



An Empirical Study of Stress Among School Going Adolescents And its Preventive Measures: Focus on Nagpur, Maharashtra.

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Abstract: An empirical study was planned to see the stress level among school going adolescents of Nagpur, Maharashtra from 14 to 17 years of the age and its preventive measures. A sample of 1000 school going boys and girls adolescent from 10th to 12th classes were drawn from the different schools of Nagpur. As per our research plan, 320 boys and girls adolescent were finally selected from their furnished information sheets. Therefore, boy and girl adolescents were distributed in four groups in view of their respective age. Stress scale was applied on four groups of boy and girl adolescents. The obtained scores on stress scale were analyzed by applying ANOVA and t-test to examine the significant differences. Therefore, in our final analysis, the boy adolescents from 14 to 17 years of the age were more stressed as compared to girl adolescents from 14 to 17 years. The obtained results indicate the significant differences between the scores obtained by boys and girls adolescents.

Index Terms- Stress, School going adolescents, Adolescents stress, Preventive measure.

INTRODUCTION

The present investigation is concerned with the effect of stress on school going adolescents and its preventive measures. Adolescence is a transitional stage of physical, emotional, cognitive, and psychological changes. The personality development and bodily changes of adolescents are seen rapidly and they face many challenges like seeking freedom, casting off all attachments and forming new interpersonal contacts during the period from puberty to maturity. Stress is the serious problem of adolescents all over the world. Most of the adolescents have developed their pseudo world in their own self and when they are confronted with actual situation, they are unable to handle the situation and thereby it throws them to a stressful situation. Therefore, preventive measures facilitate to reduce the stress level among the school going adolescents and enable them to enjoy all the fruits of educational, social and national development.

Moreover, a large number of school going adolescents generate their stress when they have excessive arguments with their teachers and parents, rejecting and neglecting behaviors are perceived from others, they feel trouble with classmates, their break up with boy or girl friend, exposed to violence, low financial status of their parents, sexual harassment, serious illness or injury in their family and they are unable to obtain high marks in the academic institution and fail to compete with other adolescents. Most of the adolescents are reluctant to share their problems with their parents and teachers and thereby, it leads to stress level.

Stress is categorized by feelings of tension, frustration, worry, alienation, sadness, withdrawal from reality and security which commonly last for few days and months. Stress is the body's reaction to a challenge, which can be anything like outright physical danger and it affects the mental frequency of adolescents. The human body responds to stressors by activating the nervous system and specific hormones. In the human brain system, hypothalamus signals the adrenal glands and it produces adrenaline and releases them into the bloodstream (Margaret R. Paccione-Dyszlewski, 2020). Consequently, hormones increase the rate of heart beat, rate of respiration, pulse rate, blood pressure and circulation, vocal expression, muscular tension, pupils dilate to improve vision, and the liver releases stored glucose to increase the body's energy and the adolescents experience stress and acts strongly.

Therefore, when any internal or external stimulus creates disturbance to the dynamic equilibrium of the body system, the individuals feel stress. According to stress theory the certain stimulus is perceived as threatening cause reactions that have adverse physiological and psychological reactions. Nagabhana (2021) has investigated the school going Indian urban adolescents and concluded that generally, the urban adolescents perceived stress in their family conflicts, academic pressures and issues among peer relationships. Steven Zauderer (2023) has made an empirical study on high school students and reported that nearly 45 percent of students in high school admit to being stressed almost every day in school and 61 percent of teenagers between the age from 13 to 17 years feel stress over producing satisfactory grades, around 500 Japanese students below the age of 20 years kill themselves each year. He also explained that the pressure to do well on examination, financial commitments, tension caused by relationships with peers, family and romantic partners and difficulty of balancing many activities at once, create stress among the school going students.

We experience good and bad stresses in our daily life from family, friends, peer groups and society. Good stress is an optimal amount of stress which energizes and motivates to do our best work in life and encourages us to develop effective coping strategies to deal with our challenges. On other hand, bad stress represses our capacity of coping mechanisms and we do not have the ability to meet the challenge. Hence, the solution is to adapt change and find methods to turn that bad stress into good stress.

Signs of stress in adolescents:

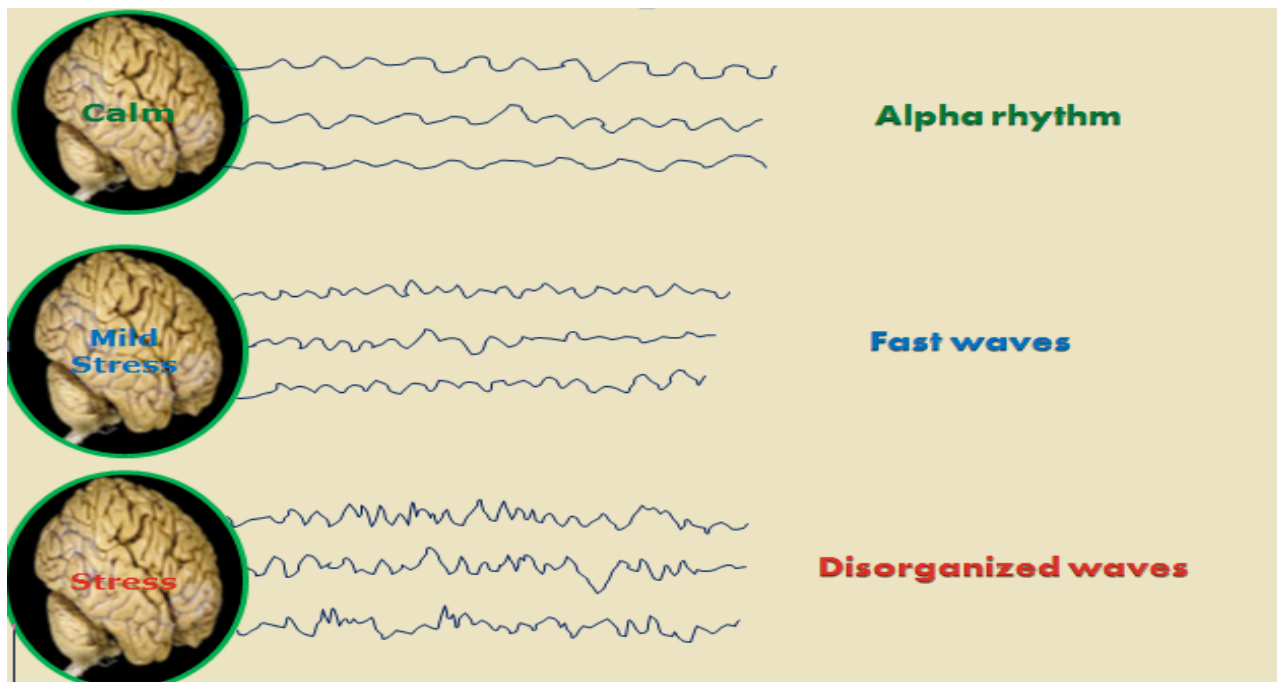
Some noticeable signs and changes can be observed among the adolescents before starting the stress.

- They may complain headache, stomach contraction, muscle pain, and tiredness.
- Their working style can be slow and withdraw from people activities.
- They can manifest their anger and irritability before others.
- They cry more often and appear teary-eyed.
- They feel helpless and lonely in their life.
- They feel chronic anxiety, tension and nervousness.
- They can change their sleeping and eating habits.
- They suffer from insomnia, nightmares and being too busy to eat.
- They feel difficulty in concentrating in their works.
- They can start experimentation with drugs and alcohol.
- Their self-disclosing ability can be low and unable to manifest their ideas and thoughts before others.
- Their interaction and persuasion with others can be deteriorated.
- Their thinking, imagination and creative ability can be seen low.
- They can generate sadness and dissatisfaction in their life.

The increasing stress level of school going adolescents can be understood with the help of following brain waves mentioned in figure-1. When the school going adolescents are in the state of calm, the brain waves are regular and organized. Such brain waves are known as alpha rhythm. In the case of mild tension, anxiety and stress the frequency of brain waves become fast and it is considered as fast waves. In the case of stress the brain waves become disorganized. As a result physical and muscular changes such as heart beat, pulse rate, rate of respiration and blood circulation

are increased and adolescents start disorganized behaviours and are unable to do mental, intellectual and academic work properly.

Figure-1



Preventive Measures and approaches for adolescents:

The following strategies should be adapted by school going adolescents to reduce their stress level.

- Start meditation in the early morning under the open sky.
- Exercise and eat regular meals.
- Have proper sleep.
- Visualize and enhance positive thinking.
- Talk and share your problems with other person.
- Perform progressive muscle relaxation of the body.
- Set small goals and break tasks into smaller and manageable chunks.
- Focus on your necessary works.
- Minimize and control unrealistic expectations in life.
- Participate in enjoyable activities.
- Accept yourself as you are and identify your unique strengths.
- Create the ability and habit to learn from mistakes.
- Avoid your friend who is involved in bad practices.
- Help someone who is seeking for help.
- Do not feel regret and remorse in life.

Preventive Measures and approaches for parents:

Every parent has a dream to see their children successful in their lives. Parents can do everything for their children to establish a better parent-child relationship. Therefore, when adolescents articulate their problems before parents, adolescents should be facilitated by their parents to reduce the forthcoming problem and stress. Besides, proper love and affection, encouragement, educational facilities and social support should be given to the school going adolescents by their parents to mitigate their problems. Moreover, proper counseling and guidance should be provided to adolescents for developing their mental

health and ray of hope in life to make them stand in good steads for taking the challenges of life and scale new heights.

The following precautions should be taken by parents to reduce the stress level of school going adolescents.

- Parents should be loving and affectionate towards their adolescents.
- Parents should be aware of their adolescent's behaviour and emotion.
- Parents should established trust and believe in their adolescents.
- Parents should be available and open to talk to their adolescents when he or she is ready.
- Parents should encourage the expression of feeling in the family before the adolescents.
- Parents should teach and model good emotional responses for their adolescents.
- Parents should encourage their adolescents when they feel anxiety and tension.
- Parents should encourage the healthy and diverse friendships.
- Parents should encourage their children for physical activity, good nutrition and proper rest.
- Parents should teach the moral responsibilities to adolescents to solve the problems and stress.
- Parents should remind their adolescents of his or her ability to get through tough times, with affection and support of family and good friends.
- Parents should keep their children aware of anticipated family changes.
- When the parents monitor television programs they should kept in mind that could worry their adolescents and pay attention to the use of computer games, movies, and the Internet.
- Parents should use encouragement and natural consequences when poor decisions are made in the family.
- Parents should help their adolescents to participate in the extracurricular activities and limit over scheduling.
- Parents should make their adolescents aware of the harmful effects of drugs and alcohol before experimentation begins.
- Parents should monitor their own anxiety and stress level properly.
- Parents should contact adolescent's school teacher with any concerns and make him or her part of the team available to assist their adolescent.
- Parents should seek the assistance of a physician, school psychologist, school counselor, if stress continues to be a concern.

NEED OF THE STUDY

In our Indian society a large community of school going adolescents is suffering from anxiety, tension, frustration, incompetence and helplessness. Consequently, they develop stress and are unable to take the challenges of quality education. Moreover, they are unable to enjoy healthy and prosperous life. However, even today number of stress among school going adolescents is mushrooming day by day along with the increase in population. The dilemma of stressed adolescents is that they have no separate schools as the other adolescents have, into which to withdraw and seeking solace in an educational identity of their own. Stressed adolescents are unable to obtain high marks in the school because they are less competent to benefit from speech of teachers in the class-room and feel dissatisfaction in their life.

Therefore, it is necessary to study of stress level among school going adolescents and its preventive measures. The present study will facilitate to school going adolescents, parents, and school teachers, psychologists to reduce stress level of adolescents, counselors and others in their respective fields of research. Moreover, this study will contribute to excelling the educational efficiency of adolescents for the national development in the age of modernization.

Sample:

The sample constituted of 1000 school going boys and girls adolescent from different schools of Nagpur city, Maharashtra. The age of adolescents ranged from 14 to 17 years. As per our research plan boy and girl adolescents were distributed in four groups. Such as boys adolescent from 14 to 15 years, and from 16 to 17 years, whereas girls adolescent from 14 to 15 years, and from 16 to 17 years, including from 10th to 12th

classes. Therefore, 80 adolescents from each group were finally selected by their furnished information given by determining the sample size for research activities (Robert V. Krejcie & Daryle W. Morgan, 1970). Therefore, 160 adolescents from boys and 160 adolescents from girls were selected separately for the final study. Thus, four groups were matched with respect to age, sex, income, education, family size and area of residence.

Hypotheses:

In view of previous researches the following hypotheses were formulated;

It was hypothesized that boy and girl adolescents from 16 to 17 years of the age will be more stressed as compared to boy and girl adolescents from 14 to 15 years of the age. Consequently, boy and girl adolescents from 16 to 17 years of the age will obtain high scores on stress scale than boy and girl adolescents from 14 to 15 years of the age.

Secondly, girl adolescents from 14 to 15 years of the age will be less stressed in comparison to boy adolescents from 14 to 15 years of the age. Subsequently, boy adolescents from 14 to 15 years of the age will obtain high scores on stress scale than girl adolescents from 14 to 15 years of the age.

Thirdly, boy adolescents from 16 to 17 years of the age will be more stressed as compared to girl adolescents from 16 to 17 years of the age. Therefore, boy adolescents from 16 to 17 years of the age will obtain high scores on stress scale than girl adolescents from 16 to 17 years of the age.

Fourthly, boy adolescents from 14 to 17 years of the age will be more stressed as compared to girl adolescents from 14 to 17 years of the age. Thereby, boy adolescents from 14 to 17 years of the age will obtain high scores on stress scale than girl adolescents from 14 to 17 years of the age.

Lastly, boy adolescents from 10th to 12th classes will be more stressed in comparison to girl adolescents from 10th to 12th classes and significant differences will be found between scores of boy and girl adolescents.

RESEARCH METHODOLOGY

Procedure of investigation:

Each adolescent of the four groups was contacted personally for administering the Stress scale. The adolescents were from different schools of Nagpur city. Therefore, the investigator contacted them for collecting the data either in their respective schools or in their residing places. Sometimes, the investigator administered the scale to a single adolescent and sometimes, in small groups varying from 02 to 05 adolescents. For administering the scale, the time given was up to 25 minutes in a group so that data could be collected smoothly and properly for the empirical study.

Tools used:

1.) Personal Information Sheet

Personal information sheet included questions regarding age, sex, education, family size, income, family status and area of residence. Therefore, nearly 500 boys and 500 girls adolescent of different schools of Nagpur city of Maharashtra were given a personal information sheet in different small groups to fill in. By their furnished information, 80 adolescents were selected separately from each group. Therefore, 320 adolescents were finally selected in which 160 boys and 160 girls adolescent were included in the final study.

2.) Stress Scale

Stress Scale Shai Marcu, M. D. (2011) consists of 30 items including positive and negative items. Each item has four response categories: 'Almost', 'Sometimes', 'Often', and 'Usually'. Hindi translation is made by author (2023). The minimum possible score on the scale is 0 and the maximum possible score is 90. The highest score on the Stress Scale indicates the highest level of Stress.

RESULTS AND DISCUSSION

Stress level of school going adolescents was determined by using stress scale. For testing the hypotheses one-way ANOVA was performed to see the variations among the different age group adolescents in their scores of Stress scale. The result of ANOVA is mentioned as under in Table-1.

Table-1

Source of Variance	Df	Ss	Ms	F	P
Between groups	3	10036.94	3345.65	461.47	< .01
Within groups	316	2291.55	7.25		
Total	319	12328.49			

The result indicates that the groups of 10th to 12th classes school going adolescents create significant variations in the Stress scores ($F=461.47$, $P< .01$). Therefore, school going adolescents have a significant role in the obtained scores of Stress scale. Thereafter, to examine the significant differences between obtained Mean of school going adolescents t-test was applied. The statistics of group differences are exposed in Table-2.

Table-2

No. of Groups	Adolescents Groups	N	Mean	S D	Group Difference	t-ratio	P
A	Boys adolescents from 14 to 15 years	80	40.54	4.05	A B	10.72	P<.01
					B C	25.80	
B	Girls adolescents from 14 to 15 years	80	34.56	2.91	C D	7.76	
					A C	13.67	
C	Boys adolescents from 16 to 17 years	80	49.60	4.33	AD	6.97	
					BD	19.84	
D	Girls adolescents from 16 to 17 years	80	44.74	3.55			

The result table indicates that boys and girls from 14 to 15 and 16 to 17 years have obtained 40.54, 49.60, 34.56, and 44.74 respectively in their Mean scores on Stress scale. On the basis of obtained Means the S D of boy and girl adolescents was tabulated 4.05, 4.33, 2.91, and 3.55 respectively. Therefore, to examine the significant difference between the two Means the t-ratio was applied.

The obtained t-ratio was $t= 10.72$ between the boys and girls adolescent from 14 to 15 years, the obtained t-ratio was $t= 25.80$ between the girls (from 14 to 15 years) and boys (from 16 to 17) adolescent, the obtained t-ratio was $t=7.76$ between boys and girls adolescent (from 16 to 17 years), the obtained t-ratio was $t=13.76$ between boys adolescents from 14 to 15 and 16 to 17 years, the obtained t-ratio was $t=6.97$ between boy adolescents from 14 to 15 years and girls adolescents from 16 to 17 years, and obtained t-ratio was $t=19.84$ between girls adolescent from 14 to 15 and 16 to 17 years. The obtained t-ratio was significant on the 0.01 of confidence. Therefore, average Mean score of boy adolescents was 90.14 and average Mean score of girl adolescents was 79.30. Subsequently, school going boy and girl adolescents effectively reinforce the obtained scores on Stress scale. The highest stress level was found among boys adolescents

from 16 to 17 years and lowest stress level was found among girls adolescents from 14 to 15 years. Thus the hypotheses of the present study are confirmed.

CONCLUSION

In our final analysis school going boy and girl adolescents are suffering from stress in their life. The findings of the present investigation indicated that from 14 to 17 years age group school going boy and girl adolescents create a significant difference in the scores of the Stress scale. Consequently, it is quite clear that boy adolescents are more stressed as compared to girl adolescents. However, some school going adolescents which have remained impervious to reduce their stress level to achieve their goal in life and respond to the new winds of change. They try to mix up with the sharp adolescents in the class room and want to compete with them. Still the stark fact remains that the vast majority of school going adolescents remain out of the charmed circle of quality education and lives in the world of stress and dissatisfaction in the age of modernization.

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