

IMPACT OF SPECIFIC BIG-FIVE FACTORS ON BODY DYSMORPHIC DISORDER AMONG COSMETIC SURGERY PATIENTS

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ABSTRACT

Objective: To explore the predictive effect of big-five factors on Body dysmorphic disorder among cosmetic surgery patients.

Study Design: Cross sectional design.

Place and Duration of Study: Cosmetic centers of Rawalpindi and Islamabad, from Aug 2015 to Dec 2017.

Methodology: Using correlation research design the sample of the present study consisted of 200 cosmetic surgery patients were taken from different. Big five inventory (BFI) and Dysmorphic concern questionnaire (DCQ) were used in the present study to assess specific personality characteristics and Body dysmorphic disorder among cosmetic surgery patients. Psychometric properties of selected instruments were explored for the present study.

Results: The result was carried out using SPSS-21. The results of multiple linear regression showed that extraversion ($\beta = -.22, p < 0.01$), conscientiousness ($\beta = -.22, p < 0.01$) negatively predicted body dysmorphic disorder. Whereas, agreeableness ($\beta = 0.24, p < 0.01$), positively predicted body dysmorphic disorder. The value of R² showed that specific personality traits such as extraversion, conscientiousness, and agreeableness explained a total of 14% change in body dysmorphic disorder among cosmetic surgery patients. Gender differences showed that male patients are higher on all personality dimensions. Whereas, females are higher in body dysmorphic disorder as compared to male patients.

Conclusion: Individual personality is a strong predictor of individual ideas of personal defects which forecast one's inclination toward cosmetic surgery.

Keywords: Body dysmorphic disorder, Cosmetic surgery patients, Extraversion, Neuroticism, Openness.

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INTRODUCTION

Individuals nowadays are facing new challenges such as concern about their weight, look, and body image. Considering the available literature review there is an association between different personality dimensions affecting the different level of body-dysmorphic Disorder (BDD) among the cosmetic surgery patients.

Body Dysmorphic Disorder (BDD) is associated with individually perceived preoccupation related to physical features defects or flaws without any logical support. Mostly individual with body dysmorphic have a preoccupation of a defected nose, hair, or skin, but sometimes more than one part of the body is considered more

defected by the individual¹. Secondly, individuals with BDD often indulge in different repetitive acts which are time-consuming, and persistent e.g., camouflaging their imaginary defects by using different cosmetic products or covering it up with clothes. BDD individual often does mirror checking or reconfirm their physical appearance¹.

The development of BDD is assumed to determined by multiple factors³, one factor is previous life experiences (e.g., teasing or bullying), biological factors (e.g. genetics) and personality traits (e.g. perfectionism). Perfectionism is one of the personality traits, in the models that it is considered a vulnerability factor for the development of BDD²⁻⁵.

Disappointment with one's body appearance is increasing day by day. Research suggests that the media agitation regarding slim/thin bodies

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may be linked to body image disturbances. Another study explored the effect of media pictures (thin models) and found that these slim figure images had a significant influence on self-perception of women⁶. When it comes to gender differences, body disappointment was more in women but men were also significantly affected by body disappointment⁷. The results of another study revealed that there is a significant positive relationship between body dissatisfaction and neuroticism while a concrete negative connection between body dissatisfaction and openness, agreeableness, extraversion, and conscientiousness⁸. Another study documented a significant negative relationship between neuroticism and sexual self-esteem⁹.

A longitudinal study explored body dissatisfaction gender differences in which males were most disappointed with their body appearance in early youth, however, for women body disappointment advances in a certain progression that continues into late pre-adulthood¹⁰. Individuals with body dysmorphic disorder (BDD) have been reported to score high on schizoid, narcissistic, and obsessional personality traits and are found to be sensitive, introvert, perfectionistic, and insecure. Studies reveal that the rate of identity issue in BDD is moderately high, with avoidant identity issue being generally basic. The high neuroticism scores and low extraversion scores are steady with this finding. Another research revealed that early life exposure to dolls with the ideal slim physique can harm ladies' self-perception in later life and can lead to problems with eating habits and weight issues^{12,13}. Standards set by society in regard to body image and self-perception has a significant influence on the self-regard of young ladies belonging to ethnic minorities of US.

The present study was aimed to identify the relationship between personality traits and body-dysmorphic disorder among cosmetic surgery patients. In general personality traits are the elements that construct every individual's identity. These are enduring discrete characteristics. Body dysmorphic disorder is a very important topic,

for many reasons. People with body-dysmorphic disorder experience the ill effects of overpowering pain and can experience difficulty concentrating on anything but their apparent defect(s) because of their internalized conviction that they don't look visually pleasing. In some cases, BDD may lead to social withdrawal, repeated hospitalization, and even suicide attempts.

There have been a lot of studies in this area in western researches still it remains unexplored to some point and yet a broad understanding has not been developed in indigenous culture. Lastly, the indigenous and western researchers have shown that the personality traits and body-dysmorphic disorder have been studied separately but none of the researchers have shown the possible relationship between all the variables. With this background, the present study is a modest attempt towards exploring the relationship between all these variables and our focus will be on how different personality traits correlate with body dysmorphic disorder, how much the Pakistani cosmetic surgery patients both male and female suffer from body dysmorphic disorder.

METHODOLOGY

In the present study, correlation research design was used. The study included 200 cosmetic surgery patients. The age range of the participants was from 18-40 years. After getting approval from the Ethical board the study was initiated. The cosmetic surgery patients from British Cosmetic Laser Surgery, Cosmesurge International Hospital, Ellipse Laser Clinic, Ellipse Laser Clinic, Laserase Skin Clinic, Ali Medical Centre, Elixir, Hair Transplant, Skin Laser and Cosmetic Surgery Center Islamabad, from August 2015 to December 2017. Patients who had previously carried out cosmetic surgery, or recently had cosmetic surgery were included in the sample. Patients with burn cases, acid burn cases, and domestic violence that led to cosmetic surgery were not included in the sample. The sample of the present study was calculated through slovin's formula. The standard parameters using Solvins formula was used for study sample calculation

the formula for study was $n=N/1+N(e)^2$. By keeping the margin of error as 0.05 total of 200 patients were included in the sample. All the patients were approached in their clinical setting after approval from the cosmetic surgeon. Consecutive sampling technique was used in the selection of the patients. After receiving approval from the head to the cosmetics center/unit the consent from the participants the participants were approached individually by the researcher.

In the present study, 2 instruments were used on the cosmetic patients. The Big Inventory (BFI) was used on the patients to explore the big five factors of personality. It is a 44-Item inventory that measures an individual on the big five factors of personality. The second instrument Dysmorphic concern questionnaire (DCQ) was used to assess the physical appearance/body malfunctioning¹¹⁻¹⁵. It was a self-report questionnaire assessing the extent of concern with physical appearance/body malfunctioning. It consists of seven items, each item is rated on a 4 points likert scale with a total score ranging from 0-12. The dysmorphic concern is a term that has been used to refer to an over concern with a perceived or slight defect in physical appearance.

Patients were approached with prior permission of the head of the cosmetic center/unit. Data was gradually collected in different phases and questionnaires were filled from the patients, who gave their informed consent and willingness to participate in this study. The research questionnaires were distributed among the patients during their scheduled appointment with the doctors and were collected later depending on their feasibility. It was also ensured on the part of the researchers that all information would be kept confidential and personal identity will not be revealed. After collection of the data, the data was analyzed for statistical analysis. SPSS- 21 version was used in the present study. Pearson Correlation determined the relationship between personality traits and body dysmorphic disorder among cosmetic patients. The t-test was used to analyze the gender and age differences between patients on personality traits and body dysmor-

phic disorder. The regression analysis revealed the effect of personality traits on body dysmorphic disorder among cosmetic patients. A $p \leq 0.05$ considered as a significant value.

RESULTS

The present study was conducted on 250 participants but due to the inclusion and exclusion criterion total of 200 cosmetic patients filled up all the three assessments. The study included 200 cosmetic surgery patients (Male= 84 (42%), Female=116 (58%) with mean age range of $22.84 \pm$

Table-I: Difference in body dysmorphic concerns among cosmetic patients.

Body dysmorphic concerns	n (%)
Being fat/more weight	67 (33.5)
Skin	62 (31)
Nose	35 (17.5)
Hair concern	20 (10)
Teeth concern	16 (8)

1.67 years.

The result of the study highlighted that 82 (42%) of males experienced body dysmorphic disorder and different personality traits, whereas 116 (58%) of females have experienced body dysmorphic disorder and different personality traits. Patients in the age range of 18-26 years of age reported a higher tendency for the study variables as compared to patients in the age of 27-40 years of age indicating the lower age is predictor factor for the body-dysmorphic disorder. Married patients 92 (46%) participated in the study and 108 (54%) single patients experienced body dysmorphic disorder and different level of personality traits. 145 (72.5%) of patients with cosmetic surgery had gone through 1 cosmetic operation (table-I).

Table-II highlights extraversion, conscientiousness, and openness to experience have significant negative relationship with body dysmorphic disorder. Showing that, patients those are extrovert, conscientious and open to the new idea will have less Body dysmorphic disorder. On contrary, agreeableness and neuroticism have significant positive relation with body dysmorphic disorder. Indicating that more the person is

agreeable and neurotic more the person has the inclination to have Body dysmorphic disorder.

Table-III shows gender differences in personality traits and Body dysmorphic disorder. The table shows that male patients are higher in all personality dimensions. Whereas, females are

the age range of 24-30 years as compared to other age categories.

Regression analysis was carried out to highlight the predictive features of personality traits on body-dysmorphic disorder. Results in table showed that extraversion ($\beta=-.22, p<0.01$),

Table-II: Correlation matrix among personality traits and body-dimorphic disorder (n=200).

	1	2	3	4	5	6
Extroversion	-	0.47**	0.24**	0.17*	0.65**	-0.24**
Agreeableness		-	0.35**	0.13	0.28**	0.34**
Conscientiousness			-	0.20**	0.37**	-0.21**
Neuroticism				-	0.42**	0.23**
Openness to experience					-	-0.23**
Body dysmorphic disorder						-
Mean \pm SD	24.59 \pm 4.96	28.79 \pm 4.59	29.30 \pm 4.20	24.77 \pm 3.93	31.96 \pm 5.71	12.25 \pm 4.20

* $p<0.05$, ** $p<0.01$

higher on body-dysmorphic disorder as compared to male patients. The results of the present study are thus supporting the literature review.

Table-IV shows age differences in personality traits and Body dysmorphic disorder. The table showed that there are no significant age

conscientiousness ($\beta=-.22, p<0.01$) negatively predicted body-dimorphic disorder. Indicating, that more extrovert and conscientious patients are less likely to develop the body-dysmorphic disorder. Whereas, agreeableness ($\beta=.24, p<0.01$), positively predicted body- dysmorphic disorder. Indicating

Table-III: Personality traits and body- dysmorphic disorder (n = 200).

Variables	Female (n=116)	Male (n=84)	p-value
	Mean \pm SD	Mean \pm SD	
Extroversion	23.09 \pm 5.07	26.65 \pm 4.00	<0.001
Agreeableness	28.49 \pm 4.57	29.20 \pm 4.36	0.28
Conscientiousness	28.66 \pm 3.94	30.17 \pm 4.41	0.01
Neuroticism	24.10 \pm 4.29	25.70 \pm 3.25	0.01
Openness to experience	30.12 \pm 5.41	34.51 \pm 5.12	<0.001
Body dysmorphic disorder	12.88 \pm 3.96	11.38 \pm 4.39	0.01

CI= Confidence Interval, LL = Lower Limit, UP= Upper Limit, * $p<0.05$, ** $p<0.01$

Table-IV: Age differences in personality traits and body- dysmorphic disorder (n=200).

Variables	18-23 years (n=51)	24-30 years (n=149)	p-value
	Mean \pm SD	Mean \pm SD	
Extroversion	25.62 \pm 4.37	24.23 \pm 5.11	0.08
Agreeableness	28.70 \pm 3.44	28.81 \pm 4.94	0.88
Conscientiousness	29.74 \pm 3.55	29.14 \pm 4.40	0.38
Neuroticism	25.76 \pm 3.53	24.43 \pm 4.01	0.04
Openness to experience	33.92 \pm 4.52	31.29 \pm 5.93	0.004
Body dysmorphic disorder	10.58 \pm 3.74	12.82 \pm 4.21	0.001

CI= Confidence Interval, LL = Lower Limit, UP= Upper Limit, * $p<0.05$, ** $p<0.01$

differences in personality dimensions. The body-dysmorphic disorder score is higher in patients in

that more the patients are susceptible to agree with other individuals they are more prone to

develop body- dysmorphic disorder. The value of R2 showed that extraversion, conscientiousness, and agreeableness explained a total of 14% change in body-dysmorphic disorder.

DISCUSSION

The variable of body dysmorphic disorder is least studied variables in patients of cosmetic surgery¹⁶⁻¹⁸. As these patients according to the DSM-V criterion consider their defects to be real and thus adopt different acts to cover their invisible defects. For that cosmetic patients experience diverse levels of dysmorphic disorder.

Table-V: Multiple regression analysis to test effects of personality traits on body- dysmorphic disorder (n=200).

Variables	Body dysmorphic disorder	
	B	Model 1 95% CI
Constant	17.06	[11.83, 22.30]
Extroversion	-0.18**	[-0.34 , -0.03]
Agreeableness	0.22**	[0.07 , 0.36]
Conscientiousness	-0.22**	[-0.37 , -0.07]
Neuroticism	0.13	[-0.02 , 0.28]
Openness to experience	-0.10	[-0.24 , 0.03]
R2	0.14	
F	6.34	

CI = Confidence Interval, **p*<0.05, ***p*< 0.01

ders. For that, the main purpose of the present study was to explore the relationship between specific personality traits and body dysmorphic disorders. The present study consisted of 200 cosmetic surgery patients (Male=84, 42%; Female =116, 58%). The age range of the participants was from 18-40 years (M=22.84, SD=1.67).

The indigenous study also highlighted similar results that most of the student experienced body dimorphic concerns due to media influence. Out of 28% patients, 8.4% had significant concern about body defeats, 3.8% had the extreme concern about body defects, 8.1% fulfilled the DSM-V criterion of BDD. 40% patients, had a concern about being fat, 21.9% about skin, 15% had the skin concern, 15% had hair concern, 11.5% had teeth concern, 14% had nose concerns.

25.4% student experienced depression, anxiety due to physical defeat¹⁹⁻²¹.

Results indicated a significant relationship of specific personality traits and body-dysmorphic disorder. Neuroticism was found to be positively correlated with body- dysmorphic disorder whereas conscientiousness and extroversion were found negatively correlated with body-dysmorphic disorder. As previous studies have shown that there is a significant positive relationship between body dissatisfaction and neuroticism while a concrete negative connection between body dissatisfaction and openness, agreeableness, extraversion, and conscientiousness⁸. Another study documented a significant negative relationship between neuroticism and sexual self-esteem⁹. Individuals with body dysmorphic disorder (BDD) have been reported to score high on schizoid, narcissistic, and obsessional personality traits and are found to be sensitive, introvert, perfectionist, and insecure. The high neuroticism scores and low extraversion scores are steady with this finding^{11,12,21}.

Further analysis revealed that male patients were higher on all personality dimensions. Whereas, females patients were higher on body-dysmorphic features as compared to male patients. The results of the present study are thus supporting the literature review. The table showed that there are no significant age differences in personality dimension. The body dysmorphic disorder score is higher in patients in the age range of 24-30 years as compared to another age criterion. The results of the study are in accordance with the previous longitudinal study which showed that male also experience BDD but in early youth, however, for women body disappointment advances in a certain progression that continues into late pre-adulthood¹⁰. Other studies also revealed similar results^{6,7}. Other studies also highlighted that cultural values playing with thin dolls and relationship with mother is the significant predictor of BDD^{11,12} concerns in female as compared to male patients.

CONCLUSION

The personality features which are the significant predictor of body dysmorphic disorder, found in our study need to be been considerate before going for the cosmetic surgery, as early identification in early stage would help to minimize the possibility of multiples cosmetic surgeries in these patints¹⁹. As multiple studies have shown that individual with extroversion and conscientiousness has a negative correlation with body dysmorphic disorder. Neuroticism is positively correlated with body dysmorphic disorder^{9,10,11,19,20}. As none of the indigenious research has explored the relationship between different personality traits and body dysmorphic among cosmetic patients, for that current data can be used as the baseline to explore the interventions that can be applied on cosmetic patients before any cosmetic surgery. As despite cosmetic surgery therapeutic interventions would be possible to change the cognition of these patients. But as the current research was conducted on cosmetic patients of Rawalpindi and Islamabad the current research data cannot be generalized to the overall population of Pakistan.

CONFLICT OF INTEREST

This study has no conflict of interest to be declared by the author.

REFERNCES

- American Psychiatric Association. Diagnostic and statistical manual of mental disorders. Washington, DC: American Psychiatric Association, 2000.
- Veale D. Advances in a cognitive behavioral model of body dysmorphic disorder. *Body Image* 2004; 1(1): 113-25.
- Wilhelm S. Feeling good about the way you look: a program for overcoming body image problems 2006. New York: Guilford Press.
- Atta M, Ather M, Bano M. Emotional intelligence and personality traits among university teachers: relationship and gender differences. *Intl J Business Social Sci* 2013; 4(17): 253-59.
- Skorek M, Song AV, Dunham Y. Self-Esteem as a mediator between personality traits and body esteem: Path Analyses across Gender and Race/Ethnicity. *PLoS One* 2014; 9(11): e112-86.
- Grabe S, Monique LM, Janet W, Hyde S. The role of the media in body image concerns among women: a meta-analysis of experimental and correlational studies. *Psychological Bulletin* 2008; 134(3): 460-47.
- Brennan AM, Lalonde EC, Bain LJ. Body image perceptions: do gender differences exist? *Psi Chi J Undergraduate Res* 2010; 15(3): 130-38.
- Schieber K, Kollei I, Zwaan de M, Müller A, Martin A. Personality traits as vulnerability factors in body dysmorphic disorder. *Psychiatr Res* 2013; 210(1): 242-46.
- Firoozi M, Azmoude E, Negar-Asgharipoor N. The relationship between personality traits and sexual self-esteem and its components. *Iran J Nursery Midwifery Res* 2016; 21(3): 225-31.
- Bearman KS, Martinez E, Stice E, Department of Psychology, University of Texas at Austin, 2008.
- Presnell K. The skinny on body dissatisfaction: a longitudinal study of adolescent girls and boys. *J Youth Adolescents* 2006; 35(2): 217-29.
- Phillips KA, McElroy SL. Personality disorders and traits in patients with body dysmorphic disorder. *Comparative Psychiatry* 2000; 41(4): 229-36.
- Dabros, JL. Correlates of body image of undergraduate females attending andrews university (M.sc Dissertations) 2014. Retrieved from: <http://digitalcommons.andrews.edu/dissertations/311>
13. Anschutz JD, Engels CMR 2010. The effects of playing with thin dolls on body image and food intake in young girls. *Sex Roles* 2010; 63(9-10): 621-30.
- Yam M. Does culture matter in body image? The effects of subjective and contextual culture on body image among bicultural women 2013. Doctor of Philosophy (Psychology) in University of Michigan.
- Shenaar-Golan V, Walter O. Mother-Daughter relationship and daughter's body image 2015. *Health* 2015; 7(1): 547-59.
- John OP, Srivastava S. Handbook of personality: Theory and research. New York: Guilford Press 1999; 2(1): 102-38.
- Oosthuizen P, Lambert T, Castle DJ. Dysmorphic concern: Prevalence and associations with clinical variables. *Aust NZ J Psychiatr* 1998; 32(1): 129-32.
- Schieber K, Kollei I, de Zwaan M, Müller A, Martin A. Personality traits as vulnerability factors in body dysmorphic disorder. *Psychiatry Resilience* 2013; 210(1): 242-46.
- Barahmand U, Mozdsetan N, Narimani M. Body dysmorphic traits and personality disorder patterns in rhinoplasty seekers. *Pub Med* 2010; 47(2): 154-67.
- Jangda AA, Uddin FM, Jangda AM, Khan AM, Sultan AA, Shah RS. Body dysmorphic disorder: A serious concern for our young generation. *Asian J Psychiatr* 2017; 28; 3.
- Donaghue N. Body Satisfaction, sexual self-schemas and subjective well-being in women. *Body Image* 2009; 6(1): 37-42.