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**STRESS AMONG SCIENCE STUDENTS OF CLASS 12TH FROM
DIFFERENT SCHOOLS OF BIHAR STATE AND MEASURES FOR
ERADICATION
(A case study based on the Contact program students)**

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ABSTRACT

The present study was designed to investigate stress among class twelve students from different schools of Bihar and to explore the methods to ameliorate their stress. The Contact Programme was sponsored by the Department of Science & Technology, Government of India, New Delhi, to motivate the class 10+2 students to study science and finally pursue research. This whole program was a unique programme designed to enrich the participants' interest in science subjects. It is a learning by doing and learning by recreation programme to promote research interests in the participants. This case study was carried out on two groups of Contact Program me students. In each group 30 students of Science stream were selected. The total number was 60. The eligibility criteria was 50% or more marks in their class tenth examination. The programme is designed like a project for science students, organized outside their school, in the other organization, and is fully residential.

Keywords: Stress, Contact programme, Class 12TH Science student, teacher, Co-ordinators, Relaxation.

INTRODUCTION:

Stress related disorder is increasing with the changing lifestyle among young group of high school and pre-University students. The aim of the present study was to investigate stress among 11th & 12th science students of Bihar. The Contact program of Ministry Science and Technology is a unique program by the Government of India which aims to provide the 12th standard students a method of learning by doing and learning during recreation. It is entirely different type of program which decrease the stress level of all students. Their enjoyment during period of learning revealed that the participants felt stress free during the programme except during the first two days. Stress has become an important factor of their life. Students of 12th class or higher secondary of adolescents age specially suffer with academic stress (Towbes & Cohen, 1996). They have to pass through the transition period

which occurs at an individual as well as community level. Stress emerges from different sources in our life. Franken (1994) defined stress as body reaction both at neurological and physiological levels to adjust in a new condition. Negative emotional feeling arises due to stress leading to behavioral changes (Baum, 1990). Stress is a non-specific biological emotional change. Negative emotions arise followed by anxiety and depression. Kaur (2018) reported about different symptoms of stress like disinterest in game and outings, social isolation, mental drain-out and inability to concentrate.

Anxiety has a very bad effect on student's personality. Ericson (1992) and Gazzaniga (2003) have reported that anxious students have difficulties in learning, problem solving ability and discussion making capacity.

The three major factors that cause significant stress among the 11th and 12th class student are- 1) excessive workload, 2) long working hours and 3) physical symptom/inability. Workload refers to the amount of work in a prescribed project. It includes both qualitative and quantitative components to complete the prescribed work. Working hours refer to the average amount of time spent by student on the project *i.e.*, average number of hours worked per day. Similar work has been reported by (Spector & Jex 1988) for undergraduate students.

This project has been undertaken to prevent or reduce the stress among the young pre-University or 12th standard students.

MATERIALS & METHODS:

Sampling/Study group:

The target group were selected through announcement made through emails to 12th class schools students and also to the Principals of different schools of Bihar state. The phone calls were also made, whenever felt urgent. Selected students, who enrolled themselves for a minimum of 8 days Contact Programme were selected. A total of 60 participants registered in each group for this project.

Participants for the contact programme comprised of a large group of students formed by students selected from different schools of the state. Two groups of Contact program students were selected, each group of 30 students (n=30) Gender or age was not considered as exclusion criteria. The Students who volunteer themselves to participate in the study were selected.

Multimodal management techniques were applied on the target group. They were trained and motivated with the help of very interesting charts, posters and models. With the permission of Co-coordinator /Head of the programme, the Academic Co-ordinator of the programme arranged learning tour in different organizations, colleges and industry which provided the participants a platform for recreation, to reduce their stress. The study samples consisted of 60 science students. The objective of the project was to motivate students to study science in higher classes as well and there should not be any drop out from science stream. Rather the teachers/trainers should give such an interesting scientific environment to the participants so that they feel stress free. Interesting classes were arranged with demonstration on the practical models, so that students could perceive science on a practical basis and understand its significance in life.

RESULTS

Stress is the natural response to challenges. The academic pressure on 12th class students to achieve high academic success exerts mental pressure which affects physical functioning.

In new environment of contact program stress can be recognized by identifying a number of changes in the student's daily routine activities.

At this point, teacher and co-coordinator plays a very important role to recognize their stress and they also try to solve their problem to reduce stress;

Academic achievement was analyzed by their performance during the 8 days of residential program during which the participants had to appear in objective written tests and oral tests by discussing questions and answer among themselves under the supervision of co-ordinator and teachers (Oug, Bessie & Cheong, 2009). They were evaluated by teachers throughout the interactions on a daily basis. They were also given marks on discipline and their performance in the cultural programme that was organized in the evening.

TABLE 1: SCHEDULE OF THE CONTACT PROGRAM FOR TALENTED SCHOOL STUDENT OF 12TH CLASS

DAYS	8:30 AM TO 9:00 AM	1 ST SESSION 9:00 AM TO 10:00 AM	2 ND SESSION 10:00 AM TO 11:00 AM	3 RD SESSION 11:00 AM TO 12:00 PM	LUNCH	4 TH SESSION 1:00PM TO 2:00 PM	5 TH SESSION 2:00 PM TO 4:00 PM	4 : 00 PM TO 4:30 PM EVENING
D	MORNING BREAKFAST	PHYSICS	BIOLOGY	CHEMISTRY	LUNCH	Interactive session	Discussion for poster	EVENG SNACKS
DAY	MORNING BREAKFAST	PLANTATION	INFORMATION TECHNOLOGY	BIOTECHNOLOGY INTRODUCTION	LUNCH	INTRO OF DIFFERENT PROJECTS	Doubt clearing session	EVENING SNACKS
DAY 3	VISIT TO DIFFERENT INSTITUTES OF PATNA IIT / IGIMS / NIT ,PATNA							
DAY 4	VISIT TO ORGANIZATION / INDUSTRY OF PATNA ICAR / SUDHA DAIRY							
DAY 5		INTRODUCTION TO DIFFERENT COURSES OF SCIENCES	PROJECT WORK	PRACTICALS		QUIZ	ROLE PLAYS	RELAXATION & EVENING SNACKS
DAY 6	RECREATION TRIP TO PLANETORIUM / BOTANICAL GARDEN							
DAY 7	POSTER PRESENTATION / SCIENCE EXHIBITION							
DAY 8	AWARD AND PRIZES AND REMUNIRATION TO THE STUDENTS AS PER GOVT NORMS OF THE PROG							

The cultural activities gave a lot of relaxation to the stressed students. In this program most students had moved out from their homes for the first time, causing home sickness and giving a lot of stress to the participants. This stress got reduced a little by making new friends and interacting with them during the programme.

From the interview it revealed that about 30 to 40 % participants were studying science against their own free will. About 45% were studying science of their own will. Only 5 % changed their mind for studying science subjects by counselling and attending contact programme.

Major reason of stress in participants during the Contact Programme was making and presenting model, chart or poster. These were the tasks given to the students. Every day they had to prepare at

least one of these and they had to present in the class. About 50 % students enjoyed the oral presentation but students who could not prepare, demonstrated extreme stress and depression. As this program was a residential one, counseling the participants in leisure time was very necessary which helped to reduce such stress among the participants.

Generally, it was observed that 60% students belonged to the moderate stress group while 40% suffered from stress of serious categories. Difference between male and female students was also observed in both academic and daily life stress. The female students suffered more than male students in both types of stresses. Further was been observed that students with high academic performance were less stressed than those with moderate or low academic performance.

Physical symptoms were necessarily measured through self-assessment of the students such as backache, headache, eye strain, sleep disturbance and gastrointestinal problems. This program had been organized to relieve the students from these stress symptoms and anxiety.

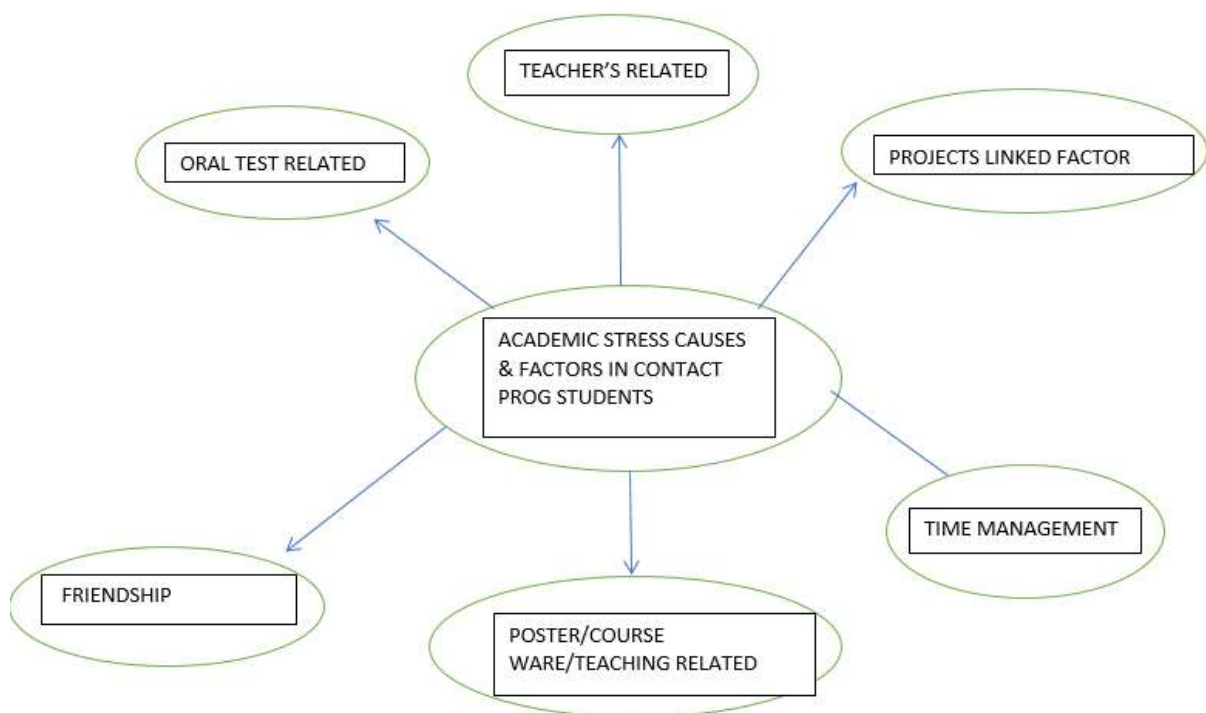


FIGURE 1: DIAGRAMATIC VIEW OF THE DIFFERENT STRESS FACTORS OF THE SCHOOL [STUDENTS OF THE CONTACT PROGRAMME]

DISCUSSION

One of the most important roles of a teacher or a counselor is to train their students to face problems in a positive way to achieve success in life. The students can de-stress themselves by identifying which stressors are simply avoidable and which are tolerable. Examination fear is also very important as every student has to appear in examination. Examination results are the highest cause of stress in this adolescent stage. Parent and teacher always force them to study for examination. This over burdens the students and the stress increases as they grow.

About 30 % of students in the study group were studying science forcibly because of their parents. This type of stress is very dangerous for these adolescent boys and girls. A number of suicidal attempts have been reported in similar conditions (Spirito, 1989). So, parents and teachers should take care of the student's own will in deciding the subjects to study.

In the present study, the academic stressors had been identified as high work-load, attendance and deadlines of submissions of work report. Balancing the contact programme related work during the specific time span, daily activities of life as well as dealing with financial problems became very difficult for some of the students. These stressors demotivate students to achieve high academic performance (Kerr et. al 2004).

An optimum level of stress in school students is normal and beneficial. Such positive stress response was observed during different events of the Contact Programme such as making models, chart and posters. Meeting different students from other schools and making new friend also helped students to learn and grow. On the same time, such activities can also lead to stress in some students at emotional and physical levels. Sometimes such stress, especially physical stress, can exceed normal limits and become toxic. The students of this age group may not feel the type of stress as an adult can feel. These adolescent students are experiencing stress at growing rates, and they are sometimes more stressed than the adults. Girls show more anxiety than boys. Similar observations were made by Wani *et al* (2006).

Anxiety and depression are the negative emotional experiences that arise due to stress. Stress is very common among adolescent higher secondary school students globally these days. Anxiety has detrimental effect on students especially during oral presentation or interaction during classroom. Anxious students show inability in problem solving and grasping capability. Such incidence has been observed by Kulsoom *et al.*, (2015) among medical student also.

Stress is the natural response to challenges. The academic pressure on 12th class students to achieve high academic success exerts mental pressure which affects physical functioning. In new environment of contact program stress can be recognized by identifying a number of changes in the student's daily routine activities. The students who are intelligent or brilliant become the high achievers but for those who are of lower than them in academic intelligence level, suffer from stress leading to depression. At this point, teacher and co-coordinator plays a very important role to recognize their stress and they also try to solve their problem to reduce stress. In the present study, the role of counselor or psychologist was very important. The Director of clinical research took interview of the participants one by one to know the causes of stress in these at 11th and 12th class science student. The students were very happy with the programme and most of them requested to extend the programme for one more week.

The 12th class science students have to handle a number of problems and increased academic demands. The students who were academically brilliant excelled in this contact program also. This programme proved to be efficient for those participants also who were not high academic achievers, as indicated by their positive response at the end of the programme.

CONCLUSION

The students got motivated by the teachers, academic coordinator and also with the interaction with their new friends. Thus, it can be deduced that such programme can play a role in making students stress free, and teaching them to stay positive and optimistic as well as to labour hard to achieve their goal. Results revealed that after the programme, the participants of 12th class had less stress level and their academic achievement improved considerably.

Such programme could be categorized as the "Recreation Management Model" and this type of programme should be exercised in every school for 11 and 12th class students for stress management. The contact program is a unique approach to help all students to achieve their goal by managing their stress in a very efficient manner.

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