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Comparative Study

A Comparative Study on Examination Anxiety Among Students in Relation to Gender and School Locales

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ABSTRACT

Examination anxiety is quite a common phenomenon among students across the world. However, anxiety entails various psycho-physical fallouts which interfere in the normal healthy living of many students. The present study was conducted to find out examination anxiety faced by students in relation to two major factors i.e., Gender and locales of the schools. In Indian perspective, in some states, much disparity and comparisons are often drawn between the result outcomes of urban and mofussil schools. However, it is quite a matter of introspection into the quintessential matters that determine the examination results of students. Besides, various external factors like, socio-economic status of the population; school infrastructure; number of faculties; availability of books and proper tutoring, indigenous factors - play pivotal roles. Internal factor like, anxiety is a major factor that regulates academic performance. ***Objectives:*** The study primarily focused on the gender differences among male and female students in relation to anxiety experienced regarding examination on subjects like, Mathematics, Science (Physics, Chemistry and Biology) and Humanities (History and Geography). The second primary objective was to find out the differences among students in relation to the locales of their schools i.e., urban or mofussil schools. ***Materials and Methods:*** A standardized tool in form of a questionnaire was used to assess mild and severe cases of test anxiety from the participants of class VIII (n= 120). Both female and male students were randomly chosen to study. Descriptive and inferential statistics were employed where necessary. ***Results:*** Significant differences were found out in anxiety level among male and female school students. More detailed statistical outcomes are illustrated in the following part of the study.

Keywords: *Students, Gender (Male and Female), Examination Anxiety, Locales (Mofussil and Urban)*

In most cases students prefer class rooms to be enjoyable. Education is more liked when the workload remains to the minimum and assignments are deadline free. However, this idea is utopic. Some amount of stress and anxiety is good for better achievement, but academic pressure have been found to bring in debilitating effect on physiological as well as psychological well-being of students. There have been many instances where, due to excess stress and anxiety behavioural abnormalities have been found. Socially, students were found

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to be more withdrawn and unsociable. Karande et al. (2017) reported a study on anxiety disorder among students in Mumbai, India. The researchers after having run an extensive research and intensive study opined that city students needed care to treat anxiety, as they showed traces of anxiety. Anxiety disorder was found to strike almost every student. In one such similar study administered on Kolkata school students, Deb and Walsh (2010) found that girls suffered from higher level of anxiety than boys belonging to the 13-17 years age group. Anxiety was found to create problems in scoring high GPA and eventually, demoralized the idea of high achievement among many students.

In the opinion of Damasio and Carvalho (2013), anxiety is quite a common occurring emotion. Apart from human beings the feeling of anxiety is also found in other several animal species. Hallam (1992) researched and found that the term 'Anxiety' had its roots in a German word "Angst". According to Hallam (1992) anxiety is often used as general term to signify a feeling of apprehension often accompanied by physiological signs of discomfort. In fact, anxiety and fear are often found to occur simultaneously with each other. Even though, there have been previous extensive research works on anxiety in the field of behavioural science, with the advancing time, the issue of panic attack and anxiety among human beings seems to be ceaseless. Moreover, several psychopathological cases of anxiety disorder are found to escalate every minute. Apparently, endeavour to revamp the curriculum structure has been the top priority of curriculum planners but there still lies the gruesome effect of anxiety among students.

BACKGROUND

Anxiety was found to exist ever since time immemorial – in almost every human being, in varying level. But, in this competitive time, where work pressure seems to take toll on human health, anxiety and stress are the doubtless harbingers of fatal health issues. A very interesting observation outcome put forward by Mathyssek (2014) exposed the fact that in the recent years more emphasis is laid on the dimensional way of looking at anxiety. The dimensional way of assessing anxiety is basically detecting the symptoms and gauging the severity quantitatively. It was found by Walters et al. (2005). Anxiety due to examination fear had symptoms specifications. In terms of physiological fallouts, behavioural and emotional fallouts various studies were conducted to justify the detrimental effects of examination anxiety.

Physiological fallouts:

It was reported by researchers that anxiety occurring pre- examination increased heart rate among students of higher education (De Phil et al., 2011). Prior to the research the behavioural scientists also found out that anxiety due to examination altered the physical, behavioural and cognitive domains of an individual. Cassady (2010) mentioned that unlike generalized anxiety disorder which is generally characterized by experience of higher level stress crossing wide range of situations, examination anxiety creates higher state of nervousness among students. However, Cherry (2012) also noticed that students generally performed well when they had achievement anxiety. But exorbitant amount of anxiety deteriorated the performance of the students. Severe anxiety exhibited bodily symptoms like tremendous headache, gastrointestinal problems, feeling of excessive fear, problems in smooth breathing, abnormal amount of perspiration, pacing or fidgeting, uneasiness in every work, sobbing and crying, racing thoughts or over thinking and even often blanking out as well as trouble in remembering things and events. Lyness (2012) explained that the heightened rate of adrenaline released in the body during anxiety eventually caused

physiological difficulties.   Similarly, it was reported by Lee and Larson (2000) that examination stress among students brought upon various mental health issues, which again got reflected on various somatic disturbances. A very interesting report was presented by Banerjee and Henderson (2001) exposed that suicide due to examination anxiety occurred mostly among students of a certain age group i.e. 18 to 20 years. Correspondingly, in study conducted by Kumari (2014) clearly showed that there existed a strong correlation between examination stress and anxiety. Regardless of the level of education i.e. post graduation or under graduation, the students were found to be afflicted by examination anxiety. Bartwal and Singh (2014) opined that mild stress due to examination anxiety could be beneficial for cognitive tasks but a prolonged stress led to depression among students. The individual could be detected with neuropsychiatric disease entities as well.

Behavioural and emotional fallouts:

Anxiety revolving around examinations and surprise tests was found to bring upon immense emotional turbulence among students. Regardless of the level of education, students were found to panic during the pre-examination days. Test anxiety was found to have severe and intense pathological consequences among students which further affected their social, emotional and behavioural development (Lowe and Ang, 2012). When asked, students also showed profound aversion against their schools and educational institutions. Previous to this aforementioned study Murugesan (2005) investigated students suffering from exam related anxiety were fund to inclination towards skipping classes. Most of the anxious students were found to have inclination towards truancy. The researcher also found that too much anxiety caused apathy for preparation for lessons and assignments among students. Less preparation led to lack of practice for examination among students. Consequently, students were found to perform poor in academics. In relation to this observation, it is pertinent to put across that as per personality trait model, social anxiousness stemmed from feelings of shame, shyness. The students who performed poor on GPA (Grade Point Average) were found to be withdrawn, inhibited and quiet (Mark and Robin, 1997). In the following years again, researchers found that anxiety was the major predictor of academic performance (McCraty, 2007; McCraty, Dana, Mike, Pam and Stephen, 2000). Similarly, Zeinder (1990) also studied that high parental expectation from their children examination results were found to create panic among students. Such display of high expectation from parental fronts was found to take toll on the health among students during the pre-examination period. The chronic feeling of anxiety entailed various psychological ailments. Students were found to exhibit trails of immense lack of confidence and social-phobia. In terms of behavioural changes in examinations perspective, behavioural changes were found to be quite emphatic. External behavioural gestures like stammering, nervousness sweating of the palm, shortness of breath, excessive sweating, tremors or twitching of muscles, headache, fatigue or weakness and facial paleness.   Examination centred anxiety was found to produced debilitating health aftermath, which permanently damaged the urge to perform in academics. Anxiety damaged students' learning and academic performance. Anxiety proved calamitous for future development of students (Sub and Prabha, 2003). A very keen observation put forward by Bembenutty (2009) showed that anxiety and stress revolving academics and evaluation procedures were emotional subcomponents for emotional arousals which ultimately affected student's performance in examination. The cognitive faculty also got affected by worry and hindered attention among students. Mathews, Zeidner and Roberts (2006) also opined that concentration as well as information processing capacity of brain was hugely hampered due to anxiety. Most of the students suffered from anxiety from the class-room setting itself. Without even grasping the lessons taught in the class, they worried

about their performances in the examinations. Poor examination performance affected students post examination. Their estimation about the future academic outcome spawned anxiety among students. In order to suppress anxiety students were found to resort to drug taking and alcohol in-take. Poor examination outcome was found to be correlated with depression and ill habits like doing drugs. Even though, Truautwein, Ludtke, Koller and Baumert (2006) stated that students at a young age showed greater amount of examination anxiety, they became more emotionally stabilized as they grew older. Perhaps the intensity and magnitude of examination- anxiety changed over time. A very close observed research conclusion cited by Salend, (2011), demonstrated that students who suffered from anxiety experienced heightened level of self-doubt. They mostly had fidgety behaviour. Too much stress due to anxiety produced incongruence in thoughts and speech among students. They were found to be highly apprehensive.

Those suffering from test anxiety may experience heightened levels of self-doubt, rapid heartbeat or sweaty palms and off task behaviours such as fidgeting or staring (Salend, 2011). In children, test anxiety can manifest itself as tearfulness, a reluctance to go to school or a lack of concentration (Connor and Davidson 2003). Pressures from both parents and teachers can heighten these feelings.

As far as examination related anxiety is concerned, it was found by Rezazadeh and Tavakoli, (2009) that it was the most pervasive reaction that most students experienced throughout his academic life. According to the researchers, examination anxiety is "a set of phenomenological, psychological, and behavioural responses that accompany concern about possible negative consequences or failure of an exam or similar evaluation situations". An observation by Getzfeld (2006) showed that university students who were found to be anxious about their academic outcome, generally had problems in adjusting with social settings. The first year university students displayed more anxious behaviour.

The present study

The present study targeted at studying the anxiety level and differences among the students who hailed from the urban and school situated at the sub-urban regions i.e. the mofussil areas. Often disparities are made between the urban and sub-urban students based on the quality of education and facility availabilities. The urban students are often hypothesised to perform better in examination due to better availability of recourses and tutorials centres, whereas the students with mofussil backgrounds tend to feel lagged behind due to the lack of easy availability of the resources unlike the urban students. The sub-urban schools are often deprived from all the facilities related to education, unlike the students of the metro cities, who are privileged to enjoy the updated versions of educational appliances and books without many difficulties. But also speculating from the ground of gender disparity, females are still the backward section society for whom education is still a taboo. However, relying on the data collected in the present study, the aim is at projecting the differences of anxiety levels experienced in relation to academics and examinations comparably between the male and female students.

Objectives

The objectives of the study are to:
- To find significant difference in examination anxiety among male and female urban school students.

- To find significant difference in examination anxiety among the male and female mofussil school students.
- To find significant difference in examination anxiety among urban and mofussil male school students.
- To find significant difference in examination anxiety among urban and mofussil female school students.
- To find overall significant difference in examination anxiety among male and female school students.

Null Hypotheses

Determining the set objectives of the study, null hypotheses were constructed as:

H_0 1: There is no difference in examination anxiety level among male and female urban school students.

H_0 2: There is no difference in examination anxiety level among male and female mofussil school students.

H_0 3: There is no difference in examination anxiety level among male urban and mofussil school students.

H_0 4: There is no difference in examination anxiety level among female urban and mofussil school students.

H_0 5: There is no difference in examination anxiety level among male and female school students.

METHODOLOGY

Research Design

Descriptive survey research design was adopted for the present study. This type of research design is more appropriate and useful to find out information about local problems concerning local issues. Information gathered is factual and practically informative in character (Saraia, 2012).

Sample and data collection

The participants of the study comprised of class VIII students from the government schools of West Bengal. The schools chosen were under the West Bengal Board of Secondary Education. In total, eight schools were considered i.e., four urban and four mofussil schools. The questionnaires were administered on thirty male and thirty female students from both the mofussil and urban schools. Ethical issues were kept in concern during the data collection procedures from the participants. Prior permission was asked from the institutional heads to carry out the survey. In total, one hundred and twenty students (n=120) students were asked to answer the questionnaires. Probability sampling method was used to collect responses from the participants taken under consideration for the present study.

Tool

The tool used in the study as a questionnaire designed by Nist and Diehl (1990), a self – report tool.The questionnaire primarily, measured anxiety regarding test/ examination among students. The questionnaire was so designed, that students could provide their response regarding anxiety experienced around a test or examination. The tool contained ten items. The items used in the tool were in forms of statements set against five options for answering. The answering options ranged from 'Never' to 'Always'. The values ascribed for every items ranged from 1 to 5, i.e. for Never= 1; Rarely = 2; Sometimes=3; Often=4 and

Always=5. The highest value was 5 and least value was 1. The total score ranged from 10 to 50. In total, this self-reporting tool contained 10 items /statements. The tool was found to have high Cronbach alpha reliability value 0.9 (Ogundokun, 2011). For the present study, the Cronbach Alpa reliability value was found to be good as 0.85.

RESULT AND INTERPRETATION

As per the data collected from the participants, the responses were treated statistically. The outcome of the results clarified existence of anxiety among the students. As per the H_0 1: There is no difference in examination anxiety level among male and female urban school students, the statistical outcome showed that there was much difference noticed in examination of mathematics and humanities. For mathematics and humanities, there was much significant difference in the level of anxiety found among male and female urban students, where $p < 0.05$ level of significance. Therefore, the **H_0 1 was not accepted.**

The result outcome is shown in table 4.1. The average score of examination anxiety among urban male and female students are provided as graphical presentation is provided in table, 4.1.1.

Table 4.1: Difference in anxiety level among the male and female urban school students.

Subject	Gender	N	Mean	Standard Deviation	t-test	df	Sig
Science	Male	30	31.77	1.97	0.841	58	0.404
	Female	30	30.27	9.56			
Mathematics	Male	30	32.30	1.49	2.388*	58	0.020
	Female	30	33.33	1.85			
Humanities	Male	30	31.03	5.06	2.29*	58	0.025
	Female	30	26.73	8.94			
*Level of significance at 0.05 level.							

Table 4.1.1.: Graphical representation of difference among male and female urban school students
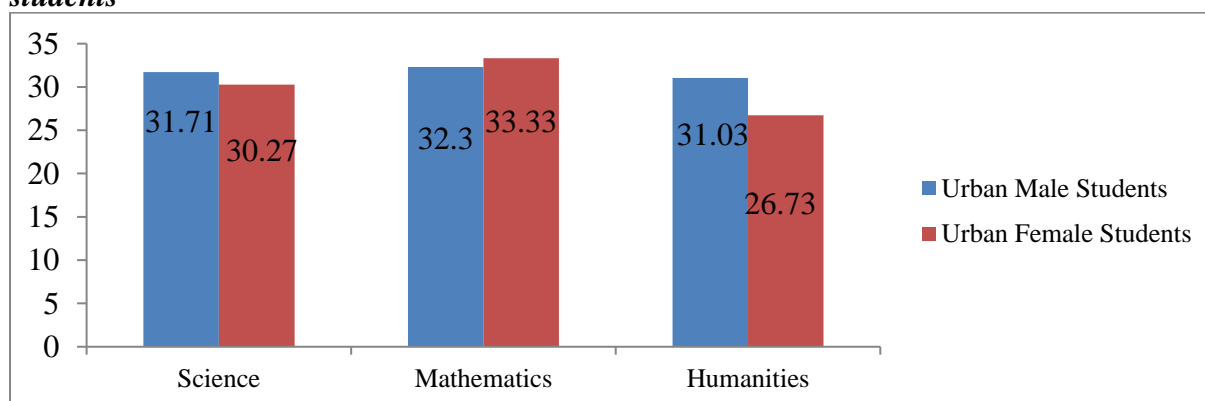
The average score of anxiety about examination on each subject (mathematics, science and humanities) are given in table.4.1.2.

Table 4.1.2: The average score of examination anxiety per subject among male and female urban school students

	Science	Mathematics	Humanities
Urban Male Students	31.71	32.3	31.03
Urban Female Students	30.27	33.33	26.73

As per the outcome of the above graphical representation, urban male school students displayed more anxiety about examination than their female counterpart. In case of Mathematics female urban students showed more examination anxiety than the male students. Unlike, mathematics, much heightened examination anxiety was found to exist among male urban students than female students.

According to the second hypothesis of this study, i.e. $H_0 2$: There is no difference in examination anxiety level among male and female mofussil school students. However, the difference between male and female mofussil school students was found to exist. Significant difference in mathematics examination anxiety among students was noticed, with $p<0.05$ level of significance, where $p=0.012$, therefore **H_0 2 stood not accepted.** The table 4.2 depicted the Mean and Standard Deviation as well as the t-test values.

Table 4.2: Difference in anxiety level among the male and female Mofussil school students.

Subject	Gender	N	Mean	Standard Deviation	t-test	df	Sig
Science	Male	30	32.50	0.39	-1.199	58	0.235
	Female	30	33.20	0.44			
Mathematics	Male	30	29.73	5.59	-2.607*	58	0.012
	Female	30	32.63	2.25			
Humanities	Male	30	30.36	4.75	-0.124	58	0.902
*Level of significance at 0.05 level.							

Further, table 3.3.2.1 showed graphical outcome about the difference in level of examination anxiety in terms of anxiety among mofussil male and female students.

Table 4.2.1: Graphical representation of difference among male and female mofussil school students

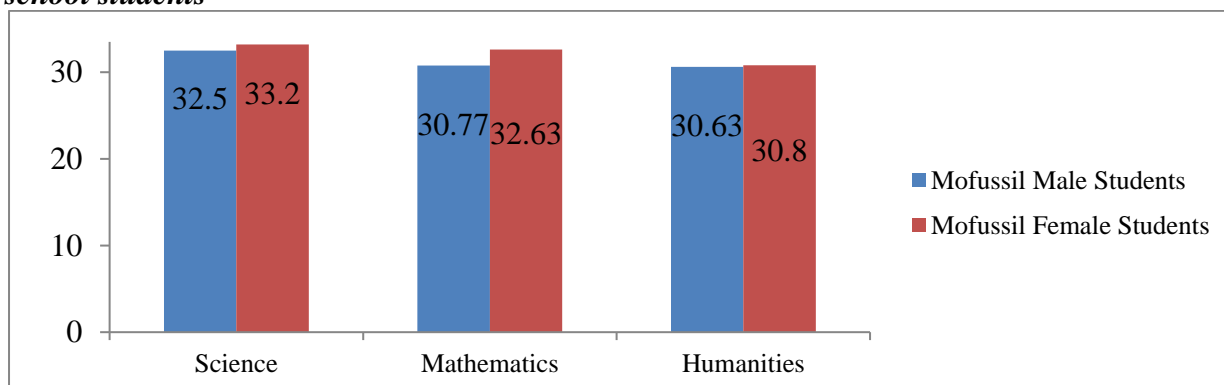

Table 4.2.2. Provides the detail of the average score of the examination anxiety among the mofussil male and female students.

Table 4.2.2: The average score of examination anxiety per subject among male and female mofussil school students

	Science	Mathematics	Humanities
Mofussil Male Students	32.5	30.77	30.63
Mofussial Female Students	33.2	32.63	30.08

As per the table 4.2.2. and graphical representation, mofussil female students displayed more anxiety for mathematics and science examination than male mofussil students. Only in case

of humanities subjects, examination anxiety was slightly less among female mofussil students than their male counterpart.

The third hypothesis of the study stated, H_0 3: There is no difference in examination anxiety level among male urban and mofussil school students. As per the statistical outcome, table 4.3 demonstrated that there was significant difference between urban male and mofussil male students in relation to mathematics examination, where $p < 0.05$ level of significance. (p=0.018).

Table 4.3: Difference among male urban and mofussil male school students

Subject	Gender	N	Mean	Standard Deviation	t-test	df	sig
Science	Male	30	31.77	1.977	-1.388	58	0.170
	Female	30	32.50	2.113			
Mathematics	Male	30	32.30	1.49	-2.431*	58	0.018
	Female	30	29.73	5.59			
Humanities	Male	30	31.03	5.06	0.316	58	0.753
	Female	30	30.63	4.75			
*Level of significance at 0.05 level.							

Table 4.3.1 showed the graphical representation of the differences in the level of examination anxiety among urban and mofussil male school students. The average scores of examination anxiety was of the students was calculated.

Table 4.3.1: Difference in anxiety level among the urban mofussil male school students.
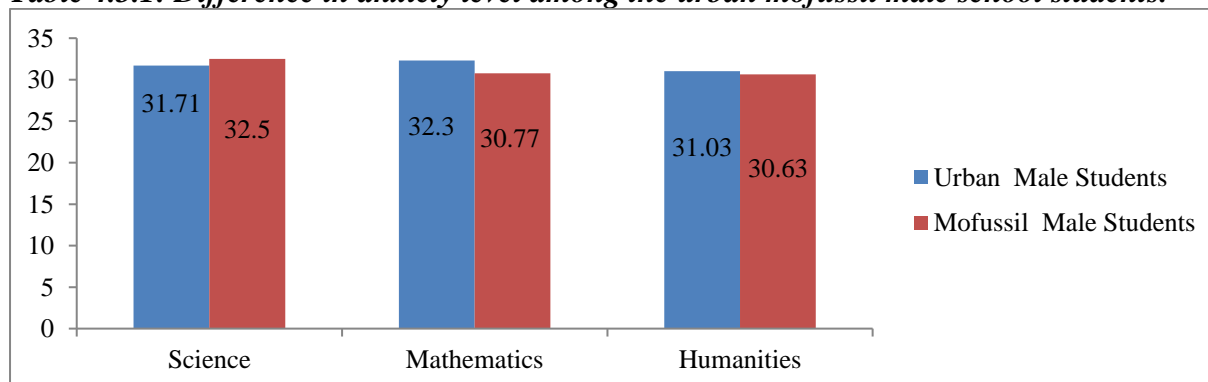
As per the average score obtained, the graphs showed that mofussil male students had greater examination anxiety in science than the male urban school students. Whereas, in case of mathematics, urban male students showed more examination related anxiety than the mofussil male students. Similarly, urban male students exhibited more anxiety in humanities related examinations than the mofussil male students. The average score are provided in table 4.3.2

Table 4.3.2: The average score of examination anxiety per subject among urban and mofussil male school students.

	Science	Mathematics	Humanities
Urban Male Students	31.71	32.3	30.63
Mofussial Male Students	32.5	30.77	30.63

According to the fourth hypothesis, i.e. H_0 4: There is no difference in examination anxiety level among female urban and mofussil school students, the computed outcome showed that in case of humanities subject related examinations, there was much significant difference found among urban and mofussil female students, where $p<0.05$ (p=0.040). Even though in mathematics and science related examination, significant anxiety was absent. Withstanding with the result outcome, the **H_0 4was not accepted.** Table 4.4. showed the output of the result.

Table 4.4: Difference among male urban and mofussil female school students

Subject	Gender	N	Mean	Standard Deviation	t-test	df	Sig
Science	Male	30	30.27	9.57	-1.629	58	0.109
	Female	30	33.20	2.40			
Mathematics	Male	30	33.33	1.86	1.257	58	0.214
	Female	30	32.63	2.428			
Humanities	Male	30	26.73	8.94	-2.105*	58	0.040
*Level of significance at 0.05 level.							

The graphical result shown in table 4.4.1 gave clearer understanding of the differences observed among the female urban and mosfussil school students. The average examination anxiety score demarcated the differences perspicuously.

Table: 4.4.1: Difference in anxiety level among the urban mofussil female school students.
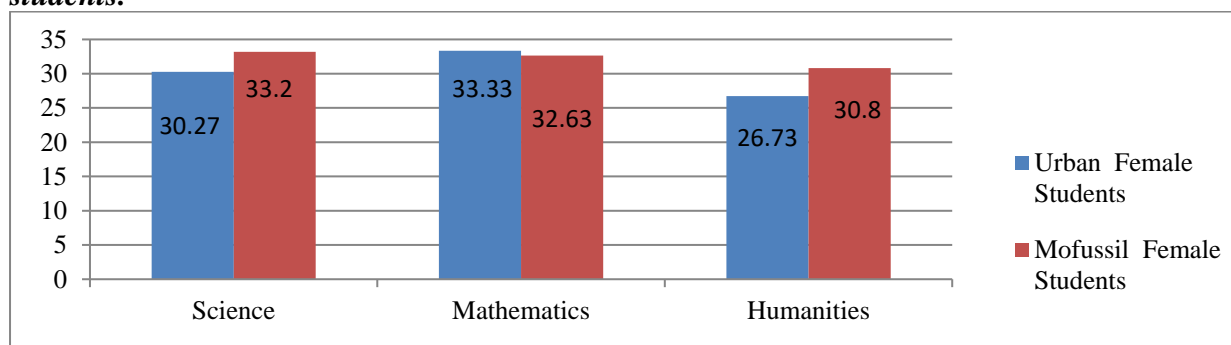
The graphical outcome clearly showed that urban female school students had lower anxiety in science and humanities examinations than the mofussil female students. Conversely, in mathematics related examinations, urban female students displayed a more anxiety than mofussil female school students. However, significant differences were only found out when t-test was administered.

Table 4.4.2 demonstrated the scores of the differences denoting the observable average scores of anxiety differences.

Table 4.4.2: The average score of examination anxiety per subject among urban and mofussil female school students.

	Science	Mathematics	Humanities
Urban Female Students	30.27	33.33	26.73
Mofussial Female Students	33.2	32.63	30.8

The fifth null hypothesis of the study i.e., $H_0 5$: There is no difference in examination anxiety level among male and female school students was refuted. The computation was administered on the entire sample of students (n=120) to find out the overall examination anxiety level in all the streams of subjects i.e., Mathematics, Science and Humanities. Table 4.5 showed that there was significant difference in examination anxiety level in mathematics distinctively, among male and female students, in the overall study. Therefore, the **$H_0 5$ was not accepted.**

Table 4.5: Difference among male and female school students

Subject	Gender	N	Mean	Standard Deviation	t-test	df	sig
Science	Male	60	32.13	2.062	0.421	118	0.675
	Female		31.73	7.071			
Mathematics	Male	60	31.02	4.257	-3.189	118	0.002*
	Female		32.98	2.167			
Humanities	Male	60	30.83	4.87	1.758	118	0.081
	Female		28.77	7.696			
* Significant at 0.05 level.							

However, the graphical representation in table 4.5.1 showed differences among the students (both male and female) in anxiety level, even though significant difference was projected in table 4.5.

Table: 4.5.1: Difference in anxiety level among the male and female school students.
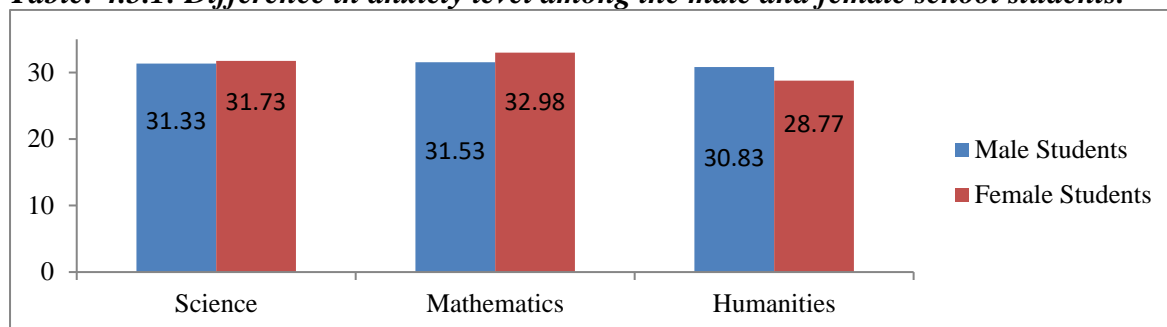
The table 4.5.1 showed that overall, male students had lesser anxiety in science examinations than female counterparts. Similarly, in case of mathematics, male students showed lesser anxiety than female students. Unlikely, mathematics and science, the male students displayed more examination anxiety in humanities subjects.

The following table 4.5.2 displayed the average score of examination anxiety among the students. The scores obtained were reflected in the graphical representation above in table 4.5.1.

Table 4.4.2: The overall average score of examination anxiety per subject among male and female students.

	Science	Mathematics	Humanities
Urban Female Students	31.33	31.53	3.83
Mofussial Female Students	31.73	32.98	28.77

CONCLUSION AND FURTHER IMPLICATION OF STUDY OUTCOME

There could be several conclusions drawn from the result outcome. However, the study outcome should not be generalised, as because the sample size was restricted to 120 (n=120) only. The study was delimited to test of anxiety level involving certain subjects. There could be other stream of studies and subjects for which students might have anxiety pre and post examinations. Apart from psycho-physiological internal factor like anxiety, there could be other factors and variables that affect or contribute to academic or examination performance of students. The study however, does set rooms for further considerations of factors like introspecting the loopholes in academic settings. There could more care taken for the up gradation of mental health and counselling for the students who are intimated about examinations and certain subjects. Teachers and the administrators, could also revamp the curricular structure and mode of communication with the students to understand the problems of the latter.

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Conflict of Interest
The author(s) declared no conflict of interest.