

## **Big Five Personality Trait and Hoarding Behavior Prevalence**

**Nida Rasheed**

Sir Syed University of  
Engineering and Technology

**Shazia Jabeen**

Jinnah University for Women

**Aisha Qasim**

University of Karachi

**Palwasha Khan**

Jinnah University for Women

Hoarding disorder is characterized by difficulty discarding objects and developing a deep attachment to people, events and places. Emotional fusion with objects is often a key factor in hoarding behavior. The aim of the study is to determine the prevalence of hoarding behavior in the general population, explore the association between hoarding symptoms and personality traits, and examine the mean difference in gender on hoarding behavior. Data were collected through an online survey from 387 non-clinical adult participants. The study employed self-report measures, including the Saving Inventory- Revised (SI-R) and the Ten- item personality Inventory (TIPI). Results indicated a significant prevalence of hoarding behaviors, with 44.8% of participants exhibiting hoarding pattern. Additionally, the study found that hoarding behaviors (clutter, excessive acquisition, and difficulty discarding possessions) were negatively related to emotional stability. Furthermore, extroversion was associated with greater difficulty discarding possessions, contributing to hoarding behavior in the general population.

*Keywords.* Personality trait, hoarding behavior, prevalence

Hezel and Hooley (2014) in the study addressed the association of creativity and creativity personality achievement with hoarding

---

Nida Rasheed, Department of Psychology, Sir Syed University of Engineering and Technology, Karachi, Pakistan.

Shazia Jabeen and Palwasha Khan, Department of Psychology, Jinnah University for Women, Karachi, Pakistan.

Aisha Qasim, Department of Psychology, University of Karachi, Karachi, Pakistan.

Correspondence concerning this article should be addressed to Nida Rasheed, Department of Psychology, Sir Syed University of Engineering and Technology, Karachi. Email: [nidasheed01@gmail.com](mailto:nidasheed01@gmail.com)

symptom that were based on the Anecdotal literature. The study examined the relationship between the series of creativity and performance that was based upon young adult university student aged (17 and older). The study endorses that there is no significant association between the creativity and the hoarding ( $r = -.03, p = .80$ ). The research focused on the relationship between the hoarding symptoms and personality traits including impulsivity, distress tolerance attitudes about money and the environment appeared to have no relationship ( $r = .05, p = .68$ ) or ( $r = .09, p = .44$ ). Moreover, personality traits neuroticism, impulsivity have high level of hoarding tendencies as well conscientiousness and distress tolerance have minimal level of hoarding tendencies. Hezel and Hooley's (2014), and Yoshino et al.'s (2021) study investigated the relationship between personality traits and hoarding behavior during the coronavirus disease pandemic. An online survey was conducted among 530 adults including 274 women ( $M = 44.2, SD = 8.43$ ) in the state of emergency. Extraversion, neuroticism, openness and dispositional greed have positive correlation with hoarding behavior. Yoshino et al. (2021), and Dozier and DeShong (2021) explored the relationship between personality traits and hoarding behavior in the pandemic contexts. The study highlighted hoarding behavior as the action of stockpiling goods and availability of the products including toilet paper and antibacterial wipes. The study during Covid-19 pandemic has strongly demonstrated hoarding behavior with increased neuroticism, conscientious, extraversion, and openness to experience personality traits

Raines et al.'s (2014) study revealed the role of perceived control as a general psychological vulnerability factor for hoarding. The study included a sample of 180 undergraduate students (58.3% females, 41.7% males), with ages range 18-29 ( $M = 18.89, SD = 1.31$ ). The goal of the study was to rule out association between hoarding behavior and perceived control based on the vulnerability anecdotes. As predicted, elevated hoarding severity has robust relationship with lower level of perceived control. Additionally, perceived control was significantly related to specific hoarding, such as acquiring, and difficulty discarding items (Raines et al., 2014).

Hoarding behavior has garnered increased attention due to its significant impacts on the individual's daily functioning and psychological well-being. While prior research has explored hoarding in clinical population, the relationship between traits and hoarding behavior in non-clinical population remains underexplored. The Big five-factor model, which includes openness, conscientiousness, extraversion, agreeableness and neuroticism, has been linked to

various psychological phenomena, including hoarding behavior. However, the role of personality traits in non-clinical populations remains, less understood, leaving a gap in the literature that this study aims to study. Furthermore, there are number of researches that indicate hoarding behavior to be higher among females in comparison to males (Neave et al., 2016; Tripathi et al., 2018; Turna et al., 2018).

This study is important because it explores how personality traits and gender influence hoarding behavior in a non-hoarding behavior, offering a boarder perspective beyond clinical setting. It addresses gaps in the literature by examine the role of the big five personality traits in hoarding behavior. The finding will provide insight into the psychological basis of hoarding, help identify risk factors for individuals and informative prevention and therapeutic intervention, thus contributing significant role in the field of psychology.

### **Hypotheses**

1. Hoarding symptoms are positively related to specific personality traits (lower emotional stability, lower conscientiousness, and lower agreeableness).
2. Hoarding behavior is higher among females in comparison to males.

### **Method**

The target population for the study was the general adult population, individual aged 18 and above. A total of 489 participants were initially recruited though online survey using a convenient sampling method. After removal of incomplete responses, 493 participants were included in the final analysis. The sample consisted of 351 females (71.1 %) and 142 males (28.7%), with a means age of 23.12 years ( $SD = 5.98$ ). Participants were eligible for the study if they were least 18 years old, could read and understand English, and provided informed consent. To ensure the sample represented a non-clinical population, individuals with self-reported history of diagnosed psychiatric disorder were excluded.

### **Measures**

#### ***Saving Inventory-Revised***

The saving Inventory-Revised (Frost et al., 2004) is a 23-item questionnaire used to determine hoarding behavior. The scale is

comprised of three subscales (i) Clutter, (ii) difficulty discarding possession, (iii) excessive acquisition. Each item has a 5-point Likert scale ranging from 0 (none) to 4 (Almost all/ complete). The higher scores indicate severe hoarding behavior. The SI-R demonstrated good internal and reliability consistency for all subscales. The Cronbach alpha for the scale was .96. (Frost et al., 2004)

### ***Ten Item Personality Measure (TIPI)***

Ten Item Personality Measure (Gosling et al., 2003) is thought to measure personality domains including extraversion, agreeableness, conscientiousness, and emotional stability, open to experience. The scale consists of 10 items. The item is rated on a 7-items -Likert scale that ranging from 1 (strongly disagree) to 7 (strongly agree). The Cronbach alpha coefficients are .40-.68 (Gosling et al., 2003)

### **Procedure**

The data were collected online via social media plate forms (WhatsApp, Facebook, and Instagram messages). Firstly, Participants were provided to fill consent forms and then precede to the demographic information and the scale of the study. The form took 10-14 minutes. After data collection, the data were analyzed through correlation, *t*-test and ANOVA using Statistical Package for the Social Science (SPSS-21).

### **Results**

Table 1 present the result of the correlation analysis between level of hoarding (SIR-Total = Saving Inventory Revised- total, Clutter, Difficulty Discarding, Acquisition and various personality traits Extraversion (EXTF), Agreeableness (AGRF), Emotional Stability (ESTF), Conscientiousness (CONSF), Openness to Experience (OPEF). The results indicate that there is non-significant relationship between hoarding and Agreeableness, open to experience, and conscientiousness. However, a positive correlation was found between extraversion and difficulty discarding ( $r = .09$ ), suggesting a moderate association between these two variables. It is exceptional findings that the extraversion personality trait did not exhibit significant relationship with other hoarding levels, including Acquisition and clutter subscales.

In contrast, emotional stability demonstrated significant relationship with all hoarding types. Emotional stability was negatively correlated with total hoarding, Furthermore; the correlations for clutter, difficulty discarding, and acquisition have showed negative associated with other types of hoarding within general population

**Table 1:** Correlation Between Hoarding Behavior and Personality Traits (N = 489)

	1	2	3	4	5	6	7	8	9
1. SIR-Total	-								
2. Clutter	.06	-							
3. Difficulty Discarding	.10	.45**	-						
4. Acquisition	.086*	-.01	.38**	-					
5. Extraversion	.046	.45**	.51**	.46**	-				
6. Agreeableness	-.10	-.01	-.38**	.03	.02	-			
7. Emotional Stability	-.11*	-.12**	-.08*	-.74**	.21	.03	-		
8. Conscientiousness	.02	.21	.03	.05	.21			-	
9. Openness to Experience	.46**	.46**	.51**	.46**	.46**	.21			-

Note. SIR-Total = Saving Inventory-Revised Total Score; Clutter = Clutter Subscale; Difficulty Discarding = Difficulty Discarding Subscale; Acquisition = Acquisition Subscale; EXTJ = Extraversion; AGRF = Agreeableness.

\*\* p < .05, \* p < .01.

**Comparison of Hoarding Score by Gender**

**Table 2:** Mean Differences in Gender on Hoarding (N = 489)

Variable	Gender	M	SD	t(487)	p	95% CI	
						LL	UL
Hoarding	Male	37.7	14.6	-.55	.58	-3.8	2.14
	Female	38.5	15.3				

Note. M = Mean, SD = Standard Deviation, t = t-value, df = degree of freedom, p = significant value, CI = confidence Interval, LL = lower limit, UL = Upper limit.

The Table 2 shows that an independent samples t-test was conducted to compare hoarding behavior between males and females. There is non-significant mean difference in the hoarding scores between males and females.

### Multiple Regression Analysis of Hoarding Behavior

**Table 3:** Multiple Regression Predicting Hoarding Behavior

Variables	B	95% CL		SEB	B	R <sup>2</sup>	ΔR	
		LL	UL					
Step I							.01	.01*
Emotional Stability (ESTF)	-1.30*	-.20	-.27	.50	-.11			
Step II							.01	.01
Emotional Stability (ESTF)	1.31*	-.36	3.50	.50	-.11			
Gender	.56	-2.20	1.30	1.40	.17			
Marital status	-.41	-2.20	2.20	.92	-.02			

Note: B = Understandardized regression coefficient, SEB = Standard error of the coefficient, B = standardized regression coefficient, CL = Confidence Interval, LL = Lower limit, UL = Upper limit, R<sup>2</sup> = R-squared, ΔR<sup>2</sup> = R-squared Change.

\*  $p < .05$ .

A two-step hierarchy multiple regression was conducted to predict hoarding scale. The emotional stability (ESTF) subscale of Ten Item Personality Inventory (Tipi) was entered as the independent variable in STEP 1, and demographic characteristics (age, marital status, socio economic status) were entered in Step 2. In Step 1, the model was significant, revealing an  $R^2$  value of .12, indicating that emotional Stability explained 10% of the variance in hoarding behavior,  $F(1,487) = 6.12$ ,  $p < .01$ . The finding demonstrated that emotional stability predicted a negative slop for hoarding behaviors ( $\beta = -1.3$ ,  $p < .01$ ). The finding demonstrated that emotional stability predicted a negative slope for hoarding behaviors ( $\beta = -1.3$ ,  $p < .01$ ), suggesting that higher emotional stability is associated with the lower level of the hoarding behavior.

In Step 2, the addition of gender and other demographic characteristics explained an additional .9% of the variance, but this change in  $R^2$  was not Significant  $f(1,487) = .04$ ,  $p = .70$ . Therefore, the demographic characteristics of the participants did not significantly alter the relationship between hoarding behavior and the personality traits (emotional stability).

### Discussion

The study of hoarding behavior is in its nascent stages in Pakistan. In the present study, two major findings were reported. Firstly, the research aimed to explore the relationship between

personality and hoarding. In particular, emotional stability and extraversion exhibited a significant relationship with hoarding symptoms. In contrast, agreeableness, conscientiousness and open to experience did not show any association with the hoarding symptoms. Whereas Emotional stability has a negative relationship with total hoarding symptoms, clutter, difficulty discarding, and excessive acquisition that is consistent with the findings of the previous studies. The finding supports the notion that inability to control emotions and emotional dysregulation are more likely to exhibit core features of hoarding (Steketee, 2020).

Findings line up with the previous observation individuals who have strong impulses to experience intense emotions in terms of positive and negative has robust impact on rational decision making and more frequently to engage in the impulsive action may heightened strong reactions of excessive acquisition hoarding linked with the holding and urges to acquire more things and difficulty in discarding that causes clutter. However, numerous studies suggest clutter is the negative reinforced response to avoidance negative emotions (Tolin et al., 2018).

Interestingly, research supports the interesting fact that extraversion personality has positive correlation with the core feature HD, difficulty discarding which is inconsistent with previous study. In this context, extraverted tends to be friendly, tenderness, sympathy, and passionate, often social activities and forming emotional connection with object (Lucas & Fujita, 2000). These connections may contribute to their difficulty in discarding item. (Abdullah, 2017). Kings et al. (2017) also note that extraverted individual may exhibit in discarding difficulty due to emotional attachment. Yoshino et al. (2021) highlights that during COVID-19 pandemic, extraverted individuals were more likely to prefer to joint living arrangement, which may lead to increased anxiety to discard items.

Moreover, both extraversion and emotional stability traits appear to be emotionally attached to the possessions, suggesting that the origin of hoarding may be more emotional than a pathological cause (Noh & Hasan, 2017; Shahjehan, 2012). The traits of agreeableness, neuroticism and conscientiousness traits did not establish relationship with hoarding behavior which contradictors prior research findings (Otero et al., 2021).

Secondly, there was no significant impact of gender, on hoarding behavior. This finding is in consistence with prior studies (Ayers, 2017; Subramaniam et al., 2014; Zhao et al., 2022). This finding did not support our second hypothesis.

### Limitation and Future Direction

The direction for future research is informed based by the limitation of the present study. First future studies should explore additional dimension and mechanism for understanding personality traits related to the hoarding behavior. Second, the use of self-report inventories may introduce perceptual bases, as participants' responses are influenced by their personal appraisal. Incorporating interviews could help reduce subjective bias by providing more in-depth insight. Third, future researches should consider including assessment related to emotional attachment, memories and uncertainty about the future to better understand the prevalence and nature of hoarding behavior. Furthermore, incorporating textual analysis techniques, as suggested by Uludag (2024), could offer a valuable approach for examining hoarding behavior by analyzing parameters that reflects psychological and cognitive factor.

### Conclusion

In this study, hoarding tendencies were present were 44.8% of the sample, indicating a significant change in hoarding within general populations. The personality traits of extraversion were associated with difficulty in discarding items, while emotional stability was found to a negative relationship with hoarding behavior, suggesting that higher emotional stability is linked to lower levels of hoarding.

### References

- Abdullah, M. Q. (2017). The relationship between social skills, self-esteem and big five personality factors among children. *Psychology & Psychological Research International Journal*, 2(3), 1-8. <https://doi.org/10.23880/pprij-16000129>
- Ayers, C. R. (2017). Age-specific prevalence of hoarding and obsessive-compulsive disorder: A population-based study. *The American Journal of Geriatric Psychiatry*, 25(3), 256-257. <https://doi.org/10.1016/j.jagp.2016.12.001>
- Diagnostic and Statistical Manual of Mental Disorders: DSM-5*. (2013). American Psychiatric Association.
- Dozier, M., & DeShong, H. (2021). The association between personality traits and hoarding behaviors. *Current Opinion in Psychiatry*, 35(1), 53-58.
- Frost, R., Steketee, G., & Grisham, J. (2004). Measurement of compulsive hoarding: Saving Inventory Revised. *Behaviour Research and Therapy*, 42(10), 1163-1182.

- Gosling, S. D., Rentfrow, P. J., & Swann, W. B., Jr. (2003). A very brief measure of the Big Five personality domains. *Journal of Research in Personality, 37*, 504-528.
- Hezel, D. M., & Hooley, J. M. (2014). Creativity, personality, and hoarding behavior. *Psychiatry Research, 220*(1-2), 322-327. <https://doi.org/10.1016/j.psychres.2014.07.037>
- Kings, C., Moulding, R., & Knight, T. (2017). You are what you own: Reviewing the link between possessions, emotional attachment, and the self-concept in hoarding disorder. *Journal of Obsessive-Compulsive and Related Disorders, 14*, 51-58.
- Lucas, R. E., & Fujita, F. (2000). Factors influencing the relation between extraversion and pleasant affect. *Journal of Personality and Social Psychology, 79*(6), 1039-1056. <https://doi.org/10.1037/0022-3514.79.6.1039>
- Neave, N., Tyson, H., McInnes, L., & Hamilton, C. (2016). The role of attachment style and anthropomorphism in predicting hoarding behaviours in a non-clinical sample. *Pers. Individ. Differ. 99*, 33-37. <https://doi.org/10.1016/j.paid.2016.04.067>
- Noh, M., & Hasan, H. (2017). Moderating effect of personality traits on relationships between retail therapy, compulsive buying, and hoarding for fashion products. *Journal of Global Fashion Marketing, 8*(3), 180-192.
- Otero-López, J., Santiago, M., & Castro, M. (2021). Big Five personality traits, coping strategies, and compulsive buying in Spanish university students. *International Journal of Environmental Research and Public Health, 18*(2), 821. <https://doi.org/10.3390/ijerph18020821>
- Raines, A. M., Oglesby, M. E., Allan, N. P., Short, N. A., & Schmidt, N. B. (2014). Perceived control: A general psychological vulnerability factor for hoarding. *Personality and Individual Differences, 56*, 175-179. <https://doi.org/10.1016/j.paid.2013.09.005>
- Shahjehan, A. (2012). The effect of personality on impulsive and compulsive buying behaviors. *African Journal of Business Management, 6*(6), 2187-2194.
- Steketee, G., & Bratiotis, C. (2020). What is hoarding and hoarding disorder? *Hoarding*. <https://doi.org/10.1093/wentk/9780190946395.003.0002>
- Subramaniam, M., Abidin, E., Vaingankar, J. A., Picco, L., & Chong, S. A. (2014). Hoarding in an Asian population: Prevalence, correlates, disability, and quality of life. *Annals of the Academy of Medicine, Singapore, 43*(11), 535-543. <https://doi.org/10.47102/annals-acadmedsg.v43n11p535>
- Tolin, D. F., Frost, R. O., Steketee, G., Gray, K. D., & Fitch, K. E. (2018). Hoarding disorder and difficulties in emotion regulation. *Journal of Obsessive-Compulsive and Related Disorders, 16*, 98-103.

- Tripathi, A., Avasthi, A., Grover, S., Sharma, E., Lakdawala, B. M., Thirunavukarasu, M., et al. (2018). Gender differences in obsessive-compulsive disorder: Findings from a multicentric study from India. *Asian J. Psychiatr*, *37*, 3-9. <https://doi.org/10.1016/j.ajp.2018.07.022>
- Turna, J., Patterson, B., Simpson, W., Pullia, K., Khalesi, Z., Kaplan, K. G., et al. (2018). Prevalence of hoarding behaviours and excessive acquisition in users of online classified advertisements. *Psychiatry Res*. *270*, 194-197. <https://doi.org/10.1016/j.psychres.2018.09.022>
- Uludag, K. (2024). Exploring the Association Between Textual Parameters and Psychological and Cognitive Factors. *Psychology Research and Behavior Management*, 1139-1150.
- Yoshino, S., Shimotsukasa, T., Hashimoto, Y., & Oshio, A. (2021). The association between personality traits and hoarding behavior during the COVID-19 pandemic in Japan. *Personality and individual differences*, *179*, 110927. <https://doi.org/10.1016/j.paid.2021.110927>

Received 02 October 2023

Revision received 26 November 2024