

Assessment of Stress Level among College Going Students and its Effect on Diet The

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Abstract—College life is one of the most scintillating and memorable experience in an adolescent's life. It is in college that an adolescent enjoys the vibrant environment, the company of friends and the various academic and co-curricular activities which enriches nurtures and prepares the adolescent for adulthood. Stress is the process by which an individual or person react when opened to external or internal problems and challenges. "the organism processes numerous systems to coordinate such adaptive responses both at systematic and cellular levels "by this, stress has direct effect on the brain and the whole anatomy of the body as such failure to adapt to a stressful condition can result in brain malfunction, physiological problem and also many areas of psychological challenge's in the form of depression, anxiety, pain and burnout etc. With the above background, present study was conducted with the aim to assess stress level on college going students and its effect on diet. The present study recruited 100 students (50 girls, 50 boys) from Delhi and Faridabad region, belonging to colleges of 19-22 years of age. Standardized questionnaire was used to assess stress level and 24hour dietary recall method was selected to analyse dietary profile. There was a positive correlation between nutrient intake and stress level among the respondents. The present study concluded that respondents those who had increased stress tend to eat more as compared to those who had decreased stress.

Keywords: Stress, anxiety, dietary recall method, etc.

INTRODUCTION

College life is one of the most scintillating and memorable experience in an adolescents life. It is in college that an adolescent enjoys the vibrant environment, the company of friends, and the various academic and co-curricular activities, which enriches, nurtures and prepares the adolescent for adulthood. College students are at a critical period where they are about to enter their adulthood. They are expected to be the elites in the society. Thus, they should enhance their stress management abilities so as to live a healthy life after entering the society, [3]

Every student aspires to pursue academic success to achieve respect, family pride and social mobility. This results in extremely high academic demands and extraordinary pressure on students and specially adolescents. As a consequence of stress and demands to perform well in examination the

students are not able to enjoy their academic life and it becomes joyless and burden for them. [4]

Stress is the process by which an individual or person react when opened to external or internal problems and challenges. "the organism processes numerous systems to coordinate such adaptive responses both at systematic and cellular levels "by this, stress has direct effect on the brain and the whole anatomy of the body as such failure to adapt to a stressful condition can result in brain malfunction, physiological problem and also many areas of psychological challenge's in the form of depression, anxiety, pain and burnout. [9]

But if the students feel intense stress before and during examination, it has consequences for mental health and somatic symptoms. As per the report every year about 25,000 students in the age group of 18 to 20 years commit suicide during the examination month (i.e. March to June). Due to high examination stress, students spent less time in socializing and get engaged in passive and active leisure which may further magnify the effects of examination stress [8]

Types of Stressors

Stress is a reality of everyone's life. At the point when individuals search for help, they are regularly managing conditions, circumstances and stressors in their life that leave them feeling emotionally and physically troubled. Countless people feel that they have very little resources or assistances to deal with the high levels of stress they are experiencing. Circumstances that trigger stress are known as stressors. Stress is not only negative things that happens positive things also cause stress. In our life we only know stress to be bad but that's not the cases. There are two types of stressors which is the positive stressors which is known as eustress and negative stressors which is also known as distress.

There some positive situations that causes a person to be stressed up. Some examples of these circumstances are promotion at work, starting a new job, getting married and having a child which are few of the many. Positive stressors are usually not noticed because it has some characteristics.

On the other hand, negative stressors happen to be the bad things or events which causes us to be stressed and these type of stressors are easily noticed. Examples of negative stressor are death of a loved one, unemployment, divorce and illness which are also few of many. There are also some characteristics of negative stressors that's makes it easily for them to be noticed.

There is another type of stress which is the neustress and "this is any kind of information or sensory stimulus that is perceived as unimportant". [2,10]

Higher education system and examination system in India

Education is critical for economic and social development. It is crucial for building human capabilities and for opening opportunities. The second priority has been given to develop higher education system. Elementary education creates the foundation for further learning whereas the importance of secondary education lies in the fact that it forms a link between elementary education and higher education. But higher education system adds real value to human resources and produce wealth creators and leaders in all fields – business, professions, politics, administration, and creative pursuits. Over the past seven decades, India made impressive strides in the field of higher education. The quality of the bulk of our graduates is appalling. The students are doing their best – they are studious and disciplined, they cram, clear entrance tests, pass examinations, and obtain degrees. [7]

The effects of stress on eating patterns

Three methods of identifying whether individuals are predisposed to stress induced eating have been proposed. The first method is based on weight. It is suggested that individuals of normal-weight will decrease their eating when stressed and the eating of individuals who are obese will remain unaffected. The second method involves dietary restraint. It is proposed that individuals who work to control their eating when not stressed, will increase their eating when stressed whereas individuals who do not normally control their eating will remain unaffected. Lastly, the third method is based on gender. It is postulated that women are more likely than men to increase their eating when stressed, especially toward particular foods. The individual differences model will be used as the theoretical framework for the basis of this study, in which the links between various aspects of eating behavior and stress will be examined in order to illustrate some of the underlying themes of the stress-eating paradigm. [3]

METHODOLOGY

Methodology is the systematic, theoretical analysis of the methods applied to a field of study. It comprises the theoretical analysis of the body of the methods and principles associated with a branch of knowledge. Typically, it encompasses concepts such as paradigm, theoretical model, phases and qualitative or qualitative techniques.

The methodology is the general strategy that outlines the way in which research is to be undertaken and among other things, identifies the methods to be used in it. These methods, describes in methodology, define the means or modes of data collection or sometimes how a specific result is to be calculated. [6]

A study was conducted to assess the stress level on college student and its effect on diet.

The study was conducted in Delhi and Faridabad. Target population comprised of college students (age group 19 to 22 years).

Random sampling was done to collect the sample size of 100 subjects, comprising 50 each males & females respectively.

Tools and Techniques

A detailed questionnaire was prepared for the data collection on personal information of the respondents.

- Standardized questionnaire was used to assess the stress level.
- Qualitative analysis of dietary profile was done by 24 hour dietary recall method (for 3 consecutive days)

A general questionnaire was prepared in which gender, marital status, education, family income was being asked to respondents.

To assess stress, a standardized questionnaire [5] was chosen which covered different aspects like physical indicators, sleep pattern, behavioral indicators, emotional indicators and personal habits related to stress.

24 Hour dietary recall can be used to assess total dietary intake and particular aspects of diet. The 24 hour dietary recall yield detailed information on a given day. The total amount of each specific food and beverages consumed is captured. Similar types of food and beverages item reported such as soups or sugar sweetened beverage, can be grouped. If data are linked to nutrients composition data base, nutrient intake from food and beverage can be determined. However, total nutrient intake cannot be created unless dietary supplement intake data also are collected. 24 hour dietary recall can be use to describe a population intake. Collection of recall for three consecutive days allow application for statistical techniques to estimate usual dietary intake distribution for group. 24 hour dietary recall data can be used to examine the relationship between diet and stress or other variables in which diet is individual variable. The potential for differential response bias due to the possibility that the intervention group and control group may report their diets differently, especially following an intervention should be considered. The number and timings of the 24HRs needed depends on the intervention design and objectives. [1]

RESULTS AND DISCUSSION

Stress is something that causes strong feeling of worry or anxiety. It is a normal part of life and it is not necessarily harmful until and unless, it takes over the person to feel overwhelmed and even isolated. It pushes them to work hard to get a good score. But when anxiety caused by examination stress reached clinical or sub-clinical levels, it interfered with the ability of the students to perform at their potential. The inability to perform in turn led to a greater sense of distress.

Table 1: Stress level indicators among respondents

Stress Indicator	Very low	Medium	High	Very high	Danger	p-value
Physical indicator	19	22	24	18	17	0.000*
Sleep indicator	20	29	23	9	9	0.001*
Behaviour indicator	13	39	30	14	4	0.000*
Emotional indicator	9	25	29	18	19	0.000*
Personal habits	18	30	17	21	14	0.000*

* Values are significant at p<0.05

Table 1 represents stresses level indicators as assessed from standardized questionnaire. In parameter like physical indicator, 24% respondents fell in high stress zone while 17% respondents fell in danger limit. Whereas while assessing sleep indicator and behavior indicator, the majority of respondents fell in the medium cadre i.e. 29% and 39% respectively. 29% of respondents were highly stressed because of emotional turbulence, while 30% respondents were stressed moderately due to their personal habits. All the four indicators (physical, sleep, behavior, emotional and personal) showed a significant difference (p<0.05) among two groups (i.e. boys and girls).

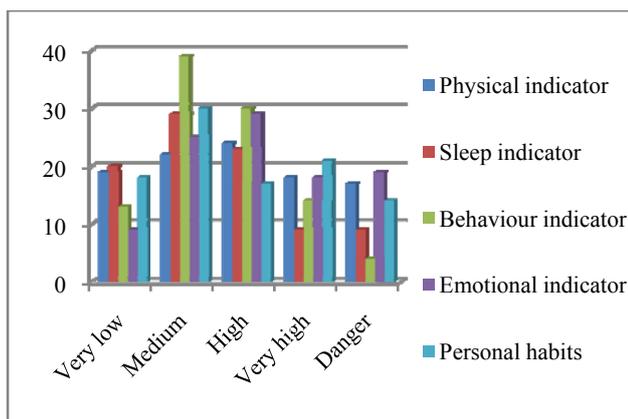


Figure 1: Graphical representation of stress level indicators

Table 2 Nutrient Adequacy Ratio (NAR) among respondents

Nutrient Adequacy Ratio (NAR)	Over adequate (over 1)	Fairly adequate (0.66-1)	Inadequate (below 0.66)	p-value
Energy	1	68	31	0.004*
Protein	42	47	11	0.000*
Fat	92	4	4	0.067
Carbohydrate	0	1	99	0.315

*Values are significant at p<0.05

Table 2 represents NAR among respondents as calculated through their 24-hour recall (for three consecutive days). After assessing adequacy for energy it was reported that 68% respondents were fairly adequate while 31% were inadequate. On applying statistical test, it was inferred that there was a significant difference (p<0.05) among two groups (i.e. boys and girls). Likewise similar significant difference was reported while calculating the adequacy for protein. Whereas, fat and carbohydrate adequacy ratio did not show any significant difference among two groups of respondents.

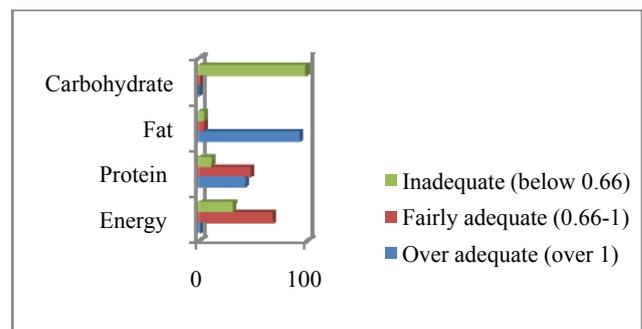


Figure 2 Graphical representation of Nutrient Adequacy Ratio (NAR)

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