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OBESITY AND INCREASED WEIGHT RATIOIN SCHOOL GOING ADOLESCENTS: ITS PSYCHOLOGICAL COMPLICATIONSIN AFFLUENT AND NON-AFFLUENT SCHOOLS OF FAISALABAD, PAKISTAN.

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Alia, Habib Ullah , Muhammad Imran Khan , Ghulam Shabbir Anjum , Dr Noor Muhammad Marwat , Obesity And Increased Weight Ratioin School Going Adolescents: Its Psychological Complicationsin Affluent And Non-Affluent Schools Of Faisalabad, Pakistan. , Palarch's Journal Of Archaeology Of Egypt/Egyptology 18(8), 3719-3729. ISSN 1567-214x.

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ABSTRACT

Purpose: The Purpose of this particular study was to check the ratio of increase in obesity and weight in adolescents with its psychological complications and then compare that in the affluent and non-affluent schools of Faisalabad, Punjab Pakistan.

Methodology: A comparative cross-sectional study was conducted. Total 120 healthy adolescents of equal number (Male & Female) with age between 8 to 16 years were selected for the study. The nonprobability convenient sampling technique was used. Researchers used a Self-designed demographical tool for collection of data. Data was transferred to SPSS 21 for analysis.

Main Findings: The results of analyzed data revealed that 81.7% of adolescents prefer television watching and play computer games rather than participating in physical activities, exercise or sports. 53.3% (M= 2.95, SD=1.24) school-going children did not participate in physical activity and exercises. According to the results of the emotional eater Questionnaire 49.2% of adolescents did not have control on over eating, 54.2% of adolescents eat more frequently fast food. The sense of guilt felt by individuals when they look at the weighing scale for the consumption of forbidden foods was 34.2%. In this study excessive weight and obesity had a significant difference among affluent and no affluent school-going adolescents. Null hypothesis was rejected and the alternative hypothesis was accepted. Affluent school's adolescents were more active as compare to non-affluent adolescents and female participants were more active as compared to male adolescents.

Implicationsof the Study: Findings of the study have shown that gender impact is significant in developing obesity. The bad habits of computer usage, TV watching and casual eating must be monitored by the parents and teachers to avoid the development of obesity and increase in weight of adolescents. The control over weight and obesity will improve social life standard of children. They will become valuable part of society. Habits preventing obesity will make their future lives comfortable,healthy and free of worries.

Novelty: The findings of the study will pave the way for future researchers and educationists to preventthe increasing trend of obesity and weight in children. The proper supervision and periodic checking of weight will help the children to controlincrease in weight and obesity.Through findings of this researchpsychological, social and cultural benefits of preventing obesity will be achieved.

INTRODUCTION:

World Health Organization defined overweight and obesity as "excessive or abnormal fat accumulation that presents a high risk to health.About 26 to 41% of obese pre-school children and 42 to 63% obese school-age children become obese adults (Anderson, Patricia M and Kristin F, Butcher, 2006). A significant genetic component to overweight in children is approximately 10% and the obesity is due to environmental factors because few children engage in regular physical activity (Ochoa A, Berge JM, 2017). Investigated results of research study have shown that the association between obesity, sedentary behaviour, Television watching, small area recreation, and perinatal life influences on 117 schoolchildren and results showed that sedentary behaviour and watching Television were significantly higher risk factors for obesity among school-going children (Al-Dalaeen, 2017). The rate of obesity has been growing progressively over the last several decades. As per (Rachael Rettner 2015), at the world level, the rate of overweight is alarmingly increasing, since 1980. The world-wide obesity rate has almost doubled, there are currently more than 300 million women and nearly 200 million obese men. Obesity is a severe health issue and an extremely high number of people having the complexity of obesity. Obesity adversely affects the complete functional capacity of the body and increases a person's risk of disease and severe health problems like high BP, diabetes, and coronary disease both in the United States and world-wide(Moreno, Luis Aa; Rodríguez, Gerardob, 2007). It has been reported that obesity and sedentary life-style of adolescents are health risks and it has long-lastingharmful effects on health (Hoare, E; Milton, 2016). The findings of the other studies have investigated that obesity is leading cause of communicable diseases which later on converts to hypertension, psychological stress and mortality (De Rezende, R.F., 2014&Biddle, S J; 2017). One of the studies conducted on the hazards of obesity on the health of school-going children has concluded that it is leadingcause of developing mental poor health and

depression (Kelly Y; 2018). The results of research study associated withsedentary life and obesity of adolescents have shown very alarming situation. It has been found that most of obese children are easily prone to tobacco, alcoholand other prohibited drugs (Peltzer, K; 2010). Peltzer, K, (2016). The findings have elaborated those obese causes loneliness in the adolescents and thus they are victims of various psychological stresses. Most of the children are casual in eating they did not bother to take proper in time and balanced food and it may develop psychological problems in the children (Composition of Food, Vegetable, 2017). Majority of the socialproblematic behaviors of children are generated due to obesity and sedentary life. These behaviours are main factors for developing psychological complications in youth and societies(Van Rooij, 2014). Educational institutions are main nurseries for grooming of the children. The social interaction of children with each other inculcates various attitudes and behaviuors. The children with depressive symptoms and the sedentary life adversely have vital impacts on the other children. Children with increased weight or obesity have been reported to be psychologically depressed and fond of loneliness (Vancampfort, 2018).

OBJECTIVESOFTHESTUDY:

The purpose of the study was: -

1. To find out the causes of overweight and obesity among school-going adolescents.
2. To compare the overweight or obesity among affluent and non-affluent school-going adolescents.
3. To check the psychological effects of obesity on the school going adolescents.

LITERATUREREVIEW:

Approximately 85% of children lead a predominantly sedentary lifestyle, no physical activity, and it is theleading reason for overweight and obesity in children. The leading causes among these are Television watching, indoor games, and imbalance daily in taking food (Anderson PM, Butcher KE, 2006). Overweight and obesity are one of the biggest medical problems all over the world, 10% school-going child suffers from excess body weight worldwide. Lack of physical activity, high sugar energy-diet, unhealthy fast foods, and meals eating in front of the TV screen, skipping breakfast, lousy eating behaviours, eating disorders and sedentary lifestyle promote the development of obesity(Aziz, S.Noorulain, W., Zaidi, U.R., Hossain, K. and Siddiqui, I.A., 2009). Results of the available evidence a high intake of sugar, sweetened drinks seem to be the central dietary fact contributing to obesity development in children(Moreno, Luis Aa; Rodríguez, Gerardob, 2007).Patricia Anderson examines the cause of obesity, energy intake, energy expenditure, energy balance and highlights the cause of obesity. Another factor that has been studied as a contributing factor of childhood obesity is the consumption of unhealthy snack food intakes such as chips, baked foods, and candy. If children intake more calories and decrease their energy expenditure it develops a higher level of obesity(Ogden, M.D. Carroll, B.K. Kit, K.M. Flegal, 2012). Physical activity goals have contributed to the prevention of obesity and decrease body fat through physical activities to be one of the best factors contributing to the prevention of epidemic of overweight and obesity(Hills AP, Andersen LB, Byrne NM, 2011). Physical activity plays a vital role in the prevention of obesity in children; the engagement of children in physical activity and sport is a fundamental goal of obesity prevention, those who are physically active children have lower levels of body fat than those who are less active(Ogden, M.D. Carroll, B.K. Kit, K.M, 2012). Many well-designed longitudinal studies have shown a positive correlation between children watching TV, unhealthy behaviour, and BMI increase. It is evident from study results andanalysis that increase in children viewing Television is an increase in the risks factor of obesity. In a large well cross-sectional analysis of children, they found a dose-

response relationship, with a 2% increase in the prevalence of overweight for each additional hour per day of screen viewing. (Aggarwal T, 2008) has found that the children having a vegetarian diet were more at risk of obesity than those with a no vegetarian diet. Fast food, high energy density, intake large portion size all these factors favour overweight and obesity because fast food intake was found to have a direct association with overweight(Aggarwal T, Bhatia RC, Singh D, Sobti PC, 2008). The advent of video games, computers, and cable TV has led to a decline in physical activity and it is cause of overweight and obesity in the child. Among all sedentary activities, television watching has received special attention, it was a significant independent factor affecting overweight and obesity. One of the reviews identified several home environments factors that may contribute to children obesity, focusing on decreasing controlling parent feeding practices, child sleep duration, and increasing parent modeling of healthy behaviours can be used in developing culturally-specific interventions for childhood(Laxmaiah A, Nagalla B, Vijayaraghavan K, Nair M, 2007). While extensive use of electronic media has contributed to the sedentary lifestyle, opportunities to be safe environments and physical activity have decreased in recent years. Genes are thought to be significant contributors for developing of these metabolic conditions and increased BMI, diet, and exercise are generally regarded as being substantially easier to change to prevent excess weight gain and obesity(Al-Dalaeen, A. M., and H. A. Al-Domi, 2017).

HYPOTHESIS:

HA1- Fast food, less physical activities, and modern technology are main causes of overweight and obesity in adolescents.
HA2- Adolescents of affluent schools will score higher on overweight and obesity as compared to non-affluent school adolescents.
H01- Fast food and modern technology are not main causes of overweight and obesity in school-going children.
H02-
Adolescents of affluent schools are not more obese as compared to non-affluent school adolescents.
H03- Obesity has no psychological effects on school going adolescents.

RESEARCH METHDOLOGY:

Researchers used quantitative research method to reach at the conclusions from the collected data, its presentation and analysis.

Participants: A comparative cross-sectional study was conducted between three affluent and three no affluent schools in District Faisalabad, N=120 healthy adolescents of equal number (Male & Female) with age between 8 to 16 years were selected as sample. Children having any abnormality as chronic illness, physical and mental severe syndrome were not made part of the study. The non-probability convenience sampling technique was used for survey.

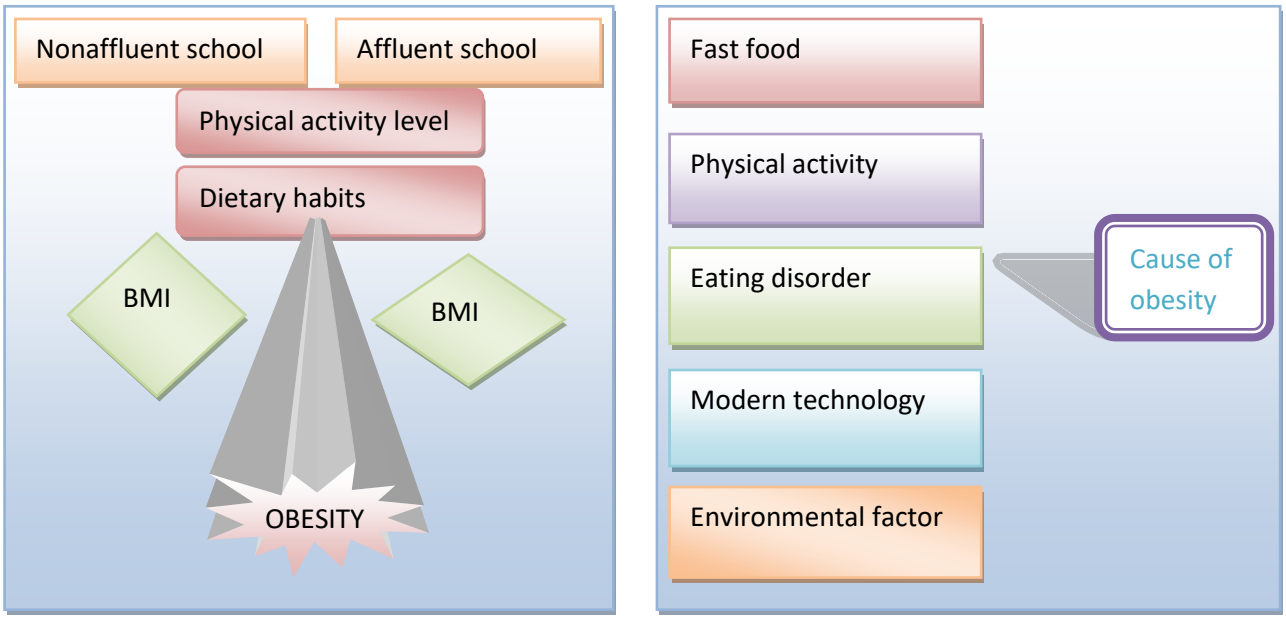
Instrument: Researchers used Self-designed demographical tool for collection of data. Through self-designed questionnaire assessment of the causes of obesity and emotional eater questionnaire the dietary habits, through physical activity questionnaire physical activity level of adolescents were assessed. Overweight and obesity were defined using the BMI scale as per WHO growth reference 2007.

Reliability was determined through Cronbach' Alpha and its range was 0.767 to 0.962

DATA ANALYSIS:

Collected data was tabulated and analyzed through appropriate statistics. As per the literature review the researcher calculated percentages, mean and standard deviation as applicable for various aspects of the study.

Conceptual framework



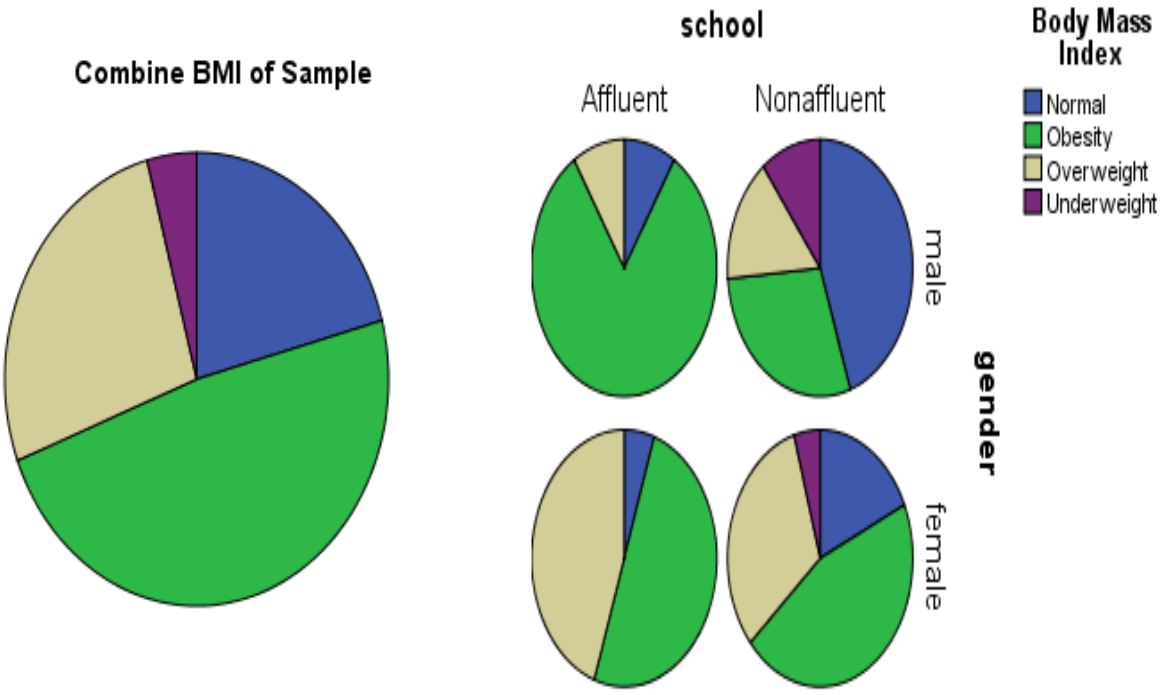
Results:

Self-Designed Questionnaire (10 items) Assess to Cause of Obesity

S.N 0	Statement	Yes (%)	No (%)	Total
1	Taking meals outside home two-time in week.	63(52.5%)	57(47.5%)	120
2	Fast food intake 3-4 times a week.	83(69.2%)	37(30.8%)	120
3	Do you Participate in physical activity programs at school?	41(34.2%)	79(65.8%)	120
4	Do you enjoy in participating physical activities?	41(34.2%)	79(65.8%)	120
5	Do you have any physical or psychological problem?	26(21.7%)	94(78.3%)	120
6	Do you eat more your favorite food when you are tired after work at night?	81(67.5%)	39(32.5%)	120
7	TV viewing 2-3 (h/day).	84(70.0) %	36(30.0%)	120
8	Do you prefer computer games, rather than participating sporting activities?	98(81.7%)	22(18.3%)	120

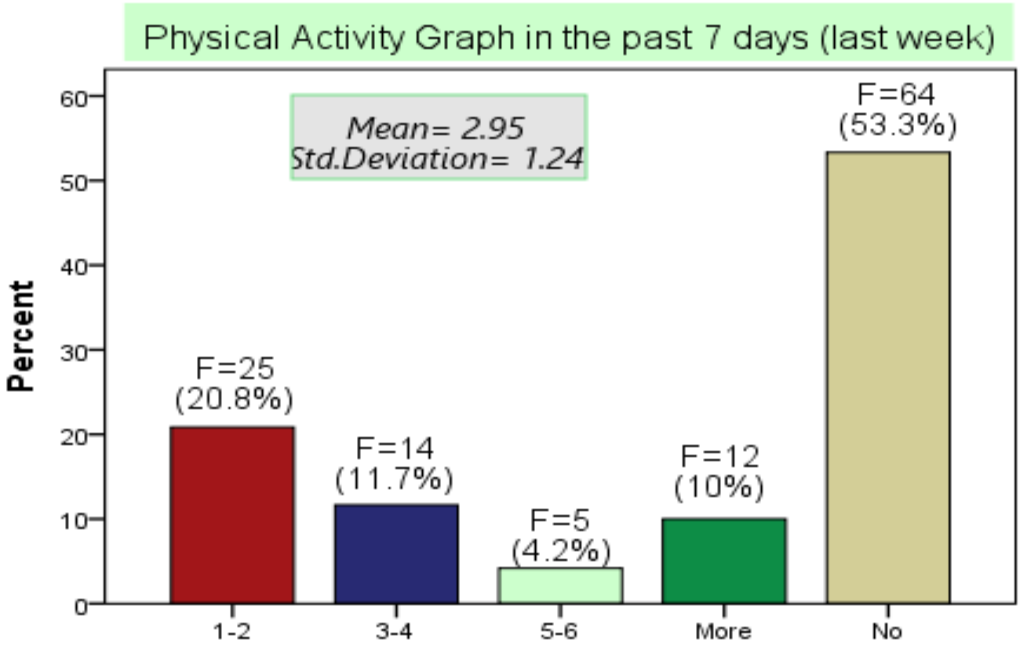
9	School authorities deliver lectures regardingawareness about health or obesity once a month?	35(29.2%)	85(70.8%)	120
10	Do you prefer to have sedentary lifestyle?	86(71.8%)	34(28.3%)	120

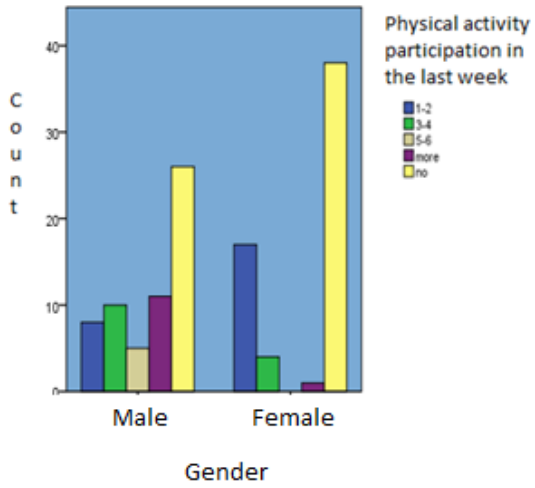
Overweight and obesity were determined byusing BMI, WHO growth reference 2007.

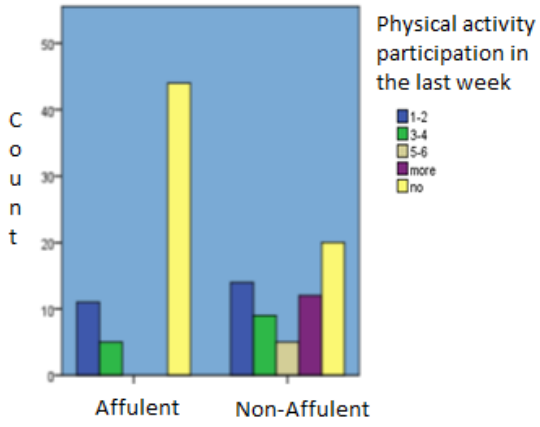


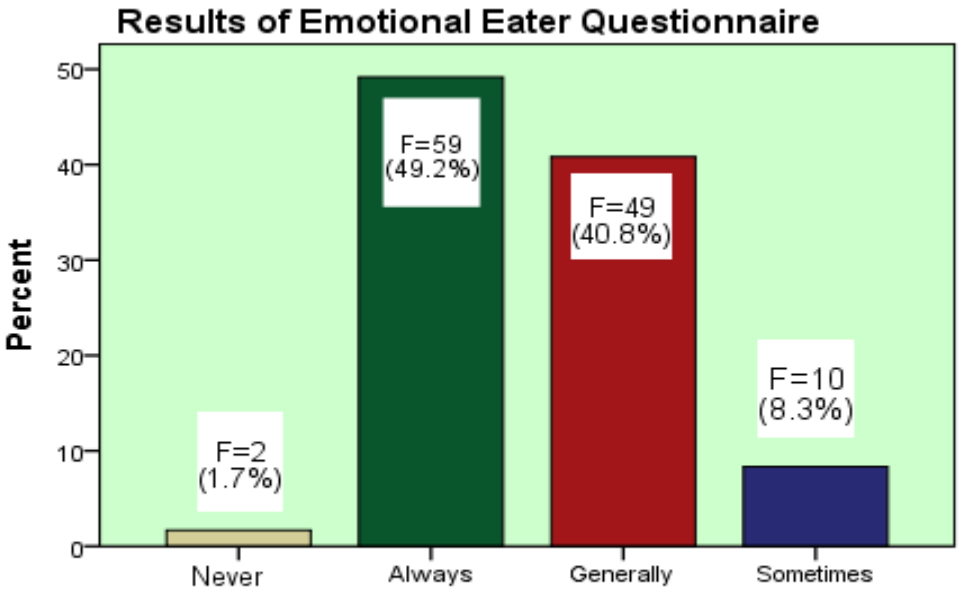
Body Mass Index of Participants

BMI	Frequency	Percent	Valid Percent	Cumulative Percent
Normal	25	20.8	20.8	20.8
Obesity	58	48.3	48.3	69.2
Over weight	32	26.7	26.7	95.8
Under weight	5	4.2	4.2	100.0
Total	120	100.0	100.0	

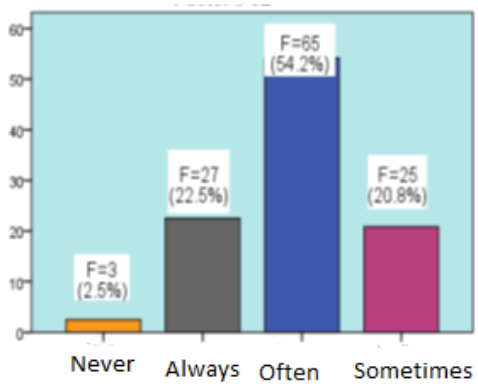

Physical Activity Graph in the past 7 days (last week)
Mean= 2.95
Std.Deviation= 1.24
Percent
F=25 (20.8%)
F=14 (11.7%)
F=5 (4.2%)
F=12 (10%)
F=64 (53.3%)
1-2
3-4
5-6
More
No


Physical activity participation in the last week
1-2
3-4
5-6
more
no
Count
Male
Female
Gender

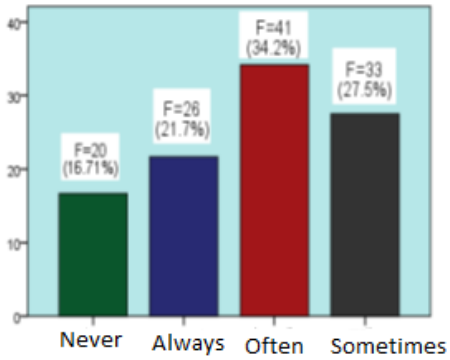

Physical activity participation in the last week
1-2
3-4
5-6
more
no
Count
Affulent
Non-Affulent
School



Fcctor #01 "Disinhibition group" the questions that refer to discontrol in terms of eating



Includes questions realted with the 'type of food' that participants eat frequently in give situations



This factor refers to the 'sense of guilt' felt by individual when they look at the weighing scales or the consumption of forbidden food

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
factor 1	120	2.000000000	5.000000000	4.006944444	.6952539633
factor2	120	2.0	5.0	3.754	.6890
factor3	120	2.0	5.0	3.412	1.0097
Valid N (listwise)	120				

DISCUSSION:

In present modern and technological era physical activities and the health of adolescents has been dramatically affected due non-sparing of time for exercises and recreation. Along with exercise habits the food and proper rest is missing in children lives.Themain objective of the

current study was to explore the cause of overweight and obesity among affluent and no affluent school-going adolescents in division Faisalabad and how to overcome this hazard. Results of study are at par with the Patricia Anderson&Al-Dalaeen, (2017), research study findings.Lack of physical activity, unhealthy fast foods habits, eating disorders, TV watching, and sedentary life-style of adolescents were declared main causes of obesity and overweight in the children. Physically active children have lower levels of body fat as compared to inactive individuals. The percentage of obesity and more weight was greater in female as compared to male participants. The environmental factor, lack of open spaces for playing, lack of parental time to supervise exercise and physical activity were also causes of obesity and increase in weight of children. Children with proper food and meal habits observed lesser prone to obesity as compared to causals.The results of the present study are supported by the findings of the research conducted (Vancampfort, D; 2018).

CONCLUSION:

Results of Self-designed questionnaire showed that 81.7% of adolescents were victim of obesity due to TV watching and using computer rather than participating in exercises of sports. 53.3% (M= 2.95, SD=1.24) school-going children did not participate in physical activity. According to the results of the emotional eater, questionnaire for dietary habits 49.2% of adolescents'decontrol of eating, 54.2% of adolescents eat more frequently fast food and the sense of guilt felt by individuals after checking weighing scale for the consumption of forbidden foods was 34.2%. It has been found out that there was significant difference overweight and obesity among affluent and no affluent school-going adolescents. Null hypothesis was rejected and the alternative hypothesis was accepted.Non-affluent schools' adolescentswere more active as compared to affluent adolescents and female participants were more active as compared to male adolescents. The parents and teachers are advised to monitor the exercise, rest, study and eating habits of the children.The long-lasting effects of obesity are harmful and it was concluded from the results of the study in hand which is at par with the results of the study conducted by Hoare, E; Milto, (2016).

LIMITATIONS:

Researchers selected Punjab Province of Pakistan for the study. There are many districts and schools in the province but researchers selected district Faisalabad for study. The number of students selected for research where 120 students from both category of schools with equal portion of male and female students.

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AUTHOR'S CONTRIBUTION:

Alia[1], Habib Ullah[2],Muhammad Imran Khan[3], Ghulam Shabbir Anjum[4], Dr Noor Muhammad Marwat[5]

Author'scontribution: 1-Study Design, 2-Data Collection, 3-Statistical Analysis,4-Manuscript preparation, 5- Financial management.

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