

THE ROLE OF PERSONALITY TRAITS IN DIGITAL AND PHYSICAL HOARDING BEHAVIORS AMONG UNIVERSITY STUDENTS OF RAWALPINDI AND ISLAMABAD

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ABSTRACT

Objectives: The present study aimed to investigate the relationship of personality traits with digital and physical hoarding among university students of Rawalpindi and Islamabad. The research further aimed to investigate the gender differences in proposed study variables, allowing for a deeper understanding of the evolving dynamics in the digital age.

Materials and Methods: The research employed a survey approach for the recruitment of 300 university students from Rawalpindi and Islamabad. Participants were provided with informed consent, Big Five Personality Inventory, and Hoarding Rating Scale to measure physical hoarding and digital hoarding. Among participants, 150 were men and 150 women from both public and private sector universities.

Results: Descriptive Analysis were performed to see the normality of the data. Further, Pearson product-moment correlation was performed to see the relationship. Results indicated partial acceptance of study hypotheses where significant associations were reported in context of neuroticism and openness dimensions. The neuroticism is positively associated with both digital and physical hoarding, whereas positive association of openness to new experiences was apparent only in digital hoarding. Non-significant correlation was reported among the remaining dimensions. However, significantly high correlation was evident among physical and digital hoarding. Gender differences indicated that women scored higher than men on neuroticism, agreeableness, and physical hoarding subdomain. Slight mean difference in digital hoarding where men scored higher, but these differences were non-significant.

Conclusion: Understanding personality traits and their linkage with physical and hoarding behaviors is vital in formulating individual specific plan that will facilitate individual as well as the organizations in reducing problematic behaviors and making life more organized and functional.

Keywords: Personality Traits, Physical Hoarding, Digital Hoarding, University Students

Introduction

Living in the digital era, where work dynamics have shifted from physical, in-person settings to increasingly digital domains, the environment has transformed not only for professionals but also for students. Managing daily routines while retaining what is perceived as important and

discarding unnecessary or unwanted possessions has become increasingly challenging. This difficulty is no longer limited to physical objects and materials; it has extended into the digital sphere as well. Individuals often develop attachments to digital content, such as saving multiple drafts of a single document, storing

downloaded materials that are never read, or keeping numerous photographs perceived as meaningful or potentially useful. These behaviors are commonly referred to as physical hoarding and digital hoarding, respectively.

Literature Review

Personality traits reflect individual's trademark examples of contemplations, sentiments and ways of behaving. Personality traits infer consistency and strength (Diener et al., 2019). Most commonly used system of traits is called Five-Factor Model of personality which includes five attributes that can be considered as OCEAN which includes Openness, Conscientiousness, Extraversion, Agreeableness and Neuroticism. Hoarding conduct is a psychological problem which is being described by relentless trouble in leaving behind belongings and participating in unnecessary obtaining of things that are not required or for which space isn't accessible. Hoarding conduct is a relentless issue when an individual finds it hard to leave behind or dispose of things since they believe they should be saved. Leaving behind the articles might cause trouble (Mayo Establishment; 2022). The commonness of "digital hoarding," or the exorbitant aggregation of digital materials including messages, photos, records, and programming, and its potential impact have for quite some time been the subject of guess in web-based gatherings, sites, and the media (Improve et al., 2018). Even though numerous studies regarding these variables have been carried out world-wide, a very few studies have been carried out in Pakistan that focused upon the relationship of personality traits with digital and physical hoarding. A little literature is available on young adults. Moreover, the previously conducted studies were carried out on late adults due to whom the pattern of digital and physical hoarding and their relationship with personality traits is not clear among young adults. This study will be done on personality factors that add to both physical and digital hoarding. The aftereffects of this study ought to give light on what youthful grown-up's digital and physical hoarding ways of behaving are meant for by their personality traits. The findings will explain the significant job personality factors play in both digital and physical hoarding, prompting a

superior understanding of the changing elements of the digital time.

Results showed that high object attachment will lead to hoarding disorder that is enhanced in the presence of introversion trait (Medard et al., 2024). Another study explored that Big Five personality traits predict physical hoarding during crises where high level of neuroticism added to the physical hoarding behavior; low agreeableness predicted panic buying and physical hoarding and openness influenced preparedness-related accumulation. The study linked personality traits directly with physical hoarding behavior (Roos et al., 2026). However, literature is available for physical hoarding behavior but scarce in context of digital hoarding. In addition, empirical evidences in context of university students and young adults also lacking as these are the population growing in digital era and heavily relying on digitized world (Thorpe et al., 2019). In spite of the fact that personality factors and both physical and digital hoarding have been widely examined, the exact system that might lead to hoarding is as yet not altogether understood. A study depicts virtual merchandise hoarding in home, office, and individual settings, including data sets, films, photos, symbols, and digital reports.

Research on digital hoarding, or digital accumulation of documents and information, is a somewhat new field (Thorpe et al., 2019). A study found that abnormal attention and significance attribution significantly predicted physical hoarding severity even after controlling mood symptoms. The findings suggested personality-related cognitive styles influence excessive acquisition and hoarding behaviors (Rivers et al., 2026). Researchers explored how personality vulnerabilities and emotional emptiness relate to hoarding severity. Findings indicated that emotional regulation difficulties and personality vulnerabilities are connected to stronger hoarding behaviors. Researchers suggested that individuals with poor emotional regulation and personality vulnerabilities may use possessive behavior as coping mechanism to their emotional stressors (Weiss et al., 2024). A research study examined how personality traits influence digital hoarding behaviors among college students (Xie et al., 2024) and concluded that neuroticism positively linked with digital hoarding; conscientiousness negatively

predicted digital hoarding tendencies. Another study conducted on social media users concluded that neuroticism and depression positively contributed to the digital hoarding whereas sociability negatively linked (Khatatbeh, 2025). Furthermore, if fear of missing out is also persistent in person, it will add on to the digital hoarding. Low conscientiousness was associated with poor digital organization and contributed to unhealthy digital retention (Meynadier et al., 2024). The current study aimed at investigating the role of personality traits in digital and physical hoarding. Along with that this study is one of its kind that also explored the dynamic aspect of digital and physical hoarding behavior.

Theoretical Framework

The development and maintenance of hoarding disorder can be explained through various psychological theories and empirical studies. Some of the major theories include Psychological Ownership Theory and Big Five Personality Theory. According to Psychological Ownership theory, those who suffer from hoarding behaviors have significant psychological ownership motivations, including self-identity, efficacy and reflectance (the propensity to examine and modify one's surroundings). These reasons play a role in the emergence and persistence of hoarding behavior (Chu, 2018). This theory is related to the topic of research in a way that it emphasizes upon hoarding behavior and the sense of ownership. Hoarding behavior focuses upon the sense of attachment with the belongings. It leads to irrelevant accumulation or cluttering of objects in case of physical hoarding and digital files in case of digital hoarding. According to Big Five Personality theory, openness to experience includes appreciation for art, emotion, adventure, unusual ideas, curiosity, and variety of experience. Openness reflects a person's degree of intellectual curiosity, creativity, and preference for novelty and variety. Conscientiousness refers to one's tendency toward self-discipline, dutifulness, competence, thoughtfulness, and achievement-striving. An

individual who scores high on extraversion is characterized by high energy, positive emotions, talkativeness, assertiveness, sociability, and the tendency to seek stimulation in the company of others. Agreeableness measures one's tendency to be compassionate and cooperative rather than suspicious and antagonistic towards others. Individuals who score low on agreeableness tend to be described as rude and uncooperative. Neuroticism refers to an individual's degree of emotional stability and impulse control. High neuroticism is characterized by the tendency to experience unpleasant emotions, such as anger, anxiety, depression, or vulnerability. This theory is related to the respective research in a way that it focuses upon different personality traits and the effect of increase or decrease in these traits on an individual's personality.

In current study the proposed hypotheses include:

H1: Extraversion, Agreeableness, and Openness personality trait will be negatively correlated with physical hoarding and digital hoarding.

H2: Neuroticism and Conscientiousness personality trait will be positively correlated with physical hoarding and digital hoarding.

H3: Individuals scoring high on physical hoarding will score high on digital hoarding.

H4: Women will score high on hoarding behavior than men.

Methodology

Population and Sample

The sample of 300 university students of Rawalpindi and Islamabad age ranging between 18 to 25 years is being taken. Both males and females are part of the research; 150 males and 150 females. Convenient sampling approach is being followed. The years of education were taken from BS level till MS level. For collecting data of variables, the instruments that are being used includes the informed consent from the individuals participating in the research is being taken. Informed consent is both in verbal and written form that ensures that the information being taken from individuals is used purely for research purposes only.

Table 1
Frequency and percentage of the Study Sample (N=300)

Demographics		n	%
Age (in years)	18-21	201	67.0
	22-25	99	33.0
Gender	Male	150	50.0
	Female	150	50.0
Marital Status	Single	290	96.7
	Married	10	3.3
Monthly Income	Below 50k	93	31.0
	50k to 1Lac	131	43.7
	Above 1Lac	76	25.3
Father's Education	Uneducated	14	4.7
	Educated	286	95.3
Family Structure	Nuclear	209	69.7
	Joint	91	30.3

Note. n= Frequency, %= Percentage

Data Collection and Measurements

Participants were provided with informed consent that covers the brief overview of study and the rights of participants. Their information was anonymous, confidential, and used for only research purpose.

Big Five Inventory (BFI-44)

The self-reported 44 item Big Five Inventory developed by John et al. (1991) was used to measure personality traits of university students. The response category was 1 (strongly disagree) to 5 (strongly agree), used to assess extraversion, agreeableness, conscientiousness, neuroticism and openness to experience, high score means high personality traits.

Hoarding Rating Scale (HRS)

It was developed by Tolin et al. (2008). It is a five-item scale that was designed to capture the key aspects of hoarding disorder and used to assess the frequency of physical hoarding. It includes five factors which are clutter in the home; difficulty discarding possessions; excessive acquiring of possessions; distress due to hoarding; and functional impairment due to hoarding. Each item is rated on a 9-point scale from 0 to 8, and the total score of items ranges between '0 to 40', with higher score of 40 which indicates high severity level of physical hoarding disorder.

The Digital Hoarding Questionnaire (DHQ)

It was developed by Frost et al. (2011). This 10-item measure relates to the inclination to hoard digital goods. It concentrated on the three main ideas of accumulation or clutter, difficulties getting rid of things, and distress. The Likert-type scale had scores ranging from 0 (not at all) to 5 (very much so) for each item.

Procedure

The data of the research is being collected from universities of Rawalpindi Islamabad. Participants are presented with informed consent form and they are asked to the informed consent form and the information regarding the basic purpose of the study is being provided. Demographic information of the participants is being taken by using demographic sheet. The responses of the participants are being collected by using scales which includes Big Five Personality Inventory (BFI-44), Hoarding Rating Scale (HRS) and The Digital Hoarding Questionnaire (DHQ). The information is being used to draw inferences. All the procedures are being approved by concerned ethics committee. It took 10 minutes on average for participants to fill the forms. In the end participants were thanked for their time and valuable input.

Ethical Considerations

The ethical considerations that are considered in research includes the respective data of the participants is kept confidential. Research topic is being completely elaborated to the

participants. The data is only being used for the research and education purpose. For obtaining data in this research population of young adults is being taken.

Data Analysis Techniques

The collected data was analyzed through Statistical Package for the Social Sciences version 21 and results and interpretation are drawn after the statistical analysis of the data. Begin with basic descriptive statistics to summarize the characteristics of study sample includes standard deviation and frequency distributions for demographic variables. Correlation (Pearson product correlation) is being done to explore the initial relationship between variables. T-test analysis is being done for the demographic differences.

Results

The Table 2 represents the descriptive analysis of study variables. For extraversion, conscientiousness, items of hoarding rating scale and digital hoarding questionnaire the skewness indicates a slight positive skew, while the skewness for the neuroticism, openness to experience and agreeableness indicates a slight negative left skewness. The kurtosis value of extraversion and agreeableness indicates that the distribution is more peaked than normal. The kurtosis value of neuroticism, conscientiousness, openness, hoarding rating scale and digital hoarding questionnaire indicates that the shape of distribution is flatter than normal. The value of Cronbach's alpha reliability makes it an acceptable value.

Table 2
Descriptive Statistics for Personality Traits, Hoarding Rating Scale and Digital Hoarding Questionnaire among University Students (N=300)

Scale	k	α	M	SD	Range		Skewness	Kurtosis
					Potential	Actual		
Extraversion	8	.58	24.18	5.32	8-40	11-40	.29	.22
Neuroticism	8	.62	25.02	5.56	8-40	8-37	-.18	-.16
Conscientiousness	9	.54	29.31	5.03	9-45	16-44	.06	-.10
Openness	10	.72	33.87	4.85	10-50	19-45	-.30	-.36
Agreeableness	9	.55	33.01	5.44	9-45	17-55	-.15	.75
Physical Hoarding	5	.64	13.44	6.14	0-40	0-33	.24	-.04
Digital Hoarding	10	.78	33.57	11.69	10-70	10-66	.44	-.03

Note. α = Cronbach's Alpha Reliability; M = Mean; SD = Standard deviation

Table 3
Pearson Correlation among dimensions of Big Five Personality Traits, Hoarding Rating Scale, and Digital Hoarding Scale (N=300)

	1	2	3	4	5	6	7
1. Extraversion	-						
2. Neuroticism	-.15**	-					
3. Conscientiousness	.14*	-.15**	-				
4. Openness	.17**	.09	.27**	-			
5. Agreeableness	.04	-.05	.33**	.21**	-		
6. Physical Hoarding	-.04	.23**	.02	-.01	-.02	-	
7. Digital Hoarding	-.05	.24**	-.08	.15**	-.00	.25**	-

* $p < .05$, ** $p < .01$

The Table 3 represents the correlation analysis between study variables. Neuroticism has a negative correlation with extraversion that is significant at 0.01 level. Conscientiousness has a positive correlation with extraversion that is significant at 0.05 level and negative correlation with neuroticism. Openness has a positive correlation with extraversion, has a non-significant correlation with neuroticism while a positive correlation with conscientiousness. Agreeableness has a non-significant correlation with extraversion, while has a non-significant negative correlation with neuroticism, has

positive correlation with conscientiousness, and has a positive correlation with openness. Hoarding rating scale total has a non-significant negative correlation with extraversion, while has a positive correlation with neuroticism, has a non-significant correlation with conscientiousness and a non-significant negative correlation with openness and agreeableness. Digital hoarding questionnaire total has a non-significant negative correlation with extraversion and agreeableness while has a positive correlation with neuroticism, conscientiousness, openness and physical hoarding.

Table 4
Gender Differences on dimensions of Big Five Personality Traits, Hoarding Rating Scale, and Digital Hoarding Scale (N=300)

Scale	Men (n=150)		Women (n=150)		t(298)	p	95% CI		Cohen's d
	M	SD	M	SD			LL	UL	
Extraversion	23.96	5.31	24.40	5.35	-.71	.470	-1.65	.77	
Neuroticism	24.28	5.37	25.75	5.67	-2.31	.020	-2.73	-.21	0.27
Conscientiousness	29.13	5.07	29.49	5.02	-.60	.540	-1.49	.79	
Openness	33.60	5.18	34.14	4.50	-.96	.330	-1.64	.56	
Agreeableness	31.91	5.43	34.11	5.25	-3.56	.000	-3.42	-.98	0.41
Physical Hoarding	12.23	6.58	14.65	5.42	-3.48	.001	-3.79	-1.0	0.40
Digital Hoarding	34.50	11.4	32.63	11.8	1.38	.160	-.78	4.52	

Note. M= Mean, SD= Standard Deviation, P = Significance, LL= Lower Limit, UL= Upper Limit

The above table 4 represents the results of the independent sample t test on gender differences. There is a non-significant mean difference in the extraversion, conscientiousness, openness and digital hoarding questionnaire used to assess

digital hoarding between males and females, there is a significant difference in the neuroticism, agreeableness and hoarding rating scale used to assess physical hoarding of males and females.

Table 5
Family System Differences on dimensions of Big Five Personality Traits, Hoarding Rating Scale, and Digital Hoarding Scale (N=300)

Scale	Nuclear Family (n=209)		Joint Family (n=91)		t(298)	p	95% CI		Cohen's d
	M	SD	M	SD			LL	UL	
Extraversion	24.21	5.61	24.12	4.64	.13	.89	-1.23	1.40	-
Neuroticism	24.71	5.67	25.73	5.28	-1.46	.15	-2.39	.36	-
Conscientiousness	29.53	5.10	28.81	4.88	1.13	.26	-.53	1.96	-
Openness	34.25	4.87	32.99	4.69	2.08	.04	.07	2.46	0.26

Agreeableness	32.94	5.22	33.18	5.97	-.35	.73	-1.59	1.11	-
Physical Hoarding	13.31	5.97	13.73	6.53	-.54	.59	-1.93	1.10	-
Digital Hoarding	33.55	12.36	33.62	10.07	-.05	.96	-2.96	2.82	-

Note. M = Mean, SD = Standard Deviation, P = Significance, LL= Lower Limit, UL= Upper Limit

The above table represents the results of the independent sample t-test on family structure which includes nuclear and joint family structure. As shown in the table, there is a non-significant mean difference in the extraversion, conscientiousness, openness and digital hoarding questionnaire between nuclear and joint family structure. There is a significant difference in the neuroticism, agreeableness and hoarding rating scale of nuclear and joint family structure. To determine the effect size, Cohen's d was also calculated. Cohen's value for neuroticism is 0.31, for conscientiousness is 0.23, while for openness is 0.41.

Discussion

The present research is being designed to study the relationship of personality traits with digital and physical hoarding among university students of Rawalpindi and Islamabad. For this purpose, 300 university students of Rawalpindi Islamabad were selected. Young adults with age ranging between 18 to 25 years were selected as part of sample for the purpose of study.

Big Five Inventory scale (BFI-44) used to assess personality traits of an individual indicates acceptable value of Cronbach's alpha reliability. Openness achieved good reliability in the validation sample while agreeableness achieved a slightly better value in Cronbach's alpha reliability (Satow, 2021). According to another research being done by Mastrascusa and his colleagues on May 2023, aimed to present normative data for interpreting scores from BFI for Brazilian population and assess the factorial structure and reliability of the scale. The BFI-44 showed good reliability, which comes to a conclusion that BFI can be used in research as well as surveys that require personality assessment (Mastrascusa et al., 2023). Openness achieved good consistence and reliability as a personality trait which makes it an authentic test for use according to the researcher (McCrae et al., 1987). According to a research the Big Five Inventory subscales in both Spanish and English indicates good internal consistency across

diverse groups which make it a standardized scale to use for personality assessment (Benet et al., 1998). A research article reported the Big Five Inventory subscales and facets showing improved internal consistency and reliability (Soto et al., 2017). A study examines the reliability and validity of Big Five Inventory scale and indicates good reliability (Hahn et al., 2012). Research evaluates the reliability of Big Five Inventory scale across different survey methods and reports good reliability (Lang et al., 2011). A research study found that emotional attachment to possessions and control-related beliefs strongly correlate with hoarding severity. The study suggested that the cognitive-personality patterns are central to hoarding disorder development and maintenance (Smith et al., 2026). Research based on the Five-Factor Model showed that hoarding symptoms are significantly associated with high neuroticism, withdrawal tendencies, low orderliness and emotional instability. The study concluded that personality traits can help predict hoarding behaviors and may improve intervention planning (Chan et al., 2022). An experimental study tested whether introversion contributes to stronger emotional attachment to possessions among individuals with hoarding symptom. Results showed that reducing introversion also reduced unhealthy attachment to objects that is physical hoarding (Medard et al., 2024). A study investigated how Big Five personality traits predict physical hoarding during crises. Researchers found that high neuroticism increased hoarding behavior; low agreeableness predicted panic buying and physical hoarding and openness influenced preparedness-related accumulation. The study linked personality traits directly with physical hoarding behavior (Roos et al., 2026). A study investigated how personality traits related to digital hoarding among university students. The findings of the study showed that high neuroticism and emotional instability increased digital hoarding; lower agreeableness and emotional instability predicted stronger digital hoarding behaviors;

that individual low in conscientiousness showed stronger digital hoarding tendencies and mental health difficulties significantly correlated with digital hoarding severity. The study concluded that personality traits are important predictors of digital hoarding tendencies; Celik (2025). A study proposed a comprehensive framework explaining digital hoarding through personality traits; emotional attachment; anxiety and information overload. The study concluded that personality variables are central to understand the digital hoarding behavior (Bravo et al., 2026).

Hoarding rating scale used to assess physical hoarding behavior of an individual indicates an acceptable value of Cronbach's alpha reliability. According to previous research the psychometric properties of an expanded version of the Hoarding Rating Scale shows an excellent reliability estimate (Tolin et al., 2018). According to research the assessment tools for hoarding including the Hoarding Rating Scale shows good reliability and strong internal consistency (Gilliam et al., 2010). According to a research study, part of the development of diagnostic criteria for hoarding disorder, indicates good alpha reliability values, supporting the scale's internal consistency which makes it a standardized scale to use for the assessment of personality (Mataix et al., 2013). The Hoarding Rating Scale shows good reliability in the twin study validation sample, and the researcher concluded that it is a consistent and standardized scale to use in order to assess physical hoarding behavior of an individual (Ivanov et al., 2013). A study found that abnormal attention and significance attribution significantly predicted physical hoarding severity even after controlling mood symptoms. The findings suggested personality-related cognitive styles influence excessive acquisition and hoarding behaviors (Rivers et al., 2026). Researchers explored how personality vulnerabilities and emotional emptiness relate to hoarding severity. Findings indicated that emotional regulation difficulties and personality vulnerabilities are connected to stronger hoarding behaviors. Researchers suggested that individuals with poor emotional regulation and personality vulnerabilities may use possessions to cope with emotional states (Weiss et al., 2024). A systematic review concluded that

dysfunctional beliefs about possessions strongly predict physical hoarding severity mostly including emotional attachment to objects; fear of losing things and excessive control over possessions. These personality patterns appear central to hoarding disorder (Smith et al., 2026). The Digital Hoarding Questionnaire used to assess an individual's digital hoarding behavior indicates acceptable value of Cronbach's alpha reliability. According to previous research, The Digital Hoarding Questionnaire (DHQ) being given by Neave and his colleagues on July 2019, used to assess accumulation and difficulty discarding the digital files. The Digital Hoarding Questionnaire has an adequate Cronbach's alpha reliability (Neave et al., 2019). A research study explores the psychological factors related to digital hoarding and provides initial reliability metrics, including Cronbach's alpha reliability. The Digital Hoarding Questionnaire shows good Cronbach's alpha reliability values (Orr et al., 2019). A research study examines the impacts of digital hoarding on productivity and includes reliability analysis such as Cronbach's alpha reliability and indicates good Cronbach's alpha reliability (Hall et al., 2010). Research addresses the development and validation of the Digital Hoarding Questionnaire and reported a detailed analysis of its psychometric properties such as Cronbach's alpha reliability and indicates good reliability values (Neave et al., 2017). Research has discussed information on the Digital Hoarding Questionnaire and provides insights into measurement tools used for digital hoarding and their reliability, including Cronbach's alpha reliability. The Digital Hoarding Questionnaire shows good reliability values (Bawden et al., 2009). A research study on the validation of instruments used to measure digital hoarding shows good Cronbach's alpha reliability values for Digital Hoarding Questionnaire (Renaud et al., 2008). Research on digital hoarding behaviors, specifically on desktop clutter, discusses the development of the Digital Hoarding Questionnaire and provides reliability data, including Cronbach's alpha reliability values which indicate good reliability of the Digital Hoarding Questionnaire (Renaud et al., 2011). Another research study covers the state of digital preservation and hoarding, which includes the measurement tools used for digital hoarding. It

provides reliability data, including Cronbach's alpha reliability for the Digital Hoarding Questionnaire. The Cronbach's alpha reliability value shows good reliability (Cerf et al., 2014).

A research study examined how personality traits influence personal digital hoarding behaviors among college students. Researchers found that emotional attachment mediated the relationship between personality traits and digital hoarding. The findings of the research include that neuroticism positively predicted digital hoarding; Conscientiousness negatively predicted digital hoarding tendencies and emotional attachment strengthened excessive digital saving behavior (Xie et al., 2024). A study examined digital hoarding behavior in social media users and found that personality traits significantly predicted excessive digital accumulation. The findings of the study include that neuroticism and depression positively predicted digital hoarding; sociability negatively predicted digital hoarding and fear of missing out strongly increased digital retention behaviors; Khatatbeh (2025). A study on problematic digital behavior found that neuroticism strongly predicts compulsive digital behaviors; low conscientiousness is associated with poor digital organization and emotional instability contributes to unhealthy digital retention. These findings support emerging theories linking personality traits with digital hoarding (Meynadier et al., 2024). A research study investigated how digital hoarding affects information utilization. Researchers found that fear of missing out and self-efficacy mediated the relationship between digital hoarding and information use behaviors. Personality-related emotional vulnerabilities influenced excessive saving behaviors (Li et al., 2026). A research study examined digital hoarding behaviors among university academics and found that personality-related tendencies contributed to excessive digital accumulation. Results of the study indicated that academics frequently hoarded text files, teaching resources, and research materials (Tugtekin et al., 2025).

It is stated in Hypothesis 1 that "Extraversion, Agreeableness, and Openness personality trait will be negatively correlated with physical hoarding and digital hoarding". Hypothesis is being accepted as the findings supported the current research study that individuals who have

extraversion are less likely to be involved in physical hoarding and digital hoarding, which means that when extraversion within an individual increases, physical hoarding and digital hoarding behavior will decrease as being proved by previous researches being done by Shinya et al. (2021) and Spittlehouse et al. (2016). Hypothesis 2 stated that "Neuroticism personality trait will be positively correlated with physical hoarding and digital hoarding". Hypothesis is being accepted as the findings supported the research study that if neuroticism within an individual increases, physical hoarding will increase. Similarly, an increase in neuroticism will lead to an increase in digital hoarding within an individual. Thus Hypothesis 1 partially supported. Yoshino et al. (2021) and Dozier et al. (2021) work supported current study finding.

Hypothesis 1 further stated that "Agreeableness personality trait will be negatively associated with physical hoarding and digital hoarding". Hypothesis is being accepted as the findings supported the study that an increase in agreeableness within an individual's personality will lead to a decrease in physical hoarding. Similarly, when agreeableness within an individual's personality increases, digital hoarding behavior will be decreased that is supported by previous researches being done by Ricci (2006) and Wangyue et al. (2023). Hypothesis 4 stated that "Openness to experience will be negatively associated with physical hoarding and positively correlated with digital hoarding". Hypothesis is being accepted as the findings supported the current research study that when openness to experience within an individual increases, digital hoarding behavior will also increase. Thus, an increase in openness to experience within an individual will lead to a decrease in physical hoarding behavior. Similarly, an increase in openness to experience within an individual will lead to an increase in digital hoarding behavior and authenticated by previous researches being done by Aquino et al. (2023) and Dozier et al. (2022). Hypothesis 2 stated that "Neuroticism and Conscientiousness personality trait will be positively correlated with physical hoarding and digital hoarding". Hypothesis is being accepted as the findings supported the research study that an increase in conscientiousness within an

individual's personality will leads to an increase in physical hoarding behavior. Similarly, the findings supported that an increase in conscientiousness within an individual's personality will leads to a decrease in digital hoarding behavior. Thus, an increase in conscientiousness personality trait within an individual will leads to an increase in physical hoarding behavior. Similarly, an increase in conscientiousness personality trait within an individual will results in a decrease in digital hoarding behavior that is supported by previous researches being done by Lopez et al. (2023) and Fink et al. (2021).

Hypothesis 3 stated that "Individuals scoring high on physical hoarding will score high on digital hoarding". Hypothesis is being accepted as the findings supported the current study that when physical hoarding behavior within an individual's personality increases, digital hoarding behavior will also increase, that is being supported by previous researches done by Neave et al. (2019) and Sillence (2023). Hypothesis 4 stated that "Women will score high on hoarding behavior than men". Hypothesis is being accepted as the findings supported the research study that females scored high on hoarding behavior as compared to males, which is being authenticated by previous researches being done by Samuels (2008) and Danet et al. (2018).

Gender differences between personality and hoarding suggested that there is a non-significant mean difference in the extraversion between males and females, there is a significant difference in the neuroticism of males and females, and similarly there is a non-significant difference in the conscientiousness and openness between males and females. Furthermore, there is a significant mean difference in the agreeableness and physical hoarding between males and females. A non-significant mean difference is present in the digital hoarding questionnaire used to assess digital hoarding among males and females. The findings are being supported by previous researches being done by Samuels (2008) and Danet et al. (2018). We are living in underdeveloped society where community is trying to sustain inflation. Socio-economically our culture is striving to develop where women play vital role, therefore they try to store things

in case of emergency and use. It is commonly observed that women are more oriented towards their family and relationships. Thus, they are more involved to store things for future use than men.

4.1 Practical Implications

The present study has several potential implications. The implications of the present research study include three levels which may involve individual level, institutional level and organizational level. At individual level, the research will help an individual to identify his/her specific personality traits. Along with it the study helps to identify an individual about his/her digital hoarding as well as physical hoarding behavior and helps to overcome the digital hoarding and physical hoarding behavior. At institutional level, the research study will help the students to overcome the problematic personality traits of their own personality as well as of their colleagues. The research study also helps the teachers and admin to rectify the problematic personality trait. It also helps the teachers and admin to identify and rectify the digital hoarding and physical hoarding behavior. It can be supportive for students as well as for teachers to understand the phenomenon of specific personality traits among themselves which creates hoarding disorder and other problems. At organizational level, the research study will helps the different organizations to rectify specific problematic personality traits of their employees. Along with it, the research study also helps the organizations to rectify the digital hoarding as well as physical hoarding behavior of their employees. This will help the organization to determine the employee being involved in specific hoarding behavior and rectify the problematic behavior.

In social context, the research can bring thorough understanding about its nature as well as its consequences. The findings of the research can give insight to the person that to some extent cluttering is desirable but when it is emphasized to practice beyond the limit, then this can be a barrier for the individual as it may develop many psycho-social problems. The research study will help the society in a way that it helps in rectifying the problematic personality traits causing digital and physical hoarding behavior which causes disruption in the society and helps the

individuals to live up a satisfactory and comfortable life. The results of the study can also be implemented in counseling of those individuals and parents who are coming with hoarding disorder because of personality traits. The individuals being involved in specific hoarding behavior will be able to identify their specific hoarding behavior and able to take psychological help to overcome their problem.

4.2 Limitations and Recommendations for Future Research

There are certain limitations in the research study that may restrict generalizability of the findings. A most important limitation of the study is digital and physical hoarders were selected from universities of Rawalpindi and Islamabad. Literate sample was being selected for data collection. Furthermore, university students being sample limits the hoarding to specific kind as mainly involved in digital hoarding. The types of physical hoarding and digital hoarding can be broadened by increasing the sample size, and increase number of universities. Another limitation of the research study is the relation of demographics is not as much obvious, as there are few researches being available to these demographics in relation to the study variables.

Further research study needs to involve an increased sample size of those students who are involved in digital and physical hoarding due to personality traits in the study for the sake of better understanding and generalization. It is recommended that the spectrum of hoarding will be broaden so that more types of hoarding disorder could be explored. Time duration should be long enough to approach a large sample for data collection and have a detailed and better understanding of all aspects of the research topic.

Conclusion

The current study addressed the research hypotheses designed to examine the relationship between personality traits and both digital and physical hoarding among university students in Rawalpindi and Islamabad. In addition, gender differences were also explored. The population for the study consisted of young adults enrolled in universities of Rawalpindi and Islamabad,

with participants ranging in age from 18 to 25 years.

The findings revealed that personality traits were significantly associated with both digital and physical hoarding behaviors. Specifically, extraversion was negatively correlated with physical and digital hoarding, indicating that individuals with higher levels of extraversion were less likely to engage in hoarding behaviors. Neuroticism showed a positive correlation with both physical and digital hoarding, suggesting that individuals high in neuroticism were more likely to exhibit hoarding tendencies. Agreeableness was negatively associated with both forms of hoarding, while openness to experience demonstrated a negative association with physical hoarding but a positive correlation with digital hoarding. Furthermore, conscientiousness was positively correlated with physical hoarding and negatively associated with digital hoarding.

The results also indicated a positive relationship between physical and digital hoarding. Individuals who scored higher on physical hoarding were also more likely to score higher on digital hoarding. This suggests that young adults who engage in physical hoarding behaviors are also more prone to engaging in digital hoarding behaviors.

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