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RESEARCH ARTICLE

"Performing Emotions and Suffering"

Recovery of Depressive Symptoms Involving Adolescent Intervention in Art and Dance Schools

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Introduction: In previous studies, a large majority of dance students reported mental health issues, mainly eating disorders and depression.
Aims: This project aimed to promote mental health and well-being as well as prevent maladaptive and risky behaviors – namely suicidal behavior – among adolescents who attend art and dance schools. It was implemented in sequential stages, including six moments of classroom intervention for adolescents.
Methods: A quasi-experimental research design was applied, with two assessment moments (before and after the intervention) using questionnaires filled out by the adolescents.
Results: The project was implemented in three art schools (Center and South of Portugal), and the sample consisted of 122 adolescents. 72.9% of our sample were girls aged 12–18 years (M = 13.88; SD = 1.54). Boys showed significantly higher well-being scores (M = 16.53; SD = 4.24 vs M = 14.67, SD = 4.17), and girls showed higher coping scores (M = 153.3; SD = 13.53 vs M = 146.73; SD = 13.22). Concerning depressive symptoms, 34.8% of adolescents had moderate/severe depressive symptoms, which decreased by 10% after the intervention.
Conclusions: Adolescents attending art schools might be more vulnerable to developing mental distress, and this intervention proved to be an effective approach for promoting mental health and well-being as well as preventing suicidal behaviors.

Keywords: mental health, prevention, suicide, adolescents, art schools

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Introduction

In adolescence, issues related to the body and body image play an important role, and social beauty standards influence adolescents' satisfaction with their body image. As they grow older, adolescents become more aware of their bodies and more concerned about and demanding with their body image (WHO, 2010a).

However, adolescents attending art schools – namely dance schools – experience body-related issues with greater intensity because their body is their work instrument in the search for an idealized ballet dancer's physique. In addition to their identity formation processes, therefore, these adolescents are more vulnerable to the influence of the idealized physical models conveyed by the media and their peers (Monthuy-Blanc et al., 2010).

On the one hand, dance allows for new perceptions of the self and the other; on the other hand, it is both physically and psychologically demanding, leaving young people in a situation of greater vulnerability to developing eating disorders (Tavares, 2013) due to the demands of body esthetics and the performance of physical activity to achieve the current beauty ideal (Stice & Shaw, 2002). Thus, prevention remains of particular relevance to break a potential cycle between stress, low self-esteem, body dissatisfaction, and psychopathological disorders, particularly depression and eating disorders (Moksnes et al., 2016).

Suicidal behaviors constitute maladaptive behaviors that can emerge during adolescence; thus, it is important to act preventively, with suicide prevention being a global imperative (WHO, 2019).

Recent studies have made significant advances in our understanding of suicide prevention and promoted changes in healthcare professionals' attitudes towards individuals having suicidal behaviors.

In order to promote mental health, WHO (2008) recommends promoting the integration of socio-emotional learning into the curricular and extracurricular activities and into the cultures of pre-schools and schools. Programs with psychosocial and well-being issues improve targeted social emotional skills, life skills, communication skills, problem-solving skills, self-awareness, flexibility, anger management, self-esteem, self-efficacy, life satisfaction, positive body perception and mental health literacy, with more effectiveness should they use interactive methods such as games and small group work according to a systematic review lead by Bidik and Sisman (2021). They also reinforced the idea that nurses should conduct school-based mental health programs with high methodological quality that focus on positive psychosocial well-being. The *Mais Contigo - Tela de Emoções* project aims to respond to this need for a school-based intervention to promote mental health and well-being and prevent suicidal behaviors in art and dance schools.

The prevalence of mental disorders is high among children and young people aged 5 to 14 years and 15 to 19 years. WHO estimates that approximately 20% of children and adolescents develop at least one mental health condition before the age of 18 and that learning difficulties, attention deficit, psychomotor disturbances, behavior disorders, indiscipline, and other- and self-directed violence can manifest in intense emotional suffering (WHO, 2010b).

The results of a meta-analysis conducted by Polanczyk et al. (2015) indicate that the worldwide-pooled prevalence among children and adolescents was 13.4% for mental disorders in general, 6.5% for anxiety disorders and 2.6% for depressive disorders in particular.

Women are more vulnerable to depression and have an increased risk for chronicity (Nock et al., 2013). Several studies in adolescent populations draw attention to the severity of the depressive psychopathological context associated with suicidal behaviors (Callahan et al., 2012). Suicidal behaviors are considered maladaptive, multidetermined behaviors that develop in a continuum of increasingly severe thoughts and behaviors, from suicidal ideation to completed suicide (Direção Geral da Saúde, 2013; WHO, 2014a).

From an epidemiological perspective, close to 800,000 people die due to suicide every year (WHO, 2017, 2019). Compared to other age groups, suicide rates have increased at an alarming pace among youths and are the second leading cause of death during childhood and adolescence, as well as the 10th leading cause of death for all ages (Centers for Disease Control and Prevention, 2017).

Suicide was the third leading cause of death among adolescents aged 15–19 years, with the number of deaths relatively similar between boys and girls in this age group. Suicide was the second leading cause of death in girls aged 15–19 years (after maternal conditions) and the third leading cause of death in boys (after road injury and interpersonal violence) in this age group (WHO, 2019).

Every year, approximately 164,000 adolescents die by suicide, and it is estimated that 4 million attempt suicide (Picazo-Zappino, 2014; Venta & Sharp, 2014). Self-injury constitutes a significant risk factor for adolescent suicidal behavior, affecting approximately 18% of adolescents worldwide (Muehlenkamp et al., 2012; Nock et al., 2013).

Therefore, it is essential to promote adolescents' psychological well-being and protect them from adverse experiences and risk factors that may affect their potential, not only for their well-being during adolescence but also for

their physical and mental health in adulthood (WHO, 2010b). Bidik and Sisman (2021) highlighted that programs focusing on improving positive mental health and well-being are more effective than programs focusing on reducing mental health problems, and suggested programs that encourage social and emotional development in schools should be increased. In Europe, suicide prevention was considered one of the five top priorities in mental health in the European Pact for Mental Health and Well-Being (WHO, 2008). In Portugal, suicide prevention is a priority, and the National Plan for Suicide Prevention (DGS, 2013), with an extension until 2020, puts forward several guidelines for suicide prevention among the general population and the risk groups, namely adolescents (DGS, 2013).

According to Grove et al. (2013), dancers are at risk of mental health issues due to the high physiological and psychological demands of dancing. Winden et al. (2020) found that 96.9% of students reported at least one physical/mental health problem, of whom 44.6% reported mental health issues. Adolescents in art schools, particularly in dance schools, have shown a greater vulnerability to eating disorders and depression (Moksnes et al., 2016). Among ballet students, 31.3% reported a history of disordered eating behaviors (Thomas et al., 2011), and an association seems to exist between body image and psychological functioning, namely regarding self-esteem and negative affect (Ricciardelli & McCabe, 2002). In a systematic review, Mainwaring and Finney (2017) concluded that psychological variables (stress, psychological distress, disordered eating, and coping) could affect the incidence and outcome of dance injury among dancers. Winden et al. (2020) suggest including coping skills training as a part of injury prevention programs; but, as mentioned by Mainwaring et al. (2001), there is a culture of injury, pain and tolerance focused on physical aspects and neglecting the psychological issues. Furthermore, we can identify negative attitudes and beliefs about mental illness and toward suicidal behaviour in health students and professionals (Gil & Lourerio, 2016; Vedana et al., 2020).

WHO recommends that promotion programs for adolescents and prevention programs for adolescents at risk of mental health conditions require a multilevel approach, highlighting:

1. school-based interventions, such as organizational changes for a safe, secure, and positive psychological environment; teaching mental health and life skills; training social gatekeepers in detecting and managing suicide risk; school-based prevention programs for adolescents vulnerable to mental health conditions;
2. prevention programs targeted at vulnerable adolescents, such as those affected by humanitarian and fragile settings, and minority or discriminated groups;
3. multisectoral suicide prevention programs.

The preventive model associated with healthy and risky behaviors in certain populations, including suicide prevention, involves strategies at the three levels of prevention: universal, selective, and indicated (Scott & Guo, 2012), where the school is seen as one of the most important community contexts for the promotion of young people's mental health (WHO, 2010b). Healthcare professionals, namely primary care providers, and educational agents serve in a key position to detect signs of risk at an early stage among adolescents and refer them to specialized help (Scott & Guo, 2012; WHO, 2014a). Using self-reported instruments could enable an understanding regarding the dancers' mental health for managing care (Grove et al., 2013).

After testing the effectiveness of the Mais Contigo project in similar groups from mainstream schools, it was important to assess the effectiveness of an intervention adapted to artistic education (Tela de Emoções), in a context of greater vulnerability to mental suffering.

This project aimed to promote mental health and well-being as well as prevent maladaptive and risky behaviors, namely suicidal behaviors, among adolescents in art and dance schools. It was implemented in sequential stages, including six moments of classroom intervention for adolescents. The research questions were:

1. What are the characteristics of the mental health of adolescents attending art schools?
2. How effective is the Mais Contigo – Tela de Emoções project in the dimensions of coping, well-being, self-concept, and depressive symptoms?

Methods

The Design of the Intervention Program

The *Mais Contigo - Tela de Emoções* project derives from the *+Contigo* program that began in 2009, aimed at 7th to 12th grade students (Santos et al., 2014). It uses a specific approach to respond to the greater vulnerability to mental health problems of adolescents attending art schools, with the purpose of improving their mental health and preventing suicidal behaviors.

The *Mais Contigo - Tela de Emoções* project is a longitudinal research project using a multilevel network intervention to increase knowledge about mental health and suicide as well as develop skills related to the identification and referral of risk situations, involving the education community (parents and tutors/guardians, educational agents, and adolescents) and primary care professionals from the reference area. Its main objectives are to promote mental health and well-being and prevent maladaptive and risky behaviors, namely suicidal behaviors, among 7th to 12th grade art students, and increase healthcare and education professionals' knowledge about risky behaviors. Its specific objectives are to promote well-being; fight against mental health stigma; promote self-concept, self-esteem, problem-solving skills, and assertiveness in communication; reduce depressive symptoms, problems of perfectionism and social pressure associated with the body image; and strengthen support networks in health services. The methodology included socio-educational games and role-plays. In one of the initial games, the rights of people with mental illness are reinforced by role-playing situations related to mental illness. In another game, the participants build puzzles about adolescence-related concepts and the tasks of adolescence are reinforced, de-dramatizing the "harmful" role often attributed to this age group. In the game "How I see myself and how other people see me," adolescents are asked to reflect on happiness, self-esteem, and confidence, and, together with the rest of the class, identify appropriate strategies for improving their well-being and mental health, reinforcing the support network and fighting against signs of mental suffering. In another game, students are asked to introduce themselves by mentioning two individual qualities and describe a colleague based on two qualities that characterize him/her while emphasizing everyone's importance and promoting group cohesion. In the problem-solving strategy, the challenge is to identify solutions based on real facts rather than on imagination, identifying the problem and choosing solutions using the support group. In another game called "Question box," the adolescents place questions about the body and the role of the body image in a box and the answers are discussed within the class. In another activity, "Compliments in the palm of your hand," students are asked to draw an outline of their hand on a sheet of paper and then their colleagues write a quality of the student on each finger, identifying him/her through his/her qualities. The facilitator's role emphasizes the importance of "all fingers" in terms of overall good functioning.

The project is sponsored by the Nursing School of Coimbra, the Honor Society of the Nursing School of Coimbra, and the Health Administration of the Center Region, IP.

The school-based interventions are conducted by nurses of the school health teams (DGS, 2015), in collaboration with the project's coordination team and other partners (differentiated health care units in the mental health area). The local authorities and other community structures are important local partners in developing specific initiatives in the regions where the intervention is underway.

The *Mais Contigo - Tela de Emoções* project is implemented in six steps (Figure 1):

Step 1 - Training healthcare professionals;

Step 2 - Raising educational agents' awareness and identifying social gatekeepers;

Step 3 - Raising parents'/educators' awareness;

Step 4 - *Mais Contigo - Tela de Emoções* intervention with adolescents;

Step 5 - Assessing the intervention and analyzing the results;

Step 6 - Sharing and disseminating the results.

Figure 1. +Contigo-Tela de Emoções Project Intervention Model

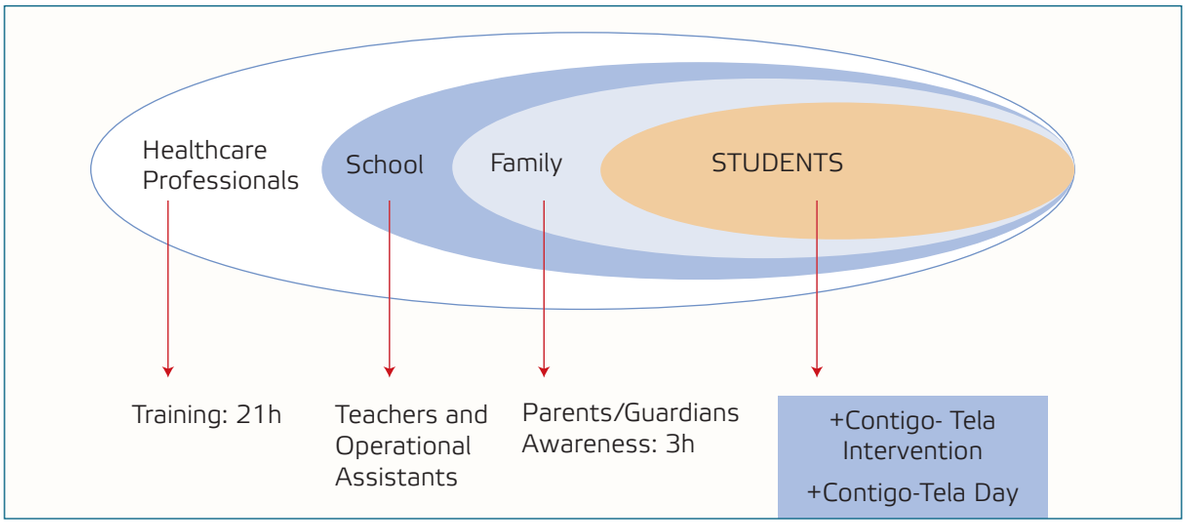
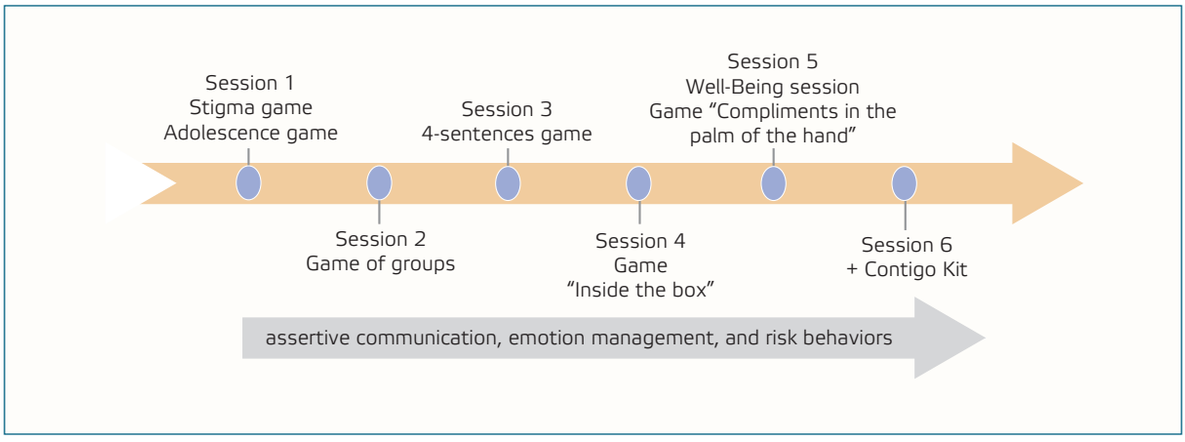


Figure 2. +Contigo Intervention Plan



The intervention phase, Step 4, includes six 45-minute sessions every two weeks where a series of topics are explored, namely regarding

1. mental illness stigma (through a game in which they played the role of a mental patient, with a subsequent discussion about their social representations of a person with a mental illness);
2. adolescence (through the characterization of adolescence using a single word, and discussion about the reasons for characterizing adolescence and how adolescence should be experienced);
3. self-esteem (students are invited to explore how they see themselves and how their peers see them, identifying strategies to improve their self-esteem);
4. body image (the students are invited to place questions anonymously, in a box, to be then discussed in a session to identify cognitive distortions regarding body image, how it affects their self-esteem, and how to cope with these issues);
5. problem-solving skills (analysis of a problem based on four questions: what I see, what I feel, what I imagine, what I want, and discuss the several implications of the problem, aiming at its resolution);
6. and well-being (the students are invited to discuss their definition of well-being and identify two qualities in themselves and their colleagues, agreeing to promote the well-being of the class).

Assertive communication, emotion management, and risky behaviors are crosscutting topics explored throughout the intervention process. Expository, interrogative, and interactive methods are used, as well as role-playing and socio-educational games (Figure 2).

The coordination team provides a guide and didactic-pedagogical materials for the sessions to the school health teams (local facilitators). It should be noted that the facilitators receive a 21-hour training before the implementation of this project.

In the post-intervention phase, the same questionnaire is applied to assess the intervention's effectiveness.

The project's implementation in the 2018–2019 academic year was co-funded by the Portuguese Directorate-General of Health (DGS-J-26–18–1).

Research Methodology

The project used a quasi-experimental design and had two assessment moments (before and after the intervention). The project used a quasi-experimental design and had two assessment moments (before and after the intervention). All students voluntarily participated in the intervention, for which reason no control group was used.

The classroom intervention has three phases:

1. Pre-intervention
2. Intervention
3. Post-intervention

The effectiveness of the *Mais Contigo - Tela de Emoções* project is assessed through a quantitative research study. In the pre- and post-intervention phases, a questionnaire including several measurement instruments is applied to assess the variables of well-being, depressive symptoms, self-concept, coping, and risk of suicidal behaviors. All measurement instruments are validated for the Portuguese population.

Ethical Procedures

Concerning the formal and ethical aspects, the permission to apply the +Contigo questionnaire (No. 0224900002 and No. 0224900004) was obtained from the educational project services of the Portuguese Directorate-General for Education, while ensuring the participants' anonymity and confidentiality. Informed consent was also obtained from the parents/tutors. Adolescents aged 16 or above are free to participate or refuse participation.

Each student completes the questionnaire in the classroom in approximately 30–40 minutes, under the local facilitators' supervision. The questionnaires are then placed in sealed envelopes and identified with the school's name as well as the adolescents' school year and class.

Participants and Data Collection

The project involved 7th to 10th grade students of the art and dance course from schools of three regions in Portugal (Coimbra, Lisbon, Faro), who participated in the project during the 2018–2019 academic year, constituting a total of 122 adolescents.

The sample is mostly composed of female adolescents (72.9%), with a mean age of around 14 years (*SD* = 1.54), distributed between the 7th and 10th grades, with approximately two-thirds of them attending the 8th and 9th grades (Table 1).

Table 1. Sample characterization by gender, age, and school year

Gender	Phase 1 *n* (%)	Phase 3 *n* (%)
Male	33 (27%)	33 (27%)
Female	89 (73%)	89 (73%)
Total	122 (100%)	122 (100%)
Age	**Phase 1**	**Phase 2**
Maximum	18	18
Minimum	12	12
Mean	13.88	14.07
SD	1.36	1.54
School year	**Phase 1 *n* – %**	**Phase 2 *n* – %**
7th grade	17 (13.9%)	17 (13.9%)
8th grade	42 (34.4%)	42 (34.4%)
9th grade	41 (33.6%)	43 (35.2%)
10th grade	22 (18%)	20 (16.4%)
Total	122 (100%)	122 (100%)

Measurements

WHO Well-Being (WBI-5)

The *WBI-5* (Johansen, 1989) is a widely used self-report instrument that assesses psychological well-being using 5 short questions rated on a 4-point Likert-type scale. In the Portuguese version (Santos et al., 2014) the value of Cronbach's alpha was $\alpha = .86$. In the present study it was $\alpha = .78$, which is substantial according to Landis and Koch (1977).

Toulousaine Scale of Coping

The *Toulousaine Scale of Coping* (Esparbès et al., 1993) is a questionnaire with 54 items, containing a Likert-type scale with 5 options, which assesses coping. The Portuguese adaptation of the Toulousaine Scale of Coping (Tap et al., 2005) was reduced to 51 items, and Cronbach's alpha was $\alpha = .78$. In the present study, Cronbach's alpha score was $\alpha = .68$, which is substantial according to Landis and Koch (1977).

Beck Depression Inventory-II

The *Beck Depression Inventory-II* (Beck & Steer, 1987) is a scale with 21 items, each corresponding to a symptom of depression. A four-point scale exists for each item ranging from 0 to 3. On two items (16 and 18) there are seven options to indicate either an increase or decrease of appetite and sleep. In the original study, Cronbach's alpha was $\alpha = .93$, in the validation study for Portugal it was $\alpha = .93$ (Martins, 2000). In the present study, Cronbach's alpha was $\alpha = .91$, which is "almost perfect" according to Landis and Koch (1977). Cut-off score guidelines for the BDI-II are provided with the recommendation that thresholds should be adjusted based on the characteristics of the sample, and the purpose for applying the BDI-II. A total score of 0–13 is considered as a minimum, 14–19 as a mild, 20–28 as a moderate, and 29–63 as a severe range of measured depression symptoms.

Table 2. Mean, SD and test scores in the individual dimensions by gender

Gender / Dimensions	Female *M (SD)*	Male *M (SD)*	Test value	*p*
Well-Being	14.67 (4.17)	16.53 (4.24)	2.10[a]	.038
Coping	153.30 (13.22)	146.73 (13.53)	−2.15[a]	.034
Self-Concept	39.63 (9.76)	40.23 (10.40)	−0.60[b]	.555
Depressive Symptoms	14.63 (10.16)	15.00 (15.13)	−0.52[b]	.602

[a] T-test
[b] Kruskal-Wallis

Table 3. Mean scores in the individual dimensions by school year

School year / Dimensions	7th *M (SD)*	8th *M (SD)*	9th *M (SD)*	10th *M (SD)*	Test value	*p*
Well-Being	16.87 (4.78)	15.00 (3.68)	14.37 (4.69)	14.50 (4.04)	0.50[a]	.679
Coping	149.45 (11.47)	147.20 (10.20)	148.52 (16.64)	152.68 (13.66)	1.50[a]	.219
Self-Concept	41.41 (11.51)	40.18 (10.59)	38.13 (10.33)	39.06 (7.42)	4.06[b]	.255
Depressive Symptoms	13.86 (12.96)	17.10 (9.43)	17.34 (12.00)	22.15 (11.79)	3.12[b]	.373

[a] ANOVA
[b] Kruskal-Wallis

Piers-Harris Self-Concept Scale

The *Piers-Harris Self-Concept Scale* (Piers & Herzberg, 2002) assesses self-concept in children and adolescents, it is a dichotomous scale with 60 questions; here, Cronbach's alpha was $\alpha = .91$. The validation for Portugal (Veiga, 2006) reduced the scale to 51 items and Cronbach's alpha was $\alpha = .90$. In this study, it was $\alpha = .89$.

Statistical Analysis

Data was processed and analyzed using IBM SPSS, version 23 for Windows XP. After confirming the sample's normal distribution (Kolmogorov-Smirnov test: $p < .050$), the Student's t-test for paired samples or ANOVA was used; when the distribution was not normal, we used Kruskal-Wallis, Mann-Whitney or Wilcoxon tests.

The results are presented as a whole so that individual schools cannot be identified, thus protecting the participants' anonymity.

Results

By using Kolmogorov-Smirnov tests, the scales of Well-Being and Coping have a normal distribution ($p = .705$ and $p = .897$, respectively) while Self-concept and Depression scales do not have a normal distribution ($p = .032$ and $p = .005$ respectively). According to our results, parametric or non-parametric tests were used for testing mean differences.

Table 4. Mean scores in the several dimensions by intervention phase

Phase / Dimensions	Phase 1 *M (SD)*	Phase 3 *M (SD)*	Test value	*p*
Well-Being	14.94 (4.45)	15.14 (4.21)	−0.24[a]	.804
Coping	148.76 (13.90)	151.62 (13.35)	−0.75[a]	.455
Self-Concept	38.78 (11.67)	39.59 (11.56)	−0.83[b]	.406
Depressive Symptoms	17.60 (9.80)	14.72 (9.87)	−2.11[b]	.035

[a] Paired sample t-test
[b] Wilcoxon

No significant differences were found in self-concept when compared by gender and school year (Table 2 and Table 3). Boys scored higher than girls in the well-being dimension, which varied across the school years without statistical significance. When compared by gender, depressive symptoms were slightly higher in boys and varied

slightly across the school years but without statistical significance. With regard to coping, girls scored higher than boys, and small changes were found across the school years, revealing a statistically significant difference in the comparison by gender.

Table 5. Depressive symptoms by intervention phase- Wilcoxon test

Dimensions \ Phase	Phase 1 (%)	Phase 3 (%)	Test value – Z	*p*
No depressive symptoms	47.0	57.5	–2.07	.038
Mild depressive symptoms	18.3	17.7		
Moderate depressive symptoms	15.7	14.2		
Severe depressive symptoms	19.1	10.6		

[a] Paired sample t-test
[b] Wilcoxon

Overall, a positive evolution was observed between Phase 1 and Phase 3 in the mean scores of the well-being, coping, self-concept, and depressive symptoms dimensions, with the latter showing a statistically significant difference (Table 4).

Concerning depressive symptoms, the number of adolescents with mild, moderate, or severe depressive symptoms decreased between Phase 1 and Phase 3, from 53% to 42.5%. Moderate and severe symptoms decreased from 34.8% to 24.8% (Table 5). Between Phase 1 and Phase 2, the number of adolescents without depressive symptoms increased from 47% to 57.5%.

Discussion

Contemporary dance students are at a high risk for mental health issues and a need exists for a wider perspective of mental health symptoms (Mathisen et al., 2022; Widen et al., 2020); schools offer a strong platform for early identification and treatment of mental health conditions in children and adolescents (WHO, 2022). This project aimed to promote mental health and well-being as well as prevent maladaptive and risky behaviors, namely suicidal behaviors, among adolescents in art and dance schools.

In our study, two-thirds of the sample were female, which is common in other studies (Mathisen et al., 2022; Widen et al., 2020) The prevalence of female adolescents seems to be a characteristic of dance classes in art schools, making it difficult to control the factors that can increase the percentage of depressive symptoms, compared to other similar studies.

The prevalence of depressive symptoms in this study (34.8% of adolescents with moderate or severe depressive symptoms and 53% of adolescents with mild symptoms) stands higher than the one found in a national study in which 17.7% of adolescents presented moderate or severe depressive symptoms and 13.5% of adolescents presented mild symptoms (Erse et al., 2016), but remains in line with Mathisen et al. (2022) who found that 20-60% of the dancers had symptoms of anxiety or depression, symptoms of low energy availability, and/or symptoms of eating disorders and disordered eating behavior. These results may be associated with the prevalence of female adolescents, given the higher prevalence of depressive symptoms in female adolescents found in other studies; however, no statistically significant differences based on gender were found in this study, similarly to the study from Widen et al. (2020). These results may be associated with another specific characteristic of this group of adolescents. Dance students are exposed to higher body image demands and stress levels, which often lead to personal distress, low self-esteem, body dissatisfaction, and psychopathological disorders, with a particular emphasis on depression and eating disorders (Moksnes et al., 2016; Murray et al., 2013).

The multicenter study developed in 11 European countries – Saving and Empowering Young Lives in Europe (SEYLE) – identified some asymmetries in the depression rate, although with lower scores than those found in this study, with the highest score (19.4%) found in Israel (Iosue et al., 2012), which is clearly below the score found in dance and art schools in Portugal.

The results regarding depressive symptoms across the school years revealed no significant differences, increasing until 9th grade and decreasing in 10th grade.

This sample showed high levels of depressive symptoms and a high vulnerability to suicidal behaviors. However, unlike other similar samples, girls are not more vulnerable than boys. In turn, coping, self-concept, and well-being scores are not qualitatively different from those found in other similar studies.

After the *Mais Contigo-Tela de Emoções* intervention, moderate and/or severe depressive symptoms decreased by around 10%.

Boys register higher well-being scores than girls, which follows a trend identified in previous studies in Portugal (Simões et al., 2018) but not confirmed in other international studies (Mathisen et al., 2022). In relation to the association between this variable and the school year, no significant differences were found. The highest mean score registered in 7th grade, and decreased to 10th grade, perhaps due to the developmental aspects of late adolescence or the increasing demands placed on their bodies influencing necessary recovery time (Grove et al., 2013).

In both Phase 1 and Phase 3, girls showed higher coping scores. These results are relevant due to the high level of student stress in art and dance schools (Grove et al., 2013) and the linkage between stress and depression (Moksnes et al., 2016) and the utility of coping strategies. In the comparison by school year, no significant differences were found despite some variations in coping scores.

Self-concept scores slightly improved between Phase 1 and Phase 3, although no significant differences displayed. Boys scored slightly higher than girls. No significant differences were found in self-concept by school year, despite some variations. These results are different from those noted in similar studies where boys scored higher than girls, and the scores tend to decrease throughout the school years (Santos et al., 2014).

The difference between the number of girls and boys in this sample may be the reason underlying these peculiarities.

One may conclude that the *Mais Contigo- Tela de Emoções* project proved to be effective in reducing depressive symptoms. Although the other dimensions (well-being, coping, and self-concept) improved in the second assessment, this improvement was not statistically significant.

Strengths and Limitations

Given the association between physical disorders (injuries) and some mental health dimensions (stress, psychological distress, disordered eating, and coping) identified in previous studies, we find it beneficial to monitor the physical injuries reported by the students throughout the school year.

The lack of a control group with similar characteristics constitutes a limitation and its lack may weaken the conclusions regarding the intervention's effectiveness. Previous studies with similar populations attending regular education, however, indicate a decrease in the analyzed dimensions throughout the academic year (Santos et al., 2014). Over the next academic years, implementing the *Mais Contigo-Tela de Emoções* project in similar schools with more robust samples and utilizing a control group will strengthen the results' validity for these adolescents who stand in greater need of school health care.

Conclusion, Implications and Future Directions

Primary care, differentiated care, and education professionals were involved in the *Mais Contigo-Tela de Emoções* project's implementation, who received specific training. Joint meetings were held to make the necessary adjustments to each class and/or context and to ensure the implementation of a similar intervention and homogenous data processing. The results were processed as a whole to preserve the anonymity and privacy of each context.

The sample in this study demonstrated high levels of depressive symptoms and nearly two-thirds of them showed moderate and/or severe symptoms. This situation reinforces the need for preventive proximity and referral/monitoring measures in these art schools, because depressive symptoms are a risk factor for suicidal behaviors.

The lack of significant differences in depressive symptoms between girls and boys, higher coping scores among girls, and variations of scores in the dimensions across the school years are relevant results in terms of designing intervention programs for this specific population.

Based on the conducted studies, higher well-being scores in boys than in girls seem to be a characteristic at a national level.

The *Mais Contigo-Tela de Emoções* project proved to be effective in improving the dimensions under analysis, particularly depressive symptoms. This finding is very relevant considering the high percentage of adolescents with depressive symptoms in our sample. The fact that no self-injury or other suicidal behavior was identified or reported during the intervention is another important aspect in assessing its effectiveness. However, the sample's characteristics require a closer and more systematic supervision to promote and strengthen the existing resources, particularly in the mental health area.

Given the diversity of contexts, the results have an ecological validity and cannot be generalized. They should be interpreted as indicators of the increased vulnerability to mental health problems for adolescents attending art schools, more specifically dance courses.

The high prevalence of depression, the serious repercussions on adolescents' physical and mental well-being, and the strong association between depression and suicidal behaviors call for early detection, treatment, and follow-up by mental health professionals.

Schools are ideal settings to promote mental health and invest in prevention. Thus, school-based programs for preventing depression and suicidal behaviors should be developed to assess the presence and severity of depressive symptoms and implement preventive strategies aimed at increasing individual skills, self-esteem, problem-solving skills, and help-seeking behaviors, as well as reducing the risk factors and strengthening the protective factors.

This project's multilevel approach allows for improving the mental health literacy levels of teachers, parents/guardians, and students, enabling them to identify the signs and symptoms of depression and the risk factors associated with suicidal behaviors, as well as to intervene in an informed, appropriate, and prompt manner. This project effectively reduced depressive symptoms, with partially satisfactory results in improving the other dimensions (well-being, coping, and self-concept).

Students in art schools, particularly dance and entertainment schools, use their bodies intensively, building and rebuilding images of the body undergoing two transformations: one associated with adolescence and another one associated with the desire to have a dancer's ideal body type. Thus, art students remain more vulnerable to mental disorders, requiring a specific approach for promoting mental health and well-being as well as preventing suicidal behaviors.

This study reinforces the importance of having mental health professionals in schools and investing more into training primary care professionals from the school health teams because their intervening in adolescence and changing life trajectories will increase the number of potential life-years saved. Due to the pandemic crisis, these kinds of programs are increasing in importance.

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The authors have no conflicts of interest to disclose.

Ethical statement
This manuscript is the authors' original work.
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All participants engaged in the research voluntarily and anonymously, and provided their written informed consent to participate in this study.
Data are stored in coded materials and databases without personal data, and the authors have policies in place to manage and keep data secure.

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