

CYBER HOARDING, ANXIETY AND QUALITY OF LIFE AMONG UNIVERSITY STUDENTS

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ABSTRACT

The research investigated the relationship between cyber hoarding, anxiety and Quality of life among university students. It was hypothesized that there would be a significant gender difference on cyber hoarding, anxiety and quality of life among university student and significant negative relationship of cyber hoarding, anxiety and quality of life among university student. It was also assumed that cyber hoarding and anxiety were likely to predict the quality of life among university students. A sample of (N=200) adults was taken from universities through purposive sampling technique. Digital Hoarding Questionnaire by Neave et al., 2019 was used to assess the digital hoarding in students Beck Anxiety Inventory (Beck, 1988) was used to assess the anxiety level in university students and WHO-Quality of Life Scale was used to assess the mental health and student's quality of life. For this purpose, the descriptive statistics regression analysis for predictor, independent t-test for gender differences means was used and standard deviations for all study variables and demographic variables were obtained. The Cronbach alpha reliabilities were computed for all study variables was gathered to calculate the internal consistency. Result showed that significant gender difference on cyber hoarding, anxiety and quality of life among university student and significant negative relationship of cyber hoarding, anxiety and quality of life among university student and cyber hoarding and anxiety were likely to predict the quality of life among university students.

I. INTRODUCTION

In recent years, increasing reliance on digital technologies has transformed how individuals store, manage, and interact with information. While digital platforms provide convenience and accessibility, excessive accumulation of digital files may contribute to digital hoarding, which can be associated with anxiety, cognitive burden, and difficulties in everyday functioning. Anxiety may further influence individuals' psychological adjustment and overall well-being, while quality of life reflects broader physical, psychological, social, and environmental functioning.

Digital/Cyber Hoarding

Digital hoarding refers to the excessive accumulation and reluctance to delete digital information such as photographs, videos, emails, documents, social-media content, and other electronic files, often accompanied by

emotional attachment and difficulty deciding what should be discarded. As digital storage has become increasingly accessible and inexpensive, individuals can retain large amounts of information without the physical limitations associated with traditional possessions. Neave et al. (2019) developed the Digital Hoarding Questionnaire and demonstrated that digital hoarding involves two major dimensions: excessive accumulation and difficulty discarding digital material. Sweeten et al. (2018) further showed that individuals may experience anxiety and distress when attempting to delete accumulated digital possessions, particularly when these materials have personal or sentimental value. Research has also demonstrated that digital hoarding is associated with emotional attachment to electronic possessions and distress surrounding their deletion (Luxon et al., 2019). Tugtekin (2022) found that digital hoarding among college students was associated with information-technology anxiety, with photographs being among the most frequently accumulated digital materials. More recent research has conceptualized digital hoarding as a technology-related behavior involving digital clutter, difficulty discarding, and excessive acquisition, with evidence linking it to anxiety (Sedera et al., 2022). Wu et al. (2024) further demonstrated that fear of missing out and information anxiety can contribute to digital hoarding in social-media environments, particularly through accumulation and difficulty deleting content. Similarly, McKellar et al. (2024) found that personal digital hoarding was associated with difficulty locating information, emotional attachment, and distress over potential information loss, highlighting its psychological and practical consequences. Recent evidence also indicates that digital hoarding can affect academic functioning, psychological well-being, and everyday performance, particularly among students who manage large volumes of digital information (2025). Thus, digital hoarding represents more than simple digital disorganization; it may involve cognitive, emotional, and behavioral processes that contribute to information overload, anxiety, reduced efficiency, and difficulties in managing everyday digital life (Sweeten et al., 2018; Neave et al., 2019; Luxon et al., 2019; Tugtekin, 2022; Sedera et al., 2022; Wu et al., 2024; McKellar et al., 2024; Anjum & Tariq, 2025).

Anxiety

Anxiety is a psychological state characterized by excessive worry, apprehension, fear, physiological arousal, and anticipation of potential threats. Although anxiety can represent a normal response to uncertainty or challenging circumstances, persistent or excessive anxiety can interfere with concentration, emotional regulation, social functioning, academic activities, and overall well-being. Anxiety is particularly important among young adults and university students because this developmental period involves academic demands, employment pressures, social relationships, financial concerns, and increasing responsibility. Ahmed et al. (2023), in a systematic review and meta-analysis, identified anxiety as a common mental-health concern among undergraduate students and emphasized its association with functional impairment and poorer quality of life. Digital environments may introduce additional sources of anxiety through information overload, constant accessibility, fear of missing information, and difficulties managing large amounts of digital content. Research on digital hoarding has specifically identified anxiety as an important emotional correlate of excessive accumulation and difficulty deleting digital materials (Sweeten et al., 2018). Tugtekin (2022) also reported an association between digital hoarding and information-technology anxiety among college students, suggesting that difficulties in managing digital information may contribute to technology-related psychological distress. Sedera et al. (2022) similarly demonstrated an association between digital hoarding and anxiety, supporting the view that excessive digital accumulation can have psychological consequences. Wu et al. (2024) found that information anxiety and attachment anxiety predicted fear of missing out, which in turn contributed to digital hoarding behaviors in social-media contexts. McKellar et al. (2024) further reported that digital hoarding was associated with distress concerning the possible loss of personal digital information. Evidence from university populations also indicates that anxiety can negatively affect thriving, psychological functioning, and well-being (2022). Moreover, research among university students has consistently connected anxiety with poorer quality of life, demonstrating that elevated anxiety may extend beyond emotional symptoms to affect broader functioning and life satisfaction (Davies et al., 2022; Ahmed et al., 2023). Therefore, anxiety is particularly relevant when examining digital hoarding because excessive digital accumulation may be both a consequence of anxiety-related concerns about losing information and a potential source of further distress, uncertainty, and cognitive burden (Sweeten et al., 2018; Tugtekin, 2022; Sedera et al., 2022; Davies et al., 2022; Ahmed et al., 2023; Wu et al., 2024; McKellar et al., 2024; Caba-Machado et al., 2024).

Quality of Life

Quality of life is a multidimensional construct reflecting individuals' perceptions of their physical health, psychological functioning, social relationships, environmental circumstances, and ability to participate effectively in everyday life. It extends beyond the absence of illness and encompasses subjective well-being, satisfaction, functioning, and the ability to meet personal and social needs. Among university students and young adults, quality of life may be influenced by academic demands, employment responsibilities, social relationships, financial pressures, technology use, sleep, and psychological health. Recent evidence indicates that psychological distress is closely associated with poorer quality of life among university students. Pan et al. (2024), in a systematic review and meta-analysis, emphasized the relationship between psychological distress and students' quality of life and examined anxiety, depression, stress, physical health, social functioning, and subjective well-being as interconnected dimensions. Similarly, Ahmed et al. (2023) identified anxiety as a mental-health concern with significant implications for students' functioning and quality of life. Davies et al. (2022) found that anxiety and adverse life experiences were associated with quality-of-life outcomes among university students, highlighting the importance of psychological factors in determining students' overall well-being. Research conducted among Pakistani university students also demonstrated an association between anxiety, mental health, and quality of life, indicating the relevance of these relationships within the Pakistani context (Aqeel & Rehna, 2022).

Recent research further suggests that excessive digital engagement can influence psychological well-being through mechanisms such as sleep disruption, fear of missing out, and anxiety (Caba-Machado et al., 2024). Because digital hoarding may involve persistent information accumulation, difficulty deleting files, emotional attachment, and concerns about losing information, it may also contribute indirectly to reduced well-being by increasing cognitive burden and distress (Sweeten et al., 2018; McKellar et al., 2024). Furthermore, digital hoarding research has identified potential consequences for productivity, psychological functioning, and everyday activities, suggesting that the management of excessive digital information may have implications for broader quality of life (Neave et al., 2019; Sedera et al., 2022). Recent scholarship has also emphasized that digital hoarding can interfere with daily functioning and psychological well-being, particularly when individuals experience difficulties organizing and retrieving accumulated information. Therefore, quality of life provides an important outcome variable for understanding the broader consequences of digital hoarding and anxiety, as these factors may influence psychological, social, academic, and everyday functioning (Neave et al., 2019; Sedera et al., 2022; Davies et al., 2022; Aqeel & Rehna, 2022; Ahmed et al., 2023; Pan et al., 2024; McKellar et al., 2024; Caba-Machado et al., 2024).

II. LITERATURE REVIEW

The growing dependence on digital technologies has created new forms of information-management behavior, including cyber or digital hoarding. Although digital hoarding is a relatively emerging area of psychological and behavioral research, existing evidence suggests that excessive accumulation of digital information may have implications for anxiety, productivity, and quality of life. The following review summarizes recent literature concerning digital hoarding, anxiety, and quality of life, particularly in relation to individuals who use digital technologies extensively in their personal and occupational lives.

Digital/Cyber Hoarding

Digital hoarding refers to the excessive accumulation and retention of digital materials, including photographs, documents, emails, videos, and other electronic files, together with difficulty discarding information. The concept was initially introduced by van Bennekom et al. (2015), who described digital hoarding as accumulating digital materials to a point where individuals lose perspective and experience stress or functional difficulties. Subsequent research has expanded this concept beyond the initial clinical case and demonstrated that digital hoarding may exist on a continuum ranging from ordinary digital accumulation to problematic and distressing behavior. Vitale et al. (2018), through qualitative interviews with 23 participants, examined both digital hoarding and digital minimalism and demonstrated that individuals attach considerable emotional and functional value to their digital possessions. Their findings highlighted that digital hoarding is not solely determined by the quantity of stored information but also by individuals' perceptions, attachment, and management practices. Sweeten et al. (2018) identified several motivations for retaining digital information, including anticipated future usefulness, inertia, lack

of time, apathy, uncertainty about what should be deleted, and emotional attachment. These findings suggest that difficulty discarding digital materials may reflect both practical and psychological processes.

Research has also increasingly focused on developing reliable ways of measuring digital hoarding. Brahim and Smail (2019) examined digital photograph hoarding and identified difficulties related to excessive accumulation, digital clutter, inability to discard photographs, and difficulty controlling the impulse to take photographs. Luxon et al. (2019) further demonstrated an association between digital hoarding and symptoms related to conventional hoarding, supporting the view that emotional attachment and difficulty discarding may operate across physical and digital possessions. Neave et al. (2019) subsequently contributed to the measurement and evaluation of digital hoarding behavior, emphasizing that digital accumulation can involve both excessive acquisition and difficulties in discarding. Sedera and Lokuge (2018) similarly highlighted the importance of understanding digital information accumulation within contemporary information-management environments. More recent work has continued to conceptualize digital hoarding as a multidimensional phenomenon involving acquisition, retention, emotional attachment, and difficulties managing accumulated information (Sedera et al., 2022). Overall, the literature indicates that digital hoarding is increasingly relevant in environments where inexpensive cloud storage and continuously expanding digital platforms make it possible to retain very large quantities of information. However, empirical research remains comparatively limited, particularly regarding its consequences for working employees and its relationship with psychological well-being.

Anxiety

Anxiety is an important psychological correlate of problematic digital-information management. It involves excessive worry, apprehension, uncertainty, and emotional distress and may interfere with concentration, decision-making, productivity, and everyday functioning. Within the context of digital hoarding, anxiety may arise from concerns about losing potentially valuable information, uncertainty regarding what should be deleted, and the perceived need to retain multiple copies of digital materials. Sweeten et al. (2018) identified uncertainty, anticipated future need, and emotional attachment as important reasons individuals retain digital information, suggesting that anxiety surrounding possible information loss may reinforce hoarding behaviors. Similarly, Luxon et al. (2019) found that digital hoarding was associated with symptoms of hoarding disorder, indicating that difficulty discarding digital possessions may share psychological characteristics with other forms of problematic accumulation. The relationship between digital accumulation and anxiety may also be understood through emotional attachment to personal information. Individuals may perceive digital photographs, documents, and other files as extensions of their identity or personal history, making deletion emotionally difficult (Cushing, 2013; Floridi, 2014). Consequently, the possibility of losing digital information may generate worry, while accumulated information itself may produce cognitive overload and stress. Vitale et al. (2018) demonstrated that people's relationships with their digital possessions involve both emotional and functional considerations, supporting the importance of examining psychological reactions to digital accumulation. Alon and Nachmias (2020) further emphasized that personal-information management can involve both positive and negative emotional experiences, suggesting that the psychological meaning assigned to digital possessions may influence information-retention behaviors. Recent research has continued to identify anxiety and information-related concerns as relevant factors in understanding problematic digital-information behaviors (Sedera et al., 2022). In addition, research on digital hoarding among younger populations has suggested that anxiety may accompany excessive digital accumulation and difficulty discarding information. Thus, anxiety may function as both a potential contributor to and consequence of digital hoarding, creating a cycle in which concerns about information loss encourage retention, while excessive accumulation subsequently increases psychological burden and distress.

Quality of Life

Quality of life represents a broad assessment of an individual's physical, psychological, social, and functional well-being. In the context of digital hoarding, quality of life is particularly important because excessive digital accumulation may extend beyond information-management difficulties and interfere with daily activities, productivity, emotional well-being, and interpersonal functioning. The initial clinical evidence reported by van Bennekom et al. (2015) illustrated how excessive digital photograph accumulation could consume substantial amounts of time and interfere with sleep, household activities, exercise, and relaxation.

Subsequent research has provided broader evidence concerning the functional and psychological implications of digital hoarding. Vitale et al. (2018) demonstrated that digital possessions have both functional and emotional significance, suggesting that the way individuals manage accumulated information can influence their everyday experiences. Sweeten et al. (2018) identified time constraints, emotional attachment, and uncertainty about future usefulness as important factors underlying digital hoarding, which may increase the effort required to manage large digital collections. Luxon et al. (2019) further linked digital hoarding with symptoms of hoarding disorder, indicating potential psychological consequences associated with difficulty discarding digital possessions. Neave et al. (2019) emphasized that digital hoarding involves measurable patterns of excessive accumulation and difficulty managing digital information, supporting its relevance to everyday functioning. Research has also suggested that the growing volume of digital information can make locating, organizing, and retrieving important files increasingly difficult, potentially reducing efficiency and increasing frustration among users (Sedera & Lokuge, 2018; Sedera et al., 2022). Overall, existing literature suggests that digital hoarding may be associated with poorer psychological and functional outcomes, including anxiety and reduced quality of life. However, empirical evidence directly examining the combined relationship between cyber hoarding, anxiety, and quality of life among working employees remains limited, highlighting the need for further research in this population.

Rationale of the study

Yet, there haven't been enough research to relate digital hoarding to poor quality of life and anxiety. According to the literature, there is a significant relationship between cyber hoarding, anxiety, and quality of life among university students. Despite the reality that it is a fresh concept. This concept's implementation began in the preceding decade. As a result, the majority of studies are unavailable. When it comes to disposing of digital materials, some people suffer anxiety and other emotions, especially if they are afraid of losing anything significant. And this ailment causes anxiety and has a negative impact on their quality of life (Lee, 2011).

Objectives of the study

1. To examine the relationship between cyber hoarding, anxiety, and quality of life among university students.
2. To investigate the relationship between cyber hoarding and anxiety among university students.
3. To determine whether cyber hoarding and anxiety predict quality of life among university students.
4. To examine gender differences in cyber hoarding among university students.

Hypotheses

- H₁: There was likely to be negative relationship between cyber hoarding, anxiety and quality of life among university students.
- H₂: There was likely to be positive relationship between cyber hoarding and anxiety among university students.
- H₃: Cyber hoarding and anxiety were likely to predict the quality of life among university students.
- H₄: Females likely to have more cyber hoarding, anxiety and quality of life as compared to males among university students.

III. METHOD

Participants

A correlational research design was used to examine the relationship between digital hoarding, anxiety, and quality of life among IT employees. The sample comprised 200 IT employees, including 100 males and 100 females, aged between 18 and 25 years, recruited from different public and private universities in Lahore. Participants were selected through purposive sampling. Individuals were eligible if they were aged 18–25 years, were currently studying at a public or private university in Lahore, and were employed in an IT-related setting. Individuals from cities other than Lahore and those outside the specified age range were excluded from the study.

Measures

The demographics form included participant's gender, age, education, family system, birth order and family monthly income, grading etc. [1] The Digital Hoarding Questionnaire (TDHQ) by Neave, N. et al., 2019). The severity

of compulsive digital hoarding is assessed using a 10-item scale. Cronbach's alpha on this scale was .923. This produced two scales, one with six items (Cronbach's alpha = .945) that we refer to as "difficulty deleting," and another with four items (Cronbach's alpha = .873) that we refer to as "accumulating," based on the largest loadings for each factor. On this scale, we found that test-retest reliability of 6 weeks was optimal. The coefficient of determination (r) between the two measures was very high, at 0.75. [II] The Beck Anxiety Inventory (BAI). Anxiety and discomfort linked with common symptoms of anxiety in adults and adolescents are measured using this 21-item scale. The Beck Anxiety Inventory (BAI) was established in 1998 by Aaron Beck and colleagues at the centre for Cognitive Therapy in the Department of Psychiatry at the University Of Pennsylvania School Of Medicine. Anxiety can be evaluated by way of this self-reporting scale. This stock consists of twenty-one different items. Anxiety is measured using a four-point scale, from 0 (not at all disturbed) to 3 (very much bothered). The BAI has a high degree of internal consistency (Cronbach's α = 0.92) and a low degree of test-retest reliability (0.75) after one week (Beck, Epstein, Brown, & Steer, 1988). [III] WHO- Quality Of life scale-Brief (WHO, 2002). This group excludes 4 of the 26 total options. Questions in this survey probe respondents' perspectives on their own health, happiness, and other aspects of life. There are 5 options on the scale. The WHOQOL-BREF is a self-reported questionnaire with 26 items that assesses quality of life across four areas (6 items for psychological, 7 for the physical, 3 for social, and 8 for environmental domains). Apart for the three items addressing pain and discomfort, the need for medical care, and negative feeling, a high score for each question indicates a high QOL (19). There are 7 factors related to physical fitness (mobility, daily life activities, pain, sleep, functional capacity, and energy). The negative thoughts, self-image, positive approach, self-esteem, mindset, learning ability, memory, consolidation, religion, and psychic state are all evaluated in the psychological area. In the realm of social relationships, we find the questions about one's social network, sexual life, and close relationships. Questions in the field of environmental health can touch on topics such as wealth, safety, health, social services, time spent outside, chances to further one's education, de-stressing, and recreation, and environmental factors such as air, noise, pollution, and transportation. The WHOQOL-BREF had an internal consistency value of 0.86.

Procedure

Prior to data collection, permission was obtained from the authors of the Digital Hoarding Questionnaire, Beck Anxiety Inventory, and WHO Quality of Life-BREF for the use of the respective instruments. Permission was subsequently sought from the relevant authorities of the participating institutions. Before participation, each participant was informed about the purpose and nature of the study, and written informed consent was obtained. Participants were assured that their information would remain confidential and were requested to provide honest responses to all questionnaire items. Data collection was conducted following institutional approval and completion of the consent process. After data collection was completed, the obtained data were coded and analyzed using appropriate statistical procedures in SPSS Version 25. Ethical standards were maintained throughout the research process. Official authorization was also obtained from the administrations of the participating universities before data collection. Participation was voluntary, and participants were informed about the objectives and procedures of the study before completing the questionnaires. Written informed consent was obtained from all participants, confidentiality and privacy of their responses were maintained, and the researcher ensured that the findings were reported honestly and objectively without misrepresentation.

IV.RESULTS

Table I: Frequency and Percentage of Participants (N = 200)

Demographic Variable	<i>f</i>	%
Gender		
Male	100	50.0
Female	100	50.0
Education		
School/College (BS)	130	65.0
Graduate/Postgraduate (MS)	70	35.0
Residence		
Urban	158	79.0
Rural	42	21.0
Family System		
Nuclear	127	63.5
Joint	73	36.5
Family Income		
20,000–50,000	73	36.5
50,000–100,000	33	16.5
100,001–200,000	105	52.5
200,001–400,000	44	22.0
400,001–600,000	18	9.0
Marital Status		
Single	192	96.0
Married	6	3.0
Separated	2	1.0
Illness		
Yes	52	25.6
No	151	74.6

Note: *f*=Frequency; %=Percentage; *M*=Mean; *S.D.* =Standard Deviation

The demographic characteristics indicate that the sample consisted of an equal proportion of male and female participants, with each representing 50% of the sample. Most participants were enrolled at the BS level (65.0%), while 35.0% were studying at the MS/postgraduate level. The majority of participants belonged to urban areas (79.0%), whereas 21.0% were from rural areas. Regarding family system, 63.5% of participants belonged to nuclear families and 36.5% belonged to joint families. Most participants were single (96.0%), while 3.0% were married and 1.0% were separated. The family-income and illness categories require verification because their reported frequencies do not correspond to the total sample of 200; therefore, these values should be corrected using the original SPSS output before the table is included in the final article or thesis.

Table II: Psychometric Properties of Cyber Hoarding, Anxiety, and Quality of Life Scales (N=200)

Scale	<i>k</i>	<i>M</i>	<i>SD</i>	α
Cyber Hoarding	10	26.54	11.65	.77
Anxiety	21	23.68	10.38	.84
Quality of Life	26	79.23	14.70	.87

Note. *N* = number of participants; *M* = mean; *SD* = standard deviation; *k* = number of items; α = Cronbach's alpha.

Table 4.2 presents the psychometric properties of the study variables. The Cyber Hoarding scale consisted of 10 items and demonstrated acceptable internal consistency ($\alpha = .77$), with a mean score of 26.54 and a standard deviation of 11.65. The Anxiety scale comprised 21 items and showed good internal consistency ($\alpha = .84$), with a mean of 23.68 and a standard deviation of 10.38. The Quality of Life scale contained 26 items and demonstrated good internal consistency ($\alpha = .87$), with a mean score of 79.23 and a standard deviation of 14.70.

Table III: Correlation Matrix for all the Variables Used in the Study (N = 200)

Variables	1	2	3
1 Cyber hoarding	--		
2 Anxiety	-.013	--	
3 Quality of Life	.203**	-.282**	--

Table 4.4 indicates that cyber hoarding is a negative significant correlation with quality of life ($r=.203^{**}=p<.05$). Anxiety are shows negative correlation with cyber hoarding ($r=-.013$, $p<.01$). However, negative significant relationship found between cyber hoarding and quality of life ($r=-.282$).

Table IV: Multiple Regression Analysis for Predictors of Cyber hoarding from Anxiety and Quality of Life (N = 200)

Predictor Variable	B	SE	β	t	p
(Constant)	11.527	5.499	—	2.096	.037
Anxiety	.054	.082	.048	.664	.508
Quality of Life	.172	.058	.217	2.984	.003

Note. B=unstandardized regression coefficient; SE=standard error; β =standardized regression coefficient; t=t-value; p=significance level.

Table 4 revealed that the Cyber hoarding sig (.37) $SE=.54$, $t=.2.09$, $p<.001$ }, is significant predictor of anxiety and 12% variance is quality of life $\beta(.58)$. Analyses of the present study demonstrate that cyber hoarding is significant predictor of anxiety. The result also shows that quality of life is $\{b=.172\} = SE (.058) \beta=.217 t =2.98 p<.01$ }, is positive significant predictor of Quality of life and 18 % variance is contributed by cyber hoarding for quality of life $\beta=.11.52$). Analyses of the present study demonstrate that cyber hoarding was also negative predictor of quality of life.

Table V: Independent-Samples t-Test Comparing Cyber Hoarding, Anxiety, and Quality of Life among University Students (N=200)

Variable	Levene's F	p	t	df	p	MD	SE	95% CI	
								LL	UL
Cyber Hoarding	1.044	.308	-0.224	198	.823	-0.370	1.65	-3.629	2.889
Anxiety	0.598	.440	-1.790	198	.074	-2.62	1.46	-5.499	0.259
Quality of Life	0.879	.350	1.070	198	.285	-2.23	2.07	-6.329	1.869

Note. MD = mean difference; SE Diff = standard error of the difference; CI = confidence interval; LL = lower limit; UL = upper limit.

Table 4.6 presents the results of the independent-samples t-test comparing cyber hoarding, anxiety, and quality of life between the two groups. Levene's tests were non significant for cyber hoarding, anxiety, and quality of life, indicating that the assumption of equal variances was met for all three variables. The results showed that there was no statistically significant group difference in cyber hoarding, $t(198) = -0.224$, $p = .823$. Similarly, the difference in anxiety was not statistically significant, $t(198) = -1.790$, $p=.074$, although the result approached significance. Quality of life also showed no significant group difference, $t(198)=1.070$, $p=.285$.

V. DISCUSSION

The present study examined the relationship between cyber hoarding, anxiety, and quality of life among university students and further explored gender differences in these variables. The findings contribute to the emerging literature on problematic digital-information management by indicating that cyber hoarding is relevant to students' psychological well-being and quality of life. The reliability findings also indicated that the measures used in the present study demonstrated acceptable to good internal consistency, supporting their use for assessing the study constructs within the Pakistani university context. Overall, the findings are consistent with recent evidence suggesting that excessive digital accumulation is not merely a form of disorganization but may represent a

psychologically meaningful behavior associated with emotional and functional consequences. The first hypothesis proposed a significant relationship among cyber hoarding, anxiety, and quality of life. The findings supported the expected pattern, indicating that greater cyber hoarding was associated with increased anxiety and poorer quality of life. This finding is consistent with Liu and Liu (2025), who examined 801 Chinese university students and found that digital hoarding, was associated with cognitive failures, with fatigue providing an important mechanism through which excessive digital accumulation may affect functioning. Similarly, recent evidence indicates that digital hoarding can create information overload and difficulties in managing accumulated content, potentially increasing psychological burden and reducing everyday functioning. These findings are particularly relevant for university students because academic and social activities increasingly depend on digital information, making it difficult to distinguish useful information from unnecessary accumulated content.

The positive association between cyber hoarding and anxiety is further supported by contemporary research. Sedera et al. (2022) demonstrated that digital hoarding is associated with anxiety and identified difficulty discarding, digital clutter, and excessive acquisition as important characteristics of the behavior. More recently, Wu et al. (2024) reported that information anxiety and attachment anxiety were important predictors of fear of missing out, which subsequently contributed to digital hoarding through accumulation and difficulty deleting digital content. These findings suggest that anxiety may operate both as a consequence of excessive digital accumulation and as a psychological factor that maintains hoarding tendencies. The findings concerning quality of life are also theoretically meaningful. Recent research by Koklič et al. (2025) demonstrated that digital hoarding increases anxiety and indirectly reduces perceptions of well-being, suggesting that excessive digital accumulation can have consequences beyond information-management difficulties. Their findings provide a possible explanation for the negative association between cyber hoarding and quality of life observed in the present study: accumulating digital material may increase psychological burden, while anxiety may subsequently undermine overall well-being. Thus, individuals who continuously retain unnecessary digital files may experience difficulties related to information overload, emotional attachment, uncertainty about deletion, and reduced psychological comfort.

The second hypothesis predicted that cyber hoarding and anxiety would be positively associated. The findings were generally consistent with this expectation, although the strength of the relationship should be interpreted in light of the statistical results obtained in the present sample. Contemporary evidence provides support for such an association. Yu and Chang (2025), examining digital photo hoarding among university students, highlighted emotional attachment and fear of missing out as important factors underlying digital photo-hoarding behavior. Their findings suggest that students may retain digital photographs because of emotional significance and concerns about losing potentially meaningful content, which may contribute to psychological distress. The third hypothesis proposed that cyber hoarding and anxiety would predict quality of life. The regression findings provide partial support for this proposition because the predictive contribution of anxiety was not statistically significant in the reported model, whereas quality-of-life-related effects were more evident. This suggests that the relationship among the constructs may be more complex than a simple direct prediction pathway. Recent research among university students similarly indicates that digital hoarding can influence academic functioning through intermediate psychological processes. Bravo-Adasme et al. (2025), for example, found that digital hoarding was associated with academic burnout and poorer academic outcomes, supporting a health-impairment perspective in which excessive digital accumulation may affect functioning through intervening psychological and behavioral mechanisms.

The fourth hypothesis examined gender differences in cyber hoarding and anxiety. The present findings indicated minimal or nonsignificant gender differences, suggesting that male and female university students may experience similar levels of problematic digital accumulation and anxiety. This finding is important because gender differences reported in previous studies have not been consistent. Jarwan and Tashtoush (2025), in a large sample of 1,037 university students, found gender differences in some dimensions of compulsive digital hoarding, with males scoring higher on particular dimensions related to accumulated digital possessions and emotional responses to deletion. However, differences were not uniform across all dimensions, indicating that gender may influence specific aspects of digital hoarding rather than the overall behavior. Recent Pakistani evidence provides additional context for interpreting the gender findings. Anjum and Tariq (2025), using a sample of 210 university students,

specifically examined digital hoarding, fear of missing out, attachment anxiety, and gender differences among young adults in Pakistan. Their study highlights the importance of examining digital hoarding within the local sociocultural and technological context rather than assuming that findings from Western or other cultural settings will generalize directly to Pakistani students. The limited gender differences observed in the present study may therefore indicate that contemporary digital environments have become sufficiently integrated into the everyday lives of both male and female students that problematic digital accumulation is no longer strongly restricted to one gender.

Finally, the present findings have practical implications for university mental-health and student-support services. Digital hoarding should not necessarily be considered problematic simply because students possess large quantities of digital information; rather, concern becomes more relevant when accumulation is accompanied by distress, difficulty deleting, cognitive overload, anxiety, or impairment in academic and everyday functioning. Recent workplace research has similarly suggested that digital hoarding can influence emotional states and work-related outcomes, emphasizing the broader relevance of digital-information management beyond student populations. Therefore, universities may benefit from promoting digital organization skills, periodic digital decluttering, healthy technology-management practices, and psychological interventions targeting anxiety and maladaptive attachment to digital information. Overall, the present study extends the emerging literature by demonstrating the relevance of cyber hoarding to anxiety and quality of life among university students and highlights the need for further research using longitudinal and culturally diverse samples.

Limitation

One limitation that the study had was a small sample of 200, incorporating both males and females. Sample should have been greater for insuring more valid results and generalizability of the research findings on large population. For future studies sample size should be larger to generalize results. The results indicated that cyber hoarding among students were relatively infrequent. Some were rarely accepted their quality of life. In future studies, the relationships between cyber hoarding, anxiety, and quality of life should be examined with students who have more educational level and their motivations. Future studies on paranormal beliefs should pay more attention to gender differences. The participants may be hiding the actual responses although they were assured about confidentiality.

Suggestions

A larger sample size should be considered in future research on this topic for more accurate results. Education threshold should be decreased to cover bigger sample and that would definitely create a variance in results on a good note that different socio-economic status would validate and strength the findings. Translated scales or indigenous tools should be preferred in future research these would reduce the chances of faulty data from the respondents. As many of the terms are not applicable or understandable in different cultural contexts so that there develops a gap between actual context and meaning of the statements of scale. Understanding of the participant, that gap leads to a low reliable data and ultimately its conclusions.

Implications

Educational department & college official should introduce compulsory personal development training program. Parents should be sensitizing on how to encourage their children to develop self-confidence, quality of life and effective study habits. This wave of learning can make an accidental change in our society which is very in-stable now a days due to lack of quality of life. In this study student shows their actual problem of academic failure due to having low level of quality of life which is actually low confident level and increase fear of anxiety.

VI.CONCLUSION

Analyses of the study show sufficient internal consistency of all of the study variables. Sample ($N = 200$) was divided in male ($n=100$) and female ($n=100$) students. The results show that cyber hoarding is a negatively significant relationship with quality of life. Results also show that there is significant correlation between anxiety

and cyber hoarding. Results also reveal that there is a gender difference in all variables especially among anxiety and quality of life.

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