psychology international

MDPI

Article

Psychological Improvement of People with Substance Addiction through a Self-Esteem Workshop

Santiago Manuel Fernández-Alarcón [1], Manuel Adame [2], César Jesús Antona [1], Álvaro Antón-Sancho [1] and Diego Vergara [1,*]

[1] Technology, Instruction and Design in Engineering and Education Research Group, Catholic University of Ávila, 05005 Ávila, Spain; sfalarcon@gmail.com (S.M.F.-A.); cesar.antona@ucavila.es (C.J.A.); alvaro.anton@ucavila.es (Á.A.-S.)

[2] Citizens' Association for the Fight against Drugs (Asociación Ciudadana de Lucha Contra la Droga, ACLAD), 36739 Pontevedra, Spain; manuel.adame.moldes@gmail.com

* Correspondence: diego.vergara@ucavila.es

Abstract: Addictions undermine the quality of life of individuals and their families. They generally lead to misadjustment that affects many areas (psychological, family, social, and occupational) and, in the most severe cases, can end in helplessness, loneliness, or early death. The self-esteem of the person with addictions tends to be reduced and this limits their chances of recovery. Through this research, we tried to test the effect of a self-esteem workshop on 58 people with addictions to different substances. A self-esteem workshop was carried out with people who were part of a therapeutic community belonging to the province of Pontevedra (Spain). Several working groups were established and received sessions over a period of two and a half months. Participation was voluntary and the anonymity and confidentiality of the participants were guaranteed. To assess self-esteem, the Coopersmith Self-Esteem Scale Short Form, or Form B, was used at the beginning and at the end of the workshop. The results confirm the existence of statistically significant differences in the Self-Esteem Scale in relation to the pre-treatment and post-treatment assessments: $F_{(1)} = 106.44$, $p = 0.000$, $\eta^2 = 0.655$. The self-esteem workshop resulted in a significant change in this construct and contributed to the psychological improvement of people with addictions.

Keywords: self-esteem; addiction; drugs; mental health; workshop; treatment

Citation: Fernández-Alarcón, S.M.; Adame, M.; Antona, C.J.; Antón-Sancho, Á.; Vergara, D. Psychological Improvement of People with Substance Addiction through a Self-Esteem Workshop. *Psychol. Int.* **2024**, *6*, 786–795. https://doi.org/10.3390/psycholint6040050

Academic Editor: Luca Cerniglia

Received: 24 April 2024
Revised: 9 September 2024
Accepted: 26 September 2024
Published: 29 September 2024

1. Introduction

Substance abuse is considered a major public health problem [1] and is estimated to affect about 10% of the world's population [2]. The problems it generates lead to high mortality and morbidity [3]. Substance use disorders are more prevalent in men than in women, however, women are more vulnerable, have greater comorbidity with other psychiatric disorders, become addicted more quickly after the first use of the substance, and tend to seek treatment less than men [4,5]. People affected by substance use often have other psychological and mental health problems [6]. As part of these aspects, it is common to find low self-esteem scores among people with substance abuse [7]. In this sense, it has been suggested that increasing their level of self-esteem will contribute to an overall improvement in treatment [8].

Self-esteem is defined as an overall assessment of self-worth expressed toward oneself [9]. It represents the degree of acceptance that the person has of himself or herself, through his or her own perceptions, feelings, and attitudes, developed through his or her own life experiences. The feeling of self-worth is usually established through the person's own subjective evaluations and constant interaction with the environmental situations in which he/she finds himself/herself. Self-esteem is considered one of the most important elements of mental health and socioemotional adjustment [10]. Low self-esteem has been linked to depression and anxiety disorders [11–13]. Different studies have related

self-esteem to external [14,15] and internal variables [16]. Low self-esteem is associated with anxiety and somatic symptoms [17–19].

People with high self-esteem respect themselves and others, tend to be well integrated into society, set goals they can achieve, generally feel happy and healthy, and tend to be productive [20]. On the other hand, low self-esteem has been related to low levels of self-confidence, a negative evaluation of personal abilities, increased anxiety, pessimism about the future, and negative attributions to oneself in situations in which the results are not as expected. Negative correlations have been found between self-esteem and suicide risk [21], as well as between self-esteem and loneliness [22]. Additionally, there have been positive correlations found between self-esteem and meaning in life [23] and between self-esteem and a predisposition towards active work behavior [24]. Self-esteem is considered to be one of the most important protective factors in the development of possible mental and social disorders, as well as in the potential recovery after having suffered them [25]. A positive relationship between self-esteem and mental health has been observed [26,27].

Several studies have supported the hypothesis of the relationship between self-esteem and loneliness [28,29]; likewise, it has been found that self-esteem was significantly involved as a mediator in the perception of social support and loneliness in 426 people with substance use disorders [30]. As suggested through its definition and development, self-esteem is a potentially modifiable construct and, therefore, subject to change [31,32]. The promotion of self-esteem can be increased through different social activities and seems to be closely related to social acceptance and support [33]. In this sense, using a coping skills program led to an increase in self-esteem and a decrease in anxiety scores in students [34]. Another program that worked on assertiveness and problem-solving also resulted in an increase in self-esteem [35]. Several studies have confirmed that training in daily living skills has an impact on higher levels of self-esteem [36,37].

Self-esteem and optimism are considered to be components that are particularly linked to motivation for recovery from substance addictions [38–40]. Increasing self-esteem increases the likelihood of success in the rehabilitation process [41].

The main research objectives of this study are the following:

1. To evaluate the effectiveness of the self-esteem workshop program used in the therapeutic community by comparing the scores before (pre-treatment evaluation) and after the treatment (post-treatment evaluation) and considering their possible relationship according to the sex of the participants. The working hypothesis suggests an expected increase in self-esteem scores at the end of the workshop. On the other hand, although differences between men and women related to substance use have been documented, we hypothesize that both sexes will respond similarly to the self-esteem workshop. We expect to see increases in their scores, but without the workshop generating statistically significant differences between them.
2. To find out whether there were statistically significant differences in the increase in self-esteem according to the type of main substance consumed, as well as according to the age of the participants in the self-esteem workshop. The working hypothesis proposes the absence of statistically significant differences in the increase in self-esteem according to the type of drug mainly consumed, as well as according to the different age groups established. Based on this assumption, independent analyses were performed on these two variables.

2. Materials and Methods

2.1. Participants

Fifty-eight people participated in the self-esteem workshop: 23 women (39.7%) and 35 men (60.3%). The mean age of the sample was 44.38 years (range: 21–64; SD = 9.00). All participants shared an addiction to at least one substance and were part of the same therapeutic community.

2.2. Evaluation Instruments

First, data were collected on relevant sociodemographic variables such as sex and age, as well as the main addictive substance of each of the workshop participants. In addition, an instrument was applied to assess attitudes towards oneself in adolescents and adults [42], namely the Coppersmith Self-Esteem Inventory [43]. Among the different versions of this instrument, in this study we used the short version (Short Form or Form B) [44]. This version contains a three-factor structure (personal self-esteem, parent-related self-esteem, and peer-related self-esteem) and has adequate psychometric properties, such as reliability and construct validity [45–47]. This brief version assesses self-esteem through a 25-item questionnaire with a dichotomous response format using the terms "describes me" or "does not describe me". The inventory, in any of its versions, is recommended in both clinical and educational settings to assess self-esteem in contexts of prevention and promotion of mental health [42], and its use is relatively frequent. The interpretation of the results is established with the following scores: 0–10 (very low), 10–15 (medium-low), 16–22 (medium-high), and 22–25 (very high).

2.3. Procedure

Initially, the users were referred from a public health center to the so-called Addictive Behavior Units (UCA), centers dependent on the Galician Health Service (SERGAS). From there, they were referred to a therapeutic community through a waiting list, responding, in this case, to the geographical area of the southern provinces of Galicia (Ourense and Pontevedra). The criteria for inclusion in the self-esteem workshop were as follows: (i) the participants were inmates of the therapeutic community who had as a common characteristic the use of at least one addictive substance that led to significant interference in the main areas of their lives; (ii) all of them had voluntarily agreed to the "Drug-Free" program of the Xunta de Galicia implemented in that center and had shown their willingness to actively participate in this workshop. Different health professionals participated in the process of evaluation and referral of patients, who corroborated substance abuse through personal interviews, took a clinical history, carried out a physical and psychopathological diagnosis, and evaluated the family and social reality of the consumer.

The workshop consisted of 20 sessions in a group format, developed over 10 weeks (two sessions per week). The duration of each session was one hour and fifteen minutes. A male educator was the therapist in charge of the workshop. There were 7 working groups, mostly made up of 8 participants, for a total of 58 members. The basic structure of the sessions is shown below (Table 1).

Table 1. Self-esteem workshop sessions and topics.

Session	Topic/s Worked on in Each Session
1	Instructions and norms for the development of the workshop. Definition of self-esteem. Pre-treatment evaluation.
2	Personal presentation of each participant based on positive and negative indicators of self-esteem.
3–19	Each participant presented his or her particular case over two sessions in which he or she expressed the aspects considered detrimental to his or her self-esteem, as well as the positive aspects that could enhance his or her self-esteem. Each session was directed and moderated by the educator. The rest of the group members were allowed to participate in order to generate a collective reflection and personal awareness.
20	Final review of the workshop. Post-treatment evaluation.

In the development of the workshop, flexibility was highlighted as a particularly relevant principle to adapt to the needs of the participants. Throughout the sessions, the

construction of adaptive values that could be useful from a personal point of view (to develop self-acceptance and self-esteem) and from a social point of view (improving the expression of feelings and developing social cohesion) was emphasized. Each participant had to prepare his or her interventions in the sessions in advance. Each person was able to express and reflect on indicators related to self-esteem; some were negative (indecisiveness, excessive desire to please, rigorous self-criticism, excessive guilt, etc.), and others positive (development of their own capacity to act, congruence between their values and actions, recognition of their dignity as a person beyond the performance of specific competencies or the achievement of a result, etc.). Finally, they obtained feedback from his or her peers and the educator. Aspects related to substance use could also be addressed during the interventions, as this aspect also influenced and affected other areas.

The criteria for exclusion from the self-esteem workshop were as follows: lack of confidentiality, refusal to participate in the therapeutic development, or committing a serious offense that would lead to exclusion from treatment. It is important to note that none of the participants failed to comply with these aspects.

In this research, we used a single-group design with pre-treatment and post-treatment assessments. Research designs that have a group evaluated in the pre-treatment and post-treatment are frequently used in social sciences and are also useful in suggesting hypotheses that can be used in future research [48–50].

3. Results

The main addictive substance for each of the participants was as follows (frequency and percentage): cocaine (30; 51.7%), alcohol (19; 32.8%), heroin (8; 13.8%), and cannabis (1; 1.7%). Table 2 shows the substance that was the main addiction according to sex.

Table 2. Frequencies and percentage of main addictive substance according to sex (n = 58).

	Cocaine	Alcohol	Heroin	Cannabis	Total
Female	13 (43.3)	10 (52.6)	0 (0)	0 (0)	23 (39.7)
Male	17 (56.7)	9 (47.4)	8 (100)	1 (100)	35 (60.3)

To find out the effect of the self-esteem workshop in relation to the sex of the participants, a 2 × 2 univariate mixed factorial design was used. A split plot ANOVA was performed with one within-subject factor (corresponding to the pre-treatment and post-treatment assessments of the self-esteem workshop) and one between-subject factor (sex).

The assumption of homoscedasticity in the multivariate vector (Box's M, p = 0.818) was previously tested, as well as in the dependent variable self-esteem in the pre-treatment and post-treatment (Levene's test $p > 0.05$). The level of self-esteem measurement is interval, and its distribution conforms to normality in the pre-treatment assessment. Thus, the Kolmogorov-Smirnov normality test (K-S = 0.111; gl = 58, p = 0.073) indicates that the self-esteem variable assessed before the workshop conforms to normality. The adjustment to normality of the variable self-esteem before the workshop also occurs in both the subsample of females (K-S = 0.126; gl = 23, p = 0.200), as well as in the subsample of males (K-S = 0.108; gl = 35, p = 0.200). The sphericity hypothesis was not considered due to the existence of a between-subject group and a within-subject group, which had only two levels each. Multivariate contrasts indicated that in the within-subject factor (self-esteem assessments) statistically significant differences were observed (Pillai's Trace p = 0.000). The interaction effect of self-esteem workshop and sex did not generate such differences (Pillai's Trace p = 0.957). There were also no statistically significant differences in the between-subject sex factor analysis (p = 0.700). Regarding the univariate statistics referring to within-subject effects, we rejected the null hypothesis referring to the treatment effect at the two assessment time points $F_{(1)} = 106.44$, p = 0.000, $\eta^2 = 0.655$, $\beta - 1 = 1$. Cohen's d index allowed us to quantify the improvement of the group after the workshop. According to the gradation proposed by Cohen [51], the effect size observed in this study was large.

Self-esteem pre-treatment was 13.43 (SD = 5.55) and rose statistically significantly at post-treatment to 20.78 (SD = 3.22), as can be seen in Figure 1.

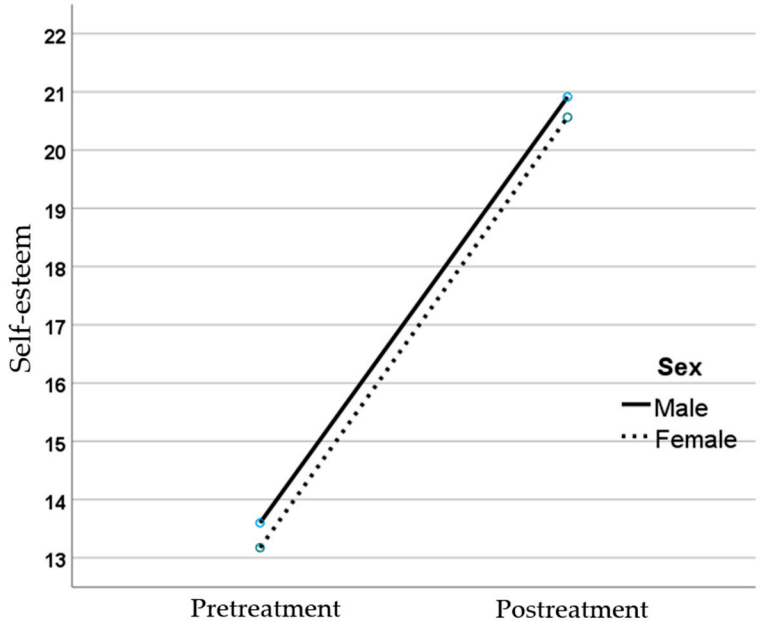

Figure 1. Self-esteem scores before and after the workshop depending on sex.

An ANOVA was performed with the independent variable main drug (in this test we analyzed cocaine, alcohol, and heroin) to find out if there were statistically significant differences in the increase of self-esteem (Table 3). This contrast fulfilled the assumptions of the independence of scores, normality of the distributions of the increase in self-esteem at each and every level (Kolmogorov-Smirnov $p > 0.05$), and homogeneity of variances (Levene's test $p > 0.05$). There were no statistically significant differences in the increase in self-esteem as a function of the main drug used [F (2,54) = 0.781; $p = 0.463$].

Table 3. Age and self-esteem as a function of the main addictive substance.

Drug	*n*	Age M (SD)	Increase in Self-Esteem M (SD)
Cocaine	30	42.00 (7.33)	6.93 (5.40)
Alcohol	19	47.21 (9.16)	6.79 (4.55)
Heroin	8	49.50 (8.14)	9.38 (6.20)
Cannabis	1	21	14

M = Mean; SD = Standard Deviation.

An ANOVA was conducted with the independent variable age to know if there were statistically significant differences in the increase in self-esteem (Table 4). As in the previous contrast, the assumptions for the test were met and no statistically significant differences were found in the increase in self-esteem as a function of the age groups established [F (2,55) = 0.668; $p = 0.517$].

Table 4. Increase self-esteem in different age groups.

Age Groups	*n*	Increase in Self-Esteem M (SD)
≤39	17	8.06 (5.88)
40 a 49	24	7.71 (4.88)
≥50	17	6.12 (5.23)

M = Mean; SD = Standard Deviation.

4. Discussion

The treatment or intervention has been effective in increasing self-esteem in a statistically significant way in post-treatment compared to pre-treatment. This result is in line with effective treatments that have increased self-esteem in patients with substance addictions [6], as well as in preventive treatments on drug use aimed at female adolescents [52]. No statistically significant differences were found in self-esteem according to sex in the post-treatment, a result that is to be expected as the treatment was aimed at both sexes equally. On the other hand, it is important to emphasize that adolescence is a particularly sensitive period for the possible onset of substance use; thus, the development of strategies that promote healthy habits can be especially relevant at this stage of life [53]. In this regard, it is noteworthy that different interventions have achieved, through different programs and techniques, increases in self-esteem in samples of adolescents [35,54] and young adults [20,34,55,56]. In this study, an increase in self-esteem was found not only in younger consumers but also in older ones, with no statistically significant differences between them according to age. Thus, the intervention was also found to be effective in patients over 50 years of age. Similarly, the intervention was found to be effective regardless of the type of drug most commonly used; therefore, all users benefited from the intervention.

High self-esteem has been considered a protective factor against high levels of stress in patients suffering from substance abuse [6,7]. The development of self-esteem includes contextual, family, and educational aspects and, in parallel, coexists with subjective and personal development. The interaction between external and internal aspects is constant. It generally takes place in natural contexts that are part of the individual's socialization process (the approval of parents, teachers, and peer groups is especially relevant). Much more punctually and infrequently it can be developed through structured programs such as workshops and courses [31,32]; thus, potentially, influence can be exerted through the teaching of other people in different modalities and formats. It can be face-to-face, through telematic courses [20], with audiovisual material, readings, exercises, etc. In recent decades there have been numerous procedures to increase self-esteem; many of these workshops and work groups have been carried out in educational contexts and, to a lesser extent, in other types of contexts such as, for example, a therapeutic setting to overcome substance abuse.

Over the past three decades, it has been documented how the use of addictive substances tends to occur alongside the development of other mental health disorders [57,58]. It has been posited that people use substances in an attempt to relieve their stress or certain emotions [59]. Recently, the focus of treatment has been on what promotes health rather than what causes illness. Aspects such as promoting self-esteem, emotion regulation, and stress management follow this direction and consider health along a continuum rather than in a dichotomous way. Enhancing self-esteem follows this same direction and can be an important therapeutic element for people with substance addictions. The workshop developed is compatible with the principles put forward in the self-determination theory [60], a person-centered approach based on enhancing competence, autonomy, and the need to relate to other people. Likewise, the way of developing the workshop fits with theoretical and practical assumptions that are part of motivational interviewing [61] which, in the case of addictive behaviors, assumes that change and growth can be favored through the personal discovery of the reasons that maintain the substance use, as well as the exploration of the motivations for not doing so.

Among the main limitations of this study is the lack of a control group, an aspect that limits the drawing of conclusions about the effectiveness of the workshop. The lack of a control group limits the establishment of causal inferences and reduces the internal validity of this research, but it is also true that it does not invalidate it.

Pre-treatment and post-treatment designs have limitations, among other aspects, due to the lack of a control group; even so, if threats to internal validity can be minimized, the design will be considered interpretable [48–50]. In this sense, we consider here the main threats that could affect this work: (i) in this study, we only assessed the self-esteem

variable (and not other variables that could generate some confusion in the identification of which is the cause and which is the effect); (ii) we were not aware of any systematic differences in participant characteristics prior to the workshop that could affect the outcome of the workshop (this is not to say that they could not exist, but with the available data, we were not aware of them). The group was homogeneous as they shared the same inclusion criteria in the workshop; (iii) the possible regression to the mean was not a relevant threat in this study, as participants were not initially selected for having extreme values in the self-esteem variable (which could change in a second measurement and be confounded by the treatment effect); (iv) it used a valid and reliable assessment instrument, also used in similar research; (v) from our knowledge, there were no external events that occurred simultaneously with the application of the workshop that could alter its effect; however, this is an assumption and the existence of a control group would maximize the control of this threat; (vi) in principle, the threat of maturation is ruled out, as the study was not of long duration and the participants were not in developmental stages subject to major changes produced by the passage of time. Taking all of this into account, and with the limitation of the absence of a control group, we consider that the intervention carried out in the workshop is interpretable. For future research, the formation of two groups to which participants are randomly assigned is desirable, as well as the random assignment of the groups to the different experimental conditions (self-esteem workshop and control group). Other limitations include that we only present data on the main addictive substances (although it is common for several substances to be used at the same time), we do not know the time of use of each participant, and we do not have information on the possible occurrence of any other psychological disorder (something that is quite common in people who use substances). Finally, the sample with which the workshop was conducted could have been highly motivated. This may be due to the fact that, among the basic conditions for admission to the therapeutic community, a prior commitment is required from the participants not to use drugs and to make active use of the stay; participation in the self-esteem workshop was free, and voluntary, but the participants could have been more willing than usual.

As suggestions for future research, in addition to the aspects mentioned above, it is important to know the following: (i) the pattern of consumption and abstinence through information that not only comes from self-report instruments, but also from the evaluation of biological data; (ii) the existence of possible disorders; (iii) specific information on support resources (personal, family, social, work and economic) and their possible change as treatment progresses; (iv) assessment of the impact of other relevant constructs and competencies such as the development of coping strategies (especially for stress and problematic situations), self-efficacy, anxiety management and mood regulation, and knowledge of other quality of life indicators (educational activity, employment status, and access to housing); (v) consider using an appropriate sample size that reduces the standard error and thus optimizes the power of the contrast (in other words, the probability of detecting the effect of interest), especially in those sub-samples of greatest interest. Finally, a longitudinal assessment of self-esteem and of all the parameters mentioned above is recommended.

5. Conclusions

The literature review suggests that self-esteem can play a mediating role in the recovery of patients with substance addiction and, therefore, constitutes a construct worth promoting. Despite this, there are hardly any studies that have conducted workshops specifically aimed at increasing self-esteem in this group, which highlights the originality of this article. The intervention carried out in the present research through a self-esteem workshop has been effective in patients with addictions, generating a statistically significant change in the desired direction. The improvement affected the whole sample, with no statistically significant differences according to sex, type of main drug used, or age groups analyzed. These results suggest that self-esteem workshops can be a fundamental tool to work on drug addiction, as well as being relevant for psychological and social health. Likewise,

focusing on the strengths of the participants, and not on their weaknesses, constitutes a motivating aspect that can be well received by them, resulting in a high adherence to the treatment and, finally, constituting an indicator of success in the recovery process. Among the limitations to be taken into account, the lack of a control group is an aspect that may be considered in future research.

Author Contributions: Conceptualization, S.M.F.-A., M.A. and C.J.A.; methodology, S.M.F.-A., M.A. and C.J.A.; validation, S.M.F.-A., M.A. and C.J.A.; formal analysis, C.J.A.; investigation, S.M.F.-A., M.A. and C.J.A.; resources, S.M.F.-A. and M.A.; data curation, C.J.A., Á.A.-S. and D.V.; writing—original draft preparation, S.M.F.-A. and C.J.A.; writing—review and editing, S.M.F.-A., M.A., C.J.A., Á.A.-S. and D.V.; supervision, C.J.A., Á.A.-S. and D.V. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Institutional Review Board Statement: The study was conducted in accordance with the Declaration of Helsinki. The participants were of legal age and gave their written and informed consent. In addition, participation was voluntary, free, and anonymous, and at no time during the process were data collected that could lead to the identification of the participants. The therapeutic community has a Health Registration number granted by the Conselleria de Sanidade de la Xunta de Galicia (C36.000141; date 27 July 1989) which allows it to carry out this therapeutic activity.

Data Availability Statement: The data are not public. They are available upon reasonable request to the corresponding author.

Conflicts of Interest: The authors declare no conflicts of interest.

References

1. Johnson, K.; Pinchuk, I.; Melgar, M.I.E.; Agwogie, M.O.; Salazar Silva, F. The global movement towards a public health approach to substance use disorders. *Ann. Med.* **2022**, *54*, 1797–1808. [CrossRef] [PubMed]
2. Koob, G.F.; Volkow, N.D. Neurobiology of addiction: A neurocircuitry analysis. *Lancet Psychiatry* **2016**, *3*, 760–773. [CrossRef] [PubMed]
3. McKee, S.A.; McRae-Clark, A.L. Consideration of sex and gender differences in addiction medication response. *Biol. Sex Differ.* **2022**, *13*, 34. [CrossRef] [PubMed]
4. Fonseca, F.; Robles-Martínez, M.; Tirado-Muñoz, J.; Alías-Ferri, M.; Mestre-Pintó, J.I.; Coratu, A.M.; Torrens, M. A gender perspective of addictive disorders. *Curr. Addict. Rep.* **2021**, *8*, 89–99. [CrossRef]
5. Smith, K.; Lacadie, C.M.; Milivojevic, V.; Fogelman, N.; Sinha, R. Sex differences in neural responses to stress and drug cues predicts future drug use in individuals with substance use disorder. *Drug. Alcohol. Depend.* **2023**, *244*, 109794. [CrossRef]
6. Souilm, N. Equine-assisted therapy effectiveness in improving emotion regulation, self-efficacy, and perceived self-esteem of patients suffering from substance use disorders. *BMC Complement. Med. Ther.* **2023**, *23*, 363. [CrossRef]
7. Bøhle, K.; Otterholt, E.; Bjørkly, S. Protective factors against psychological distress among inpatients in substance use treatment: A cross-sectional study. *Subst. Abuse. Res. Treat.* **2021**, *15*, 11782218211060848. [CrossRef]
8. Wangensteen, T.; Hystad, J. Trust and collaboration between patients and staff in SUD treatment: A qualitative study of patients' reflections on inpatient SUD treatment four years after discharge. *Nord. Stud. Alcohol Drugs* **2022**, *39*, 418–436. [CrossRef]
9. Minev, M.; Petrova, B.; Mineva, K.; Petkova, M.; Strebkova, R. Self-esteem in adolescents. *Trakia. J. Sci.* **2018**, *2*, 114–118. [CrossRef]
10. Jang, H.J.; Jeon, M.K. Relationship between Self-Esteem and Mental Health According to Mindfulness of University Students. *Ind. J. Sci. Technol.* **2015**, *8*, 1–5. [CrossRef]
11. Jirdehi, M.; Asgari, F.; Tabari, R.; Leyli, E. Study the relationship between medical sciences students' self-esteem and academic achievement of Guilan university of medical sciences. *J. Educ. Health Promot.* **2018**, *7*, 52. [CrossRef] [PubMed]
12. Liu, Y.; Wang, Z.; Zhou, C.; Li, T. Affect and self-esteem as mediators between trait resilience and psychological adjustment. *Personal. Individ. Differ.* **2014**, *66*, 92–97. [CrossRef]
13. Liu, K.; Zhang, Y.; Qu, S.; Yang, W.; Guo, L.; Zhang, L. Prevalence and correlates of anxiety and depressive symptoms in patients with and without multi-drug resistant pulmonary tuberculosis in China. *Front. Psychiatry* **2021**, *12*, 674891. [CrossRef]
14. Pierce, S.; Gould, D.; Camiré, M. Definition and model of life skills transfer. *Int. Rev. Sport Exerc. Psychol.* **2017**, *10*, 186–211. [CrossRef]
15. Savoji, A.P.; Ganji, K. Increasing mental health of university students through life skills training (LST). *Procedia-Soc. Behav. Sci.* **2013**, *84*, 1255–1259. [CrossRef]
16. Rosenberg, F.R.; Rosenberg, M.; McCord, J. Self-esteem and delinquency. *J. Youth Adolesc.* **1978**, *7*, 279–294. [CrossRef]
17. Apaolaza, V.; Hartmann, P.; D'Souza, C.; Gilsanz, A. Mindfulness, compulsive mobile social media use, and derived stress: The mediating roles of self-esteem and social anxiety. *Cyberpsych. Beh. Soc. Netw.* **2019**, *22*, 388–396. [CrossRef]

18. Lasgaard, M.; Elklit, A. Prototypic features of loneliness in a stratified sample of adolescents. *Interpers. Int. J. Pers. Relatsh.* **2009**, *3*, 85–110. [CrossRef]
19. Orth, U.; Robins, R. Understanding the Link between Low Self-Esteem and Depression. *Curr. Dir. Psychol. Sci.* **2013**, *22*, 455–460. [CrossRef]
20. Sungur, G. The effect of online self-esteem and awareness training program on university students. *Procedia-Soc. Behav. Sci.* **2015**, *197*, 476–481. [CrossRef]
21. Gómez-Tabares, A.S.; Núñez, C.; Agudelo-Osorio, M.P.; Caballo, V.E. Suicidal risk and its relationship with emotional intelligence and selfesteem in university students. *Ter. Psicol.* **2020**, *38*, 403–426. [CrossRef]
22. Da Fonseca, P.N.; Couto, R.N.; Melo, C.C.V.; Amorim, L.A.G.; Pessoa, V.S.A. Use of social networks and loneliness: Psychometric evidence of scales. *Arq. Bras. Psicol.* **2018**, *70*, 198–212. [CrossRef]
23. Smedema, Y.; Barahona, M.N. Self-esteem and sense of life in university students. *Cauriensia* **2018**, *13*, 39–55. [CrossRef]
24. Morales-Rodríguez, F.M.; Giménez, J.M.; Morales, A.M. Relaciones entre autoeficaciaemprendedora y otras variables psico-educativasenuniversitarios. *Eur. J. Investig. Health Psychol. Educ.* **2018**, *8*, 91–102. [CrossRef]
25. Mann, M.M.; Hosman, C.M.H.; Schaalma, H.P.; de Vries, N.K. Self-esteem in a broad-spectrum approach for mental health promotion. *Health Educ. Res.* **2004**, *19*, 357–372. [CrossRef]
26. Moksnes, U.K.; Reidunsdatter, R.J. Self-esteem and mental health in adolescents—Level and stability during a school year. *Nor. Epidemiol.* **2019**, *28*, 59–67. [CrossRef]
27. Nepon, T.; Pepler, D.J.; Craig, W.M.; Connolly, J.; Flett, G.L. A longitudinal analysis of peer victimization, self-esteem, and rejection sensitivity in mental health and substance use among adolescents. *Int. J. Ment. Health Addict.* **2021**, *19*, 1135–1148. [CrossRef]
28. Kapıkıran, Ş. Loneliness and life satisfaction in turkish early adolescents: The mediating role of self-esteem and social support. *Soc. Indic. Res.* **2013**, *111*, 617–632. [CrossRef]
29. Kong, F.; You, X. Loneliness and self-esteem as mediators between social support and life satisfaction in late adolescence. *Soc. Indic. Res.* **2013**, *110*, 271–279. [CrossRef]
30. Xia, M.; Yang, C. The relationship among social support, self-esteem, affect balance and loneliness in individuals with substance use disorders in China. *J. Community Psychol.* **2019**, *47*, 1269–1281. [CrossRef]
31. Ellingsen, M.M.; Johannesen, S.L.; Martinsen, E.W.; Hallgren, M. Effects of acute exercise on drug craving, self-esteem, mood and affect in adults with poly-substance dependence: Feasibility and preliminary findings. *Drug Alcohol Rev.* **2018**, *37*, 789–793. [CrossRef] [PubMed]
32. Schäfer, S.K.; Schanz, C.G.; Sopp, M.R.; Lass-Hennemann, J.; Käfer, M.; Michael, T. Pre-rehabilitation sense of coherence as a predictor of symptom change after rehabilitation. *Stress Health* **2020**, *36*, 546–554. [CrossRef] [PubMed]
33. Peng, J.; Miao, D.; Xiao, W. Why are gainers more risk seeking. *Judgm. Decis. Mak.* **2013**, *8*, 150–160. [CrossRef]
34. Winarsunu, T.; IswariAzizaha, B.S.; Fasikha, S.S.; Anwar, Z. Life skills training: Can it increases self esteem and reduces student anxiety? *Heliyon* **2023**, *9*, e15232. [CrossRef] [PubMed]
35. Golshiri, P.; Mostofi, A.; Rouzbahani, S. The effect of problem-solving and assertiveness training on self-esteem and mental health of female adolescents: A randomized clinical trial. *BMC Psychol.* **2023**, *11*, 106. [CrossRef] [PubMed]
36. Jafarigiv, S.; Peyman, N. The effect of life skills training with health literacy strategies on self-esteem and self-efficacy in female students during puberty. *Int. J. Adolesc. Med. Health* **2022**, *34*, 20190121. [CrossRef]
37. Nair, P.K.; Fahimirad, M. A qualitative research study on the importance of life skills on undergraduate students' personal and social competencies. *Int. J. High. Educ.* **2019**, *8*, 71. [CrossRef]
38. Gunn, A.; Miranda-Samuels, G.E. Promoting recovery identities among mothers with histories of addiction: Strategies of family engagement. *Fam. Process* **2020**, *59*, 94–110. [CrossRef]
39. Mokuolu, B.O.; Adedotun, A.S. Impact of self-efficacy and social support on intention to quit drug use among people with drug abuse cases. *Adv. Res.* **2020**, *21*, 67–74. [CrossRef]
40. Razali, A.; Pauzi, N.; Madon, Z.; Daud, M.N. The mediating role of depression on the relationship between personal resources and recovery motivation among individuals with drug abuse problems. *Pertanika J. Soc. Sci. Humanit.* **2023**, *31*, 699–717. [CrossRef]
41. Heidari, M.; Ghodusi, M. Relationship of assess self-esteem and locus of control with quality of life during treatment stages in patients referring to drug addiction rehabilitation centers. *Mater. Sociomed.* **2016**, *28*, 263–267. [CrossRef] [PubMed]
42. Potard, C. Self-Esteem Inventory (Coopersmith). In *Encyclopedia of Personality and Individual Differences*; Zeigler-Hill, V., Shackeford, T., Eds.; Springer: New York, NY, USA, 2017; pp. 1–3. [CrossRef]
43. Coopersmith, S. *Revised Coopersmith Self-Esteem Inventory Manual*; Mind Garden: Redwood City, CA, USA, 2002.
44. Coopersmith, S. *Coopersmith Self-Esteem Inventories: SEI*; Consulting Psychologists Press: Palo Alto, CA, USA, 1981.
45. Hills, P.R.; Francis, L.J.; Thomas, E. The psychometric properties and factor structure of a welsh translation of the school short form of the Coopersmith self-esteem inventory. *Res. Educ.* **2007**, *78*, 103–109. [CrossRef]
46. Hills, P.R.; Francis, L.J.; Jennings, P. The school short-form Coopersmith self-esteem inventory: Revised and improved. *Can. J. Sch. Psychol.* **2011**, *26*, 62–71. [CrossRef]
47. Potard, C.; Amoura, C.; Kubiszewski, V.; Le Samedy, M.; Moltrecht, B.; Courtois, R. Psychometric properties of the French version of the short-form Coopersmith self-esteem inventory among adolescents and young adults. *Eval. Health Prof.* **2015**, *38*, 265–279. [CrossRef]

48. Cook, T.D.; Shadish, W.R. Social experiments: Some developments over the past fifteen years. *Ann. Rev. Psychol.* **1994**, *45*, 545–580. [CrossRef]
49. Shadish, W.R.; Cook, T.D.; Campbell, D.T. *Experimental and Quasi-Experimental Designs for Generalized Causal Inference*; Houghton Mifflin Company: Boston, MA, USA, 2002; ISBN 9780395615560.
50. Quintanilla, L.; García-Gallego, C.; Rodríguez-Fernández, R.; Fontes, S.; Sarriá, E. *Fundamentos de Investigación en Psicología*; UNED: Madrid, Spain, 2019.
51. Cohen, J. *Statistical Power Analysis for the Behavioral Sciences*, 2nd ed.; Routledge Academic: New York, NY, USA, 1988; ISBN 978-0805802832.
52. Schwinn, T.M.; Schinke, S.P.; Hopkins, J.; Keller, B.; Liu, X. An online drug abuse prevention program for adolescent girls: Posttest and 1-year outcomes. *J. Youth Adolesc.* **2018**, *47*, 490–500. [CrossRef]
53. Fuentes, M.C.; Garcia, O.F.; Garcia, F. Protective and Risk Factors for Adolescent Substance Use in Spain: Self-Esteem and Other Indicators of Personal Well-Being and Ill-Being. *Sustainability* **2020**, *12*, 5962. [CrossRef]
54. Guo, S.; Wu, Q.; Smokowski, P.R.; Bacallao, M.; Evans, C.B.R.; Cotter, K.L. A longitudinal evaluation of the Positive Action program in a low-income, racially diverse, rural county: Effects on self-esteem, school hassles, aggression, and internalizing symptoms. *J. Youth Adolesc.* **2015**, *44*, 2337–2358. [CrossRef]
55. Lee, S.; Lee, E. Effects of Cognitive Behavioral Group Program for Mental Health Promotion of University Students. *Int. J. Environ. Res. Public Health* **2020**, *17*, 3500. [CrossRef]
56. Molina-Gómez, J.; Morales-Rodríguez, F.M.; Mercadé-Melé, P. Self-esteem and general self-efficacy in an outdoor training program in university students. *Estud. Sobre Educ.* **2023**, *46*, 141–172. [CrossRef]
57. Bray, J.W.; Aden, B.; Eggman, A.A.; Hellerstein, L.; Wittenberg, E.; Nosyk, B.; Stribling, J.C.; Schackman, B.R. Quality of life as an outcome of opioid use disorder treatment: A systematic review. *J. Subst. Abuse. Treat.* **2017**, *76*, 88–93. [CrossRef] [PubMed]
58. Morisano, D.; Babor, T.F.; Robaina, K.A. Co-Occurrence of Substance Use Disorders with other Psychiatric Disorders: Implications for Treatment Services. *Nord. Stud. Alcohol Drugs* **2014**, *31*, 5–25. [CrossRef]
59. Nordfjaern, T.; Hole, R.; Rundmo, T. Interrelations between patients' personal life events, psychosocial distress, and substance use. *Subst. Use Misuse* **2010**, *45*, 1161–1179. [CrossRef] [PubMed]
60. Ryan, R.M.; Deci, E.L. *Self-Determination Theory: Basic Psychological Needs in Motivation, Development, and Wellness*; Guilford Press: New York, NY, USA, 2017; ISBN 9781462538966.
61. Miller, W.R.; Rollnick, S. *Motivational Interviewing: Helping People Change*, 4th ed.; Guilford Press: New York, NY, USA, 2023; ISBN 9781462552795.