

The Relationship between Psychological Inflexibility and Academic Anxiety among School Children Preparing for their Board Exams: A Cross-sectional Study

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ABSTRACT

Introduction: Many school children experience psychological inflexibility, which leads to anxiety regarding their academic well-being, subsequently affecting their psychological well-being. The objectives of the present study were to investigate the relationship between psychological inflexibility and academic anxiety among school children, understand the sociodemographic characteristics of the selected participants, and identify significant mean differences in subgroups based on sociodemographic details in relation to psychological inflexibility and academic anxiety.

Aim: To examine the relationship between psychological inflexibility and academic anxiety in students who were preparing for their board exams.

Materials and Methods: A cross-sectional study involved the selection of 348 school children from 9th to 12th grade in Madurai, Tamil Nadu, India, using simple random sampling. Data collection took place from March 2021 to June 2021. The study employed a 17-item Acceptance and Fusion Questionnaire (AFQ-17), a 25-item academic anxiety scale, and a semi-structured interview schedule. The data analysis was performed using the Statistical

Package for Social Services (SPSS) software, version 19.0. Descriptive statistics were used, and the Pearson's correlation method was employed to determine the relationship between variables. Additionally, a one-way Analysis of Variance (ANOVA) was conducted to identify significant mean differences between demographic variables, with a 95% confidence level and p-value <0.05 considered as statistically significant.

Results: Out of the total 348 participants, majority 184 (52.9%) were in the age group of 16 to 18 years. The results indicate a positive correlation ($r=0.117$, $p<0.05$) between the level of psychological inflexibility and academic anxiety among school children. Furthermore, significant relationships were found between psychological inflexibility and academic anxiety in terms of age and gender.

Conclusion: The present study highlights a positive correlation between psychological inflexibility and academic anxiety. It emphasises the importance of raising awareness, promoting psychological flexibility, and reducing academic anxiety among school children.

Keywords: Academic performance anxiety, Acceptance and commitment therapy, Psychological rigidity

INTRODUCTION

Psychological inflexibility is a rigid behavioural pattern that interferes with engagement in personally meaningful activities; it is the hypothesised root of suffering according to Acceptance and Commitment Therapy (ACT). Psychological inflexibility can be seen as being excessively entangled in experiential avoidance and cognitive fusion, and having difficulties connecting with the context of a situation and choosing behaviour in line with identified values and goals [1]. Aspects of psychological inflexibility are targeted by a wide range of modern cognitive-behavioural therapies, particularly those emphasising acceptance and mindfulness-based methods [2].

This concept combines two interrelated processes: cognitive fusion and experiential avoidance [3]. Cognitive fusion refers to the process of over-identifying with one's internal events (e.g., thoughts, feelings, memories) and reacting to them as if they were real. Cognitive fusion leads to experiential avoidance, which is the person's unwillingness to experience internal events, resulting in the adoption of strategies to avoid, change, or control them. ACT has empirical support for its efficacy in treating a wide range of psychological issues, including mood and anxiety disorders, stress, and substance use [4].

Psychological flexibility is defined as the ability to mindfully observe experiences occurring in the present moment while intentionally choosing actions in line with self-chosen values [1]. A study provided evidence that psychological flexibility is associated with one's ability to cope in stressful situations [5].

Anxiety is an intense, excessive, and persistent worry about certain situations. In general, anxiety has two types: trait anxiety and state anxiety. Trait anxiety is a stable and general characteristic of an individual, while state anxiety is specifically aroused by contemporary situations and the environment with which an individual is dealing [6]. A small to moderate level of anxiety is normal and can even be beneficial for a student's academic performance. Without any anxiety, most students would lack the motivation to study for exams, write papers, or do daily homework. However, severe anxiety can be a serious problem.

Academic anxiety refers to the anxiety students experience related to tests, performance ability, time pressures, competition with their peers, as well as fear of teacher and parent expectations [7]. Academic anxiety can have a negative effect on a student's academic performance [8]. Students experiencing academic anxiety feel apprehensive about academic tasks, and some may only experience anxiety related to test-taking or specific tasks. There are four components of academic anxiety: worry, emotionality, task-generated interference, and study skills deficits. Several researchers have found that school students with a higher level of anxiety have lower academic performance [9]. Some authors have also reported a negative correlation between academic anxiety and academic performance [10]. A study by Cassady JC showed that a high level of examination anxiety leads to poor academic achievement [11]. Sweetnam (2002) posits that examination anxiety affects both high achievers and low achievers with similar results.

During the COVID-19 pandemic, many people, including children, experienced prolonged social distancing, isolation, and separation [12]. Students attending online classes faced numerous challenges in attending and understanding the concepts of their subjects. Students in grades 9th to 12th, who were preparing for board exams, faced uncertainty due to the constant changes caused by the pandemic. Additionally, the South Indian education system emphasises rote learning and high-stakes examinations, making it important to study academic anxiety in this context. Understanding the challenges students face in this system can help design tailored interventions to improve academic outcomes and overall well-being. Therefore, students, particularly those preparing for board exams, were likely to experience higher levels of academic anxiety [13]. Accessing professional psychological or psychiatric help also became more difficult.

While some studies have found the mediating role of psychological inflexibility in the fear of negative evaluation, there has been no direct study on the relationship between psychological inflexibility and academic anxiety [14]. Hence, the present study aimed to examine if psychological inflexibility influences the academic anxiety of students taking their board exams. The objectives are to investigate the relationship between psychological inflexibility and academic anxiety among school children, understand the sociodemographic characteristics of the students, and identify significant mean differences based on sociodemographic details in relation to psychological inflexibility and academic anxiety. The hypotheses of the study were there was a positive and significant relationship between psychological inflexibility and academic anxiety, and there were significant differences in psychological inflexibility and academic anxiety based on age, gender, and area of residence.

MATERIALS AND METHODS

A cross-sectional study involved the selection of 348 school children from 9th to 12th grade in Madurai, Tamil Nadu, India, using simple random sampling. Data collection took place from March 2021 to June 2021. The study was approved by the Institutional Ethics Committee (IEC) (Ref No: 01/2021).

Inclusion criteria: Both male and female students in grades 9th to 12th, who were currently living in Madurai, Tamil Nadu, India, and who could comprehend the English language, were included in the study.

Exclusion criteria: Students who did not answer all the questions and those who did not give consent were excluded from the study.

Sample size calculation: By reviewing data from an article in 2019 [15], it was found that approximately 40,000 students took their 10th exams. Assuming that half of these students went on to complete their 12th grade, an estimate of 20,000 students would have taken their 12th grade examination. The same number of students would be in the 9th grade as in the 10th grade, and the 11th grade would have the same number as the 12th grade. Therefore, it was estimated that a total of 120,000 students were in grades 9th to 12th in the year 2021. Using the Survey Monkey sample size calculator, with a 95% confidence level and a 5% margin of error, the sample size was determined [16]. A sample of 383 students must be selected for the study from a population of 120,000 students.

$$\text{Sample size} = \frac{z^2 \times p(1-p)}{e^2} \div \left(1 + \left(\frac{z^2 \times p(1-p)}{e^2 N} \right) \right)$$

Study Procedure

School students in grades 9th to 12th from 6 schools were approached to participate in the study. Consent from parents and assent from students were obtained after explaining the study and ensuring the confidentiality of personal information.

A total of 398 students provided consent to participate, and 380 students met the criteria and were included in the study. The researchers administered the annexure, which included the acceptance and fusion questionnaire and the academic anxiety scale, and the participants answered all the questions. From the 380 responses, 32 had to be discarded due to incomplete forms, leaving a total of 348 responses for analysis. A semi-structured interview schedule was used to collect information regarding the respondents' basic sociodemographic details, including age, gender, and area of residence. The AFQ-17 developed by Greco LA et al., was used to assess levels of psychological inflexibility [17]. It consists of 17 items and is a self-administered scale. The scale uses a 5-point Likert scale ranging from 0 to 4. The possible scores on the 17-item scale range from 0 to 68, with higher scores indicating higher levels of psychological inflexibility. The internal consistency of the scale is 0.93.

The Academic Anxiety Scale, developed by Cassady JC et al., was used to assess levels of academic anxiety among students. It consists of 11 items and is a self-administered scale [18]. The scale uses a 4-point Likert scale ranging from 1 to 4. Higher scores on the 11-item scale indicate higher levels of academic anxiety. The Academic Anxiety Scale has a reliability co-efficient of 0.95 [19].

STATISTICAL ANALYSIS

The data were statistically analysed using the SPSS software, version 19.0. Descriptive statistics were used to summarise the data. The Pearson's correlation method was used to determine the relationship between psychological inflexibility and academic anxiety. A one-way ANOVA was conducted to assess significant mean differences between demographic variables, with a 95% confidence level. A significance level of $p < 0.05$ was considered statistically significant.

RESULTS

The results indicate that out of the total participants (N=348), 49.4% (N=172) were males and 50.6% (N=176) were females. In terms of age, 47.1% (N=164) of the participants were between the ages of 13 and 15, while 52.9% (N=184) were between the ages of 16 and 18 years. Regarding the area of residence, 48.9% (N=170) of the participants were from an urban background, and 51.1% (N=178) were from a rural background, as shown in [Table/Fig-1]. The sociodemographic details were found to follow a normal distribution.

Factors		n (%)
Gender	Males	172 (49.4)
	Females	176 (50.6)
Age (in years)	13 to 15	164 (47.1)
	16 to 18	184 (52.9)
Area of residence	Urban	170 (48.9)
	Rural	178 (51.1)

[Table/Fig-1]: Distribution of sociodemographic details.

The relationship between scores of psychological inflexibility and academic anxiety, as well as their relationship with gender, age, and area of residence, were analysed using analysis of variance, as shown in [Table/Fig-2]. The results revealed a significant positive relationship between psychological inflexibility and gender, as well as age (significance at $p < 0.01$). However, there was no significant relationship between psychological inflexibility and area of residence.

Furthermore, a significant positive relationship was observed between academic anxiety and gender (significance at $p < 0.01$). Additionally, there was a significant relationship between academic anxiety and age (significance at $p < 0.05$). However, there was no significant

Factors		N	Mean±SD	F-value	p-value	
Psychological inflexibility	Gender	Male	172	67.44±17.71	6.710	0.010
		Female	176	72.52±18.83		
		Total	348	70.01±18.44		
Academic anxiety	Gender	Male	172	51.12±11.25	8.793	0.003
		Female	176	54.36±9.004		
		Total	348	52.76±10.29		
Psychological inflexibility	Age (in years)	13 to 15	164	67.11±20.52	7.796	0.006
		16 to 18	184	72.59±15.99		
		Total	348	70.01±18.44		
Academic anxiety	Age (in years)	13 to 15	164	51.59±10.73	4.024	0.046
		16 to 18	184	53.80±9.79		
		Total	348	52.76±10.29		
Psychological inflexibility	Place	Urban	170	70.23±17.66	0.49	0.825
		Rural	178	69.79±19.20		
		Total	348	70.01±18.44		
Academic anxiety	Place	Urban	170	52.14±10.60	1.220	0.270
		Rural	178	53.35±9.98		
		Total	348	52.76±10.29		

[Table/Fig-2]: Distribution of relationship between variables based on sociodemographic details.

N: Total number of samples; SD: Standard deviation; p: Probability

One-way Analysis of Variance (ANOVA)

**Significant at $p<0.01$

*Significant at $p<0.05$

relationship between academic anxiety and place of residence. [Table/Fig-3], obtained from the Pearson's correlation analysis, reveals a significant positive relationship between psychological inflexibility and academic anxiety (significance at $p<0.05$).

Factors		N	r-value	p-value
Psychological inflexibility	Academic anxiety	348	0.117*	0.029

[Table/Fig-3]: Pearson's correlation between psychological inflexibility and academic anxiety.

N: Total number of samples; r: The correlation co-efficient; p: Probability

Pearson's correlation

**Significant at $p<0.01$

*Significant at $p<0.05$

DISCUSSION

In the current situation, students often experience tremendous pressure to perform well in exams due to various factors. The highly competitive nature of the education system, intense parental expectations, societal pressure, and the desire to secure admission in reputable institutions contribute to the development of academic anxiety. The results of the present study indicate a significant positive relationship between psychological inflexibility and academic anxiety. Hence, the hypothesis can be accepted. This could be attributed to factors such as procrastination and performance, which can lead to higher levels of academic anxiety.

Previous research supports these findings. For example, a study found that psychological inflexibility was associated with higher levels of academic stress and anxiety among college students [20]. Another study found a significant positive correlation between procrastination and academic anxiety among Iranian university students [21]. However, there are also studies that contradict these findings, suggesting that there may not be a significant relationship between psychological inflexibility and academic anxiety based on the level of education. For instance, a study found that psychological inflexibility was associated with academic burnout among Chinese medical students, regardless of their educational level [22].

Furthermore, there is a significant relationship between psychological inflexibility and academic anxiety based on gender. This could be attributed to the recent increase in gender equality and the fact that both genders now share equal responsibilities. In terms of the

relationship between psychological inflexibility and academic anxiety based on gender, a study found a significant association between gender and psychological inflexibility among college students, with females reporting higher levels of psychological inflexibility [23]. However, another study found no significant difference in psychological inflexibility based on gender among undergraduate students [24].

There is a significant relationship between psychological inflexibility and academic anxiety, which may be influenced by factors such as the level of education and the expectations of the rural community compared to the urban community. One study that supports the idea that lower job expectations in rural communities may affect this relationship is conducted by [25]. They found that rural Chinese students had lower academic expectations and lower levels of academic anxiety compared to urban students. Similarly, another study found that rural Chinese students experienced lower levels of academic stress and anxiety compared to their urban counterparts [26].

However, there are also studies that contradict this idea, suggesting that the level of education or job expectations may not have a significant impact on the relationship between psychological inflexibility and academic anxiety. For instance, a study found that psychological inflexibility was associated with higher levels of academic stress among Indian university students, regardless of their educational background [27]. Additionally, another study found that performance-based expectations were positively associated with academic anxiety among German university students.

The findings of the present study indicate a significant difference in psychological inflexibility and academic anxiety based on gender and age. This could be attributed to differences in behaviours and expectations related to gender and age. For example, a study found that females had higher levels of academic stress and anxiety than males among Taiwanese university students [28]. Additionally, another study found that age was positively associated with academic anxiety among Malaysian university students [29].

Psychological inflexibility is considered a key source of psychological difficulties according to ACT. The ACT utilises psychological flexibility as a process to empower clients and promote their well-being during mental health services. Therefore, developing psychological flexibility in students, especially those preparing for board exams, through ACT and other techniques, can help reduce the development of psychopathology and other vulnerabilities. It can also help prevent negative outcomes such as school dropout. The present study provides valuable insights into the relationship between these variables and can serve as a guide for future research in this area.

Limitation(s)

The study was not an experimental study and it only focused on school students from Madurai, Tamil Nadu. Therefore, the findings cannot be generalised to other states and districts. Additionally, the study only included students who could comprehend English, which limits the generalisability of the findings. It is important to note that students who could not understand English were excluded from the study. Furthermore, the study relied on self-measured scales for assessment, which may have led to less reliable responses from the students.

CONCLUSION(S)

The majority of the participants were females between the ages of 16 and 18 years, residing in rural areas. Overall, there is mixed evidence regarding the relationship between psychological inflexibility and academic anxiety, with some studies supporting a positive association while others finding no significant relationship. Furthermore, the impact of factors such as level of education, job expectations, gender, and age can vary across different studies, thus rejecting the hypotheses. It is crucial for future research to continue investigating these factors

in order to gain a better understanding of the complex relationship between psychological inflexibility and academic anxiety.

REFERENCES

- [1] Hayes SC, Luoma JB, Bond FW, Masuda A, Lillis J. Acceptance and Commitment Therapy: Model, processes and outcomes. *Behav Res Ther.* 2006;44(1):01-25.
- [2] Hayes, Villatte, Levin, Hildebrandt, 2011 | Association for Contextual Behavioural Science [Internet]. [cited 2023 Mar 16]; Available from: https://contextualscience.org/publications/hayes_villatte_levin_hildebrandt_2011.
- [3] Hayes, 2004|Association for Contextual Behavioural Science [Internet]. [cited 2023 Mar 16]; Available from: https://contextualscience.org/publications/hayes_2004.
- [4] A Tjak JGL, Davis ML, Morina N, Powers MB, Smits JAJ, Emmelkamp PMG. A meta-analysis of the efficacy of acceptance and commitment therapy for clinically relevant mental and physical health problems. *Psychother Psychosom.* [Internet] 2015;84(1):30-36. Available from: <https://pubmed.ncbi.nlm.nih.gov/25547522/>.
- [5] Kashdan TB, Rottenberg J. Psychological flexibility as a fundamental aspect of health. *Clin Psychol Rev.* 2010;30(7):865-78.
- [6] Bihari S. Academic Anxiety among Secondary School Students with reference to Gender, Habitat and Types of School. 2014;3(4):30-32.
- [7] Academic anxiety. How can teachers, with the support of parents, help to alleviate academic anxiety amongst elementary school students? [cited 2023 Mar 28]; Available from: <http://www.anxietybc.com>.
- [8] Hooda M, Quest ASE, 2017 undefined. Academic anxiety: An overview. *researchgate.net* [Internet] [cited 2023 Apr 20]; Available from: https://www.researchgate.net/profile/Madhuri-Hooda/publication/327281370_Academic_Anxiety_An_Overview/links/5b8640c0a6f6cc5f8b6e9ab2/Academic-Anxiety-An-Overview.pdf.
- [9] Austin JS, Others A. Prevent school failure: Treat test anxiety. *Preventing School Failure.* 1995;40(1):10-13.
- [10] Williams KE, Ciarrochi J, Heaven PCL. Inflexible parents, inflexible kids: A 6-year longitudinal study of parenting style and the development of psychological flexibility in adolescents. *J Youth Adolesc* [Internet] 2012 [cited 2023 Mar 16];41(8):1053-66. Available from: <https://pubmed.ncbi.nlm.nih.gov/22311519/>.
- [11] Cassady JC. The stability of undergraduate students' cognitive test anxiety levels. Practical assessment, research, and evaluation [Internet] 2001 [cited 2023 Mar 16];7:20. Available from: <https://scholarworks.umass.edu/pare/vol7/iss1/20>.
- [12] Singh S, Roy D, Sinha K, Parveen S, Sharma G, Joshi G. Impact of COVID-19 and lockdown on mental health of children and adolescents: A narrative review with recommendations. *Psychiatry Res.* [Internet] 2020 [cited 2023 Jul 11];293:113429. Available from: <https://pubmed.ncbi.nlm.nih.gov/327444649/>.
- [13] Ann Mary R, Marslin G, Franklin G, Sheeba CJ. Test anxiety levels of board exam going students in Tamil Nadu, India. *Biomed Res Int.* 2014;2014:578323.
- [14] Pellerin N, Raufaste E, Corman M, Teissedre F, Dambrun M. Psychological resources and flexibility predict resilient mental health trajectories during the French COVID-19 lockdown. *Sci Rep* [Internet] 2022 [cited 2023 Mar 16];12:10674. Available from: <https://pubmed.ncbi.nlm.nih.gov/36219392/>.
- [15] SSLC results: Madurai climbs to 10th rank from 17th | Madurai News-Times of India [Internet]. [cited 2023 Jun 21], Available from: <https://timesofindia.indiatimes.com/city/madurai/sslc-results-madurai-climbs-to-10th-rank-from-17th/articleshow/69104850.cms>.
- [16] Sample Size Calculator: Understanding Sample Sizes|SurveyMonkey [Internet]. [cited 2023 Jun 21]. Available from: <https://www.surveymonkey.com/mp/sample-size-calculator/>.
- [17] Greco LA, Lambert W, Baer RA. Psychological inflexibility in childhood and adolescence: Development and evaluation of the Avoidance and Fusion Questionnaire for Youth. *Psychol Assess* [Internet] 2008 [cited 2023 Apr 20];20(2):93-102. Available from: <http://doi.apa.org/getdoi.cfm?doi=10.1037/1040-3590.20.2.93>.
- [18] Cassady JC, Pierson EE, Starling JM. Predicting student depression with measures of general and academic anxieties. *Front Educ (Lausanne)* 2019;4:422375.
- [19] Item analysis of the academic anxiety scale (N=142). [Download Table] [Internet]. [cited 2023 Aug 8]. Available from: https://www.researchgate.net/figure/Item-analysis-of-the-academic-anxiety-scale-N-142_tbl1_331283829.
- [20] Jeffords JR, Bayly BL, Bumpus MF, Hill LG. Investigating the relationship between University students' psychological flexibility and college self-efficacy. *J Coll Stud Ret* [Internet] 2020 [cited 2023 Apr 20];22(2):351-72. Available from: <https://pubmed.ncbi.nlm.nih.gov/36219392/>.
- [21] Vahedi S, Farrokhi F, Farahnaz G, Ali I. The relationship between procrastination, learning strategies and statistics anxiety among Iranian college students: A canonical correlation analysis. *Iran J Psychiatry Behav Sci* [Internet]. 2012 [cited 2023 Apr 20];6(1):40-46. Available from: <https://pubmed.ncbi.nlm.nih.gov/22311519/>.
- [22] Yang Q, Liu Y, Yang WF, Peng P, Chen S, Wang Y, et al. Mental health conditions and academic burnout among medical and non-medical undergraduates during the mitigation of COVID-19 pandemic in China. *Environ Sci Pollut Res Int* [Internet] 2022 [cited 2023 Apr 20];29(38):57851-59. Available from: <https://pubmed.ncbi.nlm.nih.gov/36219392/>.
- [23] Hou WK, Liang L, Hougen C, Bonanno GA. Regulatory flexibility of sustaining daily routines and mental health in adaptation to financial strain: A vignette approach. *International Journal of Environmental Research and Public Health.* 2021;18(6):3103. [Internet] 2021 [cited 2023 Apr 20];18:3103. Available from: <https://www.mdpi.com/1660-4601/18/6/3103/html>.
- [24] Fitzsimons GM, Finkel EJ, Vandell MR. Transactive goal dynamics. *First Georgia: Duke University;* 2015;122(4):648-73.
- [25] Hsieh KY, Hsiao RC, Yang YH, Lee KH, Yen CF. Relationship between self-identity confusion and internet addiction among college students: The mediating effects of psychological inflexibility and experiential avoidance. *International Journal of Environmental Research and Public Health.* 2019;16(17):3225. [Internet] 2019 [cited 2023 Apr 20];16:3225. Available from: <https://www.mdpi.com/1660-4601/16/17/3225/html>.
- [26] Jing Z, Li J, Wang Y, Ding L, Tang X, Feng Y, et al. The mediating effect of psychological distress on cognitive function and physical frailty among the elderly: Evidence from rural Shandong, China. *J Affect Disord.* 2020;268:88-94.
- [27] Jayanthi P, Thirunavukarasu M, Rajkumar R. Academic stress and depression among adolescents: A cross-sectional study. *Indian Pediatr* [Internet]. 2015 [cited 2023 Apr 20];52(3):217-19. Available from: <https://pubmed.ncbi.nlm.nih.gov/25848997/>.
- [28] A study of stress sources among college students in Taiwan [Internet]. [cited 2023 Apr 20]. Available from: https://www.researchgate.net/publication/242748073_A_study_of_stress_sources_among_college_students_in_Taiwan.
- [29] (PDF) Self-regulated learning and academic achievement in Malaysian undergraduates [Internet]. [cited 2023 Apr 20]; Available from: https://www.researchgate.net/publication/44239679_Self-regulated_learning_and_academic_achievement_in_Malaysian_undergraduates.

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PLAGIARISM CHECKING METHODS: [Jain H et al.]

- Plagiarism X-checker: May 02, 2023
- Manual Googling: Jul 12, 2023
- iThenticate Software: Oct 18, 2023 (14%)

ETYMOLOGY: Author Origin

EMENDATIONS: 9

AUTHOR DECLARATION:

- Financial or Other Competing Interests: None
- Was Ethics Committee Approval obtained for this study? Yes
- Was informed consent obtained from the subjects involved in the study? Yes
- For any images presented appropriate consent has been obtained from the subjects. NA

Date of Submission: **Apr 26, 2023**

Date of Peer Review: **Jun 03, 2023**

Date of Acceptance: **Sep 29, 2023**

Date of Publishing: **Nov 01, 2023**