

Prospect Association between Socio-Economic Factors and Obesity among Males in Punjab, Pakistan

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Abstract

Obesity is unavoidable dilemma and genetic structure assumes an indispensable part and includes possibilities for developing of this issue when contrasted with those with no family history. However late decades seen spike in the number of people getting obese with no earlier family history of obesity. This study aimed to investigate the socio-economic, demographic transitions of the male population over the period of time. It also examined connection between obesity and other serious wellbeing issues and ecological and financial components prompting the weight gain in males of Punjab, Pakistan. Through questionnaire 300 obese males were surveyed using convenient sampling technique and the responses were analyzed in SPSS. Economic status showed positive relationship with obesity. The research showed a positive correlation for each of the following with BMI: Monthly spending on fast foods (.196), life style (0.276), and family income (0.351).

Keywords: Obesity, Body Mass Index (BMI), Univariate, Bi-variate, Prospectand Convenient Sampling Technique

Introduction

Obesity being one of a significant health concern has been affecting more than a billion of population across the globe. Worldwide many theories had been developed in regard to this subject that includes various personal lifestyles, environmental, socioeconomic parameters and nutritional transition playing a significant role in development of obesity (Cowburn, 2007) (Monteiro *et al.*, 2001). A correlation between a set of factors revealed that the parameters such as the priorities of family meals, family connections, and mealtime environment has a direct association with the mental well-being of an obese individual and inversely related with the depressive conditions (Starrus *et al.*, 2007). Many researchers have closely observed the behavioral traits of obese individuals, whereas many researches in the past have linked the duration of the sleep with obesity. The results of the observations concluded that due to the decreasing sleep-durations within the adolescents and children leading to obesity. The pattern of the meals is primarily affected by the duration of sleep, thus lower sleep duration is positively linked with obesity within these individuals (Patel *et al.*, 2017).

Pakistan is being ranked as 6th most populous country with a total population of 184.34 million. Currently the epidemic of obesity is a major concern within the Pakistani society constituting a major chunk of financial resources of the country due to increased health problems associated with this disorder (Pakistan Economic Survey 2012-13). In a result it's posing a financial burden on the overall economy of Pakistan. Listed factors constituting this disease are unhealthy heating habits, lifestyle changes, energy dense diet, peer-pressures and other environmental changes. Pakistan is being ranked as 165/194 when it comes to the fattest country in the world (Streib *et al.*, 2007).

This study aims to observe the Body Mass Index trends over the years to analyze the trends and reasons for obesity within this timeframe. World health organization reports of BMI of adults from 1980-2012 in US shows a significant ascent that is ($>30.0 \text{ kg/m}^2$) within this timeframe which signifies that it has doubled (Bhurosy & Jeewon, 2014) (Tucker & Friedman, 2009).

Methodology

This quantitative research was conducted to study the factors behind male obesity in Punjab, Pakistan. A self-designed questionnaire was used to collect data from obese males in area of Punjab. This research also evaluated the impacts of nutritional factors and socio-economic on the growing obesity within the males in Punjab, Pakistan.

Data and Research Variables

The direct relationship of poor and unhealthy dietary, conditions Energy-dense diet, biological/genetic factors, family role meal hours with male obesity in Punjab, Pakistan was studied. The socio-economic and demographic variables in the study were the background variables which are critical in accessing the historical roots of an individual.

Research Population

This study was conducted explore the prospect association between socio-economic factors and obesity among males in Punjab Pakistan. For this purpose two districts of Punjab (Jhang and Faisalabad) were randomly selected and afterward 300 respondents were selected through convenient sampling technique. The respondents were interviewed through a well-designed questionnaire. Respondents were selected from parks, gyms and medical clinics and public/work spaces.

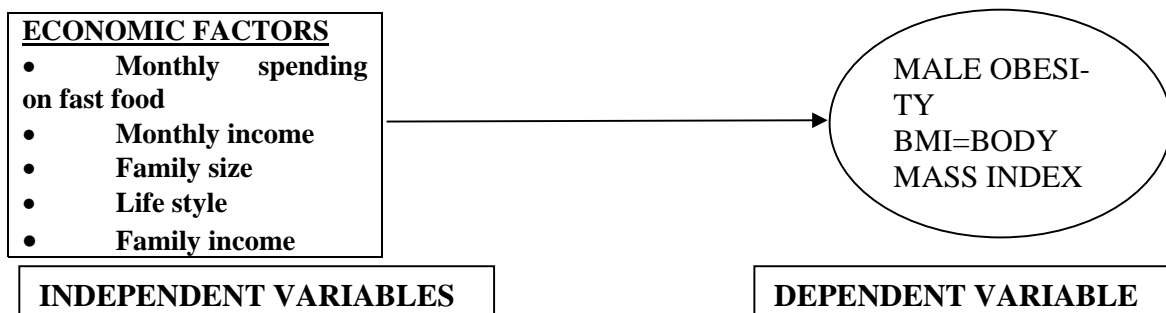
Inclusion criteria

The male of ages between 20-60 years were included in this study.

Hypothesis

H1: Economic status has a significantly positive impact on male obesity in Punjab.

Conceptual Framework



Theoretical Framework

S. Schachter's (1971) theory of differential stimulus orientation of obese and non-obese people was utilized in an experimental study in order to observe the eating habits of the obese and non-obese have been a main tool to understand the underlying reasons for the pervasiveness of obesity over the years (Hill & McCutcheon, 1975).

Results and Discussion

Univariate analysis used for analyzing the data with one variable at a one-time spam. In data analysis variables going to be analyzed by Univariate analysis that affects the BMI. The Frequency Distribution and the Percentage Distribution of every variable used in this research has been analyzed and found each possible value of respected variables. The data tables and their description are given below:

Socio-Economic and Demographic Characteristics

This section explains the socio-economic and demographic characteristics of the sample under research. Social characteristics are of special importance because they can significantly predict

the probability of a person becoming obese, and they may also help in weight management for such Individuals.

Table 1. Socio-economic and demographic characteristics

Demographic characteristics	Attributes	Frequency	%
Age	20-30	60	20.0
	31-40	137	45.7
	41-50	63	21.0
	51-60	40	13.3
Education	Matric	48	16.0
	Inter	48	16.0
	Graduation	80	26.7
	Master	114	38.0
	M.Phil	5	1.7
	Ph.D	5	1.7
Family style	Nuclear	181	60.3
	Joint	108	36.0
	Extended	11	3.7
Marital status	Single	55	18.3
	Married	245	81.7
Occupation	Business	154	51.3
	Govt. Employee	66	22.0
	Private Employee	80	26.7
Height (inches)	3-5	10	3.3
	5.1-5.3	25	8.3
	5.4-5.6	120	40.0
	5.7-6	132	44.0
	6.1 and above	13	4.3
Wight (Kg)	60-70	6	2.0
	71-80	12	4.0
	81-90	55	18.3
	91-100	134	44.7
	101-110	78	26.0
	111. and above	15	5.0
BMI	Overweight	19	6.3
	Obese	272	90.7
	Morbid obesity	9	3.0

Majority of the respondents that is 46% fell in the age bracket of 31-40 years, followed by 21% in 41-50 years, 20% in the bracket 20-30 years and the remaining 13% were in the age bracket 51-60 years. In a study conducted with respect to association of BMI and its factors, it was found that men were more likely to obese as compared to women, and those who were 50-64 years of age had a BMI of 27.72kg/m², as compared to 26.52 kg/m² for 30-49 years old, and 25.16 kg/m² for

18-29 years of age. Thus we can conclude that the incidence of obesity gets higher as a person gets old (Bhat, 2016).

Around 38% of the respondents had received qualification up to Masters level, followed by 27% who completed graduation, 16% Matric and another 16% who had completed intermediate level. A small percentage of 1.7% each had completed M.Phil. and Ph.D. There are studies which show that people with high education (degree greater than high school that is intermediate level in case of Pakistan) seem to have more chances of becoming obese (Barlin & Murat, 2016). Majority of the respondents at 82% were married with the remaining having a single status. Given that nearly 80% of the respondents fell in the age range of 31-60 years, we can understand the high percentage of married respondents as in Pakistan there is a generally accepted notion that men should be married by the age of 27-30 years.

With respect to occupation, it is not surprising to see that 51% owned and managed their own business, followed by 27% who were private employees, and 22% who worked for government organizations. As a person's occupation takes up a lot of the daily routine, and has close associations with socio-economic factors and behavioral traits, understanding the relationships between occupations and obesity will help in the efforts aimed at weight management (Barlin & Murat, 2016).

In our study we have allotted the following categories to see the extent of weight in the men under review for BMI:

Table 2. The extent of weight in the men under review for BMI

Categories	Associated BMI
Overweight	BMI>25
Obese	BMI>30
Morbidly obese	BMI>35

The frequency distribution had one additional category named "desirable" which accounts for individuals with less than 25kg/ m². The results show that 91% of the individuals are "obese" as they fall within the second category, followed by 6.3% who are overweight and the remaining 3% who are morbidly obese.

Table 3. The value of Chi-square and Pearson's Correlation Coefficient of Independent Variables (Factor Contributing in the Prevalence of Obesity) with Dependent Variables (Obesity)

Variables	Chi-Square Values	Pearson Correlation Coefficient Values
Eating habits	43.489**	.167**
Monthly spending on Fast foods	18.928**	.196**
Exercise	2.157*	.287**
Life style	9.766**	.276**
Watching TV	52.667**	.496**
Family Income	34.873**	.351**
Profession	25.530**	.412**
Genetic factors	36.591**	.151**
Smoking	23.650	-.164**

** Correlation is significant at the 0.01 level (2-tailed). * Correlation is significant at the 0.05 level (2-tailed).

H1: Economic status has a significantly positive impact on male obesity in Punjab.

The economic factor has been calculated via spending on fast/junk food and the monthly income. The family/personal income increases the level of obesity may be increase as persons have more choices to spend on junk/fast food.

With respect to junk food as explained in our multivariate and univariate analysis, we that research support this positive association between these two variables (Prentice & Jebb, 2003).

The monthly income of a person expressed favorably positive correlation with BMI as explained in table 3.3. The value of Pearson Coefficient of Family Income is “.351” and a positive sign proved that as the family income increase the value of BMI will be increases. Previously studies also prove this phenomenon that the monthly income has a positive and direct relation with obesity (Moschonis, *et al.*, 2010).

Conclusion

The Body Mass Index inclines were observed to examine the patterns and explanations behind obesity. The study identified the socio-economic, statistic and dietary attributes that impacted corpulence among males of Punjab, Pakistan. There was found to be a solid and noteworthy inverse connection amongst BMI and height and weight of the respondent. On the whole the factors that were found to increase the weight included higher consumption of fast food, sedentary way of life, higher consumption of red meat and hereditary factors. With respect to junk food as explained in the multivariate and univariate analysis, the research supports this positive association between these two variables (Prentice & Jebb, 2003). The value of Pearson Coefficient of Family Income is “.351” and a positive sign proved that as the family income increase the value of BMI will be increases. Previously studies also prove this phenomenon that the monthly income has a positive and direct relation with obesity (Moschonis, *et al.*, 2010). The primary reasons of weight gain in males of Pakistan are their family style, higher consumption of junk food and monthly income.

References

- Barlin, H., & Murat, M. A. (2016). Occupation and Obesity: Effect of Working Hours on Obesity. *Applied Economics and Finance*, 179-185.
- Bhat, N. V. (2016). Fast Food Consumption and Body Mass Index. *Journal of Social Sciences*, 129-135.
- Bhurosy, T. & Jeewon, R. (2014). Overweight and Obesity Epidemic in Developing Countries: A Problem with Diet, Physical Activity, or Socioeconomic Status?, 52 (2), 7-12
- Cowburn, G., Hillsdon, M., & Hankey, C. (2007). Obesity management by life-style strategies. *British Med Council Bulletin*, 53 (2), 389-408.
- Hill, S. W., & McCutcheon, N. B. (1975). Eating responses of obese and non-obese humans during dinner meals. *Psychosomatic Medicine*, 37(5), 395-401.
- Prentice, A. M., & Jebb, S. A. (2003). Fast foods, energy density and obesity: a possible mechanistic link. *Obesity reviews*, 4(4), 187-194.
- Schachter, S. (1971). Some extraordinary facts about obese humans and rats. *American Psychologist*, 26(2), 129.
- Strauss, J. S., Krowchuk, D. P., Leyden, J. J., Lucky, A. W., Shalita, A. R., Siegfried, E. C., & Bhushan, R. (2007). Guidelines of care for acne vulgaris management. *Journal of the American Academy of Dermatology*, 56(4), 651-663.
- Streib, Lauren. (2007). World's Fattest Countries. Forbes.

- Taylor, S. J., & Bogdan, R. (1984). Introduction to qualitative research: The search for meanings.
- Tucker, L. A., & Friedman, G. M. (2009). Television viewing and obesity in adult males. *American Journal of Public Health*, 516-518.
- Prentice, A., & Jebb, S. (2003). Fast foods, energy density and obesity: a possible mechanistic link. *Obesity Reviews-An official journal of the international association for the study of Obesity*, 187-194.
- Moschonis, G., Tanagra, S., Vandorou, A., Kyriakou, A., Dede, V., Siatitsa, P., & Koumpitski, A. (2010). Social, economic and demographic correlates of overweight and obesity in primary-school children: preliminary data from. *Public Health Nutrition: 13(10A)*, 1693-1700.
- Chandler, M., Cunningham, S., Lund, E. M., Khanna, C., Naramore, R., Patel, A., & Day, M. J. (2017). Obesity and Associated Comorbidities in People and Companion Animals: A One Health Perspective. *Journal of Comparative Pathology*.
- Monteiro -Garnacho, J., Madrazo-Osuna, J., Garcia-Garmendia, J. L., Ortiz-Leyba, C., Jiménez-Jiménez, F., Barrero-Almodovar, A., & Moyano-Del-Estad, M. (2001). Critical illness polyneuropathy: risk factors and clinical consequences. A cohort study in septic patients. *Intensive care medicine*, 27(8), 1288-1296.