

Obesity in School-Going Children in Pakistan

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Keeping in view the increasing trend of obesity in school-going children in Pakistan, I made up my mind during the course work of my PhD program, that I will share my contribution by conducting a well-organized qualitative & quantitative research work on the obesity of school-going children. My research sample size was 600 respondents, 300 hundred from Islamabad/Rawalpindi and 300 from Faisalabad. Respondents were from posh schools, private school and government schools in the age group from 12 to 18 years.

Pakistan is a developing nation combating with many social, economic, environmental, geographical, cultural, political and ecological challenges. People of Pakistan will gradually overcome these issues with a sustained and collective wisdom.

Besides other issues, obesity of school-going children is the one challenging and the most emerging issue in Pakistan. It was my observation, which came true after the research was completed, that children living in urban areas and studying in posh schools were having epidemic of obesity. Such students belong to well off families where parents provide all facilities of life to their children. They have chuffer driven cars, home servants, latest LCDs, access to Internet, video games and privilege to take foods of their choice at homes and away. This gradually makes them habitual of sedentary life styles. They have friendships with same class of children who regularly use face book, use internet for hours, play video games and eat junk food quite often. Resultantly, they become overweight and obese. This life style has travelled to semi-urban and rural areas as well. Now obese children can be seen at all types of schools – posh, public, private and rural. In our society posh and private schools do not have proper playing facilities for children; they do not have play grounds, gyms, exercise machine, and sports teachers. These schools are run purely on commercial basis and

the owners have one-point agenda – making profit by charging huge amounts of fees and allied charges to parents. I always dreamed off the children of my nation being healthy, active and with full of life. The current study may happen to be an eye opening for children, their parents and all concerned at government and private sector to the extent that they will definitely take the concrete steps for the prevention and eradication of children' obesity in Pakistan. The study was conducted on cross sectional dimensions in a comparative style. This was a quantitative study though some qualitative aspects were also touched upon.

Objectives of the study were

To explore social and economic conditions of parents of obese children

- To identify the level of obesity among children
- To know the obesity history in the families in Pakistan
- To identify the causes of obesity among the children
- To identify social, psychological and health implications of obesity in children
- To suggest measures to address the issue of obesity among the children
- To give know how to the general public to avoid obesity in their children and themselves
- To convince the Policy makers and decisions makers to keep the obesity eradication in children as top agenda
- To convince school managements to start interventional programs to address the children obesity

Measures of obesity

$$\text{BMI} = \frac{\text{Weight (Kg)}}{\text{Height (m}^2\text{)}} \quad \text{OR} \quad \frac{\text{Weight in Pounds} \times 703}{(\text{Height in inches}) \times (\text{Height in inches})}$$

Example: A fourteen years old boy having weight 210 lbs. and 65 inches tall would have
 $\text{BMI} = \{210 / (65) \times (65)\} \times 703 = 34.94$

World Health Organization (2007) has reported the BMI scores in graphic and tabulation form for 5 to 19 years old boys which are quite relevant with this study. These are annexed as Appendix-II at the end of dissertation for reference purpose.

BMI values at different levels of weight, for Caucasians: (BMI definition BMI range (kg/m²))

- | | |
|-----------------|----------------------|
| • Underweight | Under 18.5 |
| • Normal | 18.5 to less than 25 |
| • Overweight | 25 to less than 30 |
| • Obese | 30 to less than 40 |
| • Obese Grade I | 30 to less than 35 |

- | | |
|---|--------------------|
| • Obese Grade II | 35 to less than 40 |
| • Morbidly obese/obese Grade III/severe | 40 and over |
| • Overweight including obese | 25 and over |
| • Obese including morbidly obese | 30 and over |

Source: Commissioning Board Clinical Reference Group for Morbid Obesity (2013).

Theoretical Models of Human Behaviors

These four theoretical models of health behaviors were used in the study:

- The Health Belief Model (HBM)
- The Transtheoretical Model/Stages of Change (TTM)
- Social Cognitive Theory (SCT)

Recommendations

- Government should start National Childhood Obesity Prevention Program and cascade it to all Provinces, Divisions, Districts, Tehsils and Union Councils. A separate dedicated management team should run this program and all reports should be shared with all stakeholders and the general public.
- Schools and other educational institutions should come forward and start intervention programs and should invite experts and consultants to teach children about healthy eating habits and physical activities.
- No school should be registered by the governing authorities until it has proper school infrastructure; playing grounds, exercise and playing facilities and regular sports for children. Sports period should be made compulsory at all levels in the schools and annual sports festivals should be made mandatory for school managements. Providing infrastructure and policies through school based techniques that increase access to and encourage physical activity for all students.
- School cafeteria staff should be trained enough about healthy food combinations to be offered to children at breaks. There should be minimum junk foods items. It is recommended that health experts should preach and work hard to eliminate soft drinks from the school premises, speak and train to school administrators and teachers the ways how nutrition in school foods programs could be done better. They should be goal oriented and come forward and keep them involved in nutrition related activities and decision making by school advisory board. Maintaining strong physical education (PE) programs that engage students in moderate to vigorous physical activity for at least 50% of PE class time. Providing a variety of activities and specific skills so that students can be physically active not just during class but throughout the day and year; and providing qualified school professionals who are trained in teaching methods to engage students in PE, including for students who face greater barriers to activity.

- Parents’ role in obesity prevention would also be a crucial one. Parents should inculcate the healthy eating habits in their children. They should discourage junk foods habits in children. They should carry their children on regular walks in the morning and evening. They should restrict TV watching and playing video games in computers and internet at home by the children. They should develop the habits of book reading and playing sports in their children. Parents should be well trained in health education programs. People should have an idea of parent’s knowledge, their norms, and attitudes towards healthy life styles and accordingly give attention to strengthen parental life pattern. By doing so children’ health will become very healthy as children copy their parents’ patterns of life. Parents will provide healthy food to children; encourage them for physical activity and taking foods which are very rich in nutrition. Parents should encourage children to eat more fruits and vegetables in their daily takings. They should not/or give in small quantity of oil loafs and other heavy meals to children.
- Media’ role could be very pivotal for prevention of children’s obesity. Studies have shown that children adapt the things and habits which they see on media. Media should send social messages through advertisements which show the problems of obesity and the chronic diseases it carries in future lives of children. Media could restrain children from taking unhealthy foods. Media should organize periodical talk shows in which doctors and health experts should come and tell the public about healthy life styles and eating habits.
- Annual medical check of children in all schools should be made mandatory. Government should take strict actions against the management of schools where medical checkups of children will not be done once in a year.
- Awareness campaigns with regard to a balance diet, increasing the literacy level, better socioeconomic conditions and enhanced physical activity on people’ part will help in bringing down the obesity epidemic among children in Pakistan.

Appendix-I

Implications of Obesity (rural & urban areas)

Academic Consequences

Table. 1.1: Results of Regression Analysis: un-standardized, standardized regression coefficient, and level of significance of the academic consequences for rural and urban areas

	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
Academic	.575	.125	.185	4.611	.000
Independent Variable: BMI					
R ² = .033, F-value = 21.262**					

Implications of Obesity (rural & urban areas)

Psychological Consequences

Table. 1.2: Results of Regression Analysis: un-standardized, standardized regression coefficient, and level of significance of the psychological consequences for rural and urban areas

	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
Psychological	.376	.068	.221	5.530	.000
Independent Variable: BMI R ² = .047 F-value = 30.582**					

Implications of Obesity (rural areas)

Academic Consequences

Table. 1.2: Results of Regression Analysis: un-standardized, standardized regression coefficient, and level of significance of the academic consequences for rural areas

	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
Academic	.608	.165	.254	3.692	.000
Independent Variable: BMI R ² = .064 F-value = 13.629**					

Implications of Obesity (rural areas)

Psychological Consequences

Table. 1.3: Results of Regression Analysis: un-standardized, standardized regression coefficient, and level of significance of the psychological consequences for rural areas

	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
Psychological	.841	.137	.401	6.156	.000
Independent Variable: BMI R ² = 0.161 F-value = 37.900**					

Implications of Obesity (urban areas)

Academic Consequences

Table 1.4: Results of Regression Analysis: un-standardized, standardized regression coefficient, and level of significance of the academic consequences for urban areas

	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
Academic	.543	.136	.273	3.987	.000
Independent Variable: BMI R ² = 0.074 F-value = 15.896**					

Implications of Obesity (urban areas)

Physical Consequences

Table 1.5: Results of Regression Analysis: un-standardized, standardized regression coefficient, and level of significance of the physical consequences for urban areas

	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
Physical	-.762	.349	-.153	-2.182	.030
Independent Variable: BMI R ² = 0.019 F-value = 4.759**					

Implications of Obesity (urban areas)

Psychological Consequences

Table 1.6: Results of Regression Analysis: un-standardized, standardized regression coefficient, and level of significance of the psychological consequences for urban areas

	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
Psychological	.291	.113	.180	2.581	.011
Independent Variable: BMI R ² = 0.28 F-value = 6.660**					

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