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A CROSS SECTIONAL STUDY TO INVESTIGATE THE CORRELATION BETWEEN BODY DYSMORPHIA AND EATING DISORDERS.

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ABSTRACT

BACKGROUND: BDD is characterized by a fixation with physical faults or imperfections that are either unseen to others or appear to be trivial to them whereas, eating disorders are complex illnesses that are affecting adolescents with increasing frequency. Their causes are very complex and may involve genetic, environmental and psychological factors, such as low esteem, poor body image and negativity. **OBJECTIVE:** To find out the association between body dysmorphia and eating disorders **METHODS:** A cross-sectional study was carried out from the University of Lahore, Lahore. Total 100 participants were selected through a non-probability convenient sampling technique. Participants were assessed through a pretested questionnaire.**RESULTS:** The results concluded that 18 participants out of 100 hid their body parts and also did crash diets to lose weight. While, 30 participants who don't hide their body parts but do crash diets to lose weight. The results also reflect that the majority of the participants were worried about their looks and restricted their diet. Among the 100 participants, 13 participants always believed that starving speeds up weight loss, 35 participants induced vomiting sometimes, whereas 22 participants always skipped their meals. These results indicate the presence of symptoms of eating disorders and Body Dysmorphia simultaneously.**PRACTICAL IMPLICATION:** This article holds significance for the community as it investigates the link between body dysmorphia and eating disorders via a cross-sectional study. This research can provide valuable insights into understanding the relationship between these two psychological conditions, which could potentially lead to improved diagnostic and treatment approaches for individuals affected by them. By shedding light on the connection, the article contributes to both the fields of mental health and overall well-being in society. **CONCLUSION:** This study concluded that participants simultaneously observed many symptoms of Body dysmorphia and eating disorder. The symptoms of both the disorders overlap and the participants having eating disorders had more tendency to incline towards body dysmorphia. Simultaneously, for participants who had BDD, symptoms like dietary restrictions and uncontrollable food cravings existed leading to eating disorders.

KEY WORDS: Body Dysmorphia BDD, Eating Disorder, Restricted Diet, Body Shape, Crash Diet

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INTRODUCTION

Body Dysmorphic Disorder is characterized by a fixation with physical faults or imperfections that are either unseen to others or appear to be trivial to them. Along with repetitive behaviors or actions, there must also be a significant amount of stress that has an impact on the individual's life. Although it affects 2% of the population, body dysmorphic disorder is not a well-known condition as compared to obsessive compulsive disorder OCD, anorexia nervosa, or schizophrenia. People with body dysmorphic disorder are said to be more likely to be preoccupied and focused on their nose, skin, hair, or wrinkles, and these people frequently describe these parts of their bodies as "repulsive" or "appalling [1]. BDD is a disorder that is reasonably common yet commonly misdiagnosed. The frequency of the general population is estimated to range from 1.9% to 3.3 % globally [2]. Eating disorders EDs are a group of syndromes characterized by changes in eating habits and psychological symptoms coupled

with weight fluctuations and social difficulties, ultimately affecting one's quality of life and social functioning [3]. Moreover, individuals with eating disorders may experience serious health issues that can lead to increased risk of suicide and death rate [4]. There was a lot of fluctuation in the prevalence of eating disorders among the general population, which ranges from 0.1% to 3.8% [5]. Body Dysmorphic Disorder is characterized by exaggerated worries about appearance and body dissatisfaction, just like eating disorders. Some authors have claimed that an interference in body image is the fundamental pathology of both Body Dysmorphic Disorder and eating disorders. Additionally, obsessional preoccupations and repetitive behaviors such as mirror checking and body measuring are features of both eating disorders and BDD [6]. Obsessions are common in people with BDD, such as recurrent thinking about certain aspects of their appearance and obsessive checking and questioning of others. Characteristic behavior also includes rituals that are intended to hide "defects." A number of writers agree that in some patients with anorexia, indications of BDD exist prior to the clinical manifestations of eating disorders. In these circumstances, patients may use low-calorie diets, exercise, laxatives, and diuretics to try to improve their physical appearance. Additionally, it might only affect certain body parts, primarily the legs and the face. The system of remedial exercises seems to get more complex the more self- conscious a patient is about their looks. As a result, it triggers multiple physical symptoms as well as psychopathological symptoms that meet the criteria for anorexia nervosa [7]. The DSM-V recommends that eating disorders be identified in those who report with worries about a preoccupation with appearance that is entirely focused on weight or body fat. However, it's common for eating disorders and body dysmorphic disorders to coexist. Despite the fact that eating disorders and body dissatisfaction are common in this population and that there hasn't been much research on either, it's possible that body dysmorphic disorder is going unrecognized and undiagnosed. While worries about weight or fat should be classified as an eating disorder, the DSM-V explains that a preoccupation with weight can be a symptom of BDD. Both should be diagnosed in that situation [1]. Cognitive behavioral therapy and selective serotonin reuptake inhibitors are the two main therapeutic modalities used to treat BDD. With the aim of identifying and changing dysfunctional thought and behavior patterns, CBT is a course of skills-focused psychotherapy. Its objectives include helping patients build coping mechanisms and enhance their quality of life [8, 9]. An increasing body of research demonstrates that CBT is successful in long-term maintenance therapy and relapse prevention both alone and in combination with pharmacotherapy and has been established as the psychological treatment method of choice for BDD. According to a recent meta- analysis, hourly or 90-minute sessions over the course of 8 to 14 weeks of CBT are helpful in lowering symptom intensity for at least 2-4 months after treatment termination[10]. Only a few medications can effectively treat bulimia nervosa and binge eating disorders [11]. Nutrition therapy is essential for patients with eating disorders.in case where oral feeding is not possible, nasogastric nutrition is preferred over other enteral or parenteral nutrition. Total parenteral nutrition is only important in severe cases of gastrointestinal functions. The goal of nutritional therapy is typically a weight gain of 2 to 3 pounds 1 to 1.3 kg per week for inpatient care and 0.5 to 1 pounds 0.2 to 0.5 kg per week for outpatient management in anorexia nervosa patients. Electrolytes should be carefully monitored as refeeding is done gradually. Nutritional therapy must include replacement of vitamins and minerals. Zinc, in particular, facilitates healing and eases anxiety and depression. Taking calcium and vitamin D supplements, as well as using bisphosphonates like etidronate carefully, can help reverse osteoporosis. Utilizing oral multivitamin and multimineral supplements is encouraged [12].

Rationale:

This article will help us to determine the association between body dysmorphia and eating disorders and it will further help the clarification of some false beliefs that exist regarding both these disorders. Since, the symptoms of these orders are very similar, adults are often confused among both these disorders. It must be remembered that if eating disorders are not treated and diagnosed on the right time with the right treatment, the chances of developing body dysmorphia increases, which in most cases remain undiagnosed.

METHODOLOGY

Study design: The present study was a Cross-sectional study. **Study setting:** The Study was being conducted at teaching hospital, of University of Lahore**. Sampling size:** The data was collected from a total 100 number of participants with the age range of 18-35 years. **Sampling technique:** The Sampling technique was non-probability convenient sampling. **Data collection procedure:** The data was collected randomly through a survey using a detailed self-constructed questionnaire after approval from experts. The participants were categorized according to the age group in this questionnaire. This procedure helps to understand the nature of the participant, according to his/her concepts with respect to body dysmorphia and eating disorder. **Data analysis plan:** The SPSS Tool was used for analyzing data which was being extracted from the questionnaire. The Results were expressed as mean±S.D. Level of significance is set as p-value ≤ 0.05.

RESULTS

Table 1: Association between Gender and diet restriction among participants.

Among 100 participants,1 male and 2 female restricted their diet all the time, 13 male and 28 female restricted their diet some of the time while 18 male and 29 female never restricted their diet. The association between gender and restriction of diet among participants is significant p=0.016.

Sr no	Gender	Restriction in diet			*p*-value
		All of the time	Some of the time	None of the time	
1	Male	1	13	18	.016
2	Female	2	28	29	

Table 2: Association between participants who were concerned about body shape and made restrictions in their diet.

Among 100 participants, 8 participants who were concerned about their body shape all the time made restriction in diet, 19 participants sometimes made restriction in diet and 7 participants never made restriction in diet. While participants who were not concerned about their body shape, 36 participants made restriction in diet and 30 participants didn't make restriction in their diet. The association between participants who were concerned about their body shape and made restrictions to their diet is significant p=0.008.

Sr no	Concerned about body shape	Restriction in diet			p-value
		All of the time	Some of the time	None of the time	
1	Yes	8	19	7	0.008
2	No	4	32	30	

Table 3: Association between participants who hide their body parts and do crash diets to lose weight.

Among 100 participants, 18 participants who hid their body parts also did crash diets to lose weight, 10 participants never did crash diets to lose weight. While, 30 participants who don't hide their body parts but do crash diets to lose weight and 42 participants never did crash diets to lose weight. The association between participants who hide their body parts and do crash diets to lose weight is significant p=0.02.

Sr no	Hide any body parts	Crash diets to lose weight			p-value
		All of the time	Some of the time	None of the time	
1	Yes	1	17	10	0.02
2	No	12	18	42	

Table 4: Association between participants who were concerned about body shape and induced vomiting if they felt they ate too much.

Among 100 participants who were concerned about their body shape 11 participants induced vomiting after eating too much, 23 participants never induced vomiting. While participants who were not concerned about their body shape, 31 participants induced vomiting and 35 participants didn't induce vomiting. The association between participants who were concerned about their body shape and induced vomiting is insignificant p=0.062.

Distribution of socio-economic status of participants.

Among 100 participants, 3 participants belonged to lower class, 41 belonged to middle class, 47 participants were from upper middle class while, 9 participants were from upper class.

Among 100 participants, 81 participants were aged between 18-25 while 19 were aged between 26-35.

Sr no	Concerned about body shape	Induced vomiting			p-value
		All of the time	Some of the time	None of the time	
1	Yes	4	7	23	0.062
2	No	3	28	35	

DISSCUSSION

Current study showed that out of 100 participants, 35% were always worried about their weight. Moreover, 26 participants aged 18-25 and 9 participants aged 26-35 were worried about their weight all the time. A study conducted by Kittler et al., in 2007 aimed to investigate the frequency of weight concerns in individuals with BDD, and to compare similarities and differences between those who are worried and those who are not worried about their weight. The results indicated that 29.0% participants had weight concerns. It also found that such individuals were more likely to be female and younger in age[13].

Current study showed that 59% participants were concerned about their looks and 44% limited their dietary intake among which majority were female. Cansever et al., carried out a cross-sectional investigation in 2003 aimed to find association between Prevalence and Clinical Features of Body Dysmorphic Disorder in College Students. The study found that, 43.8% of the college students were not satisfied with their looks and 4.8% of all participants were diagnosed with BDD[14]. Another study conducted by Ruffolo et al., in 2006 showed that eating disorders and body dysmorphia are more likely to be present in females[6].

Present study showed that out of 100m participants 35% were always worried about their weight and 34% were concerned about their body shape. Rosen and Ramirez., carried out a study. It was concluded that individuals with eating disorder were focused on their weight and body shape[15]. Moreover, the results showed out of 100 participants' 28% people were not satisfied with themselves and hid their body parts Monzani et al., carried out a cross-sectional investigation in 2012 to examine the heritability of dysmorphic concerns. Results showed that participants were over-concern with a perceived or slight defect in physical appearance is a heritable trait[16].

There are a lot of previous studies that show the coexistence of body dysmorphia and eating disorder. In 2022, a cross sectional examination was conducted by Milligan *et al*., This study wants to emphasize how important it is to distinguish between body dysmorphia and anorexia nervosa. A 18 years old was admitted in the hospital with severe malnutrition and it was diagnosed that her sadness was caused by our patient's self-hatred and body dysmorphia and the ensuing loss of appetite and severe malnutrition led to the diagnosis of Avoidant Restrictive food Disorder. This instance demonstrates how body dysmorphia and disordered eating interact[17].

In 2013 a cross sectional investigation was conducted by Mitchison et al., the aim of the study is to find out whether clinical characteristics frequently linked to body dysmorphia are present in women with eating disorders as well as their predictive value and effects. Participants filled out questionnaires and it was concluded that the clinical characteristics linked with body dysmorphia are prevalent in, predicting and related to deterioration in women with Eds[18].

Current study showed that out of 100 participants 36% participants wished to harm themselves. Rautio et al., carried out a cross-sectional study in 2020. They observed high rates of current psychiatric comorbidity 71.5%, past or current self-harm 52.1%, suicide attempts 11.0%, current desire for cosmetic procedures 53.7%, and complete school dropout 32.4%.

Current study showed that 28% females restrict their diet and 13% men limit their dietary intake. Shamshad et al., carried out a cross-sectional investigation in 2022 and it was calculated that females are more conscious of calorie content of the food they eat.

CONCLUSION

The study concluded that eating disorders are strongly associated with body dysmorphia and vice versa. The symptoms of both the disorders overlap and the participants having eating disorders had more tendency to incline towards body dysmorphia. Simultaneously, for participants who had BDD, symptoms like dietary restrictions and uncontrollable food cravings existed leading to eating disorders.

ETHICS APPROVAL: The ERC gave ethical review approval.
CONSENT TO PARTICIPATE: written and verbal consent was taken from subjects and next of kin.

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CONFLICT OF INTEREST: No competing interest declared.

REFERENCES

1. Ellenson A. Body Image and Eating Patterns in Older Adults. 2021 cited 2023 May 6; Available from: https://red.mnstate.edu/thesis/499/
2. Veale D, Gledhill LJ, Christodoulou P, Hodsoll J. Body dysmorphic disorder in different settings: A systematic review and estimated weighted prevalence. Body Image Internet. 2016 cited 2023 May 6;18:168–86.
3. Qian J, Wu Y, Liu F, Zhu Y, Jin H, Zhang H, et al. An update on the prevalence of eating disorders in the general population: a systematic review and meta-analysis. Eat Weight Disord. 2022 Mar 1;272:415–28.
4. Keski-Rahkonen A, Mustelin L 2016 Epidemiology of eating disorders in Europe:

prevalence, incidence, comorbidity, course, consequences, and risk factors. CurrOpin Psychiatry 296:340–345 - Google Search Internet. cited 2023 Jul 23.
5. Duncan AE, Ziobrowski HN, Nicol G. The Prevalence of Past 12-Month and Lifetime DSM-IV Eating Disorders by BMI Category in US Men and Women. Eur Eat Disord Rev. 2017 May 1;253:165–71.
6. Ruffolo JS, Phillips K, … WM-… J of eating, 2006 undefined. Comorbidity of body dysmorphic disorder and eating disorders: severity of psychopathology and body image disturbance. Wiley Online Libr Internet. 2006 Jan cited 2023 May 6;391:11–9.
7. Rabe-Jablonska Jolanta J, Sobow Tomasz M. The links between body dysmorphic disorder and eating disorders. Eur Psychiatry Internet. 2000 cited 2023 May 6;155:302–5.
8. Hofmann SG, Asmundson GJG, Beck AT. The Science of Cognitive Therapy. Behav Ther Internet. 2013 cited 2023 May 6;442:199–212.
9. Kaczkurkin AN, Foa EB. Cognitive-behavioral therapy for anxiety disorders: An update on the empirical evidence. Dialogues Clin Neurosci. 2015;173:337–46.
10. Hollander E, Hong K, Nezgovorova V. New perspectives in the treatment of body dysmorphic disorder. F1000Research Internet. 2018 cited 2023 May 6;7.
11. Klatte J, Vulink N, Kemperman P. Body dysmorphic disorder. Huisarts Wet Internet. 2016 cited 2023 May 6;591:20–3.
12. Phillips KA. Body dysmorphic disorder : advances in research and clinical practice. :581.
13. Kittler JE, Menard W, Phillips KA. Weight concerns in individuals with body dysmorphic disorder. Eat Behav Internet. 2007 Jan cited 2023 May 7;81:115–20.
14. Cansever A, Uzun Ö, Dönmez E, Ozşahin A. The prevalence and clinical features of body dysmorphic disorder in college students: A study in a Turkish sample. Compr Psychiatry Internet. 2003 cited 2023 May 7;441:60–4.
15. Rosen JC, Ramirez E. A comparison of eating disorders and body dysmorphic disorder on body image and psychological adjustment. J Psychosom Res Internet. 1998 cited 2023 May 7;443–4:441–9.
16. Monzani B, Rijsdijk F, Anson M, Iervolino AC, Cherkas L, Spector T, et al. A twin study of body dysmorphic concerns. Psychol Med Internet. 2012 cited 2023 May 7;429:1949–55.
17. Milligan T, Middleman AB. Facing an eating disorder: A case of body dysmorphic disorder and avoidant/restrictive food intake disorder. SAGE Open Med Case Reports Internet. 2022 cited 2023 May 7;10.
18. Mitchison D, Crino R, Hay P. The presence, predictive utility, and clinical significance of body dysmorphic symptoms in women with eating disorders. J Eat Disord Internet. 2013 cited 2023 May 7;11