Stress in Relation to Teaching Aptitude of Student Teachers in Colleges of Education

Muraleedharan.T
Research Scholar in Education, Sai Nath University, Ranchi, Jharkhand, India

Abstract

The purpose of the present study is to investigate the relationship of Stress and Teaching Aptitude on the Secondary School Student Teachers. The study group consists of students teachers (N=550) from various colleges of education in Kerala, India .The methodology of the study was survey and data were collected by using Student Teacher Stress Inventory and Teaching Aptitude Test. The findings of the study revealed that the majority of the Student Teachers exert high stress from their academic and non-academic field due to various stressors and majority of the students come to the teacher education course have low teaching aptitude also. In the entire sample these two variables negatively correlated. So the study reveals that the Teaching Aptitude in some extend can minimize the impact of Stress in Student Teachers.

Key Words

Stress, Teaching Aptitude, Student Teacher and Colleges of Education.

I. Introduction

Stress is considered as an unavoidable experience in human life. Parents, Students, Layman, Politician, and Workers from any field irrespective of caste, creed, color, nationality, gender, education and financial status are experiencing mild to chronic stress. It comes from many sources- a difficult examination, an automobile accident, waiting in a long line, problem in the works place, strict teachers, and a day on which everything goes wrong. Mild Stress can be stimulating, motivating and desirable. But as it becomes more severe, Stress can bring on physical, psychological and behavioral. Interest in Human Stress has become widespread in recent years.

"The destiny of India is now being shaped in her classrooms", the Education Commission professed. The National Policy on Education 1986 also emphasized, "The status of the teacher reflects the socio-cultural ethos of the society; it is said that no people can rise above the level of its teachers". Such exhortations are indeed expressions of significant role played by the teachers. Hence education reforms invariably accord highest priority to improve teacher effectiveness. The issue of quality teacher education is closely tied up with the concern for the mental life of the learner who obliged to become future teachers, who are really considered as the social architect, harbinger of the progress of culture, maker of history and maker of a nation. A perusal of the reports of various commissions and committees like Kothari Commission, Chattopadhaya commission and justice Verma committee indicate the quality of the prospective teachers and teacher education courses.

The concept of student teacher in the education is highly emphasized in the development of teacher character and teaching ability. The student teachers are expected and directed to emit behavioral patterns in tune with this conceptualization. The short comings in individual student teachers to act congruent with such great expectations vested upon them, they are being driven stress. The educational policies and reforms of education, the autocratic approach of teacher educators, lack of infra structure facilities in the institution for convenient learning, stress and anxiety of teacher educators due to their poor salary in self-fiancé setter institution, misbehavior from the part of students during practice teaching, work load, job expectation, family expectation, etc. are some of the specific reasons for Student Teachers Stress. The study of student teacher is not away from the scenario of Study of Stress

The college of education of education is as complex in its functioning as any other educational institutions. A limited number of students and professors assemble together every day for duration of ten months and work and study tightly scheduled environment. Tasks need to be performed, subjects have to be learned and projects and assignments to be submitted like any other educational institutions. Yet, there are some distinctions from the regular colleges. First, internal assessment for fifty percentages of their total marks exists in Bachelor of Education (B.Ed) course. Second, duration of the course to the entire programs is only ten months. In spite of these two fundamental differences from the other courses most of the concepts in the B.Ed curriculum are new to every students and their scope are vast. All these Stressors influence the individual's well being in different degrees depending upon their personality traits, attitude towards the course, interest and teaching aptitude.

A person who is enjoying the study is said to be a lot of factors like interest towards the course, aptitude and attitude of the person toward that course. It is a generally acceptable fact that the success in teaching and satisfactory preparation of teaching profession is only possible to those people who have remarkable aptitude in teaching. Course satisfaction of the student teacher is a psychological indicator of possessing the teaching aptitude. Attempts have been world widely made to understand the relation between teaching aptitude and stress of student teachers. To be in a state of satisfaction or happiness is the prime motto of individual life. But how far and how long the student teachers are satisfied in one's own study? How far the courses plays role in developing the ability to become a potential and resourceful teacher? These questions seem more philosophical rather than psychological. Putting answers to these questions is not an easy task but we can leave it to Educational and Psychological investigators as issues for rigorous and serious researches.

A. Stress

Stress is a word of Latin derivation which was used popularly in the seventeenth century to mean hardship, straits, adversity, or affliction. According to Lazarus (1971) Stress refers to a very broad class of problems differentiated from other problem areas because deals with any demand which tax the system, whatever it is , physical system, a social system, or a psychological system and the response of that systems.

Manifestation of stress may be psychological, physical and /or behavioural. Anxiety is one of the first and important sign that an individual feels when unable to cope. Even of individual tries to hide this symptom he/she will probably find concentrating and thinking clearly difficult and will tend to focus on short rather than long-term outcomes. Minor physical ailments such as head ache, having an upset in stomach or sleeping problems are among the early signs of trouble. If external pressure is persistent, the individual may develop more sever symptoms such as ulcer, high blood pressure, shingles, etc. Behavioral manifestation may be withdrawal from those relationships which are proving difficult. Excessive smoking and drinking, use of tranquilizers, etc. may be an attempt to relieve of tension.

There are mainly three types of Stress theories, first one is stimulus oriented which view stress as a potential residing within the stimulus properties of the organism's environment. The second is the response oriented theories which defines stress as the response of the individual to the events of the environment. The third group of theory is the psychodynamic one which emphasize the events (both external and internal) which pose a threat to the integrity of the organism leading to the disorganization of personality.

II. Background of The Study

The success of any educational program largely depends upon the mental satisfaction and achievement of students. The case of the Bachelor of Education (B.Ed) course is not an exception for this statement. One will be surprised by knowing that majority of Sudent Teachers are in high level of personal frustration due to various reasons. The Student teachers have to perform different types of activities at a time which may affect their attitude towards the B.Ed course. They are supposed to do, study of different subjects which unfamiliar to them, plan and execute curricular and co-curricular activities, do routine assignment submission, and internship in schools.

During the last few years the occurrence of stress among student teachers has received wide attention. In the review of occupational stress and burnout among teachers, Kyriacov (1987) noticed stress is a wide spread phenomenon among teachers. Many factors responsible to stress of student teacher have been studied by previous researchers. These studies have shown that student teacher stress is reliably associated with a number of variables, including those intrinsic to the study, individual cognitive vulnerability and systematic factors. There is however gaps in our understanding of student teacher stress, most notably regarding effective interventions.

Certain attempts had been done by researchers as, E.A. Edward et al (1998) in their study on the title " Student Teaching: How Stressful is it?" suggests that student teachers feel stress during education and practice teaching, there are several stressors to the stress of student teachers and some of the student teachers feel chronic stress. Ramanathan, H. and Mc Dougle, o (1999) studied about 'Stress during student teaching: Prevention and coping strategies' and suggest some measures to cope with stress and they developed a standard inventory to measure student teacher stress. Wilkins-Canter, et al (2000) in their pilot study on the topic 'Learning to manage stress during student teaching' found out that a lot of students adversely affected by Stress. They developed and standardized a tool to manage the stress during student teaching.

A study made by Admiral, W.F Korthegan, F.A.J and Wubbles, J. (2000) examines the various factors, which affect the stress in student teachers. The study identifies various individual factors such as attitude, personality traits, interest, aptitude, etc. which have considerable influence on Student teacher stress.

Studies on Stress of Secondary School Student Teachers are very rare in connection with Teaching Aptitude; hence this study is very significant to explore the information about the stress of student teachers which is a prime obstacle to yield the maximum output of B.Ed course.

III. Statement of The Problem

In context with the above justification, the problem in hand can be stated as below,

Stress in Relation to Teaching Aptitude of Student Teachers in Colleges of Education

A. Operational Definitions of The Terms Employed

The present research has the following key terms which require specific explanations in order to communicate their precise definitions in the present context. The terms which need detailed contextual definitions are as following:

1. Stress

The term stress refers to a state of anxiety, heightened emotionality, and frustration that can be diagnosed from manifestation in physiological, psychological, occupational and socio-familial responses of an individual.

2. Teaching Aptitude

Teaching Aptitude is a combination of characteristics indicative of an individual's capacity to acquire (with training) proficiency in teaching and in the study, it is represented as the total score obtained in the teaching aptitude test.

3. Student Teachers

Student Teachers are meant the students studying for the degree Bachelor of Education.

4. Colleges of Education

It is the educational institutions where the Student Teachers studying for the degree Bachelor of Education in a regular and full time basis.

IV. Variables in The Study

The operational variables of the present study are as follows:
1. Independent Variable: Teaching Aptitude.
2. Dependent Variable: Stress.
3. Basal Variable: Gender, Locale and Type of Management.

V. Objectives of The Present Study

The aim of this study was to find out the nature and extend of relationship between two variables Stress and Teaching Aptitude in Student Teachers studying in Colleges of Education. In addition to this major aim, researcher interested to study about the different levels of Stress and differences in the perceived stress with regard to different samples selected for this study.

Thus the researcher proposed the following objectives for the present study,

1. To study about the extend and levels of Stress exert by Student Teachers studying in Colleges of Education.
2. To find out whether significant difference exists in the mean scores of Stress with regard to the sub samples based on

Gender, Locale, Marital Status, and Type of Management.
3. To estimate the nature and extend of relationship between Stress and Teaching Aptitude in Students Teachers.

VI. Hypotheses

In order to realize the above-mentioned objectives, the following hypotheses have been formulated:

1. Majority of the Student Teachers exert high stress in total sample and relevant sib-samples based on gender, nature of management and locale.
2. There exists significant difference in the mean scores of Stress of Student Teachers for the selected subsamples based on gender, locale and type of management.
3. There exists negative correlation between Stress and Teaching Aptitude in Student Teachers studying in Colleges of education.
4. There exists significant correlation between Stress and Teaching Aptitude in Student Teachers studying in Colleges of education.

VII. Research Methodology

The method followed to conduct the present study is survey.

A. Sample

The present study was carried out on a representative sample of 600 student teachers from the colleges of education in Kerala State. The final sample taken for the analysis was only 550 due to elimination of incomplete data. The sample was drawn by stratified random sampling method, giving due representation to factors like gender, locale and nature of management of the colleges.

Table-1 : Distribution of Sample as per the sub-sample

Locale	Type of Management	Gender		Sub-total	Grand Total
		Male	Female		
Urban	Government	36	49	85	270
	Self Financing	42	143	185	
Rural	Government	33	58	91	280
	Self Financing	53	136	189	
Sub-total		164	386	550	550

B. Data Collection Instruments

For this study, Student Teacher Stress Inventory was prepared and standardized by the investigator to measure the dependent variable, Stress of Student Teacher by giving due weightage to important categories of Stressor like Academic and Non-Academic. In academic Stressors investigator included the stressors such as Intrinsic to the Study, Role of teacher educators, Class room environment, Class room interaction with peers, Practice teaching, Examinations, Work load, Subject matter, Pre-practice teaching related activities, etc. and in Non-academic Stressors Family environment, Accommodation, Journey, Personality traits, Financial conditions, etc. were included. Item analysis was done by the procedure suggested by Edward, 1957. In the draft form of the Inventory consists of 70 stimulations but after item analysis 20 items discarded. In the final form of the Stress Inventory consisted of 50 items.

Criterion related **validity** was established by using the Student Stress Scale (Adaptation of Homes and Rahe's Social Readjustment

Rating Scale) as the external criteria. Both tools were administered on a sample of 50 student teachers and responses were collected to compute to compute coefficient of correlation through Pearson's product moment method. The value of 'r' (0.71) indicates high validity of the Student Teachers Stress Inventory. The **reliability** of this tool was established by Split-half method and the reliability coefficient is 0.69.

For the measurement of Independent Variable, Teaching Aptitude a standardized tool Teaching Aptitude Test Battery (TATB) was adopted, which was originally prepared by Dr. S.N Sharma, (1998), National Psychological Corporation 4/230 Kacheri Ghat, Agra. The validity and reliability of this tool were re-established as it was an adoption of the test which was originally constructed on 1998.

The investigator administered the tool in all the selected institutions through random sampling techniques.

C. Statistical Technique Used

The data has been analyzed using the following statistical methods,

1. Preliminary Analysis

Mean, Median, Mode, Standard Deviation, Skewness and Kurtosis were calculated by conventional statistical methods.

2. Computation of Different Levels of Stress

The sample categorized into three levels on the basis of scores obtained in the Student Teacher Stress Inventory using mean scores and standard deviation. Those subjects who obtained scores more than Mean+Standard deviation were considered as high level, who got below Mean-Standard deviation were considered as low scores and the scores lie in between Mean+ Standard deviation and Mean-Standard deviation were considered in Average Level.

3. Mean Difference Analysis

It was computed by using the equation for large and independent sample.

4. Computation of Coefficient of Correlation

In order to estimate the extent of relationship between the independent and dependent variables the techniques of Pearson Product Moment Coefficient of Correlation (Garret, 1981) was used.

5. Test of Significance of Correlation coefficient

The value of r was tested for significance using Fisher's t-test (Guilford, 1978)

VIII. Data Analysis

A. Preliminary Analysis

As the first step of analysis, the important statistical constants namely Mean, Median, Mode, Standard deviation, Skewness and Kurtosis of the selected variables were determined for the total sample separately.

Tabel 2 : Distribution of the Statistical Constants of the Variables

Sl.No.	Statistical Constants	Stress	Teaching Aptitude
1.	Mean	226.580	82.87
2.	Median	225.873	73.00
3.	Mode	224.459	70.40
4.	Standard Deviation	11.499	12.61
5.	Skewness	0.184	0.22
6.	Kurtosis	0.288	0.28

Table 2 reveals that the distribution is approximately normal in the case of Stress of Student Teachers as the three measures of central tendency are in close proximity and the indices of Skewness and Kurotsis are near to normal.

In the case of independent variable, Teaching Aptitude, there exists difference in the measures of mean, median and mode. The value of Skewness and Kurtosis are 0.22 and 0.28 respectively which suggests that the distribution of the variable Teaching Aptitude in Student Teachers is positively skewed and distribution is Platykurtic.

B. Inferential Analysis
The inferential analysis was done to prove the objectives and hypotheses

1. Extent and Levels of Stress in Total sample
Table 3 : Distribution of Total sample and Sub-samples in Different Levels of Stress

Sl.No.	Sub-sample		Size	Low level		Average Level		High Level	
				N	%	N	%	N	%
1	Gender	Male	164	20	12.19	70	42.68	74	45.12
		Female	386	84	21.76	140	36.26	162	41.96
2.	Nature of Management	Government	176	41	23.29	78	44.31	57	32.38
		Self-Financing	374	79	21.12	143	38.23	152	40.64
3.	Locale	Rural	270	62	22.96	104	38.51	108	40.00
		Urban	280	86	30.71	96	34.28	98	35.00
4.	Total Sample		550	124	22.54	211	38.36	215	39.09

Data in the Table 3 reveals that 215 students out of 550 (ie,.39.09 percentages) of the student teachers exert high stress in total sample. Among the sub-samples males exert high stress when compared to females. 32.38 percentages of Student Teachers studying in Government College exert high stress where as 44.31 percentages of students have average stress in this sub-sample, this may be due to the attitude and infrastructural facilities of these type Institution.

2. Test of Significance of Difference in the Mean Scores of Stress of Student Teachers for the relevant sub-samples based on gender, locale and nature of management.
The mean scores of Stress were compared for the different sub-samples based on the gender, locale and nature of management. The critical ratio obtained were interpreted using two tailed test of significance and presented in Table-4

Table 4 :Significance of Difference in the Mean
Scores of Stress of Student Teachers on the basis Sub-samples.

Sl. No.	Nature of the Sub-sample		No. of Sample	Arithmetic Mean	Standard Deviation	Critical Ratio
1	Gender	Male	164	226.275	10.938	
		Female	386	218.066	12.325	7.746
2	Nature of Management	Government	176	223.423	10.735	
		Self Financing	374	227.038	11.756	3.575
3	Locale	Rural	270	226.455	11.569	
		Urban	280	227.115	11.174	0.381

The test of significance of mean scores of stress for the sub-samples based on gender, locale and type of management proved that formulated hypothesis rejected only in the sub-sample based locale but the sub-samples gender and nature of management accepted the hypothesis. While comparing the mean scores of male and female obtained critical ratio is 7.746, which is more than 1.96 and 2.58 the values for 0.05 and 0.01 levels of significance so the formulated hypothesis is accepted by the sub-sample based on gender. While comparing the stress of students studying in Government Colleges to Self –Financing Colleges the obtained critical ratio is 3.575, which is also significant at 0.05 and 0.01 levels of significance. The critical ratio of the sub-sample based on locale is only 0.381, which is less than the values of 1.96 and 2.58 so the hypothesis rejected at both levels of significance.

This analysis implies that the Student Teachers in Colleges of Education experiences stress. The demographic variables such as gender and nature of management have significant difference in their experience of Stress where as no such difference exists in the case of Rural and Urban Students.

3. Estimation of Relationship between Stress and Teaching Aptitude of Student Teachers

This part of analysis was directed to examine the nature and extend of relationship between dependent and independent variable. For this purpose the investigator used the method of Pearson's Product Moment Coefficient of Correlation. The statistics was done by separately for Total sample and relevant sub-samples are given in Table 5

Table 5 : Distribution of Coefficient of Correlation between Stress and Teaching Aptitude of Student Teachers for Total Sample and Relevant Sub-samples.

Sl. No.	Sub-sample		Size of the sample	Coefficient of Correlation(r)	Verbal Interpretation (Garret,1981)
1.	Gender	Male	164	-0.435	Moderate negative correlation
		Female	386	-0.638	Moderate negative correlation
2.	Nature of Management	Government	176	-0.513	Moderate negative correlation
		Self-Financing	374	-0.593	Moderate negative correlation
3.	Locale	Rural	270	-0.725	High negative correlation
		Urban	280	-0.837	High negative correlation
4.	TOTAL SAMPLE		550	-0.566	Moderate negative correlation

Table 5 reveals that there exists substantial or moderate negative relationship between the scores Student Stress Inventory and Teaching Aptitude Test for the total sample and sub-samples based on gender and nature of management. But the sub-sample based on locale has high negative correlation. The students studying in Urban area has the correlation coefficient -0.837 when compared to rural area students (r=-0.725).

4. Test of Significance of Correlation Coefficient of Stress and Teaching Aptitude of Student Teachers for the Total sample and relevant Sub-samples.

The fourth hypothesis of the present study is to find out the significance of correlation coefficient of Stress and Teaching Aptitude for the whole sample and relevant sub-samples based on gender, nature of management and locale. This was done by computing the critical ratio by Fisher's t- test. The investigator calculated the 0.05 and 0.01 levels of significance for total sample and sub-samples male, female, government, self-financing, rural and urban student teachers. The results were interpreted using two tailed test of significance for appropriate degrees of freedom.

Table 6 : Significance of Coefficient of Correlation (r) of the Stress and Teaching Aptitude of Student Teachers

Sl.No.	Sub-sample	Size (N)	'r'	Critical Ratio	Whether Significant at 0.05 levels of significance	Whether Significant at 0.01 levels significance
1.	Male	164	-0.435	6.14	Yes	Yes
2.	Female	386	-0.638	16.23	Yes	Yes
3.	Government	176	-0.513	5.31	Yes	Yes
4.	Self-financing	374	-0.593	9.82	Yes	Yes
5.	Rural	270	-0.725	17.23	Yes	Yes
6.	Urban	280	-0.837	25.52	Yes	Yes
7.	Total sample	550	-0.566	16.07	Yes	Yes

Table 6 reveals that the coefficient of correlation between Stress and Teaching Aptitude of Student Teachers is significant in total, sample and every sub-sample based on gender, nature of management and locale at 1 percent and 5 percent level. This indicates that Stress is indirectly proportional to Teaching Aptitude.

IX. Major Findings

The major findings of the study are,

1. The student teachers of the colleges of education in Kerala, India experience high Stress in total sample and relevant subsamples such as male and female, rural and urban and self financing institutions. The majority of the Student Teachers studying in government colleges have average stress when

compared to other samples.

2. The hypothesis 'There exists significant difference in the mean scores of Stress of Student Teachers for the selected subsamples based on gender, locale and type of management' was verified by the researcher. While comparing the exerted stress of male and female, rural and urban and government and self-financing it could be found out that there exists significant difference in the exerted stress in the sub-sample gender and nature of management. The mean score of Stress Inventory for male is 226.275 and for female 218.066. This shows that males have high stress than females. When it tested for significance the obtained critical ratio was 7.746, which is significant at both levels of significance i.e. At 0.05

and 0.01 levels. So the formulated hypothesis is accepted by the sub-sample gender.

The sub-sample nature of management accepted also this hypothesis. The obtained critical ratio is 3.575, which is higher than the 1.96 and 2.58. So the hypothesis was accepted at both levels of significance. Whereas the sub-sample based on locale was rejected the hypothesis as it obtained the critical 0.381, which is less than the 1.96 and 2.58. That means the factors like locality was not influencing in differentiating the Stress among student teachers.

3. While estimating the nature and extend of relationship between Stress and Teaching Aptitude in Students Teachers the investigator could found out that, there exists negative relationship between the scores of Stress Inventory and Teaching Aptitude Test that means those students scored high in Teaching Aptitude Test, have less scores in Stress Inventory. That reveals that the variable teaching Aptitude has certain influence in minimizing the stress. In total sample it is only a moderate negative relationship (-0.566) but in the sub-sample Rural and Urban have high negative relationships -0.725 and -0.837 respectively. This reveals that Students having high Teaching Aptitude has low Stress.

4. The hypothesis, There exist significant Correlation Coefficient between Stress and Teaching Aptitude of Student Teachers for the Total sample and relevant Sub-samples was verified and found out that all the sub-samples accepted this hypothesis at both levels of significance. The calculated values are higher than 1.96 and 2.58 for total sample and sub-samples based on gender, nature of management and locale so this hypothesis accepted at 0.05 and 0.01 levels of significance.

X. Discussion of Results

The study of the relationship between Stress and Teaching Aptitude of Student Teachers reveals some facts sustaining in our educational programmes. In the analysis of extend and levels of Stress in Student Teachers reveals that 39.09 percent feel High Stress due to several reasons. This Stress may cause to Psychological and Physiological imbalance. Very few percentage of students i.e. 22.54% reported that they experience low stress during the B.Ed course. This is an accepted fact that this course exert some frustration to students even our modern concept about learning may be entirely different.

The present study could be revealed that Males and Females are different in their experience of Stress. Females experience more Stress than males, which implies that some of the academic and non-academic stressor can cop by males than females. But the females migrate to B.Ed course and teaching profession than males. In Government and Self-financing colleges, Self-financing college students exert more Stress than Governement college students. The reasons may be several, but the better healthy educational environment is more in government institutions. But the difference in Stress among Rural and Urban Students are not significant. Stress and Teaching Aptitude have significant negative relationship. The only one practical measure to minimize the stressful experience of the student teacher is make laws to conduct teaching aptitude test before admitting them to Teacher Education course. The entry behavior of the individual to this course should be controlled by criterion related evaluation, then only we can inculcate terminal behavior through this course. Unfortunately majority of the students joins in Teacher Educations have less or no teaching aptitude, the consequence far than the scope of this research.

This condition have to be eliminated in future then only a nation can dream a civilized society, as our destination shaping in our Class-room, Kothari. 1964.

XI. Suggestions for Further Research

The findings of the study have helped to identify the areas of research on Student Teacher stress so the investigator would like to suggest the following areas for further research,

1. The present study can be replicated for Student Teacher Studying for Primary School Level Teaching.
2. Investigation can be conducted to find out the influence of Attitude and Academic Interest on Stress.
3. A comparative Study on Stress can be conducted among Diploma in Education (D.Ed.) and Bachelor of Education (B.Ed) Student Teachers.
4. A correlational Study is possible Stress and Emotional intelligence or Multiple Intelligence.

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