The Relative Contribution of Personality Traits and Cyber Illness Anxiety in Predicting Quality of Life among University Students

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Abstract

This study investigates the influence of personality traits and cyberchondria on the quality of life (QoL) among Saudi Arabian university students while also developing a reliable and culturally appropriate QoL scale. Using a cross-sectional design, 376 students completed self-report measures assessing personality traits, cyberchondria, and QoL, aiming to identify dominant traits, dimensions of cyberchondria, and their predictive relationships with QoL. The findings revealed that openness, conscientiousness, agreeableness, and extraversion were the most prevalent personality traits, whereas neuroticism was the least. Among the dimensions of cyberchondria, the cognitive aspect was most prominent, followed by emotional and behavioural aspects. Regarding QoL, the health domain scored highest (4.12 ± 0.76), followed by social (3.96 ± 0.82) and psychological (3.88 ± 0.91) domains. Regression analysis identified agreeableness ($\beta = 0.45$, $p < 0.01$) and behavioural aspects of cyberchondria ($\beta = -0.34$, $p < 0.01$) as significant predictors of QoL. The newly developed 43-item QoL scale demonstrated excellent internal consistency (Cronbach's $\alpha = 0.89$), confirming its reliability. The study highlights that fostering agreeableness and reducing cyberchondria could improve students' well-being, contributing to the existing literature on QoL determinants and offering a valuable tool for further research.

Keywords

Personality Traits, Cyberchondria, Quality of Life, University Students, Saudi Arabia, Psychological Well-being, Cultural Scale Development.

1. Introduction

Digital technologies and the internet have profoundly transformed modern society, influencing communication, privacy, and daily life while fostering global connectivity that reshapes behaviours and beliefs. These pervasive impacts of the digital age extend to individuals across all age groups and levels of engagement. The ongoing evolution of the technological landscape underscores the internet's dual nature as both a source of significant benefits and a potential threat, particularly in matters related to health. A significant issue associated with online health-related behaviours is "cyberchondria," a phenomenon stemming from excessive engagement with online medical queries. Research, such as **Alcaraz-Ibáñez *et al.*** (2018), has demonstrated that these searches heighten anxiety and stress, leading to a notable decline in quality of life. Consequently, cyberchondria results in increased anxiety and negative behaviours, ultimately diminishing overall well-being. Therefore, it is essential to approach online health information judiciously to safeguard both physical and mental health.

Alcaraz-Ibáñez *et al.* (2020) and **Alcaraz-Ibáñez *et al.*** (2021) highlight that excessive consumption of digital spaces poses significant risks, including cognitive-emotional disturbances, personality changes, and the development of behavioural disorders. University students are particularly vulnerable due to their distinct developmental and

psychological characteristics, often leading to adverse effects on their quality of life within higher education settings. This underscores the importance of implementing measures to mitigate these impacts. In recent years, the concept of quality of life has gained prominence in psychological and sociological research as a key framework for understanding the complexities of modern living. **Ryff and Keyes** (1995) argue that a comprehensive understanding of quality of life facilitates human adaptation to contemporary challenges. Their model, which encompasses material, psychological, and social dimensions, offers a holistic approach to well-being. The emphasis on quality of life in academic research highlights its critical role in fostering psychosocial development, particularly among individuals most susceptible to the challenges of cyberspace.

Alcaraz-Ibáñez *et al.* (2019) and **Chen and Peng** (2008) have examined the integration of cyberspace into daily life, offering insights into its educational and social benefits while also highlighting its potential to exacerbate personality disorders and health issues, thereby negatively impacting quality of life. These challenges are particularly pronounced during late adolescence when students attend universities, necessitating targeted interventions. Addressing these issues requires a deep understanding of quality of life to mitigate the adverse effects of cyberspace. **Diener and Seligman** (2004) and **Verduyn *et al.*** (2017) emphasise the importance of prioritising well-being and happiness as central components of modern life. They advocate for a holistic approach that integrates material, psychological, and social dimensions of quality of life. Analysing the interconnections among these dimensions enables scholars to better comprehend well-being and develop strategies to counteract the negative influences of cyberspace.

Costa and McCrae's (1992) introduction of the Five-Factor Model provides a robust framework for exploring personality in relation to quality of life. **McCrae and Terracciano** (2005) argue that the five dimensions—neuroticism, extraversion, agreeableness, conscientiousness, and openness to experience—are reliable and universally relevant in describing personality. Incorporating this model into research on the impact of personality on well-being is essential for gaining comprehensive insights into the interplay between personality traits and quality of life. A study by **Steel *et al.*** (2008) demonstrates a significant relationship between personality traits and subjective well-being (SWB), identifying conscientiousness and neuroticism as reliable predictors of quality of life. Additionally, evidence suggests that conscientiousness and extraversion are positively correlated with improved quality of life. **Diener and Seligman** (2004), along with more recent research by **Zakaria *et al.*** (2023), underscore the primary role of individual characteristics in enhancing well-being. These findings provide a foundation for investigating the associations between personality traits, engagement in virtual environments, and general quality of life.

Future research should focus on developing culturally appropriate measurement scales, as existing scales may lack sensitivity to accurately reflect the experiences of university students within culturally unique contexts such as Saudi Arabia. Refining these scales will enable a more comprehensive exploration of the interrelationships among personality traits, cyberchondria, and quality of life, ultimately enhancing the efficacy of interventions. Addressing these research gaps is crucial for understanding the factors influencing university students' well-being. This effort may serve as an essential step toward implementing strategies to mitigate adverse effects and support an optimal and fulfilling quality of life among this vulnerable population.

2. Literature Review

2.1. Critical Literature Review

This research encompasses a broad spectrum of studies examining the interplay between personality traits, internet usage, cyberchondria, and quality of life, highlighting the complex relationships among these variables. Key studies reveal that personality traits such as neuroticism, extraversion, and openness influence how individuals engage with the internet, subsequently affecting their quality of life. The paper synthesises the findings of ten studies, emphasising areas of convergence and discussing the implications for identifying predictors of quality of life.

2.2. Analysis of Studies

Griffiths *et al.* (2014) argue that individuals characterised by neuroticism and openness are more susceptible to internet addiction. This proposition is further substantiated by **Alchieri *et al.*** (2015), who provide significant insights into how excessive internet use induces structural changes in the brain, particularly in regions responsible for emotional regulation. While Griffiths et al. have identified personality traits as antecedents of internet addiction, **Alchieri *et al.*** (2015) have explored the neurobiological consequences, thus complementing each other's findings while also diverging in their approaches to the issue. In contrast, the research by **Bonett** (2002) highlights the role of social support in mitigating the negative effects of excessive internet use on health anxiety. This aspect of social context, which Griffiths et al. did not consider, offers valuable clarity on the protective factors that may arise in the context of internet addiction. The focus on social context in Park et al.'s work provides a more nuanced understanding of how these factors can counterbalance the adverse impacts associated with excessive internet engagement.

2.3. Cyberchondria and Personality

Bueno-Antequera *et al.* (2020) and **Fergus and Spada** (2017) both investigated the relationship between neuroticism and the development of cyberchondria, with both studies confirming that neuroticism exacerbates health-related anxiety triggered by online searches. However, only Fergus and Spada highlighted the role of conscientiousness in mitigating these effects. In contrast, **Bueno-Antequera *et al.*** (2020) did not identify this protective factor, suggesting that personality traits can function either as risk factors or as protective agents. In a similar vein, **White and Horvitz** (2009) found that an increase in medical searches was associated with a rise in health concerns, a finding that corresponds with the results of **Bueno-Antequera *et al.*** (2020). Expanding on this, **Starcevic and Berle** (2013) explored the broader negative impacts of cyberchondria on psychiatric health and overall quality of life, particularly in relation to mental health.

Regarding the relationship between personality traits and quality of life, **Anglim *et al.*** (2020) and **Cicchetti** (1994) both observed that neuroticism negatively impacts quality of life, while extraversion and openness contribute positively to well-being. However, Anglim et al. focused primarily on subjective assessments of well-being, whereas Ding et al. included life satisfaction as a more objective measure, offering a more concrete evaluation of well-being. This conclusion was further supported by **Yu *et al.*** (2024), whose study demonstrated how social support mediates the influence of personality traits on psychological well-being. Research by **Cunningham *et al.*** (2016) provides evidence that excessive phone dependence is detrimental to overall quality of life, particularly in its association with personality disorders such as psychoticism. In contrast, **Shafaat *et al.*** (2023) found that conscientiousness, a personality trait often linked with academic success, did not show a clear positive effect on academic performance. This contradiction suggests the need for further investigation into how personality traits influence the complex, reciprocal relationships between productivity and health outcomes.

In the realm of health-promoting lifestyles and interventions, **Davis *et al.*** (1993) study explored the relationship between personality traits and health-promoting behaviours. The research confirmed that spiritual growth and stress management can help counteract the negative effects of neuroticism on quality of life. This finding partially contrasts with the studies by **Griffiths *et al.*** (2014) and **Bueno-Antequera *et al.*** (2020), which primarily focused on the risks associated with personality traits and did not address potential lifestyle adjustments. Esmer's work supports the development of personalised programmes to mitigate the adverse effects of certain personality traits, suggesting a more holistic approach to improving well-being.

2.4. Key Findings and Themes

1. Among the predictors of personality traits, neuroticism consistently emerged as a significant predictor of both cyberchondria and a diminished quality of life, while extraversion and openness were positively correlated with enhanced well-being.
2. Function of Social Support: In recent studies, both **Di Lodovico *et al.*** (2019) and **Yu *et al.*** (2024) posited that social support serves as a critical mediator in mitigating the adverse effects of excessive internet use on psychological well-being.
3. Consequences of Internet Addiction and Cyberchondria: Excessive internet use and engagement in online health inquiries lead to heightened stress and anxiety, which substantially impair individuals' quality of life (**White; Horvitz**, 2009; **Alchieri *et al.***, 2015).
4. Interventions/Mitigating Factors: **Fergus and Spada** (2017) and **Davis *et al.*** (1993) contend that the presence of conscientiousness and health-promoting lifestyle practices serves to counterbalance the negative effects of neuroticism and disordered internet use.

2.5. Agreement and Disagreement

Agreements: The majority of study findings agree that neuroticism has a detrimental effect on mental health and quality of life, whereas extraversion and openness are associated with positive outcomes. Additionally, social support is consistently recognised as a protective factor in the literature.

Disagreements: While **Griffiths *et al.*** (2014) and **Alchieri *et al.*** (2015) highlight the risks associated with personality traits and internet use, **Davis *et al.*** (1993) and **Fergus and Spada** (2017) primarily emphasise mitigation strategies.

2.6. Assessment of the Research Gap

Despite the extensive literature examining the relationship between personality traits, cyberchondria, and quality of life, significant gaps remain. The majority of research to date has been conducted within a Western context, with limited focus on non-Western countries, such as Saudi Arabia. Furthermore, the literature on the associations between different dimensions of cyberchondria and quality of life is insufficient. While past studies have identified general trends linking internet use to well-being, they fail to explore the specific ways in which various aspects of cyberchondria, such as compulsive health searches or reassurance-seeking, relate to different facets of quality of life.

Another notable shortcoming is the lack of a culturally adapted measurement tool that can accurately capture the cultural nuances of university students' life experiences in Saudi Arabia. Existing tools may not address all relevant culturally specific factors, including personality traits, cyberchondria, and quality of life in tandem. In this regard, the development of a culturally sensitive scale would help overcome this limitation and facilitate a comprehensive examination of these phenomena. To date, no comprehensive framework has integrated personality traits and cyberchondria as potential determinants of quality of life. While numerous individual studies have explored these variables, only a few have considered them collectively as predictors. Addressing this gap would significantly enhance our understanding of the factors influencing university students' well-being and provide valuable insights for the development of targeted interventions that are culturally and psychosocially relevant.

2.7. Problem Statement

Cyberspace has rapidly become an integral part of daily life, offering significant benefits while simultaneously giving rise to notable psychological and behavioural challenges. While much of the public discourse focuses on the technological risks of hacking and unsafe internet use, there is growing attention on the broader impacts of cyberspace on mental health and lifestyle. Given that students in higher education institutions are particularly engaged with technology, the associated challenges are likely to have specific effects on personality development, anxiety, and overall quality of life. Current research indicates that the exploration of personality traits and cyber-related phobias is interconnected with broader life circumstances. **Koronczai *et al.*** (2019) found that excessive use of online networks is linked to lower conscientiousness and higher levels of depression, potentially disrupting emotional stability. Similarly, **McMullan *et al.*** (2019) examined how frequent access to internet-based health information exacerbates health-related anxiety, thus diminishing quality of life.

Bull *et al.* (2020) further demonstrated that while neuroticism exacerbates anxiety, extraversion and conscientiousness serve to mitigate it, underscoring the psychosocial dimensions of cyberspace usage. In contrast, **Aliverdi *et al.*** (2022) highlighted that web-based interactions, particularly those within social networks, can contribute to increased stress and depression, which subsequently lead to a significant decline in life satisfaction among students. However, there remains a limited body of research exploring the interaction between personality traits and cyber-related anxiety as predictors of quality of life, particularly among university students. Gaining a deeper understanding of these interactions is essential for developing interventions aimed at enhancing student well-being and alleviating psychosocial risks stemming from online exposure. Therefore, the central question is: To what extent does Internet Addiction Disorder manifest in personality traits and anxiety, thereby impacting the quality of life among university students?

2.8. Study Questions

1. Do differences exist in the predominant personality traits among university students?
2. Are there variations in the levels of cyberchondria among university students?
3. Are there differences in the dimensions of quality of life among university students?
4. Can personality traits like neuroticism, extraversion, agreeableness, conscientiousness, and openness to experience predict quality of life?
5. Can specific dimensions of cyberchondria predict quality of life?

2.9. Study Objectives

Therefore, the present study aims to explore the relationship between personality traits and cyberchondria in relation to quality of life among university students. This research will make a significant contribution to the existing literature on quality of life by emphasising the importance of this relationship in fostering personal development and encouraging responsible use of digital environments.

Here are the specific hypotheses that underpin the study:

1. We are identifying the prevalent personality type among university students.
2. We sought to identify key dimensions of cyberchondria in university students.
3. Identify the major issues affecting higher education institutions and seriously impacting quality of life.
4. Assess the level of life quality based on the following personality dimensions: neuroticism, extraversion, agreeableness, conscientiousness, and openness to experience.
5. It concerns the quality of life in relation to various aspects of cyberchondria.
6. Describe an instrument that is culturally appropriate for assessing the quality of life of university students in Saudi Arabia.

2.10. Study Significance

2.10.1. Theoretical Importance

1. Integrating Research: This study bridges the gap by combining the Big Five personality traits with anxiety related to

cyber illness, thereby enhancing our understanding of their impact on quality of life.
2. Extension and Enrichment of Arabic Literature: The study will contribute to the expansion of Arabic literature by laying the foundation for future research on contemporary variables, particularly cyberchondria, thus strengthening the field of psychological research within the Arabic context.
3. Focus on University Students: The study targets university students, an age group considered ideal for investigating self-esteem, as it represents a life stage marked by significant physiological and psychological changes that influence self-perception and social evaluation.
4. Examination of DSM-5 Constructs: This study analyses cyberchondria within the context of DSM-5 constructs, specifically under the category of somatic symptom disorder, to assess their theoretical implications and their relative influence on personality traits and overall quality of life.
5. Cross-Cultural Contribution: The research offers valuable insights into the determinants of quality of life, providing significant data for psychological and sociological studies globally.

2.10.2. Practical Importance

1. Intervention Development: The findings provide a framework for developing practical programmes that, through training and awareness initiatives, help students reduce anxiety about cybersickness and improve their overall quality of life.
2. Quality of Life Assessment: We have developed a culturally appropriate instrument for Saudi Arabian university students, enabling valid measurement to support enhancement-focused empirical research.
3. The Results of this Study: The study could be highly beneficial, as the Big Five personality traits offer fundamental concepts for designing targeted counselling and training programmes in response to the emergence of cyberchondria.
4. University Support Programmes: This infrastructure can serve as a model for developing psychological interventions aimed at reducing internet overuse, enhancing mental well-being, and promoting responsible internet use among students.
5. The Current Study Establishes: A foundation for future research, enabling future experimental and practical studies to identify the personality traits that mitigate the negative effects of cyberchondria.
6. Improved student well-being: The strategies outlined in this study may inspire university students to adopt a more psychologically, socially, and academically balanced and healthy lifestyle.

2.11. Study Scopes

1. Objective Scope: The study evaluates the contribution of personality traits (Big Five) and cyber illness anxiety in predicting quality of life among university students. Its aim is to identify significant predictors and assess their combined effects.
2. Time Scope: The research was conducted during the first semester of the 2024 academic year, in alignment with the academic calendar for data collection.
3. Spatial Scope: The study was carried out at Imam Mohammad ibn Saud Islamic University in Riyadh, involving multiple faculties, including Social Sciences and Computer Science.
4. Human Scope: The research focused on 775 university students aged 19 to 25 years, representing a range of academic disciplines and developmental stages.

2.12. Study Terminologies

1. Personality Traits: **Costa and McCrae** (1992) described the Big Five personality traits model as a concise yet comprehensive framework for characterising personality, encompassing neuroticism, extraversion, agreeableness, conscientiousness, and openness to experience. **Bayram and Aydemir** (2017) defined personality traits as "a collection of stable individual differences and individuals' responses to environmental stimuli" (p. 906), supported by cross-cultural studies. The traits are categorised into five dimensions: neuroticism, openness to experience, extraversion, conscientiousness, and agreeableness. This study uses a scale for students to assess each trait.
2. Cyber Sickness Anxiety Disorder: **Ding *et al.*** (2016) define cyber sickness anxiety disorder as "a psychological disorder characterised by excessive fear and anxiety about physical health, accompanied by a tendency to seek reassurance and engage in frequent online searches for health-related information" (p. 206). **Starcevic and Berle** (2013) describe it as an irrational preoccupation with health, driven by recurrent online medical searches, causing heightened anxiety and stress despite the absence of medical evidence (p. 207). This persistent anxiety negatively impacts psychological, physical, and social well-being. The disorder is measured by students' scores on the Cyber-Induced Anxiety Disorder Scale.
3. Quality of Life: The American Psychological Association (**APA**, 2015) defines quality of life as "a state of happiness and satisfaction, with low psychological distress and high physical and psychological health" (p. 1154). The World Health Organization (**WHO**, 1997) defines it as "an individual's assessment of their life status within the framework of their cultural and value systems, in relation to aspirations, expectations, standards, and worries" (p. 3). The researcher contends that quality of life reflects personal perceptions of health, psychological state, social

relations, and environment. It is measured by students' responses on a quality-of-life scale.

Statistical analysis revealed significant differences ($p < 0.05$) between the mean scores of university students and the hypothetical mean for personality traits, cyber sickness anxiety, and quality of life components. Personality traits and cyber sickness anxiety were found to be significant predictors of students' quality of life.

3. Study Methodology

A descriptive methodology was employed to investigate the relative impact of the five dimensions of personality traits and the three dimensions of cyber disease anxiety (behavioural, cognitive, and emotional) in predicting the quality of life among university students.

3.1. Study Population and Sample

The study population comprised male students from all departments within the Faculty of Social Sciences, Faculty of Science, and Faculty of Economics and Administrative Sciences for the year 2024, with a total of 14,414 students.

3.1.1. Sample for Psychometric Properties of the Study Tools

A sample of 376 students, aged 20 to 25 years (mean age = 22.7, SD = 1.68), was used to assess the reliability and validity of the personality characteristics scale, the cyber sickness anxiety scale, and the quality-of-life scale.

3.1.2. Main Sample

The primary sample consisted of 775 students, aged 19 to 25 years (mean age = 21.9, SD = 1.62). Participants were randomly selected from various university faculties, as detailed in Table 1.

Table 1: Distribution of Students by Faculty, Department, and Number.

Faculties	Departments	Number of Students	Percentage
Faculty of Social Sciences	Psychology	93	33%
	Social Work	88	
	Geography	74	
Faculty of Science	Mathematics	89	32%
	Physics	79	
	Biology	85	
Faculty of Economics & Admin	Accounting	91	35%
	Business Administration	87	
	Banking & Finance	89	
Total		**775**	**100%**

3.2. Study Tools

3.2.1. The Five-Factor Personality Model (NEO-FFI-S)

Developed by **Downs *et al.*** (2004), this scale assesses five primary personality traits using 61 items distributed across five sub-dimensions: Neuroticism, Extraversion, Openness to Experience, Agreeableness, and Conscientiousness. Each statement is rated on a 5-point Likert scale, with positive items scored as strongly agree, agree, neutral, disagree, and strongly disagree (1, 2, 3, 4, 5), while the scoring for negative items is reversed.

3.2.2. Validity and Reliability of the Scale in the Current Study

3.2.2.1. Scale Validity

The scale's validity was established through multiple measures. Face validity was ensured by a review from ten expert judges in psychology, who evaluated the items for relevance and clarity. Items with at least 80% agreement were retained, and linguistic adjustments were made to align with the local context. Internal consistency validity was confirmed through a pilot study involving 376 university students, where item-to-dimension correlation coefficients ranged from 0.328 to 0.849 ($p < 0.01$), and dimension-to-overall scale correlation coefficients ranged from 0.736 to 0.852 ($p < 0.01$). These significant results demonstrate the scale's robustness and its capacity to reliably measure the intended constructs, as shown in Table 2.

Table 2: Correlation Coefficients Between Dimension Scores and the Total Scale Score

Five-Factor Model Dimensions	Neuroticism	Extraversion	Openness to Experience	Conscientiousness	Agreeableness
Correlation Coefficient	0.736**	0.852**	0.784**	0.797**	0.849**

3.2.2.2 Scale Reliability

The reliability of the Five-Factor Personality Scale and its dimensions was assessed using two methods: the split-half method and Cronbach's alpha, as presented in Table 3. Table 3 illustrates that the scale exhibits high validity and reliability, confirming its suitability for use in the study.

Table 3: Reliability Analysis of the Five-Factor Personality Scale and Its Dimensions Using Cronbach's Alpha and Split-Half Method.

Dimension	Neuroticism	Extraversion	Openness to Experience	Conscientiousness	Agreeableness	Total Scale
Number of Items	13	12	12	12	12	61
Cronbach's Alpha Coefficient	0.751	0.823	0.785	0.782	0.75	0.795
Split-Half Coefficient	0.671	0.734	0.668	0.709	0.712	0.731

3.3. Cyber Illness Anxiety Scale Egan *et al.* (2017)

This scale was developed by the researcher in a prior study, with its validity and reliability established through the following steps:

3.3.1. Scale Validity

3.3.1.1. Consensus Among Judges

The first version of this scale was reviewed by ten experts in psychotherapy and mental health, who assessed the underlying items. Items that did not achieve a minimum of 80% consensus were eliminated. Additionally, three items were removed as at least 30% of the judges agreed that they were inappropriate for either the specific dimension or the overall scale.

3.3.1.2. Reliability Factor Analysis

The factor analysis of the 48 items of the scale was conducted using the Varimax-Kaiser Normalization method. Two main cut-offs were considered for determining the retention of factors: first, the eigenvalue should be at least one; second, the number of items with a loading of at least 0.3 should be adequate. These analyses resulted in three clear factors, with four items dropped due to low factor loading.

4. Results

The final section of the research presents the results from investigating the association between personality features, cyberchondria, and overall quality of life among students at Saudi Arabian universities. It focuses on identifying key personality traits, main aspects of cyberchondria, and fundamental elements of quality of life within the studied population. The investigation also explores the predictive relationships between these variables and examines the reliability of the culturally adapted quality-of-life measure. The discussion covers the analysis of personality traits, dimensions of cyberchondria, and quality-of-life dimensions, followed by an exploration of predictive relationships and the validity of the scales used. Results will be presented alongside the relevant statistical analyses supporting the hypothesised research. The results will be addressed as follows:

Table 4 presents the factor loadings, eigenvalues, and the percentage of total variance explained by each dimension after the elimination of the four items that did not meet the criteria.

Table 4: Extracted Factors, Factor Loadings, Eigenvalues, and Variance Percentages for Each Dimension of the Disease Anxiety Scale

Item	Factor 1	Factor 2	Factor 3	Item	Factor 1	Factor 2	Factor 3	Item	Factor 1	Factor 2	Factor 3
1	319	---	---	16	329	---	---	31	---	---	327
2	339	---	---	17	331	---	---	32	---	---	395
3	372	---	---	18	374	---	---	33	---	---	436
4	528	---	---	19	523	---	---	34	---	---	455
5	546	---	---	20	546	---	---	35	---	---	604
6	621	---	---	21	623	---	---	36	---	---	369
7	545	---	---	22	545	---	---	37	---	---	390
8	527	---	---	23	527	---	---	38	---	---	341
9	658	---	---	24	658	---	---	39	---	---	387
10	642	---	---	25	456	---	---	40	---	---	479
11	813	---	---	26	520	---	---	41	---	---	562
12	806	---	---	27	656	---	---	42	---	---	577
13	746	---	---	28	712	---	---	43	---	---	493
14	783	---	---	29	333	---	---	44	---	---	393
15	---	---	---	---	---	---	---	45	---	---	719

- Underlying Root for Factor 1 = 7.92
- Underlying Root for Factor 2 = 5.26
- Underlying Root for Factor 3 = 6.96
- Variance Percentage for Factor 1 = 20.26%
- Variance Percentage for Factor 2 = 15.12%
- Variance Percentage for Factor 3 = 17.68%

As illustrated in Table 4, three factors were identified, with a total of 44 items distributed as follows:

Factor 1: Behavioural Dimension

This factor includes 14 items and represents behaviours exhibited by individuals to confirm they are not suffering from a disease, such as seeking diagnosis and treatment.

Factor 2: Cognitive Dimension

This factor consists of 15 items and represents unreasonable beliefs individuals may hold concerning their fear of acquiring a sickness.

Factor 3: Emotional Dimension

This component has 15 items and includes negative feelings encountered by individuals during disease-related anxiety.

4.1. Internal Consistency

The Pearson product-moment correlation coefficients between individual item scores and the overall scale score ranged from 0.371 to 0.873, demonstrating significance at both the 0.01 and 0.05 levels, so affirming the scale's adequate internal consistency.

4.2. Reliability of the Scale

The scale's reliability was assessed using the following methods.

1. Cronbach's Alpha Coefficient
2. Split-Half (Spearman-Brown)

The reliability coefficients derived from both approaches were elevated, so confirming the scale's adequate reliability. The information is shown in Table 5. Table 5 clearly demonstrates that the scale possesses a high level of validity and reliability, rendering it appropriate for application in the study.

Table 5: Reliability Coefficients for the Disease Anxiety Scale (N=376)

Disease Anxiety Scale	Cronbach's Alpha	Split-Half (Spearman-Brown)
Total Score	0.87	0.75

4.3. Correction Method

To assess the level of disease anxiety among the students, the following statistical formula was used: Category Range = (Maximum Score - Minimum Score) ÷ Number of Expected Categories = (5-1 = 4 ÷ 3 = 1.33).

The scores are categorized as follows:

- Low: From 1 to 2.33
- Moderate: From 2.34 to 3.67
- High: From 3.68 to 5.

The final scale, after testing, contains 44 items, with scores ranging between 44 and 220. The mean score ranged from 103 to 161. On this scale, a higher score indicates a greater degree of disease anxiety, while a lower score suggests less anxiety about disease. The mean score can also serve as a basis when assessing illness anxiety disorder.

4.4. Cyber Disease Anxiety Scale (Prepared by the Researcher)

4.4.1. Construction and Description of the Scale

Based on an analysis of the APA Dictionary of Psychology (**APA**, 2015) and the International Classification of Diseases (ICD-10) by the World Health Organization (WHO), alongside theoretical frameworks and prior scales related to disease anxiety (**Anglim *et al.***, 2020; **Ryff; Keyes**, 1995; **Diener; Seligman**, 2004; **Chen; Peng**, 2008; **Verduyn *et al.***, 2017; **Alcaraz-Ibáñez *et al.***, 2019), a preliminary scale consisting of 51 items was developed. These items are distributed across three dimensions.

- Health Quality of Life Dimension: 15 items
- Psychological Quality of Life Dimension: 19 items
- Social Quality of Life Dimension: 15 items

The items were designed using clear and concise language to ensure accessibility and comprehension for the target sample. A five-point Likert scale was employed, with positively phrased items rated as follows: 5 (often), 4 (frequently), 3 (occasionally), 2 (rarely), and 1 (never). Negatively worded items were scored inversely.

4.4.2. Scale Validity

4.4.2.1. Judges' Validity

The initial version of the scale was reviewed by ten experts in psychology and mental health therapy for feedback and

recommendations. An acceptance threshold of 80% agreement was set for item inclusion. Based on the experts' evaluations, three items with 30% or greater disagreement were removed for being irrelevant to the dimensions or unsuitable for the scale. Several other items were modified accordingly.

4.4.2.2. Factorial Validity Analysis

Factorial validity was assessed using principal components analysis, applying Hoteling's methodology with orthogonal rotation via the Varimax method. Factors were extracted based on the latent root criterion (eigenvalue ≥ 1), with a factor loading threshold of 0.30 for item retention. The factorial analysis of the Quality-of-Life Scale indicators identified three factors, each with an eigenvalue exceeding one. As a result, five items were excluded, reducing the total number of items to 43. Table 6 presents the factor loadings for the three identified factors.

Table 6: Factors, Loadings, Latent Roots, and Variance Explained for Quality-of-Life Scale Items (N=376)

Item	Factor 1	Factor 2	Factor 3	Item	Factor 1	Factor 2	Factor 3	Item	Factor 1	Factor 2	Factor 3
1	0.742	---	---	16	---	0.711	---	31	---	---	0.581
2	0.745	---	---	17	---	0.774	---	32	---	---	0.642
3	0.628	---	---	18	---	0.632	---	33	---	---	0.663
4	0.692	---	---	19	---	0.629	---	34	---	---	0.645
5	0.731	---	---	20	---	0.648	---	35	---	---	0.637
6	0.571	---	---	21	---	0.687	---	36	---	---	0.547
7	0.585	---	---	22	---	0.71	---	37	---	---	0.572
8	0.499	---	---	23	---	0.664	---	38	---	---	0.716
9	0.582	---	---	24	---	0.711	---	39	---	---	0.652
10	0.618	---	---	25	---	0.676	---	40	---	---	0.623
11	0.512	---	---	26	---	0.588	---	41	---	---	0.715
12	0.537	---	---	27	---	0.703	---	42	---	---	0.674
13	0.74	---	---	28	---	0.589	---	43	---	---	0.638
14	---	0.687	---	29	---	0.598	---		---	---	---
15	---	0.427	---	30	---	0.638	---		---	---	---

The latent root for Factor 1 was 4.618, which represents the Psychological Quality of Life dimension, comprising 13 items. Factor 2 had a latent root of 3.619, corresponding to the Health Quality of Life dimension, with 17 items. Factor 3 had a latent root of 3.197, reflecting the Social Quality of Life dimension, with 13 items. Together, these three factors accounted for 61.47% of the total variance, a significant proportion indicating the effectiveness of factorial analysis in explaining the majority of the variance within the Quality-of-Life construct.

4.4.3. Internal Consistency

The Pearson's product-moment correlation coefficient was calculated between the individual item scores and the total score for each respective dimension. The correlation coefficients for the items ranged from 0.418 to 0.758, all of which were significant at the 0.01 level. The correlation coefficients for each dimension with the overall scale score ranged from 0.392 to 0.697, with all values being statistically significant at the 0.01 and 0.05 levels. These findings confirm that the scale demonstrates a sufficient level of internal consistency.

4.4.3.1. Reliability of the Scale

The reliability of the Quality-of-Life Scale and its dimensions was assessed using two methods: split-half reliability and Cronbach's alpha, as shown in Table 7. Table 7 demonstrates that the scale possesses a high degree of validity and reliability, affirming its appropriateness for use in the study.

Table 7: Validity and Reliability Results Demonstrating the Scale's Suitability for the Study.

Dimension	Health Quality of Life	Psychological Quality of Life	Social Quality of Life	Overall Scale
Number of Items	13	17	13	43
Cronbach's Alpha	0.861	0.846	0.825	0.789
Split-Half Reliability	0.686	0.721	0.637	0.592

4.4.3.2. Scoring Method

Finally, the scale has 43 elements with scores from 43 to 215. The average score is 101-158. Higher ratings indicate a better quality of life, while lower numbers indicate a worse one.

4.5. Statistical Analyses

The study used SPSS28 and statistical methods like means, standard deviations, percentages, Cronbach's alpha, regression analysis, and ANOVA.

4.5.1. Study Results, Discussion, and Interpretation

The study's outcomes will be compared to its hypothesis and past studies. Results will also be contextualized within

the study's theoretical frameworks.

4.5.2. Outcomes of Evaluating the Initial Hypothesis

The initial hypothesis posits that statistically significant differences exist at a level below 0.05 between the mean and the hypothetical mean for each personality trait among university students. To test this hypothesis, the researcher employed a one-sample t-test to compare the mean of each personality trait with the hypothetical mean, with the aim of identifying the predominant traits within the study sample. The results are summarised in Table 8.

Table 8: T-Test Results and Percentage Distribution of Personality Traits (N=775).

Variable	Sub-Dimensions	Mean	Standard Deviation	Hypothetical Mean	Percentage	*T*-Value	Significance Level
Personality Traits	Neuroticism	32.4	10.794	36	17.40%	9.288	Significant at 0.01
	Extraversion	38.24	11.801	36	20.23%	5.293	Significant at 0.01
	Openness to Experience	40.08	12.022	36	21.21%	9.454	Significant at 0.01
	Agreeableness	39.02	12.123	36	20.65%	6.946	Significant at 0.01
	Conscientiousness	39.25	11.359	36	20.77%	7.969	Significant at 0.01

Table 8 indicates that statistically significant differences at the 0.01 level were observed between the mean and the hypothetical mean for the personality traits of extraversion, openness to experience, agreeableness, and conscientiousness, with the actual mean being higher. This suggests that these traits surpass the theoretical average. Conversely, for neuroticism, a significant difference was found, favouring the hypothetical mean, which implies that students show lower levels of neuroticism than the theoretical average. Figure 1 illustrates the predominant personality traits within the study sample.

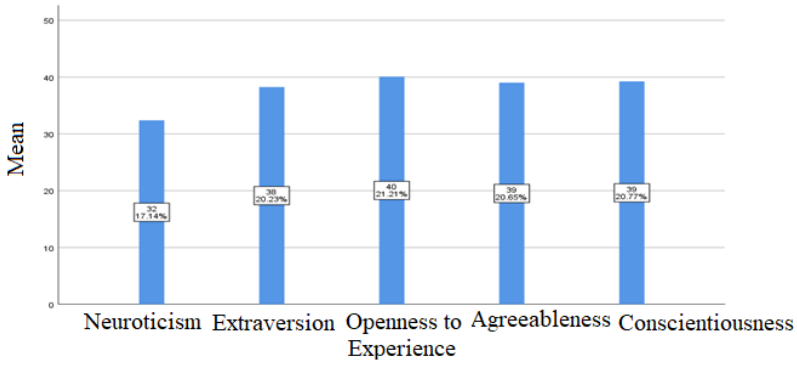

Figure 1: Profile of Dominant Personality Traits among University Students.

Figure 1 illustrates that openness to experience ranks highest at 21.21%, followed by conscientiousness at 20.77%, agreeableness at 20.65%, extraversion at 20.23%, and neuroticism at 17.14%.

4.5.3. Supporting Evidence from Literature

The findings of the current hypothesis are consistent with those of **Zakaria *et al.*** (2023), who identified statistically significant variations in the five personality traits among university students. Additionally, these results align with studies by **Tus *et al.*** (2021), **Shafaat *et al.*** (2023), and **Yu *et al.*** (2024), which highlighted the differences in personality traits across university students and their substantial impact on academic achievement. These studies also confirmed heightened levels of specific personality traits among university students. Furthermore, these findings support personality theories that recognise the presence of personality traits in all individuals, albeit to varying degrees, in line with the principle of individual differences. Variations in predominant personality traits among university students can be attributed to factors such as environment, culture, and social upbringing, emphasising their crucial role in shaping personality.

4.5.4. Researcher's Perspective

The researcher concludes that university students exhibit higher levels of positive personality traits—specifically, extraversion, openness to experience, agreeableness, and conscientiousness—while neuroticism is comparatively lower. Furthermore, this observation is considered in light of the following factors:

4.5.4.1. The Role of Universities in Cultivating Personality Traits

Colleges and universities offer many possibilities to build social and cognitive skills, such as joining a student club or study group. These actions improve agreeability and openness. College academic and social obstacles help students acquire favourable traits that help them adjust.

4.5.4.2. The Influence of Culture and Social Upbringing

Student personalities vary according to cultural and sociocultural variables. Most detrimental habits are banned by

universities, lowering neuroticism and increasing conscientiousness and extroversion.

4.5.4.3. The Significance of University Systems and Regulations

University rules promote self-discipline and civility, which reduce neurotic behaviour and strengthen the former. Rules that discourage bad behaviour increase conscientiousness and agreeableness.

4.5.4.4. Peer Interaction

University social interactions have helped students adapt to their new surroundings by introducing them to people from different backgrounds and encouraging receptivity to new experiences.

4.5.4.5. The Importance of Individual Variations

Therefore, the results are consistent with hypotheses that contend that individual differences and differences in features lead to personality differences.

4.5.4.5.1. Role of University in Developing Personality Traits

Colleges and universities provide ample opportunities for the development of social and cognitive abilities through various activities, such as involvement in student organisations or study groups. These activities promote traits such as openness to experience and agreeableness. The academic and social challenges inherent in the university environment foster the development of positive attributes, facilitating students' adaptation to college life.

4.5.4.5.2. The Influence of Cultural and Social Upbringing

The differences in students' personalities reflect the impact of their cultural background and the socialisation processes that shape individual traits. Institutional environments, particularly those in higher education, often discourage harmful behaviours, leading to a reduction in neuroticism and an enhancement of conscientiousness and extraversion.

4.5.4.5.3. Importance of University Structures and Governance

The structured environment of universities reinforces positive traits, such as self-discipline and politeness towards peers, which, in turn, mitigate neurotic behaviours and bolster the development of these positive traits. Regulations aimed at deterring negative behaviours encourage constructive actions, thereby elevating scores for conscientiousness and agreeableness.

4.5.4.5.4. Peer Interaction

The extensive social interactions inherent in university life enable individuals to engage with others from diverse backgrounds, fostering openness to new experiences. This exposure helps students confront the unfamiliar aspects of their environment, enhancing their adaptability and personal growth.

4.5.4.5.5. The Importance of Individual Differences

The findings align with theories suggesting that personality differences arise from variations in individual characteristics. These differences underscore the importance of recognising and understanding the unique features that shape each person's personality.

4.5.5 Outcomes of Evaluating the Second Hypothesis

The second hypothesis asserts that statistically significant differences exist between the arithmetic mean and the hypothetical mean for each dimension of cyberchondria among university students, with a significance level below 0.05. To test this hypothesis, a one-sample t-test was performed to compare the arithmetic mean with the theoretical mean for each dimension of cyberchondria within the study population. The findings are presented in Table 9.

Table 9: T-Test Results for Differences Between Arithmetic and Hypothetical Means and Percentages of Cyberchondria Dimensions (N=775).

Variable	Sub-Dimensions	Arithmetic Mean	Standard Deviation	Hypothetical Mean	Percentage	T-Value	Significance Level
Cyberchondria	Behavioural	40.84	13.951	42	30.84%	2.32	Significant at 0.05
	Cognitive	46.33	15.824	45	35.00%	2.347	Significant at 0.05
	Emotional	45.23	15.351	45	34.16%	0.414	Not significant at 0.05

Table 9 reveals statistically significant differences at the 0.05 level between the arithmetic and hypothetical means for the behavioural component, with the hypothetical mean being favoured. This suggests that the behavioural dimension of cyberchondria is below average. Similarly, statistically significant differences were found in the cognitive dimension, favouring the arithmetic mean, indicating that both the cognitive and emotional dimensions exceed the average. However, no significant differences were observed at the 0.05 level between the arithmetic and hypothetical means for the emotional dimension. Figure 2 illustrates the dominant aspects of cyberchondria within the study population.

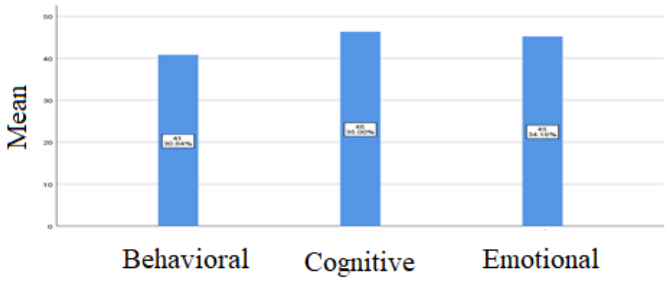

Figure 2: Profile of the Prevalent Dimensions of Cyberchondria Among University Students

The findings suggest that the cognitive component of cyberchondria is the most prominent, accounting for 35.00%, followed by the emotional aspect at 34.16%, and the behavioural component at 30.84%. These results are in line with studies by **Turkistani *et al.*** (2020), **Bonus and Ebardo** (2021), and **Chamberlain and Grant** (2020), which underscore the critical influence of the cognitive dimension in cyberchondria. These investigations highlight the role of health-related anxiety, particularly through tendencies to ruminate and excessively process information. Similarly, **Sabir and Naqvi** (2023), along with **Formby *et al.*** (2014), have pointed out that students in higher education frequently demonstrate cyberchondria, often driven by an increased reliance on online health resources that amplify their feelings of worry and uncertainty. Moreover, the emotional dimension is frequently cited as the second most significant factor contributing to cyberchondria.

This hypothesis is corroborated by research from **Mrayyan *et al.*** (2022) and **Abu Khait *et al.*** (2023), which suggests that within the overall structure of cyberchondria, the behavioural aspects have a comparatively lesser role when weighed against the cognitive and emotional factors. These findings are consistent with other studies examining higher education students, which observed notable differences in the dimensions and levels of cyberchondria, assuming normal distribution of results. The current research reveals that cyberchondria among university students is intricately linked to various cognitive, emotional, and behavioural challenges, with the cognitive dimension emerging as the most significant. The continuous pursuit of health-related information online results in excessive searching, leading to cognitive distortions. This, in turn, exacerbates anxiety about health and a need for reassurance, ultimately intensifying feelings of stress and anxiety, which can have a detrimental impact on overall well-being. The three dimensions of cyberchondria are deeply interrelated, forming a complex dynamic pattern of interaction.

4.5.5.1 The Cognitive Dimension

The most significant impact occurs at the highest level, 35.00%. Excessive rumination on health-related concerns and the quest for certainty heightens feelings of apprehension. Prolonged internet use to seek information leads to cognitive distortions, which, in turn, elevate anxiety levels, making this the primary contributor to heightened anxiety.

4.5.5.2. The Emotional Dimension

With a score of 34.16%, this indicates that stress and negative emotions are a direct result of anxiety stemming from cognitive distortions. These distortions lead to immediate consequences, manifesting as heightened stress and negative emotional states.

4.5.5.3. Cultural Influence

The behavioural dimension ranks third, representing 30.84%, making it the least influential of the three. It emerges from multiple factors and is manifested through negative behaviours, such as social withdrawal or excessive internet usage. Research has identified certain conditions that contribute to the development of anxiety associated with cyberchondria.

4.5.5.4. Demographic Traits

Factors such as age, gender, and academic discipline play a role in shaping the extent of these traits. Younger individuals, due to their higher level of technological engagement, tend to be more sensitive to these issues. Differences in academic specialisations also influence students' interests, with those in medical fields exhibiting a greater tendency to seek health-related information compared to their counterparts in other disciplines.

4.5.5.5. The Role of the Digital Environment

The widespread use of social media amplifies all three elements by disseminating large amounts of potentially misleading information, thereby increasing stress levels among individuals.

4.5.5.6. Cultural Influence

Cultural and social contexts significantly influence the intensity of the three dimensions. Cultural perceptions of health and treatment can intensify anxiety linked to cyberchondria. Likewise, societal factors, such as family

expectations or peer pressure, further contribute to the condition. The researcher underscores the dynamic interplay among the three dimensions, noting that excessive cognitive rumination worsens stress and negative emotions, ultimately leading to maladaptive behaviours. This hypothesis proposes that, at a significance level below 0.05, a statistically significant difference exists between the arithmetic mean and the hypothesised mean for each measure of quality of life among university students. To identify the predominant aspect of quality of life within the research population, the researcher employed a one-sample t-test to compare the arithmetic mean with the hypothesised mean for each dimension, as outlined in Table 10.

Table 10: Results of the T-Test for Differences Between the Arithmetic Mean and Hypothetical Mean, and the Percentage of Quality-of-Life Dimensions (N=775).

Variable	Sub-Dimensions	Arithmetic Mean	Standard Deviation	Hypothetical Mean	Percentage	T-Value	Significance Level
Quality of Life	Psychological	39.06	14.573	39	29.62%	0.121	Not significant at 0.05
	Health	49.25	18.204	48	37.34%	1.916	Not significant at 0.05
	Social	43.58	14.754	42	33.04%	2.987	Significant at 0.01

Table 10 reveals statistically significant differences at a significance level below 0.05 between the arithmetic mean and the hypothesised mean for the social quality of life component, with the arithmetic mean being preferred. This indicates that the "social quality of life" dimension surpasses the hypothesised mean. However, no statistically significant differences were observed in the psychological and health dimensions at the same level of significance.

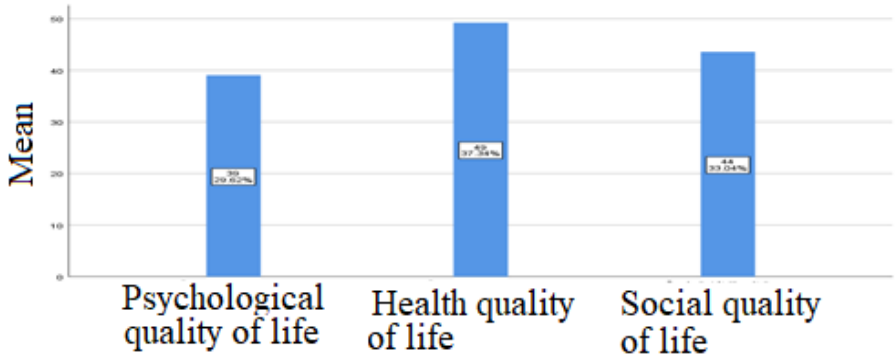

Figure 3: Profile of Quality-of-Life Dimensions Among University Students.

Figure 3 demonstrates that the health-related quality of life component ranks highest at 37.34%, followed by the social quality of life dimension at 33.04%, with the psychological quality of life dimension ranking lowest at 29.62%. These results align with the findings of **Diener and Seligman** (2002), who suggest that well-being is more closely linked to the quality of social interactions than to financial or career achievements, underscoring the importance of social connections in fostering happiness and well-being. Furthermore, the findings are consistent with studies by **Cummins** (1996), **Cho** (2016), **Cho and Kim** (2015), and **Ding *et al.*** (2016), which highlight the multidimensional nature of quality of life, encompassing not only health and financial status but also life satisfaction, social support, and the ability to balance various life domains. The current research supports these studies by affirming the importance of the social, psychological, and health dimensions in determining quality of life, with social quality of life often being above average, reinforcing the role of social relationships.

The study also corroborates the hierarchy of quality of life, with health-related quality of life being the most influential, followed by social and psychological factors. The researcher attributes these findings to the prioritisation of health-related quality of life, particularly due to families' efforts to secure healthcare resources for their children. Preventative and therapeutic health programs offered on and off-campus have increased students' health knowledge, improving their physical well-being. As health is foundational to other aspects of quality of life, it ranks highest, enabling students to engage in social activities and succeed academically. Social quality of life ranks second, influenced by the strong familial connections many students maintain, as most live with or near their relatives, providing a sense of belonging through the support of family, friends, and the community. Finally, psychological quality of life ranks third, remaining above average, largely due to the stability provided by familial and social support, which positively impacts students' mental health despite psychological challenges.

4.6. Results of Hypothesis Test 4

This hypothesis posits that "Quality of life can be statistically predicted based on personality traits among university students." To test this, the researcher employed Analysis of Variance (ANOVA) for regression to assess whether the variation attributable to the independent variable significantly contributes to predicting quality of life and whether this variation surpasses random variance. The table below highlights the significance of the ANOVA results in the regression model used to forecast quality of life based on personality traits.

Table 11: Analysis of Variance (ANOVA) for the Regression Model Predicting Quality of Life Based on Personality Traits Among University Students.

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	R	R Square	F Value	Significance Level
Regression	15133.49	5	3026.698	0.157	0.025	3.885	Significant at 0.01
Residual	599096.7	769	779.059				
Total	614230.2	774					

Table 11 shows that the F value of ANOVA for the regression model is significant at the 0.01 level, confirming a significant relationship between the independent variable (personality traits) and the dependent variable (quality of life). This suggests that the observed relationship is not due to chance. With a correlation coefficient of 0.157, it is evident that the dependent variable is significantly influenced by the independent variable. The R^2 value indicates that 2.5% of the variation in the dependent variable is explained by the independent variable. Table 11 further highlights the contribution of the independent variable to the regression equation in the model.

Table 12: Regression Analysis for Predicting Quality of Life Based on Personality Traits Among University Students.

Dependent Variable	Independent Variable	R Partial	Std. Error	B	Beta	T Value	Significance Level
Quality of Life	Neuroticism	0.036	0.06	0.093	0.036	0.988	Not Significant at 0.05
	Extraversion	-0.041	0.055	-0.098	-0.041	1.143	Not Significant at 0.05
	Openness to Experience	0.047	0.054	0.109	0.046	1.3	Not Significant at 0.05
	Agreeableness	-0.142	0.054	-0.336	-0.144	3.992	Significant at 0.01
	Conscientiousness	0.045	0.057	0.112	0.045	1.254	Not Significant at 0.05
Constant Value				19.633			Significant at 0.01

From Table 12, it can be concluded that among the personality traits, neuroticism, extraversion, openness to experience, and conscientiousness are not significantly predictive of quality of life, as their respective t-values exceed the 0.05 level of significance. However, the personality trait of agreeableness is significantly predictive of quality of life, as its t-value is below the 0.01 level of significance. Based on this, we can proceed to formulate the predictive equation as follows:

4.7. Quality of Life = -0.336 × Agreeableness + 136.979

This outcome is consistent with the research by **Anglim *et al.*** (2020), which found that agreeableness predicts quality of life and is positively associated with social and emotional well-being, as it fosters the development of positive and supportive interpersonal relationships. It also aligns with the findings of **Bonett** (2002), who suggest that quality of life may serve as a predictor for the degree of agreeableness in individuals. Further confirmation is provided by the study of **Ding *et al.*** (2016), which discusses agreeableness as a facilitating factor that could enhance the quality of life for students in higher education institutions. This conclusion also resonates with the findings of **Schimmack *et al.*** (2004) and **Steel *et al.*** (2008), reinforcing the significant role of personality traits in predicting quality-of-life assessments.

The researcher further expounds on the results of this hypothesis as follows:

4.7.1. Following are a Few Important Reasons as to Why Agreeableness is Required

1. Attention and Rejection of Apathy: Individuals with high levels of agreeableness consistently take on various responsibilities and engage actively in interpersonal relationships.
2. Commitment to and Achievement of Goals: Agreeableness facilitates effective collaboration with others, enabling individuals to align their efforts in fulfilling both personal and societal needs without succumbing to extremes of indulgence or perfectionism.
3. Key Developmental Feature: This characteristic is crucial for the learner during this stage of human development, as it plays a significant role in their growth and learning process.
4. Principal Trait in University Life: The dominant trait observed in the protagonist during their university years is agreeableness, which strengthens interpersonal connections and emotional support, thus serving as a key factor in enhancing their overall quality of life.

4.7.2. Ancillary Features Serve to do the Following

1. Openness to experience describes the flexibility a person has in interacting with others and responding to various influences. The present character does promote creative thinking and openness to new experiences. However, when alone, unless reinforced by a positive social context, it does not enhance the quality of life.
2. Extraversion is a personality trait characterised by an optimistic attitude towards life, confidence, and effective communication with others. While extraversion helps individuals form close and friendly relationships, its influence on quality of life is much less significant without specific moderator variables, such as agreeableness or a supportive environment.
3. Conscientiousness reflects a person's readiness, persistence, and commitment to accomplishing specific goals. While it may initially suggest organisation and dedication, it does not inherently influence quality of life in the absence of social and mental attributes.

Moreover, the researcher emphasises that agreeableness is important not only in social settings but also in academic and professional contexts. It contributes to psychological balance, fostering satisfaction and mental stability through positive interpersonal relationships.

4.8. Results of Hypothesis Test 5

According to this hypothesis, university students' anxiety about cyberchondria can statistically predict their quality of life. The researcher employed analysis of variance (ANOVA) for regression to assess whether the variation associated with the independent variable significantly influences the prediction of quality of life, surpassing the level of random variance. The following table highlights the significance of the ANOVA results in the regression model used to predict quality of life in relation to cyber illness anxiety.

Table 13: Variance Analysis for the Regression Model Predicting Quality of Life through Cyberchondria in University Students.

Source of Variance	Sum of Squares	Degrees of Freedom	Mean Square	R	R Square	F Value	Significance Level
Regression	27,688.20	3	9,229.40	0.212	0.045	12.13	Significant at 0.01
Residual	586,541.95	771	760.755				
Total	614,230.15	774					

Table 13 shows that the F-value calculated from the analysis of variance of the regression model was statistically significant at the 0.01 level. This indicates a strong linear relationship between the dependent variable, quality of life, and the independent variable, cyberchondria. The relationship is not coincidental, as the dependent variable is strongly influenced by the independent variable. The correlation coefficient value increased to 0.212, and the determination coefficient revealed that 4.5% of the variation in the dependent variable is explained by the independent variable under study. Thus, Table 13 highlights the significance of the independent variable within the regression model.

Table 14: Regression Analysis for Predicting Quality of Life from Cyberchondria Among University Students.

Dependent Variable	Independent Variable	R Partial	Std. Error	B	Beta	t Value	Significance Level
Quality of Life	Behavioural	0.202	0.071	0.408	0.202	5.732	Significant at 0.01
	Cognitive	-0.046	0.063	-0.081	-0.046	1.289	Not Significant at 0.05
	Emotional	-0.052	0.065	0.109	-0.055	1.563	Not Significant at 0.05
Constant Value			25.184	123.595			Significant at 0.01

Table 14 indicates that the cognitive and emotional aspects of cyberchondria do not predict quality of life, as their t-values are not statistically significant at the 0.05 level. However, the behavioural component of cyberchondria is a significant predictor of quality of life, with its t-value reaching statistical significance at the 0.01 level. The following is the prediction equation that depicts the inter-relationships among the variables.

$$\text{Quality of Life} = 0.408 \times \text{Behavioural} + 123.595$$

This study is supported by research from **Rahme *et al.*** (2021), **Ambrosini *et al.*** (2022), **Tarabay *et al.*** (2023), and **Fu *et al.*** (2011), which suggest that certain dimensions of cyberchondria significantly predict quality of life. **Rahme *et al.*** (2021) and **Fu *et al.*** (2011) argue that excessive and repetitive cyberchondria behaviours directly impact quality of life. **Tarabay *et al.*** (2023) examined the relationship between the severity of cyberchondria and quality of life, highlighting compulsive health information-seeking as a mediator and negative emotional states as a moderator. **Ambrosini *et al.*** (2022) discussed the compulsive features of cyberchondria, which amplify symptoms, worsening anxiety and depression, and ultimately deteriorating quality of life. In this regard, **Tarabay *et al.*** (2023) examined how the intensity of cyberchondria, through compulsive health information-seeking behaviour, relates to quality of life. Negative emotional states can act as a moderating variable, as their intensity may increase the maladaptive effect of this behaviour on quality of life. Conversely, **Ambrosini *et al.*** (2022) detailed the compulsive features of cyberchondria, which exacerbate anxiety and depression symptoms, ultimately leading to a decline in overall quality of life.

5. Discussion

Indeed, this research both confirms and contradicts several findings from previous studies, providing different insights into the existing literature regarding the relationship between personality traits, cyberchondria, and quality of life among students in Saudi Arabia. **Personality Traits:** The findings clearly show that personality traits such as openness, conscientiousness, agreeableness, and extraversion dominate among Saudi university students, while neuroticism has less influence. This aligns with **Begum and Alsaqer** (2021), who identified conscientiousness and openness as valuable personality traits and predictors of academic success. Additionally, **Alshebami and Seraj** (2022) highlighted innovativeness and internal locus of control—traits related to openness—as key predictors of Saudi students' entrepreneurial intentions. However, the absence of neuroticism contradicts the findings of **Aboshaiqah and Cruz** (2019), who considered neuroticism a factor affecting psychological well-being and quality of life. This may be due to the unique cultural and societal continuity among Saudi students, which the current study suggests may buffer the effects of neuroticism.

Cyberchondria: The present research indicates that the cognitive dimension of cyberchondria is the most significant, followed by the emotional dimension, with the behavioural aspect being the least influential. This is supported by **Turkistani *et al.*** (2020), who found serious behavioural consequences of cyberchondria among Saudi university students. However, the emphasis on the cognitive dimension in this study deviates slightly, suggesting that irrational health-related thoughts and biases are exacerbated by high internet usage in academic environments. This contrast may stem from **Turkistani *et al.*** (2020) narrow focus on health-related behaviours, whereas the current study adopts a broader psychological perspective, considering cognitive underpinnings.

Quality of Life: The study reveals that health-related factors are the primary drivers of quality of life (QoL), followed by social and psychological factors, emphasising the importance of access to healthcare and family stability. **Barayan *et al.*** (2018) found a positive link between family income, parental education, and the QoL of female Saudi students. **Malibary *et al.*** (2019) noted the significance of environmental aspects of QoL among medical students, which contrasts with this study, where health-related QoL is rated highest. This disparity may be due to the different target groups: Malibary et al.'s research focused on medical students, while this study encompassed a broader range of academic departments, revealing diverse stressors and QoL determinants.

5.1. Contributions to Knowledge

The primary contribution of this study lies in the cultural relevance of the literature, specifically the development of a culturally adapted QoL scale for Saudi students. This scale, with robust psychometric properties, offers a more comprehensive understanding of QoL tailored to the Saudi context, in contrast to generalized scales used in previous studies. Additionally, the study presents an integrative framework linking personality traits, cyberchondria, and QoL, extending beyond previous comparisons. While the findings align with previous research on personality traits and QoL factors, the unique focus on the cognitive aspects of cyberchondria, combined with a culturally relevant QoL assessment tool, distinguishes this study. These findings contribute to the broader academic discussion while offering practical insights for enhancing students' well-being in Saudi Arabia.

5.2. Recommendations

1. Workshops and Counselling: Address the issue of cyberchondria through targeted workshops and counselling to improve quality of life by better managing anxiety.
2. Development of Culturally Relevant Tools: Create and validate quality-of-life measures that align with the cultural contexts of students.
3. Promote Responsible Use of Digital Media: Educate students on responsible cyberspace use to mitigate risk factors associated with cyberchondria.
4. Psycho-Social Support and Social Inclusion: Provide psycho-social support through direct psychological services, initiatives promoting positive interaction, and fostering a sense of belonging among students.
5. Personality-based Interventions: Integrate resilience training based on personality traits into educational systems to enhance adaptability and ensure psychological well-being.
6. Develop Preventive Counselling Programs: Create counselling programs to address the cognitive and behavioural symptoms of cyberchondria and improve quality of life.
7. Encourage Investigations into Cyberchondria: Direct research on cyberchondria towards understanding its behavioural and cognitive aspects and their impact on quality of life.

6. Conclusion

This research highlights the impact of personality traits and cyberchondria on university students' quality of life. It emphasises the need to address both the behavioural and cognitive aspects of cyberchondria, as well as the effects of personality traits on mental health. Conscientiousness and agreeableness were linked to higher quality of life, while neuroticism and excessive engagement with cyberspace had a negative impact on well-being. The study stresses the need for further research on the interaction between digital behaviour and personality traits, offering a contextually relevant perspective for Saudi Arabia. It also calls for the development of culturally sensitive tools and interventions, ensuring ecological validity. Higher education institutions should take proactive steps to foster digital equality, psychological resilience, and social integration, thus contributing to a healthier student experience in an increasingly digital world.

6.1. Study Implications and Future Directions

It seems that higher education students require tailored psychological intervention programs to manage the negative effects of cyberchondria. Future research should consider the cultural dimensions of this issue, focusing on the importance of socio-cultural contexts. A longitudinal study could further explore how personality and online behaviours evolve over time and examine how adaptive strategies can be developed to enhance mental health and overall well-being.

6.2. Study Limitations

This research is limited by its focus on a specific university population, which may restrict the ability to generalise the findings to larger groups. The use of self-reporting introduces potential biases, as participants may downplay or exaggerate their behaviours and overall well-being. Additionally, as a cross-sectional study, it does not allow for the determination of causality between the variables of personality traits, cyberchondria, and quality of life.

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