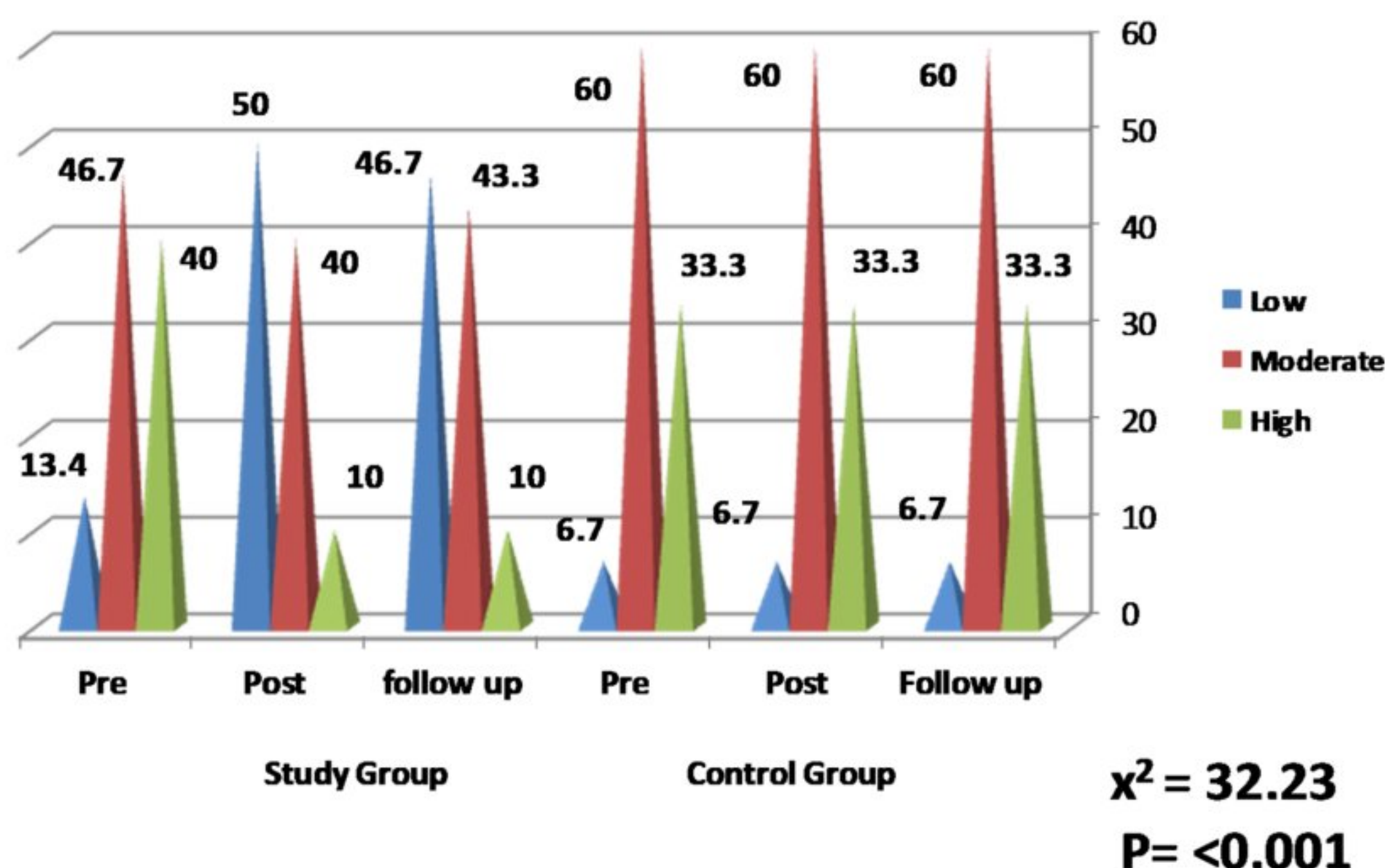


Fig. 3 Distribution of the studied sample's total levels of suicidal behavior pre and post and follow-up program implementations among both groups. **Note:** Suicidal behavior levels were categorized into low, moderate, and high according to the score ranges described in the Methods section

scores ($F = 43.50$, $p < 0.001$, $\eta^2 p = 0.60$), indicating greater improvement in the intervention group. While in the control group, dissociation scores remained stable across pre, post, and follow-up assessments (Table 3).

Comparison of baseline equivalence of self-loathing, dissociation, and suicidal behavior

In this study, baseline equivalence between the study and control groups was assessed using independent samples t-tests for self-loathing, dissociation, and suicidal behavior. No statistically significant differences were found between the two groups in the primary outcome variables before the intervention ($p > 0.05$) (Table 4).

Associations with sociodemographic characteristics

Post-intervention in the study group, sex was significantly associated with self-loathing ($p = 0.03$), dissociation ($p = 0.01$), and suicidal behavior ($p = 0.00$). Marital status was also significantly associated with self-loathing ($p = 0.05$), dissociation ($p = 0.03$), and suicidal behavior ($p = 0.02$). Residence was significantly associated with suicidal behavior ($p = 0.05$), while age, educational level, occupation, and income were not significantly associated with self-loathing, dissociation, or suicidal behavior (all $p > 0.05$) (Table 5).

Covariate between diagnosis and self-loathing, dissociation, and suicidal behavior

In this study no statistically significant difference between psychiatric diagnosis with self-loathing, dissociation, and suicidal behavior among the control and study group ($p > 0.05$) (Table 6).

In this study no statistically significant model, as indicated by the F - test result of 0.53 with a P - value of 0.66. This model explains 2.8% of the variation in psychiatric patients' diagnosis scores, with an R - squared value of 0.028 (Table 7).

Correlations between self-loathing, dissociation, and suicidal behavior

In the study group, self-loathing correlated positively with dissociation post-program ($r = 0.37$, $p < 0.05$) and at follow-up ($r = 0.37$, $p < 0.05$). Self-loathing was also positively correlated with suicidal behavior post-program ($r = 0.17$, $p < 0.05$) and at follow-up ($r = 0.17$, $p < 0.05$). Pre-program correlations were not statistically significant ($p > 0.05$) (Table 8).

Discussion

Self-loathing is a form of thought or an emotional state characterized by self-hatred and extreme self-criticism. It involves a negative internal narrative that repeatedly judges, shames, humiliates, and finds fault in the self. Dissociation refers to disruptions in memory, bodily connection, and integration of consciousness, and it follows

Table 3 Mean score distribution of dissociation dimensions pre, post, and follow-up program intervention among both groups

Dissociation dimensions (DES)	Control group (n = 30)		Study group (n = 30)	
	Pre program	Post program	Follow up	
	Mean ± SD	Mean ± SD	Mean ± SD	Follow up Mean ± SD
Depersonalization/Derealization	2.16 ± 0.68	2.13 ± 0.68	2.13 ± 0.68	1.67 ± 0.66
F (group x time)			22.17	
P			0.00	
η ² p			0.43	
Gaps in Consciousness and Memory	2.13 ± 0.68	2.13 ± 0.68	2.13 ± 0.68	1.66 ± 0.51
F (group x time)			43.50	
P			< 0.001	
η ² p			0.60	
Misperceptual Perceptions	2.20 ± 0.66	2.20 ± 0.66	2.20 ± 0.66	1.74 ± 0.63
F (group x time)			43.60	
P			0.00	
η ² p			0.60	
Cognitive/ Behavioral Re-experiencing	2.30 ± 0.65	2.30 ± 0.65	2.30 ± 0.65	1.70 ± 0.61
F (group x time)			58.00	
P			0.00	
η ² p			0.66	
Total DES score	2.30 ± 0.70	2.30 ± 0.70	2.20 ± 0.71	1.60 ± 0.67
F (group x time)			43.50	
P			< 0.001	
η ² p			0.60	

Note: Data are presented as mean ± SD. F values represent the group × time interaction from a mixed repeated-measures ANOVA examining changes across the three measurement times (pre-intervention, post-intervention, and follow-up) between the study and control groups. Effect size was reported using partial eta squared (η²p). DES scores were recoded from the original scale into a 3-point coding approach for analysis (1 = low, 2 = moderate, 3 = high), and higher scores indicate greater dissociative symptomatology. Cronbach's α for the recoded scale was 0.95. Abbreviations: DES, Dissociative Experiences Scale; SD, standard deviation. Statistical significance was set at *p* < 0.001

Table 4 Comparison of baseline equivalence means score regarding self-loathing, dissociation, and suicidal behavior before intervention among the control and study groups

Item	Control group (n = 30)	Study group (n = 30)	T	P
	Mean ± SD	Mean ± SD		
Self-loathing	2.30 ± 0.70	2.20 ± 0.71	0.54	> 0.05
Dissociation	2.30 ± 0.65	2.20 ± 0.66	0.58	> 0.05
Suicidal behavior	2.26 ± 0.58	2.26 ± 0.69	0.00	> 0.05

Note: Data are presented as mean ± SD. T, independent t-test, and p values compared between the control and study group. Abbreviations: SD, standard deviation. No statistical significance: $p > 0.05$

that dissociative symptoms may contribute to cognitive and emotional dysfunction. Suicidal behavior is not the result of a single cause or event, but rather reflects the interaction of multiple facilitators. Potential facilitators include dissociation, self-hate, and perceived reliance on others [25].

In the current study, participants in both groups shared broadly similar sociodemographic and clinical characteristics, with a predominance of males and substantial representation of divorced individuals and those with limited education. These patterns are clinically important because male sex and social adversity are frequently linked to elevated vulnerability to suicidal behavior. In addition, lower educational attainment may contribute to poorer mental health literacy, delayed help-seeking, and limited access to adaptive coping strategies, which may increase the likelihood of persistent self-loathing and suicidal thoughts. From a contextual perspective, employment status, financial strain, and rural residence may also shape exposure to chronic stressors and influence access to mental health services. Although these factors were not directly tested as mechanisms in the current analyses, they provide a plausible background for understanding why patients with psychiatric disorders may be

Table 5 Relation between total mean score of Sociodemographic characteristics of studied sample, self-loathing, dissociation, and suicidal behavior post intervention among study group (n = 30)

Sociodemographic characteristics	Total self-loathing		Total dissociation		Total suicidal behavior	
	Mean ± SD	Test of sig. P value	Mean ± SD	Test of sig. P value	Mean ± SD	Test of sig. P value
Age						
18 - <28	1.0 ± 0.00	F = 1.43	1.66 ± 0.57	F = 0.12	2.00 ± 1.00	F = 0.12
28 - <38	1.44 ± 0.72	P = 0.25	1.55 ± 0.72	P = 0.94	1.44 ± 0.52	P = 0.11
38 - <48	1.75 ± 0.46		1.75 ± 0.70		1.25 ± 0.70	
48 - ≥ 55	1.80 ± 0.78		1.60 ± 0.69		1.40 ± 0.56	
Sex						
Male	1.50 ± 0.61	T = 1.98	1.61 ± 0.69	T = 0.04	1.61 ± 0.69	T = 0.01
Female	1.75 ± 0.75	P = 0.03*	1.66 ± 0.65	P = 0.01*	1.58 ± 0.66	P = 0.00*
Marital status						
Married	1.20 ± 0.44	F = 2.47	1.40 ± 0.84	F = 1.75	1.40 ± 0.89	F = 3.79
Divorced	1.58 ± 0.66	P = 0.05*	1.41 ± 0.51	P = 0.03*	1.14 ± 0.51	P = 0.02*
Widowed	1.90 ± 0.73		2.00 ± 0.66		1.60 ± 0.51	
Separated	1.33 ± 0.53		1.66 ± 0.57		2.66 ± 0.57	
Educational level						
Illiterate	1.20 ± 0.44	F = 1.31	2.00 ± 0.67	F = 0.83	1.40 ± 0.54	F = 1.05
Read and write	1.63 ± 0.67	P = 0.29	1.63 ± 0.67	P = 0.51	1.36 ± 0.50	P = 0.40
Primary	1.88 ± 0.78		1.55 ± 0.52		1.88 ± 0.60	
Secondary	1.66 ± 0.57		1.66 ± 0.57		1.66 ± 1.15	
University	1.00 ± 0.00		1.00 ± 0.00		2.00 ± 1.41	
Occupation						
Work	1.46 ± 0.63	T = 0.17	1.66 ± 0.72	T = 0.72	1.60 ± 0.73	T = 0.00
Not work	1.73 ± 0.70	P = 0.28	1.60 ± 0.63	P = 0.79	1.60 ± 0.63	P = 1.00
Income						
Not enough	1.61 ± 0.65	F = 0.24	1.69 ± 0.75	F = 0.10	1.46 ± 0.66	F = 0.57
Enough	1.60 ± 0.73	P = 0.30	1.60 ± 0.63	P = 0.90	1.73 ± 0.70	P = 0.57
Enough and save	1.50 ± 0.70		1.50 ± 0.70		1.50 ± 0.70	
Residence						
Rural	1.64 ± 0.78	T = 0.18	1.85 ± 0.50	T = 0.17	1.70 ± 0.69	T = 2.09
Urban	1.53 ± 0.51	P = 0.27	1.69 ± 0.85	P = 0.97	1.46 ± 0.06	P = 0.05*

Note: Data are presented as mean ± SD. Test of significance: independent-samples t test was used for two-category variables (sex, residence), and one-way ANOVA was used for variables with more than two categories (age group, marital status, educational level, income). Abbreviations: SD, standard deviation. Statistical significance: * $p < 0.05$

Table 6 Mean scores of psychiatric diagnosis with self-loathing, dissociation, and suicidal behavior among the control and study groups before intervention

Diagnosis	Control group (n = 30)			Study group (n = 30)		
	Self-loathing	Dissociation	Suicidal behavior	Self-loathing	Dissociation	Suicidal behavior
	Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD
Schizophrenia	2.60 ± 0.54	2.60 ± 0.54	2.60 ± 0.54	2.20 ± 0.66	2.00 ± 1.00	2.40 ± 0.54
Depression	2.42 ± 0.51	2.35 ± 0.49	2.14 ± 0.53	2.20 ± 0.66	2.18 ± 0.65	2.06 ± 0.77
Bipolar	2.00 ± 0.89	2.09 ± 0.83	2.27 ± 0.64	2.26 ± 0.69	2.33 ± 0.70	2.33 ± 0.50
F	1.14	1.16	1.78	0.33	0.73	0.43
P	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05

Note: Data are presented as mean ± SD. Test of significance F, one-way ANOVA

Table 7 Multiple linear regression model examining the predictors of patients' self-loathing, dissociation, and suicidal behavior (n = 60)

Predictors	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	2.764	0.488		5.664	0.000
Self-loathing pre	−0.063	0.131	−0.064	−0.478	0.634
Dissociation pre	−0.114	0.143	−0.108	−0.798	0.428
Suicidal behavior pre	−0.088	0.146	−0.080	−0.601	0.550
Model summary					
Model	R	R ²	Adjusted R ²	Std. Error of the Estimate	
1	0.167	0.028	−0.024	0.70131	
ANOVA					
Model	Df.	F		P. value	
Regression	3	0.53		0.66	

Dependent variables: diagnosis

Variables entered: self-loathing, dissociation, and suicidal behavior

Notes: B = unstandardized coefficient, Beta = Standardized coefficient, t: independent t- test

R² = coefficient of multiple. P > 0.05

particularly vulnerable to self-loathing, dissociation, and suicidal behavior.

Regarding clinical characteristics, depressive disorder represented a substantial proportion of the sample, which aligns with evidence indicating that depressive symptoms are strongly associated with suicidal ideation and self-loathing. This is consistent with BJ Kim and T Kihl [26], reported that depression is a proximal correlate of suicidal behavior and self-loathing, and that higher depression severity is associated with increased suicidal ideation. Differences between diagnostic distributions across studies remain expected given variation in sampling frames, settings, and admission pathways. In this regard, the current findings contrast with TA Okasha, WM Sabry, NH Zaki, MA Rabie and YA Elhawary [27], reported a higher proportion of schizophrenia, and with T Boldrini, P Girardi, M Clerici, A Conca, C Creati, G Di Cicilia, G Ducci, F Durbano, C Maci, A Maone, et al. [28], also reported schizophrenia among a sizable subgroup of participants.

The onset of illness in early adulthood and the history of previous admissions observed in the current sample are also consistent with the chronic and relapsing nature

of many psychiatric disorders, which often require long-term management and recurrent contact with mental health services. These findings are consistent with L San, M Bernardo, A Gomez, P Martinez, B Gonzalez and M Pena [29], reported prolonged illness trajectories and relapse among psychiatric patients, including relapse associated with medication nonadherence. Recurrent admissions may reflect symptom severity, limited community support, and difficulties maintaining adherence and follow-up, all of which can contribute to ongoing psychological distress and heightened risk of self-hate, dissociation, and suicidal behavior.

A key finding of the current study is that participants who received the psycho-educational program showed improvement in self-loathing from baseline to the post-program assessment, with benefits maintained at follow-up, while the control group did not show meaningful improvement across assessments. This pattern supports the value of structured psychoeducation in helping patients identify maladaptive self-appraisals and practice more adaptive coping strategies. The program content, including fostering supportive relationships, practicing affirmations, self-forgiveness, and reframing guilt, may

Table 8 Correlation between total self-loathing, total dissociation, and total suicidal behavior at pre-program, post-program, and follow-up assessments among the study group

Total self-loathing	Total dissociation			Suicidal behavior		
	Pre program	Post program	Follow-up program	Pre program	Post program	Follow-up program
	r	r	r	r	r	r
	0.13	0.37	0.37	0.37	0.17	0.17
	P	P	P	P	P	P
	> 0.05	< 0.05*	< 0.05*	> 0.05	< 0.05*	< 0.05*

Note: Pearson correlation coefficient (r) was used to examine associations between total self-loathing and total dissociation and suicidal behavior at pre, post, and follow-up assessments in the study group. Statistical significance: * $p < 0.05$

reduce self-critical thinking and thereby lessen self-loathing. These findings are consistent with AI Turnell, DB Fassnacht, PJ Batterham, AL Calear and M Kyrios [21], who reported reductions in self-hate following structured psychological interventions and described links between self-hate and suicidal behavior.

Similarly, dissociation decreased significantly over time in the study group across dissociation dimensions and total dissociation, while the control group remained relatively stable. These findings suggest that psychoeducation that includes coping skills, emotional regulation strategies, grounding techniques, and mindfulness may help patients remain more connected to the present experience and reduce dissociative symptoms. This interpretation is clinically meaningful because dissociation is often associated with emotional dysregulation, impulsivity, and elevated suicide risk. The current findings differ from B Demartini, V Nistico, R Tedesco, A Marzorati, R Ferrucci, A Priori, O Gambini and GB Caputo [30], reported high levels of dissociation alongside increased impulsivity and emotional dysregulation, and described dissociation as a marker of suicide risk. Differences across studies may relate to variations in diagnostic profiles, symptom acuity, setting, and the type and intensity of psychosocial support available.

With respect to suicidal behavior, the study group demonstrated improvement from baseline to post-program assessment, with benefits maintained at follow-up, whereas the control group remained stable. This is clinically plausible given that individuals with severe depressive disorder, schizophrenia, and bipolar disorder may experience hopelessness, social withdrawal, and impaired reality testing, all of which can increase suicide risk. The observed improvement after psychoeducation is consistent with the view that enhancing coping skills, emotional regulation, and insight into symptoms may reduce suicidal thoughts and behaviors in high-risk inpatient populations. This finding aligns with AS Mohamed, NE Sayied, SM Zaki and AA Mohamed [1], who reported suicidal behavior among psychiatric patients, while differing from other studies [31–33], which may reflect differences in setting, comorbidity profiles, and definitions and measurement of suicidal outcomes. Emerging evidence also suggests that, in specific treatment contexts, pharmacological factors may contribute to suicidal ideation and behavior, although such findings are condition-specific and should be interpreted cautiously [34]. Comorbidities, treatment-resistant conditions, and recurrent episodes may further contribute to differences across studies.

In addition to changes in outcomes over time, the current study identified significant associations between selected sociodemographic variables and the main study outcomes, suggesting that sex and marital status may be relevant factors for self-loathing, dissociation, and

suicidal behavior, and that residence may also be relevant for suicidal behavior. These findings highlight the importance of contextual and social determinants in shaping symptom expression and risk, and they support the need for tailored intervention planning that accounts for patients' social contexts.

Finally, the correlation findings support the conceptual linkage between self-loathing, dissociation, and suicidal behavior. The current study found a positive association between self-loathing and both dissociation and suicidal behavior after the program and at follow-up in the study group. This pattern is consistent with R Calati, I Bensassi and P Courtet [7], who reported significant relationships between dissociation, self-hate, and suicidal behavior, and supports the view that dissociation can be a clinically important risk factor for suicidal behavior. The findings are also in line with A Lieberman, M Robison, SA Wonderlich, RD Crosby, JE Mitchell, SJ Crow, CB Peterson, D Le Grange, AM Bardone-Cone, G Kolden, et al. [8], who suggested that self-hate may relate strongly to suicidal behavior and may reflect a pathway to suicide rooted in deep self-loathing rather than objectification. Together, these findings reinforce the importance of targeting self-loathing and dissociative experiences within suicide prevention efforts for psychiatric patients.

Conclusion

Based on the study findings and hypothesis, the results support the theoretical and practical effectiveness of a psycho-educational program for patients with psychiatric disorders in reducing self-loathing, dissociation, and suicidal behavior, with improvements maintained at follow-up. Following program implementation, there was a statistically significant positive correlation between self-loathing, dissociation, and suicidal behavior.

Limitations

Some limitations should be taken into consideration when interpreting the findings of this study. First, the study used a purposive sample of only 60 psychiatric patients from a single psychiatric hospital, which limits the generalizability of the findings. Second, because the study was conducted in one institution in Benha City, the results may not be applicable to other psychiatric settings or populations. Third, the follow-up period was relatively short, which limits conclusions about the long-term sustainability of the intervention effects. Fourth, the use of self-report measures may have introduced response bias and affected the accuracy of the findings. Fifth, participants were allocated using a non-randomized convenience approach, so selection bias cannot be excluded despite baseline comparability between groups. Sixth, the inclusion of patients with different psychiatric diagnoses may have introduced clinical heterogeneity

that could influence the intervention response. Seventh, the DES was recoded into a 3-point format for analysis, which may have reduced measurement sensitivity and limited comparability with studies using the standard scoring method. Eighth, the brief dichotomous structure of the Paykel Suicide Scale may have limited its sensitivity to detect subtle short-term changes in suicidal behavior. Finally, because the psycho-educational program included multiple components delivered as a package, it is difficult to determine which specific components were most responsible for the observed effects.

Recommendation

- Develop many intervention plans to expand society's current understanding of psychiatric disorders, self-harm, and dissociative experiences, as well as those linked with suicidal behavior.
- The self-acceptance and self-compassion training program is a viable option for tailored self-hate and suicide prevention among patients with psychiatric disorders.
- Expressed emotion management program about self-loathing, dissociation, and suicidal behavior should be applied in a range of clinical and non-clinical settings, as well as demonstrate its generalizability to a diverse range of populations.

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Author contributions

EAS: Conceptualization, Methodology, Investigation, Supervision, Writing, original draft, Writing, review, and editing. MFA: Methodology, Investigation, Data curation, Writing, review, and editing. LMZ: Methodology, Project administration, Writing, review, paper submission, and editing. MWH: Investigation, Data curation, Formal analysis, Writing, original draft. MMAA: Formal analysis, Validation, Visualization, Writing, review, and editing. RESM: Data curation, Resources, Writing, review, and editing. All authors read and approved the final manuscript.

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Data availability

All data that were analyzed during this study are directed to the corresponding author upon request.

Declarations

Ethics approval and consent to participate

Ethical approval was obtained from the Research Ethics Committee (REC) at the Faculty of Nursing, Deanship of Scientific Research, Benha University, Egypt (Approval No. REC. PSYN.P 51) before data collection. Informed consent was taken from all participants. Completing the questionnaire pointed to intentional participation in the study. All methods in this study were implemented in accordance with the institutional research committee's ethical standards, as well as the Helsinki Statement (2013). All methods in this study were performed in agreement with relevant guidelines and regulations.

Consent for publication

Not applicable.

Competing interests

The authors declare no competing interests.

Conflict of interest

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