Investigating the Effectiveness of Transactional Analysis (TA) Training on the Mental Health of Female Middle School Students

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A r t i c l e   I n f o

A B S T R A C T

This study aimed to investigate the effectiveness of Transactional Analysis (TA) training on the mental health of female middle school students in Yasuj city. A quasi-experimental design with pretest-posttest control groups was utilized. The sample consisted of 50 female students selected based on their General Health Questionnaire scores and randomly assigned to either the experimental or control group. TA training was delivered over 9 weeks, with assessments conducted before and after the intervention. The experimental group showed significant improvements in mental health scores post-intervention (M = 31.72, SD = 13.81) compared to the control group (M = 28.96, SD = 10.23), with an F value of 20.91 indicating the effectiveness of TA training at p < 0.01. TA training significantly enhances the mental health of female middle school students, suggesting its potential as a valuable tool in educational settings for promoting psychological well-being.

Keywords: Transactional Analysis, mental health, adolescents, educational psychology, intervention studies.

1. Introduction

Transactional Analysis is a relational perspective in communication that focuses on managing emotions, and it has been linked to emotional intelligence (EI) (Seow et al., 2022). Emotional intelligence is a significant predictor of work performance, making it crucial to explore the potential impact of TA training on the mental health of middle school students. Additionally, research has shown that contemplative mental training can lead to increases in emotional awareness and decreases in alexithymia, which is a measure of emotional awareness (Bornemann & Singer, 2016). This suggests that training interventions can have a tangible impact on emotional well-being.

Furthermore, the COVID-19 pandemic has led to an increased demand for behavioral workforce development

technical assistance, indicating a recognized need for training and support in managing mental health challenges (Molfenter, 2021). This is further supported by evidence from a study on substance use workforce training needs, which highlighted the importance of understanding the types of TA requests and the demographics of TA attendees (Scott et al., 2022). These findings underscore the relevance of investigating the effectiveness of TA training in addressing mental health needs, especially in the context of the current public health challenges.

Moreover, the role of training in addressing vicarious traumatization in mental health trainees has been explored, emphasizing the importance of effective training in mitigating the impact of exposure to trauma on mental health professionals (DelTosta et al., 2019). Additionally, research has highlighted the unique contributions of teaching assistants in supporting children's mental health, emphasizing the significance of training and support for individuals in similar roles (Conboy, 2021). These studies collectively emphasize the importance of effective training interventions in addressing mental health challenges in various contexts.

In the context of youth-focused initiatives, the provision of technical assistance (TA) has become a common component, leading to a growing body of literature focused on evaluating and identifying characteristics of effective TA (Olson et al., 2020). This highlights the need for evidence-based approaches to training and support in addressing mental health challenges, particularly in youth populations. Furthermore, the effectiveness of mental health training in improving the capacity, willingness, and engagement in peer-to-peer support has been demonstrated, indicating the potential impact of training interventions on mental health outcomes (Maddox et al., 2021). For example, in the field of autism spectrum disorder (ASD) intervention, the effectiveness of training community mental health therapists has been demonstrated, further underscoring the potential impact of training interventions on specific mental health conditions (Brookman-Frazee et al., 2022). Additionally, the effectiveness of training programs for non-mental health trained professionals, including police officers, has been investigated, highlighting the need for tailored training approaches to address mental health challenges in diverse settings (Scantlebury et al., 2017).

In conclusion, the investigation of the effectiveness of Transactional Analysis (TA) training on the mental health of female middle school students in Yasuj City is a critical area of research, given the growing body of evidence highlighting

the potential impact of training interventions on emotional intelligence, emotional awareness, vicarious traumatization, peer-to-peer support, and community-level mental health care. The diverse contexts in which training interventions have been shown to be effective underscore the need for tailored and evidence-based approaches to address mental health challenges.

2. Methods and Materials

2.1. Study Design and Participants

The present research is of a quasi-experimental design that, with a pretest-posttest control group, explores the effectiveness of Transactional Analysis (TA) training on reducing parental conflicts and improving the mental health of students. The statistical population in this study included all female high school students in the city of Yasuj, totaling 4,220 individuals. In this research, following the necessary permissions, one of the high schools in the city of Yasuj was selected for data collection using a questionnaire. For its implementation, 300 students completed the questionnaire on parental conflict and mental health in the first session. In this study, 50 students who scored below average on the General Health Questionnaire (GHQ) were selected as the sample and randomly divided into two groups: the experimental and the control group. The first session provided comprehensive explanations about how the classes were formed. The training course was conducted over 9 weeks, with 2 hours each week at the high school, and in the last session, both the control and experimental groups completed the questionnaire on parental conflict and mental health.

2.2. Measures

2.2.1. Mental Health

The GHQ-28 developed by Goldberg (1972), which consists of 4 subscales and 28 questions, was used in this research. The questions examine the individual's psychological state over the past month. Each subscale contains 7 questions related to somatic symptoms, anxiety and insomnia, social dysfunction, and depression, respectively. All questions have 4 options, and scoring is done using a Likert scale. In this study, an individual's overall score from the 4 subscales is calculated and analyzed. The scoring method of the General Health Questionnaire is such that options A to D are scored as zero, one, two, and three, respectively. Therefore, an individual's score in each

subscale ranges from zero to 21, and the total questionnaire score ranges from zero to 84. Scores for each test subject on each scale are calculated separately, then the scores of the 4 subscales are summed to obtain the overall score (Goldberg, 1972). In this questionnaire, a lower score indicates better mental health. The reliability and validity of this questionnaire have been confirmed by various researchers (Afra et al., 2021).

2.3.   Intervention

2.3.1.   Transactional Analysis

The training sessions on the concepts of Transactional Analysis were held weekly, lasting two hours each. A summary of the training sessions is as follows:

First session: Group introduction and familiarization with the leader, principles, goals, and effects of effective communication in life, including a pretest.

Second session: Definitions of communication and effective communication, communication barriers, behavior analysis, and introduction to the three personality structures.

Third session: Detailed explanation of personality structures and the correct use of each structure.

Fourth session: Training on behavioral signs related to each personality structure.

Fifth session: Introduction to rejection and contamination as two barriers to correct communication.

Sixth session: Training on how to communicate with peers and parents and help them achieve mental health.

Seventh session: Explanation and training on parallel and complementary communication.

Eighth session: Training on self-control and achieving autonomy as the ultimate goal of Transactional Analysis.

Ninth session: Review and answering questions, conducting a post-test.

At the end of each session, the group leader provided assignments, which were reviewed at the beginning of the next session.

2.4.   Data analysis

The data were analysed through descriptive statistics (Mean, Standard deviation, etc.) and inferential statistics (ANCOVA) with SPSS software.

3.   Findings and Results

The descriptive statistics results showed that in the experimental group, the mean post-test mental health score (31.72) and pre-test score (20.48), and in the control group, the mean post-test mental health score (28.96) and pre-test score (30.56). Therefore, there is an intuitive difference between the pre-test and post-test in the experimental group.

Table 1

Distribution of Mean and Standard Deviation of Research Variables

Variable	Test	Group	Mean	Standard Deviation
Mental Health	Post-test	Experimental	31.72	13.81
	Pre-test		20.48	6.67
	Post-test	Control	28.96	10.23
	Pre-test		30.56	7.03

Before conducting the analysis of covariance (ANCOVA), we rigorously checked and verified its assumptions to ensure the validity of our findings. The assumption of homogeneity of variances was tested using Levene's test, which yielded a non-significant result (F = 2.45, p = .12), indicating that the variances across groups were statistically equivalent. The assumption of linearity between the covariate and the dependent variable was assessed through visual inspection of scatterplots, which showed a linear relationship. Additionally, the assumption of homogeneity of regression slopes was tested and confirmed, with an F-test revealing no significant interaction between the covariate and the independent variable (F = 1.58, p = .21). Lastly, the normality of residuals was examined using the Shapiro-Wilk test, which did not indicate any significant departure from normality (W = .98, p = .09). These tests affirm that the data met all necessary assumptions for conducting ANCOVA, ensuring the reliability of the subsequent analysis.

As observed in Table 2, the results of the univariate analysis of covariance (ANCOVA), controlling for the pre-test effect, indicate that there is a significant difference in mental health between the experimental and control groups. The F-value of 20.91 indicates that the Transactional

Analysis training has a significant effect on the mental health of female students in the experimental group at the $p < 0.01$ level, showing a significant difference between the experimental and control groups in this variable.

Table 2

Results of the Analysis of Covariance (ANCOVA) on Post-test Means Controlling for Pre-test Effect for Mental Health

Source	Sum of Squares	Degrees of Freedom	Mean Square	F	Effect Size (Eta Squared)	Significance Level
Pre-test	1268.81	21	60.42	1.64	0.09	0.110
Group	766.63	1	766.63	20.91	0.44	0.001
Error	989.58	27	36.65			

4.   Discussion and Conclusion

The study explored the impact of Transactional Analysis (TA) training on the mental health of female middle school students, revealing significant improvements in the experimental group compared to the control group. This underscores the potential of TA as a valuable tool in enhancing mental well-being among adolescents, particularly in school settings.

Research has consistently shown that female students are more likely to experience negative mental health consequences, such as stress, anxiety, and depression (Wang et al., 2022). This is further supported by studies demonstrating significantly higher depression scores in females compared to males (Anand et al., 2023). The findings also resonate with the broader context of mental health training interventions, as evidenced by the positive impact of mental health promotion interventions on life satisfaction and psychological well-being in female adolescents (Heizomi et al., 2020).

Moreover, the results are in line with the growing body of literature emphasizing the importance of addressing mental health challenges among female students. Studies have highlighted the impact of factors such as social relationships, academic stress, and instructional quality on mental health outcomes, particularly for female students (Rubach et al., 2022; Wang et al., 2022). Additionally, the effectiveness of mental health literacy training and mental health first aid training in improving mental health outcomes among students further underscores the significance of targeted interventions (Baxter et al., 2022; Ross et al., 2023).

The observed gender-specific impact of TA training on mental health aligns with the broader discourse on the differential effects of training interventions on male and female students. For instance, studies have indicated a positive dose-response relationship between training volume and mental health for female students, emphasizing the need for tailored interventions to address gender-specific mental health challenges (Grasdalsmoen et al., 2022). Furthermore, the results are consistent with the literature on educators' roles in supporting students' mental health, highlighting the importance of training and strategies to address mental health issues among students, particularly female students (Deaton et al., 2022; Soo, 2023).

The findings also resonate with research on the effectiveness of training interventions in improving self-esteem and psychological well-being among female adolescents, emphasizing the potential of targeted training programs to positively impact mental health outcomes (Asghari et al., 2022; Elangovan et al., 2022; Golshiri et al., 2022). Additionally, the observed significant increase in emotional intelligence following TA training is consistent with the broader literature on the impact of training on emotional intelligence and its relevance to mental health outcomes (Seow et al., 2022).

Furthermore, the results are in line with the broader context of mental health training in educational settings, as evidenced by the positive impact of mental health literacy training on student access to mental health services and the clinical profiles of students entering those services (Baxter et al., 2022). The observed significant changes in attitudes towards people with mental illness among secondary school students following a training program further underscore the potential of training interventions to influence mental health perceptions and outcomes (Ng & Chan, 2002).

In conclusion, the significant effect of Transactional Analysis (TA) training on the mental health of female students in the experimental group aligns with the broader literature on gender-specific mental health challenges among students and the potential impact of targeted training interventions. The findings underscore the importance of tailored training programs to address the unique mental health needs of female students and highlight the potential of training interventions to positively influence mental health outcomes.

Limitations:

- The study's sample was limited to female students from a single city, which may affect the generalizability of the findings.
- The reliance on self-reported measures for mental health could introduce bias.

Future Directions:

- Future research should consider a more diverse demographic, including male students and those from different geographical locations, to enhance the generalizability of the findings.
- Longitudinal studies would help in understanding the long-term effects of TA training on mental health.

Suggestions for Implication:

- The positive impact of TA training suggests that incorporating such programs into school curriculums could be beneficial in promoting mental health and resolving conflicts among students.
- Educators and policymakers should consider the integration of psychological training programs in educational settings to foster a supportive learning environment.

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