

Orthorexia-When Eating Healthy Becomes An Obsession

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Abstract: *The study was aimed to investigate the prevalence of orthorexia among the college and university students of some major cities of Pakistan, with a special focus on the variations existing between these subjects of different age groups. Orthorexia, which comes from the Greek 'ortho' meaning right or correct and 'orexis' meaning appetite literally means a 'correct diet'. Orthorexics obsessively evade foods that contain artificial flavours and preservatives; they are overly concerned about how the food was prepared and only consume food that they deem healthy. This often results in social isolation of these individuals. Although the causes of the disease were beyond the scope of this study to assess, but the definite incidence of orthorexia has been accordingly described. The methodology involved in the collection of data was a survey conducted by a questionnaire, (a modified version of ORTO-15); distributed at various high schools, colleges and universities of Pakistan. The questionnaire was meant to detect the presence of orthorexia in the subject along with the differences recorded among the respective age groups. Results were assessed statistically from the questionnaires filled out by the subjects. The age group most susceptible to the development of orthorexia was found out to be between 15 to 19 years of age. In conclusion, orthorexia could be a potential risk to the emotional and psychological wellbeing of students in Pakistan, as it is with students anywhere in the world. Therefore there is a need to address the problem of orthorexia in the public space.*

Keywords: *Orthorexia, Obsession, Healthy-eating, Obsessive-Compulsive Disorder.*

1. Introduction

Benjamin Franklin said: "Nothing is more fatal to health, than the over care of it". It holds true for the people categorized as "orthorexics". Social awareness regarding nutritional foods and healthy eating has increased in the general population all over the world in the past few years, to an extent in some people that has led to an obsession. Worrying about what food might be the "healthiest" often leads to ignoring one's health in such cases; attention is not paid towards lack of nutrition due to such tainted eating habits.

The survey conducted focuses on the prevalence of this obsession- Orthorexia nervosa- in the young population of Pakistan.

The term "Orthorexia nervosa" dates back to 1997. Coined by Steven Bratman, it originated from the Greek words orthos meaning "right" and orexis meaning "appetite" [1]. Orthorexia has been defined as an Obsessive Compulsive Disorder in which the sufferer is extremely careful and selective of what is "thought" of as pure healthy food [2]. In other words, healthy eating is called Orthorexia nervosa when self-inflicted restrictions in diet interfere with one's social life and daily activities. Along with malnutrition, social isolation is a major outcome since life itself is planned around eating habits [3]. Orthorexia is also considered as a behavioral and personality disease because orthorexics give immense attention to eating healthy food, stay preoccupied for an extended time and face counterproductive experiences in everyday life. [4]

Orthorexics are characterized by a rigid eating style; they worry about what they'll eat, how their food is prepared and spend hours planning their diet. Deviating from their diet plan makes them feel guilty and at times they also punish themselves by acts like fasting, stricter eating or exercise. Following the planned food intake brings about the feelings of pride and self-esteem among them.

They avoid food containing preservatives, artificial flavours, genetic modifications, unhealthy fat, added salt or sugars. They also fuss about how the food was prepared and what kitchenware was used to prepare it [3].

2. Methodology

The methodology involved in the collection of data for this study was a survey conducted by way of a questionnaire (Appendix). Initially, the Bratman Test was consulted, being the first ever test made to evaluate the significance of this particular disease. It contains 10 questions with a Yes/No option. Since the answers to these questions were quite restricted, we went one step forward and came up with an elaborate test that contained a total of 21 questions of two types that assessed the relationship between obsessive-compulsive symptoms as well as body dissatisfaction and also related it to how much this habit is affected by social media such as television, internet and newspapers.

Participants were students from different high schools as well as undergraduates from different cities of the Punjab; mainly Islamabad/Rawalpindi, Lahore, and Sialkot. The participants were not made aware about the purpose of the questionnaire. The questionnaire was developed using ORTO-15 diagnostic questionnaire as a reference based on the model previously used by Bratman for diagnosing Orthorexia in U.S population [5]. The questions were to be answered by choosing from a range of four options: Always (score 4), Often (score 3), Sometimes (score 2) and Never (score 1). Total score of the test was achieved by taking the sum of all the scores. Based on the test structure, the threshold value for the questionnaire was calculated as till 21 score for normal, 22-42 score for prone to Orthorexia, 43-63 score for mildly orthorexic and 64-84 score for orthorexic.

556 individuals participated in the survey from these schools. Participants from different age groups, ranging from 15-25, filled out the questionnaires. The research procedure involved statistically assessing the questionnaire filled out by the participants. The questionnaire was meant to detect the presence of Orthorexia in the targeted population.

3. Results

At the study's conclusion, responses from a total of 556 participants were included in data analyses. The self-reported demographic characteristics are also presented in the survey. The sample consisted primarily of 339 female and 227 male students (Figure 1 a, b). In addition, most of the sample consisted of single, full-time students, with no children. Prior to conducting the main study analyses, descriptive statistics were conducted to examine the distribution of scores and screen the orthorexic individuals. Histograms, dot plots and pie charts give test of normality. The data set is further divided in two categories with age group between 15-19 and 20-25.

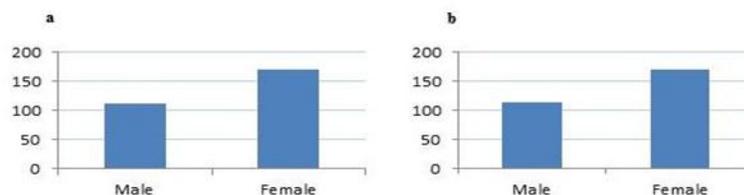


Fig. 1: Histogram illustrating the ratio of male and female students in total sample number (a) for the age group 15-19 and (b) for the age group 20-25.

For age of 15-19, the dot graph shows that most of the population lies in mild orthorexic condition whereas some are prone to Orthorexia but there is no evidence of orthorexic individual and the normality ratio is also quite less. In case of the age group 20-25, the cluster lies in the prone to Orthorexia while some are mild Orthorexic. No individual lies in orthorexic condition and barely any fall in the normal zone (Figure 2 a, b).

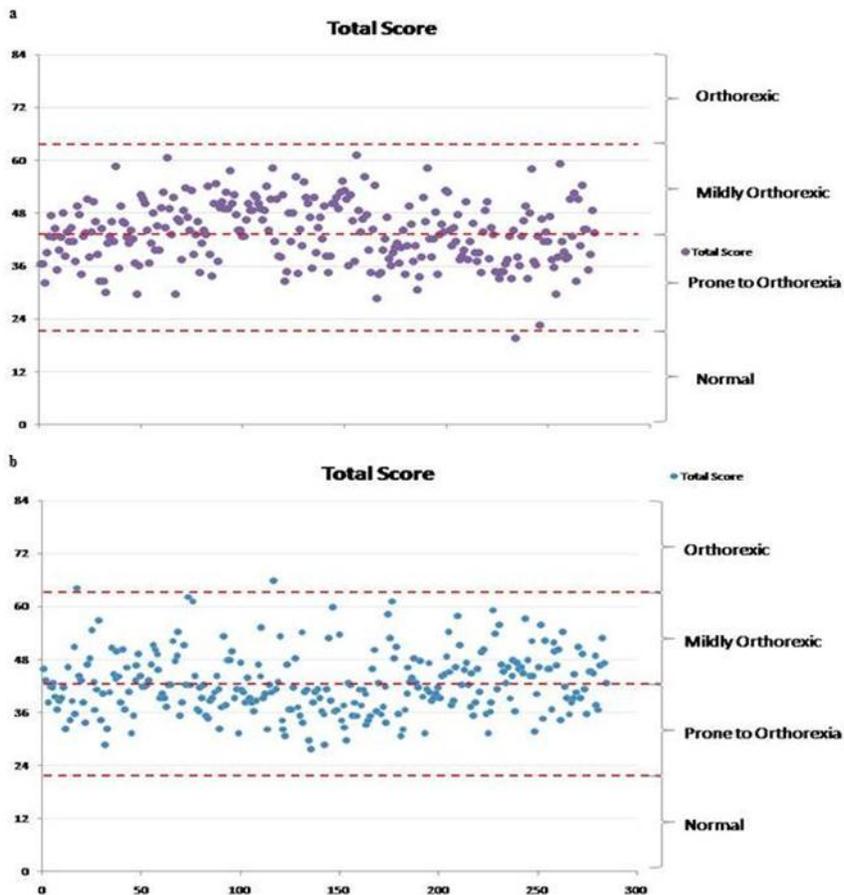


Fig. 2: Dot plot illustrating the distribution of the results in the four preset zones which are orthorexic, mildly orthorexic, prone to Orthorexia and normal (a) for the age group 15-19 and (b) for the age group 20-25.

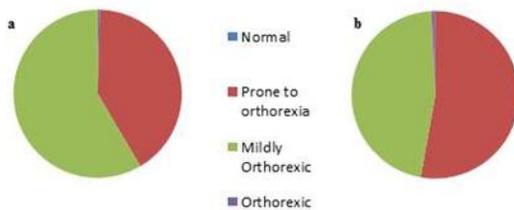


Fig. 3: Pie chart showing distribution of test scores (a) For the age group 15-19 (b) for the age group 20-25.

TABLE 1: Data Showing the Percentage of Students Falling into Four Preset Zones Under Study.

Results	Age Groups	
	(15-19)	(20-25)
Prone to Orthorexia	41.2%	53%
Mildly Orthorexic	65.4%	46%
Orthorexic	0%	1%
Normal	0.4%	0%

The pie chart showing age group of 15-19 presents the distribution among the subjects according to the ranges that were deciphered with respect to the total score. Approximately 41.2% of participants were found to be prone to Orthorexia whereas 65.4% were mildly at risk of becoming orthorexic. However the percentage for

completely orthorexic individuals was zero and only 0.4% were normal. However for age group of 20-25, the disease ratio is less and susceptibility ratio is high. Approximately 53% individuals are prone to Orthorexia whereas 46% are suffering from mild Orthorexia. None of them fall in the normal zone while disease ratio is only 1% (Figure 3 a, b) (Table 1).

These results are clearer in the normal distribution curve showing standard deviation and mean value for the data set (Figure 4 a, b). The graphical representation of these results shows that the mean score for the sample population between age group 15-19 was 43.50 and the standard deviation is 7.0, which signifies that 67% (normal distribution) is mostly within the prone to Orthorexia range, but the far spectrum of the normal distribution also brushes the mildly orthorexic zone. Almost similar to other age group, the mean score for the sample population ranges between 20-20 was 42.48 and the standard deviation is 6.95, which signifies that 67% (normal distribution) is mostly within the prone to Orthorexia range, but the far spectrum of the normal distribution also touches the mildly orthorexic zone.

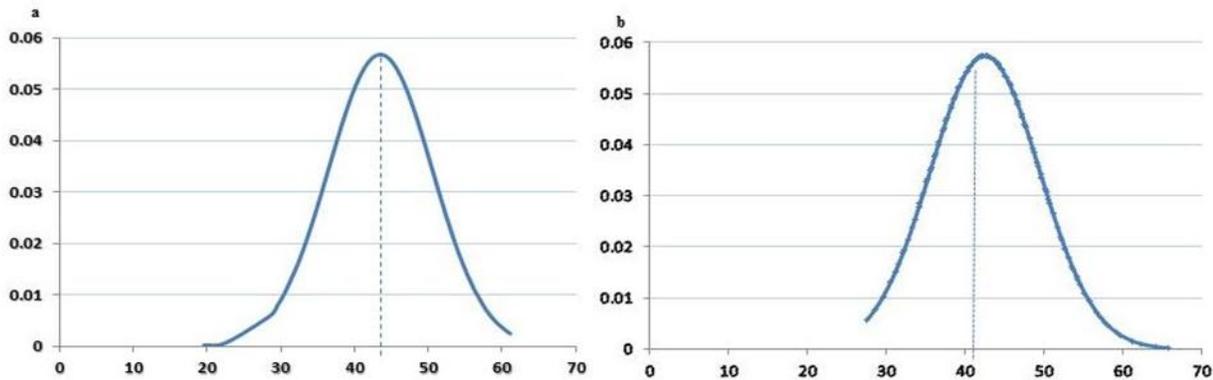


Fig. 4: The Normal Distribution Curve Indicating Standard Deviation and Mean Value for Four Preset Zones (a) for age Group 15-19 (b) for age group 20-25.

4. Discussion

Much of the research on Orthorexia is still under its way. As far as Pakistan is concerned, there has not yet been any study conducted to assess how the so-called 'healthy habits' can significantly affect the social life of an individual.

The main strength of this study included testing a large sample number from a minimum of three different cities of Pakistan. The aim was to get around 600 questionnaires filled by different groups of people, and to make statistical conclusions based on their answers and to finally assess the prevalence of such a disease in Pakistan. It was hypothesized that a complete set of questionnaire could definitely help in identifying young people at high risk of suffering from a health obsession that turns out to be not so healthy in the long run. The questions were about the obsession of choosing, buying and cooking food that people consider healthy, and aimed to check how and what effects their eating habits had on their social life. For example, 'How often do you read the labels of food products?' Several other characteristic questions were included in the survey that highlighted on identifying individuals prone to Orthorexia.

The highly notable habits that helped in identifying the disease were that these individuals make their complete day-to-day diet plan, consisting of a very limited variety of only those foods which they consider healthy. Upon following this schedule, they feel a boost in self-esteem which makes them feel somewhat superior, when compared to any other individual. These characteristics not only helped in classifying orthorexics but also distinguished this disease from another of its kind known as Anorexia Nervosa, where an individual is concerned with only the quantity of food consumed and not the quality.

The findings indicated a high frequency of those individuals who were prone to becoming orthorexic compared to those who already experienced mild signs and symptoms of it. Those who are mildly orthorexic

were more likely to answer “sometimes” whereas those who answered “always” were indicative of probably being more orthorexic. Similarly, on the rating questions the individuals who rated answers as “1-scale” indicated that they were least orthorexic, and therefore, were not much concerned about the quality of food and the health benefits they receive from it. On the other hand, those who rated it on a scale of 6 or above were considerably more orthorexic. Based on our results, we concluded that very few of the people who filled our forms were completely normal, corresponding to the fact that every individual holds a great tendency of adapting such a disorder. However, the ratio of 100 percent orthorexic patients was also quite low. A greater proportion of people were found to be moderate about their eating habits. Several others are prone to becoming victims of Orthorexia, especially due to their obsession with eating healthy foods. Some people who are mild patients of this disease have compulsive and phobic symptoms which might increase with the passage of time if they don't keep a check on their “healthy” eating habits.

From each of the questionnaires, we added up the total score to check for the final test score. Analysis of the data has shown that the majority of the age group of 15-19 that filled the questionnaires was only mildly orthorexic, as compared to the age group between 20-25 that was merely prone to Orthorexia. It can therefore be conceived, after studying responses to the media related questions in the survey form, that the students between ages 15 and 19 are more influenced by media, and it may actually be the delusional ideas planted into their immature minds through inaccurate or exaggerated advertisement that has lead them to become mildly orthorexic.

5. Conclusion

It is concluded from this report that orthorexia could be a potential threat to the emotional and psychological wellbeing of students in Pakistan, as it is with students anywhere in the world. The prevalence of this disease, observed in this study, predicts that it could be a serious and major health issue in Pakistan along with other diseases. Also, it is of immense importance that media (including advertisement) realizes the colossal impact it is having not only on the thinking of the youth, but their lives as well. Further studies can be made on the causes, symptoms and treatment of this disease, which hopefully improve our knowledge regarding orthorexia.

6. Acknowledgement

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8. Appendix Questionnaire

Sex:

Age:

Years of education completed:

Do you believe that people can have food related issues? (Y/N)

Does anyone in your family have food related issues? (Y/N)

Answer the following with Always (A), Often (O), Sometimes (S), Never (N)

1. How often do you read the labels of food products?
2. Would you eat nutritionally rich food even if its calorie content were high?
3. Does your diet contain only a few food items that you deem healthy?
4. Do you take dietary supplements?
5. Are you willing to spend more money to eat healthy food?
6. Do you think fortified food is superior to natural food?
7. Do you avoid foods with additives/preservatives?
8. Do you care more about the quality of food than its taste?
9. Do you fuss over how your food was prepared?
10. Do you make your daily or weekly diet plan?
11. Have you ever consulted a nutritionist for a healthy diet plan?
12. Does straying away from your diet make you feel uncomfortable or guilty?
13. Does it matter what people think about your eating habits?
14. Have you ever considered taking anti-depressants?
15. Do you feel a boost in self-esteem when you follow your healthy diet?
16. Do you read health magazines/articles or watch health shows frequently?
17. How often do you discuss eating habits with friends and family?
18. Do you think commercials truly reflect the nutritional status of food?
19. Do commercials influence your choice of food?
20. Over the past few years, to what extent have your eating habits changed? Grade your answer from a scale of zero to ten.
21. Have your eating habits affected your social life or activities? Grade your answer from a scale of zero to ten.