

# PERSONALITY TRAITS, OPTIMISM AND SOMATIC SYMPTOM DISORDER AMONG FEMALE UNIVERSITY STUDENTS DURING COVID-19

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## ABSTRACT

### OBJECTIVE

To explore the relationship among personality traits, optimism and somatic symptom disorder among female university students.

### STUDY DESIGN

Cross-sectional research design.

### PLACE AND DURATION OF THE STUDY

The study was conducted at the Department of Applied Psychology, University of Management & Technology, from June 2020 to March 2021.

### SUBJECTS AND METHODS

Purposive non-probability sampling technique was used to obtain a sample of 110 female students from different universities of Lahore using mixed mode (face to face & online) data collection. The study was conducted during the pandemic, therefore because of lockdown data collection mode was changed from in-person to online. The 24-item Brief HEXACO Inventory, Life Orientation Test (LOT) and Patient health questionnaire were used in this study.

### RESULTS

The results indicated that there was a positive correlation between personality trait (emotionality) and somatic symptom disorder found significant. Results also revealed that there was a positive correlation between personality traits (Extraversion, Conscientiousness) and optimism found to be significant. Furthermore, a negative correlation was found significant between optimism and somatic symptom disorder. A negative correlation between personality trait (emotionality) and optimism was found significant.

### CONCLUSION

The present study concluded that emotionality was positively related to somatic symptom disorder. Optimism was negatively correlated with somatic symptom disorder.

### KEYWORDS

Personality traits, Emotionality, Optimism, Somatic symptom disorder.

## INTRODUCTION

Personality traits and cognitive resources play a vital role in development of any mental health issues. There is a connection between mind and body. This proposition has been supported with the evidence that a person experiences physiological symptoms like sweating, high heart rate, trembling, nausea, high blood pressure, etc. because of emotional disturbances. Thus, a positive thinking or optimistic life approach may not only facilitate good mental health, but it also minimizes the daily life stressors associated with mental disorders, and somatoform disorder is one of them. Life orientation has two aspects, optimistic view of life and pessimistic view of life. The people who have positive thinking regarding different situations of life fall in optimistic life approach<sup>1,2</sup>. While on the other side if someone has negative thinking regarding life will be fall in pessimistic life orientation. Literature also revealed that people who have optimistic life orientation can deal better after having any physical condition. While there are very few researches in which optimism is explored with psychological disorders.<sup>3</sup>

Moreover personality traits also have an important function in developing some psychiatric illnesses issues.<sup>4</sup> Personality traits are identified as an individual's stable behavioural tendencies, captured in different situations, circumstances, times and instances,<sup>5</sup> and these reflect an individual's persistent and organised way of feeling, thinking and working.<sup>6</sup> Personalities are comparatively stable characteristics that help individuals guide their behaviour and beliefs. There are many facets of personality from being extraverted to highly conscientious, agreeable, open to experience and neurotic.<sup>7</sup> Individuals who are highly neurotic are easily prompted by facing any adverse condition, like threat, danger or any uncertain condition.<sup>8</sup> On the other hand, individuals who are more open to experiences can cope well with the adverse conditions with help of their creative abilities.<sup>9</sup> Whereas, individuals who are highly conscious adapt to behaviours that are healthy in nature.<sup>10</sup> Individuals with personality characteristics like low level of optimism, perceived control and dispositional intolerance for insecurity, cannot cope well with adverse states and negatively impacts the nature built psychological adaptation route to cater crisis or stressful situations.<sup>11</sup>

In the conditions of stress, there are few psychological dynamics that help lower the adversarial effects of anxiety and stress on wellbeing. These dynamics include positive traits, the



psychology of positivity and some positive strengths found in psychology such as optimism, positive attitude, and having denotation, and purpose in the life of oneself.<sup>12</sup> which aids in coping and overcoming mental issues in the hours of crisis or dilemma.<sup>13</sup> In Pakistan's culture, few studies were found in which somatic symptom disorder was explored. On the other hand, much focus has been given to other psychological aspects such as anxiety, stress and depression rather than somatic symptom disorder.<sup>14</sup>

The present study aimed to explore new dimensions which were ignored in the past. In previous literature, somatoform disorder was assessed with neuroticism, so this research filled the gap of literature by exploring how an optimistic life view contributes to developing psychological problems. In this research, the role of personality traits was also studied. The study highlighted these factors to make people and authority figures aware of such factors, so they may take appropriate measures.

## SUBJECTS AND METHODS

### Participants

The sample comprised of 110 female university students (mean age=21.85), recruited from different universities of Lahore. To address the confounding variables, such as anxiety, depression, the patients with such psychological problems were not included in the study.

### Instruments

Following tools were used to collect the data.

### Informed Consent and demographic sheet

The form involved information about the purpose and requirements of the study. The participants were assured that their information would be kept confidential. A self-developed demographic sheet was created to assess demographic variables such as age, education, employment status, marital status, family background and monthly income that were measured through the self-developed demographic form. (See Table 1).

### The 24-item Brief HEXACO Inventory (BHI)

A short version of HEXACO inventory was used in the current research. It has 24-items. Four items represent one dimension. It is used to measure six dimensions of personality, i.e. honesty-humility, emotionality, extraversion, agreeableness, conscientiousness and openness to experience. It uses a 5-point Likert scale ranging from 1=strongly disagree, 2=disagree, 3=neutral (neither agree, nor disagree), 4=agree, and 5=strongly agree. The Cronbach's alphas of BHI are .57, .46, .72, .44, .53 and .57 respectively for honesty-humility, emotionality, extraversion, agreeableness, conscientiousness and openness to experience.<sup>15</sup>

### Life Orientation Test (LOT)

It is a brief measure and revised form of the original Life Orientation Test (LOT). It is used to measure optimism in comparison with pessimism. It has 10 items, out of which 3 items are for optimism, 3 for pessimism and 4 are filler items. Each item is rated on a 4-point Likert scale ranging from 0 = strongly disagree, 1 = disagree, 2 = neutral, 3 = agree, and 4 = strongly agree. The Cronbach's alpha of LOT is .72.<sup>16</sup>

### Patient Health Questionnaire (PHQ-15)

It is a brief self-administered scale that was derived from the original version of patient health questionnaire (PHQ) studies. The scale PHQ-15 has 15 items, and assesses the severity of somatic symptoms and the existence of somatoform disorder and somatisation. It uses the 3-point Likert scale ranging from "0" (not bothered at all) to "2" (bothered a lot). Score "5" on PHQ-15 is a low score, "10" being medium and score "15" shows high severity of somatic symptoms. The Cronbach's alpha of PHQ-15 is .87.<sup>17</sup>

### Procedure

Prior to administering the scales, permission was taken from the authors of scales through email. When permission was granted, then the process of data collection started. The informed consent form and demographic forms were formulated. The purpose of forms was to brief them about the study, to acquire their consent and to get brief information about the participants. The measures (Patient Health Questionnaire, Life Orientation Test and the brief HEXACO inventory) were administered individually to the participants after having their consent. Mixed sampling strategy was used to collect data. Initially, the data was collected on campus using a purposive sampling technique, but because of COVID-19 lockdown, the remaining data was collected online by using a snow-ball technique. For online data collection Google forms were used. The overall response rate was good but a little slow when collecting online. After the collection of data, they were entered into Social Package for Social Sciences (SPSS-21) software. After screening the data, the reliability of scales was measured and scores were computed. To find the relationship among variables, the Pearson Product-Moment Correlation analysis was used to deduce results of the study and to draw conclusion accordingly.



**RESULTS**

The results of the present study were analyzed stepwise. In the first step, descriptive statistics were calculated in which all demographic variables were used (See Table 1). Second, the Pearson Product-Moment Correlation analysis was carried out to investigate the relationship among personality traits, optimism, and somatic symptom disorder.

**Table 1**  
**Descriptive Statistics of Demographic Variables (n = 110)**

Variables	f (%)	M (SD)
Age	-	21.85 (3.20)
Marital status	-	-
Married	9 (8.2)	-
Single	101 (91.8)	-
Birth order	-	-
first born	27(25)	-
middle born	45(41)	-
Last born	38(34)	-
Family system	-	-
Nuclear	76 (69.1)	-
Joint	34 (30.9)	-
Family members	-	6.91(3.11)
Family background	-	-
Urban	77 (70)	-
Rural	33 (30)	-
Education level	-	-
BS/BSc	80 (72.7)	-
MS/MSc/MPhil	24 (21.8)	-
PhD	6 (5.5)	-
Employment	-	-
Employed	13 (11.8)	-
Unemployed	97 (88.2)	-
Monthly family income	-	-
20000-30000	33 (30)	-
30000-40000	13 (11)	-
40000-50000	26 (23.6)	-
50000-above	38 (34.5)	-

Note. f = frequency, M = arithmetic mean, and SD = Standard Deviation

**Table 2**  
**Correlation Analysis between Independent Variables and Outcome Variable (n=110).**

Variables	Honesty-Humility	Emotionality	Extraversion	Agreeableness	Conscientiousness	Openness	Optimism	SDD
Honesty-Humility		-.02	-.14	-.12	.00	-.09	.07	-.12
Emotionality			-.24*	.20*	-.16	-.10	-.32**	.35**
Extraversion				.11	.09	.16	.29**	-.14
Agreeableness					-.23*	-.26**	.15	-.05
Conscientiousness						.15	.22*	-.16
Openness							-.07	-.02
Optimism								-.25*
SDD								

Note. \*p<.05, \*\*p<.01, \*\*\*p<.001. SSD = Somatic Symptom Disorder

The results of correlation analysis (see Table 2) showed that there was a positive correlation between personality trait (emotionality) and somatic symptom disorder found significant. Results also revealed that there was a positive correlation between personality traits (Extraversion, Conscientiousness) and optimism found to be significant. Furthermore, a negative correlation was found significant between optimism and somatic symptom disorder. A negative correlation between personality trait (emotionality) and optimism was found significant.

**DISCUSSION**

In the context of the existing literature, it was hypothesized that there is likely to be a negative correlation between emotionality personality trait and optimism. The result of Pearson product-moment correlation showed that there was a negative correlation between emotionality personality trait and optimism. It is implied that with high emotionality levels, capacity to be optimistic decreases. The study demonstrated that neuroticism has a strong negative correlation with optimism and extraversion has a positive relation.<sup>18</sup> The high emotionality corresponds to the neuroticism (low emotional stability).<sup>19</sup> and people high in neuroticism experience much worry and anxiety, and negative emotions in reaction to life stressors, instead of having positive attitude towards circumstances.<sup>20,21</sup> This is due to the fact that neuroticism is correlated with worry and rumination and somatic symptom disorder involves the excessive anxiety and concern about health, therefore emotional instability/neuroticism lead to the somatic symptom disorder.<sup>19</sup>

One hypothesis was that personality traits of honesty-humility, openness to experience, extraversion, agreeableness and conscientiousness are likely to have a positive relationship with optimism. It was found as the result of correlation analysis that extraversion and conscientiousness had a positive relationship with optimism. According to a study, extraverts have usually positive mood-sets.<sup>22</sup> It has also been revealed that optimism does not have any significant association with rest of the paradigms of personality (introversion, emotional stability and psychoticism) which explained different personality traits had different associations with optimism.<sup>23</sup> In another study, it was found that patients with somatization scored high on neuroticism and low on conscientiousness and extraversion.<sup>24</sup> A study of optimism and big five personality traits (extraversion, introversion, neuroticism, emotional stability and psychoticism) revealed that optimism was positively significant with extroversion. It has also been revealed that optimism does not have any significant association with the other paradigms of personality (introversion, neuroticism, emotional stability and psychoticism). It was concluded that an extrovert couple is more optimistic regarding future.<sup>23</sup>



The other hypothesis stated that the emotionality personality trait will be positively correlated with somatic symptom disorder. The result of correlation analysis indicated that emotionality is positively related to somatic symptom disorder. Considering previous studies that covariation between internalizing symptoms and the personality traits like neuroticism could be described in the way of genomic risk factors, whereas for other personality traits there is little evidence.<sup>4</sup> Neurotic individuals have poor well-being, including physical, psychological and social.<sup>20,21</sup> It also been observed that introverted personality with reduced social skills and low emotionality develop somatoform disorder.<sup>25</sup> The results of one study showed that dysfunctional attitudes are positively related with neuroticism and negatively with other personality traits and personality traits are linked to the dysfunctional attitudes in patients of SSD.<sup>26</sup> In the study of the effect of mental health and personality traits on somatic symptoms, it was seen that anxiety had a stronger correlation with somatic symptoms than depression and stress. Among personality traits, agreeableness and neuroticism had a strong association with extracted factors of somatic symptoms.<sup>27</sup>

Another hypothesis was that optimism will be negatively related with somatic symptom disorder. The results of correlation analysis revealed that optimism is negatively related to SSD. In the view of existing literature, it was found that the tendency of a patient to expect good outcomes while confronting the negative stressful situations referred to as optimism. Positive thinking has a great power which brings fruitful consequences. Several psychosocial variables predict health related quality of life. Optimism is also a psychosocial variable which predicts better quality of life and well-being. Positive expectancies and goal-directed behaviour lead the person to cope with stressful situations which affect his or her mental as well as physical wellbeing. It has been seen that greater levels of optimism are associated with lesser levels of distress.<sup>28</sup> As in ongoing pandemic situations people were becoming hopeless and less optimistic. The ones who could keep themselves composed and had positive orientation were less affected. As a result of a study exploring the impact of anxiety related to pandemic corona virus on a psychological variable, optimism. It was found that there was a significant negative association between optimism and COVID-19 related anxiety.<sup>29</sup> In another study, results indicated that psychological resilience and dispositional optimism both were found significant positively associated with subjective well-being.<sup>30</sup>

### CONCLUSION

The present study concluded that emotionality is positively related to somatic symptom disorder. Optimism was negatively correlated with somatic symptom disorder. Moreover, emotionality was a predictor of somatic symptom disorder

### RECOMMENDATIONS

For better and more reliable results, a large sample should be selected from different sectors on a large scale. For more diverse results, the population characteristics could be changed, such as including male participants, or making comparisons between different age groups, like adolescents and adults.

### IMPLICATIONS

This study explored understudied areas and brought awareness to the role of personality traits and optimism in relation to somatic symptom disorder. The present study is filling the literature gap, as somatoform disorder has not been explored with optimism. Seminars and trainings can be conducted to enhance the optimism among university students and create awareness regarding the consequences of pessimism.

### REFERENCES

1. Scheier MF, Matthews KA, Owens JF, Magovern GJ, Lefebvre RC, Abbott RA, Carver CS. Dispositional optimism and recovery from coronary artery bypass surgery: the beneficial effects on physical and psychological well-being. *J Pers Soc Psychol.* 1989;57(6):1024-40.
2. Carver C.S., Scheier M.F. *On the Self-Regulation of Behavior.* Cambridge, UK; Cambridge University Press. 1998.
3. De Ridder D, Fournier M, Bensing J. Does optimism affect symptom report in chronic disease?: What are its consequences for self-care behaviour and physical functioning?. *J Psychosom Res.* 2004;56(3):341-50.
4. Widiger TA & Smith GT. Personality and Psychopathology. In John OP, Robins RW & Pervin LA (Eds.), *Handbook of personality.* 2008; (pp. 743-769). New York: Guilford.
5. DeYoung CG, Hirsh JB, Shane MS, et al. Testing predictions from personality neuroscience: Brain structure and the big five. *Psychol Sci.* 2010;21(6):820-8.
6. McAdams DP, Pals JL. A new Big Five: fundamental principles for an integrative science of personality. *Am Psychol.* 2006;61(3):204.
7. Judge TA, Bono JE, Ilies R, Gerhardt MW. Personality and leadership: a qualitative and quantitative review. *J Appl Psychol.* 2002;87(4):765-780.
8. Lahey BB. Public health significance of neuroticism. *Am Psychol.* 2009;64(4):241-256.
9. Williams PG, Rau HK, Cribbet MR, Gunn HE. Openness to experience and stress regulation. *J Res Pers.* 2009;43(5):777-84.



10. Roberts BW, Walton KE, Bogg T. Conscientiousness and health across the life course. *Review of General Psychology*. 2005;9(2):156-68.
11. Taha S, Matheson K, Cronin T, Anisman H. Intolerance of uncertainty, appraisals, coping, and anxiety: The case of the 2009 H 1 N 1 pandemic. *Br J Health Psychol*. 2014;19(3):592-605.
12. Ryan RM, Deci EL. On happiness and human potentials: A review of research on hedonic and eudaimonic well-being. *Annu Rev Psychol*. 2001;52:141-166.
13. Seligman ME, Csikszentmihalyi M. Positive psychology. *Am Psychol*. 2000;55(1):5-14.
14. Salman M, Asif N, Mustafa ZU, Khan TM et al. Psychological impact of COVID-19 on Pakistani university students and how they are coping. *MedRxiv*. 2020.doi: <https://doi.org/10.1101/2020.05.21.20108647>
15. Rosmalen JGM, Neeleman J, Gans ROB, de Jonge P. The association between neuroticism and self-reported common somatic symptoms in a population cohort. *JPsychosom Res*. 2007;62(3):305-11.
16. Frustaci A, Pozzi G, Gianfagna F, Manzoli L et al. Meta-analysis of the brain-derived neurotrophic factor gene (BDNF) Val66Met polymorphism in anxiety disorders and anxiety-related personality traits. *Neuropsychobiology*. 2008;58(3-4):163-70.
17. Scheier MF, Carver CS, Bridges MW. Distinguishing optimism from neuroticism (and trait anxiety, self-mastery, and self-esteem): a reevaluation of the Life Orientation Test. *J Pers Soc Psychol*. 1994;67(6):1063-1078
18. Kroenke K, Spitzer RL, Williams JB. The PHQ-15: validity of a new measure for evaluating the severity of somatic symptoms. *Psychosom Med*. 2002;64(2):258-66.
19. Sharpe JP, Martin NR, Roth KA. Optimism and the Big Five factors of personality: Beyond neuroticism and extraversion. *Pers Individ Dif*. 2011;51(8):946-51.
20. Denovan A, Dagnall N, Lofthouse G. Neuroticism and somatic complaints: concomitant effects of rumination and worry. *Behav Cogn Psychother*. 2019;47(4):431-45.
21. Kotov R, Gamez W, Schmidt F, Watson D. Linking "big" personality traits to anxiety, depressive, and substance use disorders: a meta-analysis. *Psychol Bull*. 2010;136(5):768-821.
22. Malouff JM, Thorsteinsson EB, Schutte NS. The relationship between the five-factor model of personality and symptoms of clinical disorders: A meta-analysis. *J Psychopathol Behave Assess*. 2005;27(2):101-14.
23. Stafford LD, Ng W, Moore RA, Bard KA. Bolder, happier, smarter: The role of extraversion in positive mood and cognition. *Pers Individ Dif*. 2010;48(7):827-32.
24. Ahmad N, Jahan A, Imtiaz N. Personality correlates of optimism among couples. *Int J Indian Psychol*. 2016;3(4):175-83.
25. Van Dijk SDM, Hanssen D, Naarding P, Lucassen PL et al. Big Five personality traits and medically unexplained symptoms in later life. *Eur Psychiatry*. 2016;38:23-30.
26. Dawood S, Samuel S, Ehsan N. Personality traits of prison inmates of Pakistan and their vulnerability towards different psychopathologies. *Pak J Clin Psychol*. 2011;10(2).
27. Bibi A, Masroor U, Khalid MA. Personality Traits and Dysfunctional Attitudes among Patients with Somatic Symptom Disorder in Pakistan. *Int J Indian Psychol*. 2017;5(1): 181-190.
28. Mostafaei S, Kabir K, Kazemnejad A, Feizi A et al. Explanation of somatic symptoms by mental health and personality traits: application of Bayesian regularized quantile regression in a large population study. *BMC psychiatry*. 2019;19(1):1-8.
29. Montgomery GH, David D, Goldfarb AB, Silverstein JH E. Sources of anticipatory distress among breast surgery patients. *J Behav Med*. 2003;26(2):153-64.
30. Ajlouni AO, Almahaireh AS. Relationship between coronavirus-related anxiety and optimism among undergraduates at the University of Jordan. *Education*. 2015.

Undertaking

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