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Physical activity, eating attitudes and its psychological relation among adolescents girls in district Udham Singh Nagar of Uttarakhand

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Abstract

The present study was carried out in G.G.I.C. Pantnagar of district Udham Singh Nagar, Uttarakhand. In the school two classes were selected that is 11th and 12th girls were available for interview. A comprehensive and exhaustive questionnaire was formulated specifically keeping in mind the objectives of the study. The existing knowledge of adolescents regarding how regular physical exercise is conducive to enhanced health behavior as well as effective stress coping in adolescent girls in the context of leisure assessed with the help of a questionnaire which comprised of 23 multiple choice questions and in which student had to choose one correct answer. The purpose was to examine how adolescent's girls responded while questions on physical activity, eating habits and stress related subjects were asked. Structured questionnaire were used to investigate the knowledge and opinions of adolescents at the age of 15-18 years about physical activity, eating habits and stress. Students showed a good level of knowledge about physical activity, eating habits and stress. Out of 297 girl's only 2-3 girl's students had poor knowledge and felt to end their life due to stress.

Keywords: Stress, physical activity, eating habits, adolescents, knowledge and attitude

Introduction

Adolescent is a significant period of human growth & maturation. It may represent a window of opportunity to prepare nutritionally for adult life. This period is characterized by an exceptionally rapid rate of growth which exceed only during total life & early infancy (Medhi *et al.*, 2007) ^[9]. Modern life is full of hassles, deadliness, frustrations & demands. For many people, stress is so commonplace that it has become a way of life. In small close, it can help you perform under pressure & motivate you to do your best. Stress accounts for 80% of all illnesses either directly or indirectly. Stress weakens the immune system & has other serious effects on the brain & body. Stress management is the need of the hour. Some studies have looked at the relationship between food consumption & stress. Studies also examined the relationships among stress, physical activity & eating habits among adolescents at school. In adolescence, physical activity can be used as the vehicle to better control personal stress. For many adolescents, common life stressors include bullying (O'Neill, 2017) ^[10], family dynamics (Aherne, 2001) ^[1], peer influence (Allan & lawless, 2003) ^[2], expectations of self & from other (Deutsch & Schwertaz, 2011) ^[6]. Yet, within the school context, physical education classes provide students with opportunities to be physically active. Possibly to mitigated daily stress. (Lang *et al.* 2016) ^[7] Developed a physical education stress coping programme for German speaking vocational students in Switzerland. This study aims at investigating in-depth information regarding impacts of physical exercise on psychological well-being among adolescents with emphasis on coping with stress in the context of leisure a qualitative research, based on interview 297 students in a school took part in face to face, semi-structured interviews using 23 open ended questions with respect to benefits of leisure time and physical exercise.

Materials and Methods

A school based cross-sectional study was conducted among school going adolescents in a G.G.I.C Pantnagar Adolescents in the age group 15-18 years studying in class 11th and 12th were selected and thus the sample size for the study came out to be 297.

A self-designed, semi-structured, self-report pretested questionnaire was used to screen students regarding basic information like age, height, weight and type of family. Questionnaire was also used to screen knowledge and attitude towards physical activity, eating habits and stress related subjects were asked. Most of the questions were structured with 3-5 options. Students were to answer one option unless

specified otherwise. Open-ended questions were given wherever description of answers was required. Completed questionnaires were compiled and entered into Microsoft Excel and analyzed.

Results and Discussion

Table 1: Basic Information

Variables	No. of girls (N=297)	Percent (%)
Age Group (years)		
15	30	10.10
16	102	34.34
17	148	49.83
18	17	5.72
Body Weight(kg)		
35-40	10	3.3
40-45	77	25.92
45-50	102	34.34
50-55	80	26.93
55 Above	28	9.4
Type of Family		
Nuclear	214	74.56
Joint	83	27.94

Table 1 reveals about the general information of students among of 297 students 10.10% girls were of 15 years whereas 34.34% were of 16 years. Girls in this age group had low knowledge about relationship between physical activity and

stress and eating habits girls above 17 years 49.83% believe that there is a relation between physical activity and stress management while 74.56% girls belonged to nuclear family whereas 27.94% belonged to joint family.

Table 2: Information about physical activity

Variables	NO. of Girls (N=297)	Percent (%)
Do You Do Exercise Regularly		
Yes	275	92.59
No	22	7.4
Type of Exercise You Do		
Distance cycling	281	94.61
Household work	233	78.45
Rope jumping	8	2.6
Running stairs	17	5.7
Walking	78	26.26
Dancing	40	13.46
Time Devoted For Exercise		
more than 30 min	237	79.79
less than 10 min.	118	39.73
10-20 min.	74	24.91
Sports Participation		
Kho kho	17	5.7
Badminton	108	36.36
Race	44	14.81
Kabaddi	37	12.45
Basketball	28	9.42
None	84	28.28
How Do You Go To School		
Bicycle	281	94.61
Walking	78	26.26
Bus	48	16.16
Do You Help In House Hold Work		
Yes	297	100
No	0	0
Type of Household Work		
Preparing food	134	45.11
Mopping	282	94.94
Dusting	290	97.64
Washing utensils	238	80.13
Ever Tried To Lose Weight		
Yes	128	43.09
No	169	56.90

Physical activity means a multidimensional behavior defined as the behavior that involves human movement, resulting in physiological attributes including increased energy expenditure and improved physical fitness (Pette *et al.* 2012) [11]. It is evident from Table 2 that most of the girl's i.e. 92.59% do regular physical activity while 7.4% didn't do any type of physical activity.

Table 3: Information about Eating Habits

Variables	No. of girls (N=297)	Percent (%)
Do You Take any Vitamins and Minerals Supplements		
Yes	139	46.80
No	158	53.19
Type of Beverages Intake Per Day		
Tea	205	69.02
Milk	77	25.92
Fruit juices	33	11.11
Green tea	12	4.04
Water	297	100
Buttermilk	92	30.97
Sources of Knowledge About Health And Disease		
TV	205	69.02
Magazines	12	4.04
Newspaper	18	6.06
School	156	52.52
Internet	105	35.35
Eat Whole Grain Cereals		
Yes	292	98.31
No	5	1.68
Include Pulses In Your Diet		
Yes	289	97.30
No	8	2.69
Eat Green Leafy Vegetables		
Yes	134	45.11
No	163	54.88
Include Fruits In Your Diet		
Yes	59	19.86
No	238	80.13
Eat Cakes, Sweets, Chocolate Or Biscuits At School/Home		
Yes	285	90.95
No	12	4.04
Add Salt To Meals At The Table		
Yes	289	97.30
No	8	2.69
Do You Eat Non-Vegetarian		
Always	95	31.98
Occasionally	52	17.50
Never	150	50.50
How Often Do You Eat Fast Food		
Less than once a week	29	9.7
1-3 times per week	26	8.7
4-5 times per week	168	56.56
Daily	74	24.91
Breakfast Habits		
Yes	134	45.11
No	163	54.88
Have A Snacks In Evening		
Yes	238	80.13
No	59	19.86
How Often You Have A Heavy Breakfast and skip LUNCH		
Yes	5	1.68
No	292	98.31

It is evident from Table 3 that 46.80% of the girl's take vitamins and minerals supplements. In the present study very low consumption of fruits was observed. Only 19.86 percent girls consume fruits in a day. Meat consumption was observed by only 50 percent girls. It was observed that only 25.92%

girls consume milk while 54.88% girls didn't eat green leafy vegetables. It was seen that 98.31 percent of the girls were having wheat and rice daily as main energy source. Similar study conducted on 400 adolescents by (Deka *et al.* 2015) [5] in the urban areas of Jhansi district in Uttar Pradesh also revealed that most of the adolescents did not consume green leafy vegetables, milk products, fruits, and liver and majority of the participants consumed chapati (94.5%) and rice (81.2%) as daily food. Another study done by (Venkaiah *et al.* 2015) [12] on rural adolescents in Orissa found that more than half of the rural adolescents were not consuming green leafy vegetables, fruits, fish, meat and poultry, milk and milk products. Table 3 also reveals that 56.56% girls eat fast food 4-5 times in a week similar study was done by (Brown *et al.* 2014) showed that many college students tended to choose quick and tasty options, which were usually available through vending machines.

Table 4: Information about Stress Management

Variables	No. of Girls (N=297)	Percent (%)
How Often Are You Stressed Out		
Always	13	4.37
Sometimes/rarely	262	88.21
Never	22	7.40
Why Do You Feel Stressed Out		
Excessive burden of study	270	90.90
Career	111	37.37
Examination	275	92.59
Conflicts at home	37	12.45
Relationship	0	0
Financial problem	198	66.66
Have You Ever Felt Depressed Due To Stress		
Yes	22	7.40
No	275	92.59
Feel At That Particular Time When You Are Stressed		
Scared	261	87.87
Restless and nervous	258	86.86
Locking yourself in a room	17	5.72
Feel like ending your life	2	0.67
Is Stress Harmful For Health		
YES	297	100
NO	0	0
Stress Busters		
Spending Quality Time With Friends/Family	204	68.68
Spending Quality Time Alone	248	83.50
Going for a trip	109	36.70
Yoga and meditation	4	1.34
Listening music	233	78.45
Is Stress Management Important		
Yes	290	97.64
No	7	2.35
Does Stress Influence Your Health		
Started eating less	263	88.55
Suffer from weakness and dizziness	248	83.50
Losing lots of hair	233	78.45
No, stress does not affect my health	24	8.08
Does Your Parents Talk To You About Stress		
Always	24	8.08
Sometimes/rarely	258	86.86
Never	15	5.05
Do you ever feel that physical activity helps you to reduce the stress		
Yes	295	99.32
No	2	0.67

It is evident from Table 4 that 88.21% girls are stressed stress sometimes and maximum girls were stressed due to examination. Table 4 also revealed that 88.55% girls started eating less due to stress. Similar study was done by (Bas *et al.* 2004) ^[4] that the prevalence of disturbed eating attitudes was higher among the Turkish late adolescents & that disturbed eating attitudes were related to several psychological characteristics. Bench & Haslem 2014 ^[3] They investigated college student's perception regarding the effects of participation in physical activity courses in life stressors in a sample of 350 college students. Study findings suggested that college students felt that participation in physical activity courses helped accomplishing other academic assignments. As well this sample perceived that college student's participation in physical activity helped in better handling of other life stressors.

Conclusion

It was concluded from the study that there is a relationship between food consumption, physical activity and stress and this research shed a light in illuminating potential mechanism of how regular physical exercise is conducive to enhanced health behavior/ eating habits as well as effective stress coping in adolescent girls in the context of leisure. In particular, this research appears to be meaningful in suggesting that regular physical exercise can cope through elicitation of positive emotion.

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