JETIR.ORG ISSN: 2349-5162 | ESTD Year : 2014 | Monthly Issue
JOURNAL OF EMERGING TECHNOLOGIES AND INNOVATIVE RESEARCH (JETIR)
An International Scholarly Open Access, Peer-reviewed, Refereed Journal

Effectiveness of Transactional Analysis based Group Therapy in Controlling Academic Stress among Secondary School Students

[1]Mary Nisha, K. V., [2]Iron Sherly & [3]Arjunan, N. K.

[[1]Research Scholar, Dept. of Psychology, Manipur International University, Imphal, Manipur, India-795140
[2] Professor, Dept. of Psychology, Manipur International University, Imphal, Manipur, India-795140
3Principal, Adi Sankara Training College, Kalady, Kerala, India-683574, E-mail: arjunamendall@gmail.com]

Abstract: The present study examined the effectiveness of Transactional Analysis Based Group Therapy (TAGT) in reducing academic stress among secondary school students in Kerala, India. Specifically, it explored whether gender and level of academic achievement differentially influenced the effectiveness of TAGT. A quasi-experimental pre-test post-test control group design was adopted. The sample comprised 158 ninth-grade students (aged 14–16) from a private aided school, with one division assigned as a waitlist control group and three divisions as experimental groups. The tools used were the Instrument for Measuring Academic Stress (I-MAS) and the Student Emotional Intelligence Scale (SEIS), both developed by the investigators. The intervention consisted of 13 psycho-educational sessions based on the Transactional Analysis Psycho-Pedagogic Programme (TAP-3), each lasting approximately 40 minutes. Data were analyzed using SPSS through descriptive and inferential statistics including t-tests, ANCOVA, and ANOVA. Results indicated that TAGT was highly effective in reducing academic stress, with ANCOVA showing a large effect size (η^2 = .810). Gender exerted a significant differential influence, with boys benefitting more than girls. Academic achievement also moderated effectiveness, as low achievers exhibited greater reductions in academic stress compared to average and high achievers. These findings highlight the potential of TAGT as a structured, school-based intervention for alleviating academic stress, while also pointing to the need for tailoring such interventions to student characteristics such as gender and achievement level.

Index terms: Transactional Analysis, Transactional Analysis Based Group Therapy, Academic Stress, Secondary School Students.

1.INTRODUCTION

Academic stress is a pervasive and consequential problem for secondary-school students, particularly during periods of high-stakes assessment when rates of test anxiety, sleep disturbance, and burnout rise markedly and academic self-efficacy and coping resources are strained (Jagiello et al., 2024; Gao, 2023). School-based programs delivered in group formats are attractive for scalability and early prevention, but a recent systematic review found that most school interventions targeting academic stress rely on cognitive-behavioral methods, include few high-quality randomized trials, and vary widely in delivery and outcomes—highlighting a need to evaluate alternative, theory-driven approaches (Iqra, 2024; Ogakwu et al., 2023; Berger et al., 2022; Feiss et al., 2019). Transactional Analysis (TA) is a relational, communication-focused psychotherapeutic model that targets ego-state awareness, interpersonal transactions, script analysis, and adaptive coping strategies. Its group formats emphasize role clarity, assertiveness, and emotion regulations—skills theoretically relevant to reducing academic worry and maladaptive coping among students (Abbasszade et al., 2025; Kia et al, 2023). Empirical studies in educational settings report that TA-based training or group therapy improves mental-health indicators and emotion-regulation skills in school and university student samples (Abbasszade et al., 2025; Dehghani et al., 2025; Kharamin & Moradian, 2023). Emotional intelligence (EI) and self-efficacy consistently buffer stress and mediate academic outcomes, suggesting that interventions which strengthen EI and self-regulation could plausibly reduce students' academic stress and downstream burnout (Gao, 2023; Seow et al., 2022). Taken together, the theoretical fit of TA with emotion-regulation and interpersonal skills, plus emerging positive findings from quasi-experimental and experimental studies, justify a rigorous examination of Transactional Analysis-based Group Therapy (TAGT) as a school-deliverable intervention for controlling academic stress among secondary school students.

2.OBJECTIVES

1) To find out the effectiveness of TAGT in controlling academic stress of secondary school students.

2) To find out the differential influence of gender on the effectiveness of TAGT on controlling academic stress of secondary school students.

3) To find out the differential influence of level of academic achievement on the effectiveness of TAGT on controlling academic stress of secondary school students.

3.HYPOTHESES

1) TAGT is not effective in controlling academic stress of secondary school students.

2) Gender has no significant differential influence on the effectiveness of TAGT in controlling academic stress of secondary school students.

3) Level of academic achievement has no significant differential influence on the effectiveness of TAGT in controlling academic stress of secondary school students.

4.METHODOLOGY

The quasi-experimental study adopted pre-test post-test control group design. The population of the study is students in the age range 14-16 years, studying in grade levels eight, nine and ten in schools affiliated to the Kerala Board of Public Examinations, Government of Kerala (India). The participants (sample) for the study were four intact classes of ninth grade students (n = 158), selected from a private aided school. One of the class divisions was randomly fixed as waitlist control and the remaining three divisions as experimental groups. The tools needed to measure academic stress and emotional intelligence were developed by the investigator which were named as Instrument for Measuring Academic Stress (I-MAS) and Student Emotional Intelligence Scale (SEIS) respectively. The Transactional Analysis based group therapeutic intervention was done with the help of psycho-educational package named Transactional Analysis based Psycho-Pedagogic Programme (TAP-3) developed by the investigator. The baseline measurement of the variables in control group and experimental group was followed by 13 sessions of psycho-educational intervention, each of approximately 40 minutes duration, and then by the post-testing of the variables on the next day. The data thus collected were analyzed descriptively and inferentially with the help of SPSS to test the hypotheses.

5.ANALYSIS AND INTERPRETATIONS

The data were analyzed using SPSS to test the hypotheses, and the results are presented under appropriate subheadings.

5.1. Effectiveness of TAGT in Reducing Academic Stress

As the first step, the control group and experimental group were compared regarding the pre-test scores of academic stress to find out the significant difference, if any, between the groups in the baseline. Table 4.1 presents the result of the independent sample t-test conducted incidentally.

Table 4.1: Comparison of Control Group and Experimental group Regarding the Pre-test Scores of Academic Stress

Groups	Statistical Indices				t	Sig
	N	M	SD	SE_M		
Control Group	39	148.18	29.44	4.71	0.449	NS
Experimental Group	119	150.60	29.06	2.66		

The t-value estimated on comparing control group and experimental group regarding the pre-test scores of academic stress is not significant ($t = 0.449$; $p>.05$). It shows that there is no true difference between the control group and experimental group before the psychological intervention.

The groups were then compared regarding the post-test scores of academic stress to find out the effectiveness of TAGT in controlling academic stress. The comparison was done by employing ANCOVA after adjusting for the effect of pre-test scores as covariate. The data and results of the ANCOVA conducted is given in Table 2.

Table 2: Summary of ANCOVA for the comparison of post-test scores of control group and experimental group

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	130134.369	2	65067.185	6010.135	.000	.987
Intercept	61.507	1	61.507	5.681	.018	.035
Pre-test	124958.066	1	124958.066	11542.145	.000	.987
Group	7158.678	1	7158.678	661.234	.000	.810
Error	1678.068	155	10.826			
Total	3156517.000	158				
Corrected Total	131812.437	157				

a. R Squared = .987 (Adjusted R Squared = .987)

The F-ratio obtained is significant ($F_{(1, 155)}$ = 661.234; p<.001) showing a true difference between control group and experimental group regarding the post-test scores of academic stress even after adjusting for their pre-test scores as covariate. As per Cohen (1988)'s guidelines, the estimated valued of the partial Eta Squared value indicates that (η^2_{patial} = 0.810), the effect size is very large. It further points out that 81% of the variance in the post-intervention score of academic stress is explained by the group membership, after adjusting the pre-intervention scores. The control group and experimental group were compared with regard to the mean post-test scores obtained after adjusting for the covariates (pre-test scores) to find out the significance of the differences between the scores, the result of the same is given in Table 3.

Table 3: Mean Difference between control group and experimental group in the post-test scores of academic stress after adjusting for the covariate.

Groups	Mean	Std. Error	95% Confidence Interval		Mean Difference	Sig.
			Lower	Upper		
Control Group	150.13	.527	149.09	151.17	15.621	.001
Experimental Group	134.50	.302	133.91	135.10		

The mean difference estimated between the groups even after partialling out the effect of covariate is significant (Mean difference = 15.621; p<.001), disclosing a true differential effect of treatment and waitlist control condition. The mean estimate for experimental group (M = 134.50) is significantly lower than that for the control group (M = 150.13), showing that the TAGT intervention was effective in reducing academic stress of the experimental group.

5.2. Differential Influence of Gender on the Effectiveness of TAGT in Reducing Academic Stress

The gender based sub-samples of the experimental group were compared by using independent sample t-test to examine whether boys and girls differ significantly in terms of their change scores (pre-test scores subtracted from post-test scores). The result of the t-test is given in Table 4.

Table 4: Comparison of boys and girls in the experimental group regarding the change scores of academic stress

Sub-samples	Statistical Indices				t	Sig
	N	M	SD	SE_M		
Boys	55	16.67	3.601	.486	3.205	.01
Girls	64	14.52	3.712	.464		

Comparison of the gender based sub-samples in the experimental group regarding the change scores of academic stress produced a significant t-value (t = 3.205; p<.01). It indicates that boys and girls differ significantly with respect to the effectiveness of TA-based group therapy in controlling their academic stress. The mean change score estimated for the boys is 16.67, while that for the girls is 14.52. It discloses that the pedagogic intervention was more effective for boys than for girls in reducing the academic stress.

5.3. Differential Influence of Level of Academic Achievement on the Effectiveness of TAGT in Reducing Academic Stress

The differential influence of academic achievement on the effectiveness of TAGT in controlling the academic stress of students was studied by comparing the 'change scores' of high, average and low achieving students in the experimental group. The comparison was done by using one-way ANOVA, the result of the same is given in Table 5.

Table 4.5: Comparison of low-, average-, and high achievers in the experimental group regarding the change scores of academic stress

AST	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	253.922	2	126.961		
Within Groups	1451.809	116	12.516	10.144	.001
Total	1705.731	118			

The one-way ANOVA produced an F-ratio which is significant beyond 99.9% confidence interval ($F = 10.144$; $p<.001$). It reveals that the low, average and high achieving students differ significantly regarding the effectiveness of TAGT in controlling their academic stress. In another words, achievement level is a significant decisive factor in the effectiveness of TA therapy in alleviating academic stress of secondary school students. The significant F-ratio estimated in the ANOVA was followed by post-hoc test to find out the groups that exhibit the true difference in their change scores of academic stress. The result of the Tukey HSD test performed to compare different groups pairs are given in Table 6.

Table 6: Post-hoc tests for comparison of high, average and low achievers regarding the change scores of academic stress

(I) Exp	(J) Exp	(I-J) Mean Difference	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
LOW	Average	3.678	.942	.000	-5.91	-1.44
	High	5.040	1.181	.000	-7.84	-2.24
AVERAGE	Low	-3.678	.942	.000	1.44	5.91
	High	1.363	.900	.288	-3.50	.77
HIGH	Low	-5.040	1.181	.000	2.24	7.84
	Average	-1.363	.900	.288	-.77	3.50

The result of the post-hoc test conducted to examine the significant difference between students at different levels of academic achievement regarding the success of TAGT in controlling academic stress revealed the following:

1) There is significant difference between low achievers and average achievers regarding the reduction in their academic stress when intervened with transactional analysis therapy (Mean difference = 3.678; $p<.001$). The reduction in academic stress was highest in low achievers ($M = 18.88$) than in average achievers ($M = 15.20$);

2) The low achieving students differ significantly from the high achieving students regarding the improvement they made in academic stress when exposed to TA-based group therapy (Mean difference = 5.040; $p<.001$). The drop in academic stress happened in low achievers ($M = 18.88$) is significantly greater than that happened in high achievers ($M = 13.84$);

3) There is no significant difference between average achievers and high achievers regarding the drop in academic stress the groups attained when treated with TA therapy (Mean difference = 1.363; $p>.05$).

6.CONCLUSION

The comparison of control group and experimental group regarding the post-intervention scores of academic stress, after adjusting for the effect of respective pre-test scores, by employing ANCOVA, produced an F-ratio that is highly significant. The post-test mean score of academic stress in the experimental group is significantly lower than that in the control group, after removing the effect of respective pre-test scores, proving that the observed reduction is contributed by TAGT. In another word, the TA-based group therapy is effective in reducing the academic stress of the target population beyond doubt. Hypothesis-1 *(transactional analysis-based group therapy is not effective in controlling academic stress of secondary school students)* is, therefore, rejected. Comparison of boys and girls in the experimental group regarding the change scores of academic stress exposed the presence of a significant difference between the sub-groups. The boys and girls responded differently to the therapeutic settings which facilitated greater emotional expression and cognitive reframing in boys, thereby

leading to more substantial reductions in academic stress. Hypothesis-2 *(gender has no significant differential influence on the effectiveness of transactional analysis-based group therapy in controlling academic stress of secondary school students)* is, therefore, rejected. Comparison of low, average and high achieving students in the experimental group regarding the change scores of academic stress brought out a significant difference. It underpins that level of academic achievement exerts a significant differential influence on the effectiveness of TAGT in reducing academic stress of secondary school students. Hypothesis-3 *(level of academic achievement has no significant differential influence on the effectiveness of transactional analysis-based group therapy in controlling academic stress of secondary school students)* is, hence, rejected.

7.REFERENCES

Abbasszade, A., Farokhzadian, J., Torkaman, M., Miri, S., & Shahrbabaki, P. M. (2025). A transactional analysis training program on cognitive flexibility and emotion regulation in undergraduate nursing students: An experimental study. *BMC Nursing, 24,* 306. https://doi.org/10.1186/s12912-025-02961-w

Berger, E., Reupert, A., Allen, K.-A., & Campbell, T. C. H. (2022). A systematic review of the long-term benefits of school mental health and wellbeing interventions for students in Australia. *Frontiers in Education, 7*, Article 986391. https://doi.org/10.3389/feduc.2022.986391

Dehghani, N. H., Atashpour, S. H., & Torkan, H. (2025). *The impact of transactional analysis group therapy, schema therapy, and emotion-focused therapy on emotional regulation in female college students following romantic breakups*. *Women's Health Bulletin, 12*(2), https://doi.org/10.30476/whb.2025.104565.1323

Feiss, R., Dolinger, S. B., Merritt, M., Reiche, E., Martin, K., Yanes, J. A., Thomas, C. M., & Pangelinan, M. (2019). A systematic review and meta-analysis of school-based stress, anxiety, and depression prevention programs for adolescents. *Journal of Youth and Adolescence, 48*(9), 1668–1685.

Gao, X. (2023). Academic stress and academic burnout in adolescents: A moderated mediating model. *Frontiers in Psychology, 14,* 1133706. https://doi.org/10.3389/fpsyg.2023.1133706

Iqra. (2024). *A systematic review of academic stress intended to improve the educational journey of learners*. *Methods in Psychology, 11*, 100163. https://doi.org/10.1016/j.metip.2024. 100163

Jagiello, T., Belcher, J., Neelakandan, A., Boyd, K., & Wuthrich, V. M. (2024). *Academic stress interventions in high schools: A systematic literature review*. *Child Psychiatry and Human Development*. Advance online publication. https://doi.org/10.1007/s10578-024-01667-5

Kharamin, S., & Moradian, M. (2023). Investigating the effectiveness of Transactional Analysis (TA) training on the mental health of female middle school students. *KMAN Counseling and Psychology Nexus, 1*(1), 183–188. https://doi.org/10.61838/kman.psychnexus.1.1.21

Kia, M., Hashemian, K., & Abolmaali, K. (2023). Comparing the effectiveness of transactional analysis (TA) and imaginary exposure and response prevention (ERP) training courses on reducing students' academic anxiety. *Journal of Adolescent and Youth Psychological Studies, 4*(4), 1–7. https://doi.org/10.61838/kman.jayps.4.4.1

Ogakwu, N. V., Ede, M. O., Agu, P. U., Manafa, I., Ezeaku, F., Onah, S. O., Okereke, G. K. O., Omeke, F. C., Agbigwe, I. B., & Oneli, J. O. (2023). School-based intervention for academic stress management and school adjustment among industrial technical education students: Implications for educational administrators. *Medicine, 102*(2), e32547. https://doi.org/10.1097/MD.0000000000032547

Seow, H. Y., Wu, M. H. L., Mohan, M., Mamat, N. H. B., Kutzsche, H. E., & Pau, A. (2022). The effect of transactional analysis training on emotional intelligence in health professions students. *BMC Medical Education, 22*(1), 383. https://doi.org/10.1186/s12909-022-03455-y

■