The Role of Family Functioning in the Quality of Life of Internet-Addicted Generation Z Individual

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Abstract

The rapid development of information technology and internet access has significantly impacted Generation Z, the largest group of internet users in Indonesia. While the internet provides various benefits, excessive use may lead to internet addiction, negatively affecting quality of life, particularly in psychological, physical, and social domains. Family functioning plays a crucial role in supporting the well-being of individuals experiencing internet addiction. This study aims to examine the effect of family functioning on the quality of life of Generation Z individuals with internet addiction. A quantitative approach was employed involving 633 participants aged 17-27 years who were categorized as having moderate to severe internet addiction. Measurements were conducted using the Internet Addiction Test (IAT) by Young (1998), WHOQOL-BREF by the World Health Organization (1996), and the McMaster Family Assessment Device-General Functioning (FAD-GF) by Epstein, Baldwin, & Bishop (1983). Data were analyzed using Pearson correlation and linear regression. The results revealed a significant negative correlation between family functioning scores and quality of life, indicating that better family functioning (lower FAD-GF scores) is associated with higher quality of life. Family functioning contributed most to the social domain ($r = -.299$, $R^2 = .099$, $p < .001$), followed by the environmental ($r = -.275$, $R^2 = .081$, $p < .001$), psychological ($r = -.234$, $R^2 = .061$, $p < .001$), and physical dimensions ($r = -.161$, $R^2 = .031$, $p < .001$). These findings emphasize the importance of family functioning particularly emotional and social support in enhancing the quality of life among Generation Z individuals with internet addiction.

Keywords: *Family Functioning, Quality of Life, Internet Addiction, Generation Z, Family Psychology.*

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A. INTRODUCTION

The rapid advancement of information technology has significantly impacted the lives of Indonesian society, particularly by facilitating internet access across various regions, including remote areas, through innovative services that enable connectivity in underserved locations. According to a 2024 survey conducted by the Indonesian Internet Service Providers Association (APJII), internet usage in Indonesia has reached 79.5%. Out of a total population of 278,696,200, approximately 221,563,479 individuals are connected to the internet. This figure represents a 1.4% increase compared to the previous year and reflects a consistent upward trend since 2018, when internet penetration stood at 64.8%, rising to 73.7% in 2020, 77.01% in 2022, and 78.19% in 2023 (Haryanto, 2024). This growth not only illustrates technological advancement but also highlights a shift in societal behavior, with increasing reliance on digital technologies across various aspects of daily life.

Generation Z, born between 1997 and 2012, represents the largest demographic group contributing to internet usage in Indonesia, accounting for 34.40% of total users. Often referred to as digital natives, Generation Z demonstrates a higher level of adaptability to technology compared to other generations. They are followed by Millennials at 30.62%, Generation X at 18.98%, Post-Gen Z at 9.17%, Baby Boomers at 6.58%, and Pre-Boomers at only 0.24% (Haryanto, 2024). However, this dominance of Generation Z in internet usage also poses certain risks, one of which is the increasing prevalence of internet addiction among this group. A 2022 survey revealed that Generation Z had the highest rate of internet addiction at 34%, significantly surpassing Millennials at 24.7% and Generation X at 12.1% (Anur, 2022).

Internet addiction, according to Tao et al. (2010), is a form of behavioral addiction characterized by an individual's inability to control the frequency and duration of internet use, thereby affecting various aspects of life—physical, psychological, social, as well as academic and professional domains. Physically, individuals may experience fatigue, sleep disturbances, and other health issues. Psychologically, this addiction is associated with increased impulsivity, difficulties in self-regulation, and a higher risk of depression, anxiety, and loneliness. Socially, excessive internet use can lead to social isolation and challenges in forming and maintaining interpersonal relationships. In academic and professional contexts, internet addiction contributes to reduced productivity, impaired concentration, and declining performance (Perina et al., 2020; Li et al., 2021; Wutsqo et al., 2023; Noroozi et al., 2021). Given its wide-ranging impacts, internet addiction is considered a significant factor that can diminish an individual's overall quality of life.

An individual’s quality of life is influenced by various factors, including physical condition, mental health, social relationships, and the quality of their living environment (WHO, 2012). These elements are interrelated in shaping a person's overall well-being. In today’s digital era, internet usage habits have also emerged as an important factor to consider. Uncontrolled internet use can develop into addiction, which negatively affects multiple aspects of life. Physically, internet addiction may lead to sleep disturbances and reduced daily stamina. Psychologically, it increases the risk of anxiety disorders and depression (Noroozi et al., 2021). Socially, individuals who spend excessive time online are more likely to experience social alienation and loneliness due to diminished real-life interactions with their surroundings (Li et al., 2021). Consequently, internet usage habits have become a modern factor influencing quality of life.

Although internet addiction is one of the factors that influence quality of life, other variables also play a significant role. These include physical health, psychological well-being, social relationships, economic conditions, and the living environment (Laili et al., 2022). For instance, financial stability and a supportive work environment contribute to the enhancement of individual well-being (Lumiling et al., 2023). Moreover, regular physical activities such as exercise are known to improve quality of life by maintaining bodily health and reducing the risk of illness (Palit et al., 2021).

In the context of internet addiction, family functioning serves as a protective factor that can help individuals manage their internet usage habits in a healthier manner. Family support can assist individuals in reducing their dependency on the internet by providing guidance, monitoring technology use, and fostering an environment that promotes balance between online activities and real-life experiences (Livingstone & Helsper, 2007). Research by Syahirah et al. (2021) indicates that individuals from families with optimal functioning tend to have better physical health, receive support in managing stress, develop stronger social skills, and gain motivation to lead healthier lives. Furthermore, open communication within the family enables individuals to better understand the negative impacts of internet addiction and to receive support in managing their technology use more wisely (Wang et al., 2019).

Although numerous studies have examined the role of family functioning in individual health and well-being, as well as its relationship with internet addiction, few have specifically explored how family functioning can improve the quality of life of Generation Z individuals affected by internet addiction. This focus is particularly important, as Generation Z, known as digital natives, is more vulnerable to technology-based addictive behaviors (Fikra, 2024). Therefore, this study aims to fill the research gap by examining how family functioning influences the quality of life of Generation Z internet addicts.

B. LITERATURE REVIEW

1. Quality of Life

Quality of life is defined as an individual's perception of their position in life, within the context of the culture and value systems in which they live, and in relation to their goals, expectations, standards, and concerns (WHO, 2012). This definition is supported by Maslow's hierarchy of needs theory (1943) and Diener's theory of subjective well-being (1984). According to Maslow (1943), an individual's quality of life is influenced by the fulfillment of hierarchical needs, ranging from basic needs (physiological and safety) to higher-level needs such as self-actualization. When these needs are met, an individual's perception of their quality of life tends to improve, aligning with the definition that emphasizes personal goals and standards as crucial components. Meanwhile, Diener (1984) argues that quality of life depends on the balance between cognitive evaluations of life satisfaction and affective experiences, specifically the frequency of positive and negative emotions.

According to the World Health Organization (WHO), the dimensions of quality of life include physical health, psychological well-being, social relationships, and the environment. The physical health dimension encompasses energy, mobility, and work capacity, all of which support an individual's ability to carry out daily activities. Psychological well-being involves positive feelings, cognitive functioning, and the management of negative emotions such as anxiety and stress. Social relationships refer to emotional support from family, friends, and the community, which fosters a sense of connection and emotional security. Meanwhile, the environmental dimension

includes access to financial resources, the quality of housing, and public facilities such as healthcare and transportation services, all of which contribute to creating a comfortable and supportive living environment (WHO, 1997; Seo et al., 2018).

Low quality of life can have highly detrimental consequences. Physically, poor quality of life may increase the risk of chronic illness, fatigue, and reduced work capacity. Psychologically, individuals with low quality of life are more vulnerable to stress, anxiety, depression, and diminished self-esteem (Ribeiro et al., 2017). Social impacts may include social isolation, difficulties in forming interpersonal relationships, and decreased participation in social activities. Economically, individuals with poor quality of life may become more dependent on medical or social assistance, which can ultimately undermine their financial stability (Jenkins et al., 2020). Therefore, a comprehensive understanding of the definitions, factors, dimensions, and consequences of quality of life is essential for designing effective interventions aimed at improving individual and societal well-being.

2. Family Functioning

Family functioning refers to the effectiveness of family members within the system in maintaining emotional relationships, adhering to rules, communicating effectively, and coping with external events (Epstein et al., 2005). According to Epstein et al. (1983), there are seven dimensions of family functioning: problem-solving, communication, family roles, affective responsiveness, affective involvement, behavioral control, and general family functioning—each of which significantly impacts family well-being. The first dimension, problem-solving, reflects the family's ability to resolve threats to its integrity and functional capacity. This ability helps reduce conflict and strengthen interpersonal relationships, whereas failure to solve problems can lead to prolonged stress and the breakdown of emotional bonds. The second dimension, communication, assesses the clarity of verbal messages exchanged among family members. Clear communication fosters trust and an open atmosphere, while poor communication can lead to misunderstandings and interpersonal conflict. The third dimension, roles, evaluates the distribution of tasks within the family. Clear and equitable role distribution enhances harmony, whereas unfair role assignments may cause frustration and conflict. The fourth dimension, affective responsiveness, refers to the ability of family members to respond emotionally to various situations. High emotional responsiveness fosters emotional support, while low responsiveness can lead to feelings of neglect.

The fifth dimension, affective involvement, measures the level of interest and appreciation among family members. Healthy involvement supports balanced relationships, while insufficient involvement can lead to emotional detachment, and excessive involvement may result in interpersonal conflict. The sixth dimension, behavioral control, evaluates the family's behavioral standards in various situations. Flexible control patterns promote stability, whereas rigid or chaotic control can lead to stress and uncertainty. Lastly, general functioning assesses the overall emotional health or pathology of the family. Good general functioning reflects an emotionally

healthy and harmonious family environment, while poor general functioning may result in chronic stress, depression, and prolonged conflict that negatively affect the quality of life of its members. By understanding the impact of each dimension, families can take intentional steps to improve the quality of their relationships and the well-being of all members.

3. Family Functioning and the Quality of Life of Individuals with Internet Addiction

The family plays a vital role as the primary support system in assisting individuals struggling with internet addiction. Family support can be manifested through emotional encouragement, supervision of internet usage patterns, and modelling a balanced approach to online and offline activities. Families can foster a supportive environment by facilitating early problem identification through open communication, observing behavioral changes, and encouraging openness without judgment (Harsej et al., 2021). A sense of security can be established by creating emotional stability, offering consistent support, and maintaining a positive and conflict-free home atmosphere (Lu et al., 2023). Furthermore, a harmonious environment can be cultivated through shared activities that strengthen emotional bonds, collaborative problem-solving, and appreciation for each family member's efforts—thereby fostering an atmosphere conducive to recovery (Kadu et al., 2023). The home environment, as the primary space where individuals seek comfort, holds substantial potential to serve as a protective factor in breaking the cycle of internet addiction (Khehra, 2020).

Stress is often a primary trigger for internet addiction. When individuals are unable to manage stress effectively, they may resort to excessive internet use as an escape, creating a cycle of dependency that is difficult to break without support from those closest to them (Wang et al., 2024). In this context, the family can help reduce psychological pressure by fostering openness, attentiveness, and effective communication among its members. Openness can be cultivated by creating a safe and nonjudgmental atmosphere, where family members feel comfortable sharing their thoughts and feelings. Attentiveness can be demonstrated through emotional presence—such as listening without interruption and expressing affection through supportive words or gestures like hugs. Effective communication is reflected in the use of kind and respectful language, solution-focused dialogue during conflicts, and routinely setting aside time for meaningful discussions (Harsej et al., 2021). Through such efforts, family members can better understand one another's needs, not only to convey information, but also to strengthen emotional bonds.

Emotional involvement within the family, such as giving full attention when a family member shares a story, supporting them during challenging times, or expressing affection through hugs or soothing words, represents a form of support that can help individuals feel more valued and cared for. Studies show that family involvement in internet addiction interventions is crucial for improving family interactions and enhancing effective communication among its members (Lo et al.,

2020). When individuals feel appreciated and cared for, a sense of safety and comfort is created, reducing the likelihood of seeking escape through excessive internet use.

In addition, the family's ability to solve problems together helps resolve conflicts productively, thereby minimizing psychological pressure. Studies have found that a positive family atmosphere can enhance individual self-esteem and directly reduce internet addiction (Shi et al., 2023). Emotional support from the family also plays a crucial role in improving individuals' emotional regulation, which is an important factor in reducing internet addiction (Hadadian et al., 2021).

The role of the family in addressing internet addiction extends beyond emotional support and also includes supervision and modeling balanced behavior. For instance, families can establish clear rules regarding internet usage time, provide engaging alternative activities, and set an example by reducing their own dependence on technology. In doing so, the family helps individuals develop a healthier and more balanced lifestyle. Bozoglan (2019) emphasizes that parental involvement, including supervision and guidance in internet use, can prevent and reduce internet addiction in children and adolescents.

Furthermore, optimal family functioning not only helps individuals cope with internet addiction but also plays a vital role in the quality of life of those affected. Families that provide emotional support, create a stable home environment, and assist individuals in developing healthier habits can enhance the physical, psychological, social, and environmental aspects of quality of life among internet addicts. A meta-analysis by Noroozi et al. (2021) found that internet addiction is negatively associated with quality of life, particularly in the psychological and physical domains. In addition, research by Huang (2024) revealed that positive family involvement, such as parental discipline and parent-child attachment, can significantly reduce internet addiction and improve individuals' psychological well-being.

H1: Family function has a positive role in the quality of life of Gen Z who experience internet addiction.

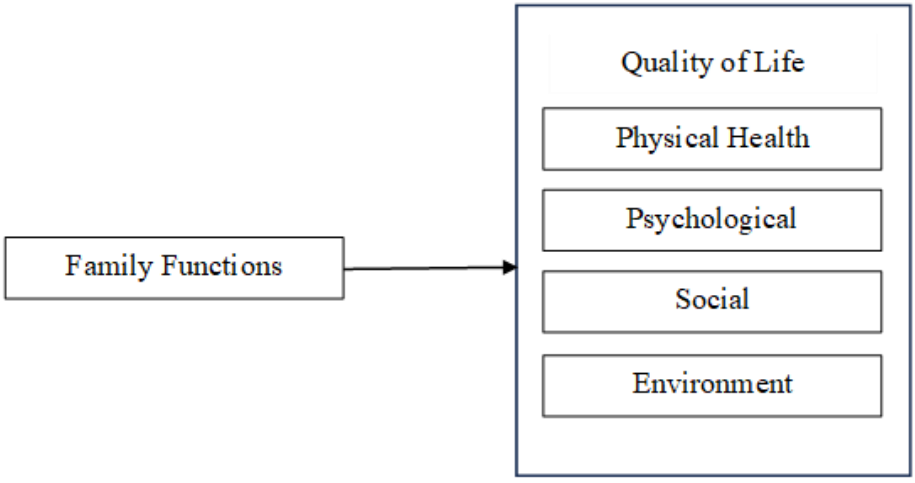

Figure 1 Research Model

C. METHOD

The participants in this study were individuals born between 1997 and 2007 (aged 27 to 17 years) who exhibited moderate to high levels of internet addiction. To measure demographic data, the study targeted participants of both male and female genders, with educational backgrounds ranging from senior high school, undergraduate (S1/D4), master's (S2), to doctoral (S3) levels. Employment status included students, private sector employees, civil servants, fishermen, teachers, freelancers, doctors, entrepreneurs, and those currently unemployed. Current living arrangements included residing with parents, siblings, grandparents, friends, their own family, or living alone. The expected sample size was 384 participants, based on Krejcie's sample size table (Krejcie, 1970). Data collection employed a non-probability sampling method using convenience sampling, chosen to match the specific characteristics of the study's target population. Data were gathered through an online questionnaire distributed via Google Forms. The questionnaire was disseminated through social media platforms.

Quality of life was measured using the WHOQOL-BREF instrument, which has been translated into Indonesian. This tool consists of 24 items covering four key dimensions that have been validated for assessing an individual's quality of life. These four dimensions include: (1) physical health, comprising 7 items; (2) psychological, with 6 items; (3) social relationships, consisting of 3 items; and (4) environment, with 8 items. Each item is rated on a scale from 1 to 5, with higher scores indicating better quality of life. Domain scores are calculated by multiplying the mean of each item by a factor of 4. An example item is, "To what extent does physical pain prevent you from doing what you need to do in your daily life?". The reliability of the WHOQOL-BREF instrument has shown a Cronbach's α of 0.74 for the physical health domain, 0.66 for the psychological domain, 0.41 for the social relationships domain, and 0.77 for the environmental domain. In this study, the overall Cronbach's α value obtained was 0.53, indicating a moderate level of internal consistency (Gondodiputro et al., 2021; Bangun et al., 2020).

Family functioning was measured using the McMaster Family Assessment Device (FAD), developed based on the McMaster Model of Family Functioning (MMFF) by Nathan et al. (1978). The instrument consists of seven subscales: (1) problem-solving with 5 items, (2) communication with 6 items, (3) roles with 8 items, (4) affective responsiveness with 6 items, (5) affective involvement with 7 items, (6) behavioral control with 9 items, and (7) general functioning with 12 items. In the original study, the Cronbach's α values for each dimension were as follows: problem-solving = .74, communication = .65, roles = .72, affective responsiveness = .83, affective involvement = .78, behavioral control = .72, and general functioning = .92. Based on these values, the researchers identified general functioning as the most representative dimension of overall family functioning. According to Epstein et al. (1983), the general functioning dimension provides a comprehensive overview of how a family operates as a unit, encompassing various interconnected aspects. In this study, the researchers used the general functioning subscale to focus on the overall level of family

functioning. The FAD-GF employs a Likert-type scale with four response options: "strongly agree" scored 4, "agree" scored 3, "disagree" scored 2, and "strongly disagree" scored 1. The FAD-GF consists of 12 items, with an example item being: “Our family has difficulty planning activities because misunderstandings are always occurring among us.” In this study, the FAD-GF yielded a Cronbach’s α value of .73.

Internet addiction was measured using the Internet Addiction Test (IAT), developed by Young (1998). This instrument consists of 20 items rated on a 5-point Likert scale, ranging from “never” (1) to “always” (5). The IAT evaluates various aspects of internet addiction, including emotional dependency, time management, and the impact of internet use on social life, work, and daily activities. An example item is: “How often do you find it difficult to reduce your online time?” The total IAT score ranges from 20 to 100, with higher scores indicating greater levels of internet addiction. The validity and reliability of the IAT have been confirmed in multiple studies, showing Cronbach’s α values ranging from 0.89 to 0.905, indicating strong internal consistency (Herrero et al., 2024; Nugroho et al., 2020).

This study employed a non-experimental quantitative method using a non-probability approach through convenience sampling. The questionnaire was designed as a measurement tool to assess the research variables and included informed consent, participant demographic data, and measurement scales. Upon completion of the questionnaire design, the researcher submitted an ethics review application, which was approved by the Faculty of Psychology, Tarumanagara University (No. 142-TIM/KEPTM/3492/FPsi-UNTAR/X/2024). Data collection was conducted online via Google Forms, with the questionnaire requiring approximately 20 minutes to complete. Data were collected from October 18 to November 14, 2024, through three methods: distributing the questionnaire via social media and WhatsApp, creating engaging content on Instagram and Facebook, and directly sharing the questionnaire link with participants. Once the data were collected, the researcher proceeded to the analysis phase to obtain the study results.

This study employed various data analysis techniques using statistical software, namely JASP (Jeffrey’s Amazing Statistics Program) version 0.19.1 and SPSS version 26 for Windows. The analysis began with data grouping, reliability testing, and Confirmatory Factor Analysis (CFA) using JASP. Data grouping aimed to provide an initial overview of the data structure and classifications relevant to the research objectives. Instrument reliability was tested to ensure the internal consistency of the measurement tools, thereby validating the usability of the collected data. CFA was conducted to assess construct validity and to ensure that the data aligned with the theoretical model. Pearson correlation analysis was used to explore the relationship between family functioning and quality of life, which was further examined through linear regression to evaluate the influence of family functioning on the dimensions of quality of life. Additional analyses included ANOVA to assess variations based on demographic factors, as well as assumption tests covering normality, linearity, heteroscedasticity, and multicollinearity to ensure the validity of the regression model used in this study.

D. RESULTS AND DISCUSSION

1. Participant Subject Description

This study involved 661 participants categorized by various demographic characteristics, including age, gender, educational background, employment status, and current living arrangements. The collected data reflect variations across these demographic aspects, with a focus on the categories with the highest frequencies. The majority of participants were 23 years old, accounting for 20.99% of the total sample, with a mean age of 22.52 years (SD = 7.08). In terms of gender, most participants were male (51.74%). Regarding educational background, the majority held a bachelor's degree (S1) or a diploma (D4), comprising 90.32% of the sample. A total of 49.62% were employed in the private sector, while 55.52% reported living alone, indicating that most participants did not reside with their families. The study also revealed that the majority of participants were classified as having severe internet addiction (89.26%). For data analysis, the researcher used responses from participants with moderate to severe levels of internet addiction, totaling 633 individuals. More detailed information is presented in Table 1.

Table 1 Research Participant Demographic Data

Category		Frequency	Presentation (%)
Age	17 Year	22	3.33%
	18 Year	15	2.27%
	19 Year	72	10.90%
	20 Year	74	11.20%
	21 Year	78	11.80%
	22 Year	96	14.53%
	23 Year	110	20.99%
	24 Year	43	6.51%
	25 Year	39	5.90%
	26 Year	35	5.30%
	27 Year	48	7.27%
Gender	Man	342	51.74%
	Woman	319	48.26%
Last education	Senior High School	4	.61%
	S1/D4	597	90.32%
	S2	49	7.42%
	S3	11	1.67%
Employment Status	Student	257	38.88%
	Private Employee	328	49.62%
	Self-Employed	47	7.11%
	Civil Servant	15	2.27%
	Doctor	10	1.51%
	Teacher	1	.15%
	Fisherman	1	.15%
	Freelance	1	.15%
	Not Working	1	.15%
Residence	Alone	367	55.53%
	With Parents	65	9.81%
	With Siblings	80	12.11%

	With Friends	57	8.63
	With Relatives (Grandparents/Aunts/Uncles)	92	13.92%
Levels of Internet Addiction	No Addiction	8	1.49%
	Mild Addiction	18	2.74%
	Moderate Addiction	43	6.51%
	Heavy Addiction	590	89.26%

2. Variable Overview

In this study, two variables were examined and analyzed descriptively to gain an overview of the participants in relation to each variable. The research scales used ranged from one to five, with a hypothetical mean of 3.00. If the empirical mean exceeds the hypothetical mean, the variable or its dimensions are categorized as high. Conversely, if the empirical mean falls below the hypothetical mean, the variable or its dimensions are categorized as low.

The results showed that overall, participants reported a high level of quality of life. This is reflected in the overall empirical mean score of 3.87, which is higher than the hypothetical mean (3.00). Among the dimensions, the highest mean was observed in the environmental dimension (M = 3.89), while the lowest was in the social dimension (M = 3.83). All dimensions of quality of life—physical health, psychological well-being, social relationships, and environment—were categorized as high. These findings indicate that participants generally experienced a good quality of life across multiple aspects.

Table 2 Quality of Life Variable Data Overview

Variables/Dimensions	Min	Maks	SD	Mean	Hypothetical Mean	Category
Variables	2.12	4.85	.26	3.87	3.00	High
Physical health	2.14	5.00	.41	3.87	3.00	High
Psychological	1.67	5.00	.45	3.88	3.00	High
Social	1.67	5.00	.62	3.83	3.00	High
Environment	1.88	5.00	.39	3.89	3.00	High

The descriptive analysis of the family functioning variable indicates that, overall, participants reported a high level of family functioning. This is evidenced by the empirical mean score of 3.11, which is higher than the hypothetical mean of 3.00. Specifically, the descriptive results show an empirical mean of 3.11 for the family functioning variable, with a standard deviation (SD) of 0.29, a minimum score of 1.92, and a maximum score of 5.00.

Table 3 Family Function Variable Overview

	Valid	*Mean*	Std. Deviation	Minimum	Maximum
Family Functions	633	3.11	0.29	1.92	5.00

3. Assumption Testing Results

Assumption testing was conducted to ensure the validity of the multiple regression model used in this study. The tests included normality, linearity, heteroscedasticity, and multicollinearity. The Kolmogorov-Smirnov test results

showed p = .029 for the family functioning variable and p = .049 for quality of life, indicating slight deviations from normal distribution; however, these values are still considered acceptable for regression analysis. The linearity test using ANOVA yielded an F value of 153.343 (p < .001), indicating a significant and linear relationship between the two variables, thus meeting the assumption of linearity. The heteroscedasticity test confirmed that the residual variance was constant, ensuring no bias due to heteroscedasticity. Furthermore, the analysis showed that the Variance Inflation Factor (VIF) values were below 10 and tolerance values were above .1, indicating no significant multicollinearity among the independent variables. With all assumptions satisfied, the regression model in this study can be considered valid, allowing the analysis results to be interpreted accurately and the conclusions to be deemed reliable.

4. Correlation Test Results

The results of the Pearson correlation analysis showed that the strongest relationship between family functioning and the dimensions of quality of life was found in the social dimension (r = -0.299, p < 0.001), while the weakest relationship was with the physical health dimension (r = -0.161, p < 0.001). Among the dimensions of quality of life, the highest correlation occurred between the psychological and environmental dimensions (r = 0.322, p < .001), whereas the lowest correlation was between the physical health and environmental dimensions (r = .173, p < .001). Overall, family functioning demonstrated the strongest correlation with the social dimension, while the physical health dimension exhibited the weakest relationship. The correlations among quality of life dimensions varied, with the psychological and environmental dimensions showing the strongest interrelationship compared to the other dimensions.

Table 4 Pearson's Correlations

Variable	Family Functions	Physical Health	Psychological	Social	Environment
Family Functions	—				
	—				
Physical Health	-.161	—			
	< .001	—			
Psychological	-.234	.196	—		
	< .001	< .001	—		
Social	-.299	.204	.303	—	
	< .001	< .001	< .001	—	
Environment	-.275	.173	.322	.289	—
	< .001	< .001	< .001	< .001	—

5. Regression Analysis

Based on the results of the regression analysis, among the four dimensions of quality of life examined, Family Functioning had the greatest influence on the social

dimension, with $R^2 = 0.099$, F (1.631) = 69.64, $p < 0.001$. This indicates that Family Functioning explains 9.9% of the variance in the social dimension. In contrast, the physical health dimension showed the smallest influence, with $R^2 = 0.031$, F (1.631) = 20.25, $p < 0.001$, meaning that Family Functioning explains only 3.1% of the variance in this dimension.

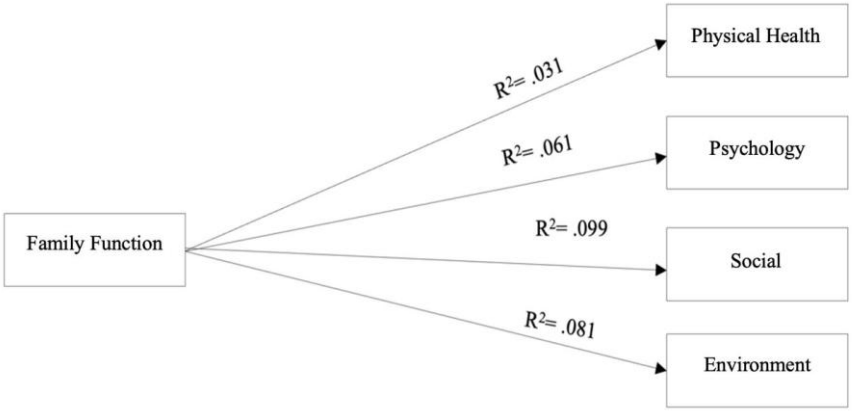

Figure 4 Regression Test Results

The linearity test between quality of life and family functioning was conducted using an ANOVA-based approach. The contribution of linearity was assessed with F (1. 619) = 0.710, p = 0.400, which was not statistically significant, indicating that a strictly linear relationship was not observed. However, the deviation from linearity test yielded F (40.619) = 1.801, p = .002, which was statistically significant, suggesting the presence of a potential non-linear pattern in the relationship. Overall, the combined effect across groups showed F (41.619) = 1.774, p = 0.003, indicating a significant difference among the groups. These findings highlight the need to consider the possibility of non-linearity in the relationship between family functioning and quality of life.

Table 5 Linear Regression Test Results

			Sum of Squares	df	*Mean Square*	F	Sig.
Quality of Life* Family Functions	Between Groups	(Combined)	4428.531	41	108.013	1.774	.003
		Linearity	43.256	1	43.256	.710	.400
		Deviation from Linearity	4385.276	40	109.632	1.801	.002
	Within Groups		37690.634	619	60.890		
	Total		42119.165	660			

6. Gender Difference Test

Based on the gender difference analysis, the mean scores across various dimensions showed minor variations between women and men. For the Family Functioning variable, men had a slightly higher mean (M = 40.023, SD = 7.609) compared to women (M = 39.607, SD = 7.946), with coefficients of variation of .190 for men and .201 for women. In the Physical Health dimension, women reported a higher mean (M = 7.728, SD = 1.442) than men (M = 7.610, SD = 1.521), with respective coefficients of variation of .187 and .200. In the Psychological dimension, women also

had a slightly higher mean (M = 26.010, SD = 3.093) than men (M = 25.838, SD = 3.046), with relatively similar coefficients of variation (0.119 for women and 0.118 for men). For the Social dimension, women again reported a marginally higher mean (M = 23.413, SD = 2.731) compared to men (M = 23.259, SD = 2.652), with coefficients of variation of 0.117 for women and 0.114 for men. Meanwhile, in the Environmental dimension, men showed a slightly higher mean (M = 31.128, SD = 3.221) than women (M = 31.075, SD = 3.276), with respective coefficients of variation of 0.103 and 0.105. Overall, the differences between women and men across these dimensions were small, with relatively uniform variation as indicated by the coefficient of variation for each group.

Table 6 Difference Test Based on Gender

	Group	N	Mean	SD	SE	Coefficient of variation
Family Functions	Woman	305	39.607	7.946	.455	.201
	Man	328	40.023	7.609	.420	.190
Physical Health	Woman	305	7.728	1.442	.083	.187
	Man	328	7.610	1.521	.084	.200
Psychological	Woman	305	26.010	3.093	.177	.119
	Man	328	25.838	3.046	.168	.118
Social	Woman	305	23.413	2.731	.156	.117
	Man	328	23.259	2.652	.146	.114
Environment	Woman	305	31.075	3.276	.188	.105
	Man	328	31.128	3.221	.178	.103

7. Age Group Difference Test

The results of the age-based quality of life comparison revealed that mean quality of life scores varied across age groups. The 17–18 years age group had the highest mean score (M = 101.091, SD = 3.240), with a coefficient of variation of .032, indicating low variability. The 19–20 years group had the lowest mean score (M = 98.716, SD = 4.061), with a coefficient of variation of .041. The 21–22 years group showed a slightly higher mean (M = 99.902, SD = 3.252) than the previous group, with similarly low variability (coefficient of variation = .033). Next, the 23–24 years age group had a mean of 99.229 (SD = 4.128), with a coefficient of variation of .042. The 25-27 years group reported a mean score close to the 23-24 years group (M = 99.795, SD = 5.172) but exhibited the highest variability among all age groups, with a coefficient of variation of .052. Overall, the mean quality of life remained relatively stable across age groups, with minor differences and generally low variation—except for the 25-27 years age group, which showed the highest variability.

Table 7 Age Difference Test Quality of Life

Age (Year)	N	Mean	SD	SE
17-18 Year	37	101.091	3.240	.533
19-20 Year	146	98.716	4.061	.336
21-22 Year	174	99.902	3.252	.247
23-24 Year	153	99.229	4.128	.334
25-27 Year	123	99.795	5.172	.466

The results of the age group comparison on family functioning showed that mean scores varied across age groups. The 17-18 years group had the highest mean score (M = 42.439, SD = 5.742), with a coefficient of variation of 0.135, indicating relatively low variability compared to other age groups. The 19–20 years group had a mean of 38.666 (SD = 6.286), with a coefficient of variation of .163, while the 21–22 years group reported the lowest mean score (M = 37.795, SD = 6.324), with a coefficient of variation of 0.167. The 23–24 years group had a higher mean (M = 41.313, SD = 8.062) than the previous group, but with greater variability (coefficient of variation = .195). Lastly, the 25–27 years group showed a mean score similar to the 23–24 years group (M = 41.424, SD = 10.173), yet it had the highest variability among all groups (coefficient of variation = 0.246). Overall, the data indicate a fluctuating pattern in the mean family functioning scores across age groups, with a general trend of increasing variability in the older age groups.

Table 8 Family Functions Age Difference Test

Age (Year)	N	Mean	SD	SE
17-18 Year	37	42.439	5.742	.944
19-20 Year	146	38.666	6.286	.520
21-22 Year	174	37.795	6.324	.479
23-24 Year	153	41.313	8.062	.652
25-27 Year	123	41.424	10.173	.917

8. Educational Background Difference in Quality of Life

The results of the quality of life comparison based on educational background showed that respondents with a Senior High School education had the lowest mean quality of life (M = 88.455, SD = 20.004) and the highest coefficient of variation (0.226), indicating a high level of variability within this group. The Bachelor's/Diploma (S1/D4) group had a higher mean (M = 99.532, SD = 3.965) and the lowest coefficient of variation (0.040), reflecting the most consistent data distribution. The Master's (S2) group reported a mean nearly identical to the S1/D4 group (M = 99.594, SD = 3.770), with a similarly low coefficient of variation (0.038). Meanwhile, the Doctoral (S3) group had the highest mean quality of life (M = 100.254, SD = 6.235), with a coefficient of variation of 0.062—higher than S1/D4 and S2, but still indicating relatively low variability. Overall, quality of life tended to increase with higher levels of education, while data variability decreased in groups with more advanced educational attainment.

Table 9 Test of Differences in Educational Background and Quality of Life

Educational Background	N	Mean	SD	SE	Coefficient of Variation
Senior High School	2	88.455	20.004	14.145	.226
S1/D4	572	99.532	3.965	.166	.040
S2	48	99.594	3.770	.544	.038
S3	11	100.254	6.235	1.880	.062

The analysis of family functioning based on educational background showed variations in both mean scores and data distribution across groups. Respondents with

a Senior High School education (N = 2) had the highest mean family functioning score (M = 51.490, SD = 26.403) but also the highest coefficient of variation (0.513), indicating a very high level of variability within this group. The Bachelor's/Diploma (S1/D4) group (N = 572) reported a lower mean score (M = 39.829, SD = 7.569) with a coefficient of variation of 0.190, reflecting relatively consistent data distribution. The Master's (S2) group (N = 48) had a lower mean score (M = 38.555, SD = 8.868), with a slightly higher coefficient of variation (.230) compared to the S1/D4 group. Meanwhile, the Doctoral (S3) group (N = 11) showed a higher mean score than the S2 group (M = 42.915, SD = 7.756), with a coefficient of variation of 0.181, which was lower than all other groups except S1/D4.

Table 10 Test Different Educational Background Family Functions

Educational Background	N	Mean	SD	SE	Coefficient of variation
Senior High School	2	51.490	26.403	18.670	.513
S1/D4	572	39.829	7.569	.316	.190
S2	48	38.555	8.868	1.280	.230
S3	11	42.915	7.756	2.338	.181

9. Living Arrangement Difference in Quality of Life

The results of the quality of life comparison based on living arrangements revealed that respondents living with friends or roommates reported the highest mean quality of life (M = 100.138, SD = 3.378) with the lowest coefficient of variation (0.034), indicating the most consistent data distribution. The group living with siblings (brothers or sisters) had a comparable mean (M = 99.856, SD = 3.939) with a coefficient of variation of 0.039, followed by those living alone (M = 99.550, SD = 3.779) with a coefficient of variation of .038, and those living with relatives (grandparents, aunts, or uncles) (M = 99.602, SD = 3.590) with a coefficient of variation of .036. Meanwhile, respondents living with parents reported the lowest mean quality of life (M = 97.680, SD = 7.306) and the highest coefficient of variation (0.075), indicating greater variability compared to other groups. Overall, quality of life tended to be higher and more consistent among individuals living with friends, siblings, or alone, while those living with parents reported lower quality of life and greater variability.

Table 11 Quality of Life Residence Difference Test

Current residence	N	*Mean*	SD	SE	Coefficient of Variation
Alone	362	99.550	3.779	.199	.038
With Parents	45	97.680	7.306	1.089	.075
With Siblings (Brother/Sister)	79	99.856	3.939	.443	.039
With Friends/Friends	56	100.138	3.378	.451	.034
With Relatives (Grandparents/Aunts/Uncles)	91	99.602	3.590	.376	.036

The results of the Family Functions Residence Difference Test showed that respondents living with their parents had the highest mean score in family functioning (M = 42.394, SD = 13.593), but also the highest coefficient of variation (0.321), indicating the greatest variability among all groups. Respondents living alone had a mean score

of 39.923 (SD = 7.334) with a coefficient of variation of .184, reflecting a more consistent data distribution. Those living with siblings (brothers or sisters) had a slightly lower mean (M = 39.360, SD = 6.549) with the lowest coefficient of variation (.166), indicating the most uniform data among all groups. Participants living with friends or roommates reported the lowest mean family functioning score (M = 37.726, SD = 6.428) with a coefficient of variation of 0.170. Meanwhile, those living with other relatives (such as grandparents, aunts, or uncles) had a mean score of 39.843 (SD = 7.013) and a coefficient of variation of 0.176. Overall, family functioning tended to be higher among those living with parents, despite greater variability, while the most consistent scores were observed among those living with siblings. Respondents living with friends showed the lowest level of family functioning, with relatively low variation.

Table 12 Family Functions Residence Difference Test

Current Residence	N	Mean	SD	SE	Coefficient of Variation
Alone	362	39.923	7.334	.385	.184
With Parents	45	42.394	13.593	2.026	.321
With Siblings (Brother/Sister)	79	39.360	6.549	.737	.166
With Friends/Friends	56	37.726	6.428	.859	.170
With Relatives (Grandparents/Aunts/Uncles)	91	39.843	7.013	.735	.176

This study aimed to analyze the relationship between family functioning and quality of life among individuals experiencing internet addiction. The key findings of this research are as follows: (a) Family functioning was significantly associated with quality of life, with the social dimension showing the highest correlation; (b) Family functioning significantly predicted quality of life, particularly in the social dimension, contributing 9.9% of the variance; (c) The gender difference test revealed no significant difference in quality of life between men and women, although there was a significant difference in family functioning; (d) Age showed significant differences in both family functioning and quality of life, with the 17–18 years age group reporting the highest scores in both variables; (e) Educational background also showed significant differences, with participants holding higher educational degrees reporting better family functioning and quality of life; (f) Living arrangement had a significant impact on both family functioning and quality of life. Participants living alone reported the highest quality of life but lower levels of family functioning.

The first finding indicates that family functioning is significantly associated with quality of life, with the highest correlation observed in the social dimension ($r = -0.299$, $p < 0.001$). This suggests that better family functioning (indicated by lower FAD-GF scores) corresponds to higher social quality of life. An optimally functioning family creates a supportive emotional environment, enhancing individuals' sense of security, self-confidence, and social skills necessary for building interpersonal relationships. Open communication, emotional support, and healthy interactions within the family serve as foundational models for social interaction outside the family and help individuals manage stress and resolve conflicts constructively

(Syahirah et al., 2021; Livingstone & Helsper, 2007). Conversely, poor family functioning can hinder social development, lead to feelings of isolation, and diminish overall quality of life (Wang et al., 2019). Therefore, the quality of family interactions plays a crucial role in shaping positive social experiences and supporting individual well-being.

The second finding shows that family functioning can predict quality of life, with the strongest contribution in the social dimension ($R^2 = 9.9\%$) and the weakest in the physical dimension ($R^2 = 3.1\%$). A high score in the social dimension indicates that effective family communication can strengthen individuals' interpersonal relationships. This aligns with previous studies, which have emphasized that emotional support and social involvement within the family play a key role in enhancing an individual's social well-being (Syahirah et al., 2021). Individuals from well-functioning families tend to be more capable of building healthy social relationships and receiving support from their surrounding environment. Moreover, earlier research also found that family functioning significantly contributes to the quality of life of patients with chronic illnesses, with the greatest impact on the social dimension (Oktowaty et al., 2018). This indicates that family functioning is important not only for healthy individuals but also for those experiencing health challenges. Harmonious family relationships can help individuals manage stress, improve emotional well-being, and foster a sense of security in their social lives. In contrast, the impact of family functioning on the physical dimension tends to be lower, as physical health and lifestyle habits are more strongly influenced by individual factors, such as dietary patterns, physical activity, and specific medical conditions (Pradina et al., 2022). Therefore, family functioning appears to have a greater influence on social relationships and emotional well-being than on the physical aspects of an individual's quality of life.

The third finding indicates that there was no significant difference in overall quality of life between men and women; however, a difference was found in the family functioning dimension, with men showing slightly higher scores. Additionally, women demonstrated higher scores in the psychological and social dimensions, while men tended to score higher in the environmental dimension. These differences may reflect gender role tendencies, where women are more engaged in emotional and relational aspects, whereas men are more oriented toward external environmental factors (Jiménez Boraita et al., 2020; Wahyuni et al., 2024). According to Bandura's social cognitive theory, such differences may occur because individuals develop behavioral schemas based on observation, social experiences, and gender expectations within their environment. These factors shape how they perceive and process emotional and social experiences. Therefore, while the overall quality of life between men and women appears similar, their experiences within specific dimensions may vary depending on social constructions and cognitive processes that influence their perceptions of roles and social relationships.

The fifth finding indicates that differences in educational background revealed significant variations in both family functioning and quality of life. Respondents with

higher levels of education, particularly those with master's (S2) and doctoral (S3) degrees, reported better scores in both variables. Individuals with higher education levels tend to possess a more mature and realistic outlook on life, which allows them to be more emotionally and rationally prepared to face life's challenges (Thompson, Pawson, & Evans, 2021). Previous studies have also shown that individuals with higher education tend to have a deeper understanding of life, enabling them to handle adversity more effectively and improve their quality of life through richer social experiences and stronger interpersonal skills (Ramadhana et al., 2023).

The sixth finding shows that living arrangement has a significant influence on family functioning and quality of life. Respondents who live alone reported higher levels of quality of life, but lower family functioning. This may be attributed to the greater autonomy that individuals living alone have in managing their lives, including financial, social, and lifestyle aspects, without the pressure or conflict that may arise in shared household environments (Livingstone & Helsper, 2007). Moreover, individuals who live alone often maintain broader social networks outside the family, such as friendships, colleagues, or community groups, which can support their well-being (Noroozi et al., 2021). However, because living alone means less active involvement in daily family dynamics, their family functioning tends to be lower due to limited emotional support and communication with other family members (Wang et al., 2019). In contrast, respondents living with their parents demonstrated the highest levels of family functioning, despite greater variability, as physical proximity facilitates more frequent interaction and emotional involvement (Syahirah et al., 2021). Nonetheless, complex family dynamics—such as intergenerational conflicts and differing values—can generate tensions that may contribute to lower life satisfaction (Zhao et al., 2022). Previous research also found that living arrangement significantly affects quality of life, with individuals living alone tending to experience higher levels of quality of life due to greater personal autonomy, while those living with family or in social institutions benefit more from emotional and physical support (Bunga-Kiling et al., 2017). Thus, external social interactions may enhance the quality of life for individuals living alone, while physical proximity to family members plays a more critical role in strengthening family functioning.

This study has several limitations that should be acknowledged. First, the data collection method relied on social media platforms, resulting in a sample with random and uncontrolled characteristics. This may have introduced sampling bias, as not all individuals have equal access to or willingness to participate through digital platforms. Second, there are limitations in the measurement instruments used—WHOQOL-BREF and the Family Assessment Device (FAD). Although both tools have been widely validated and employed in numerous studies, they may not fully capture the complexity of quality of life and family functioning, especially within diverse cultural contexts. Thus, future research should consider incorporating additional or alternative instruments that are more locally specific. Third, the sample size in this study was relatively limited to 633 respondents, which necessitates caution in generalizing the findings to broader populations. Fourth, the study did not map

respondents' geographic characteristics based on their region of origin. As a result, potential cultural and socio-economic differences that might influence quality of life and family functioning could not be analyzed in depth. This limitation reduces the study's capacity to understand the dynamics of these relationships within more specific social contexts.

Despite its limitations, this study also presents several strengths. First, it contributes to a deeper understanding of the relationship between family functioning and quality of life, particularly among young individuals facing the challenges of internet addiction. Second, the study employed academically validated measurement instruments, which enhances the reliability of the findings in assessing both quality of life and family functioning. Third, the findings of this study can serve as a valuable foundation for future research aimed at developing more effective interventions to improve the quality of life of individuals from diverse family backgrounds.

The findings of this study contribute to the academic literature on the impact of family functioning on individual quality of life, particularly among young people who are vulnerable to internet addiction. By providing a deeper understanding of the factors that influence quality of life, the results of this study are expected to serve as a foundation for more effective interventions aimed at enhancing individual well-being through strengthening family support.

E. CONCLUSION

This study concludes that family functioning plays a significant role in influencing the quality of life of Generation Z individuals experiencing internet addiction, particularly in the social and environmental dimensions. Better family functioning is associated with stronger emotional and social support, which helps individuals cope with the negative effects of internet addiction. The relationships identified in this study appear to be complex, indicating that certain aspects of family functioning—such as communication and emotional stability—contribute more substantially than others. Nevertheless, a considerable portion of the variation in quality of life is influenced by factors outside of family functioning. Therefore, while family-based interventions remain relevant for improving the quality of life of individuals with internet addiction, these efforts should be integrated with other approaches that take into account individual and environmental factors.

REFERENCES

1. Almeida, A. C., Leandro, M. E., & Pereira, M. G. (2019). Family functioning and quality of life in adolescents with type 1 diabetes: The role of dissimilarity in illness representations and school support. *Clinical Child Psychology and Psychiatry, 24*(4), 647–659.
2. Anderson, M., & Jiang, J. (2018). *Teens, social media & technology 2018*. Pew Research Center. Retrieved from: https://www.pewresearch.org/internet/2018/05/31/teens-social-media-technology-2018/
3. Anur, A. (2022). *Prevalensi kecanduan internet pada generasi Z di Indonesia.* Jakarta:

Alvara Media.
4. Asosiasi Penyelenggara Jasa Internet Indonesia (APJII). (2024, February 7). *Jumlah Pengguna Internet Indonesia Tembus 221 Juta Orang*. Retrieved from: https://apjii.or.id/berita/d/apjii-jumlah-pengguna-internet-indonesia-tembus-221-juta-orang
5. Bai, W., Cai, H., Wu, S., Zhang, L., Feng, K., Li, Y., ... & Xiang, Y. (2022). Internet addiction and its association with quality of life in patients with major depressive disorder: A network perspective. *Translational Psychiatry, 12*(138).
6. Bangun, B. C. K., Gondodiputro, S., & Andayani, S. (2020). Insomnia and quality of life in the elderly: WHOQOL-BREF and WHOQOL-OLD Indonesian version. *KEMAS: Jurnal Kesehatan Masyarakat, 16*(2).
7. Bickham, D. S. (2021). Current research and viewpoints on internet addiction in adolescents. *Current Pediatrics Reports, 9*(1), 1–10.
8. Bozoglan, B. (2019). The impact of family on digital addiction. *Advances in Psychology, Mental Health, and Behavioral Studies.*
9. Brickell, T. A., French, L. M., Sullivan, J. K., Varbedian, N. V., Wright, M. M., & Lange, R. T. (2021). Unhealthy family functioning is associated with health-related quality of life among military spouse caregivers. *Psychological Trauma: Theory, Research, Practice, and Policy, 14*(4), 587–596.
10. Bunga-Kiling, B. N., & Kiling, I. Y. (2017). *Tinjauan tempat tinggal dan Gender pada kualitas hidup orang usia lanjut.* Universitas Nusa Cendana.
11. Cong, C. W., Tan, S. A., Nainee, S., & Tan, C. S. (2022). Psychometric qualities of the McMaster Family Assessment Device-General Functioning Subscale for Malaysian samples. *International Journal of Environmental Research and Public Health, 19*(4), 2440.
12. Diener, E. (1984). Subjective well-being. *Psychological Bulletin, 95*(3), 542–575.
13. Epstein, N. B., Baldwin, L. M., & Bishop, D. S. (1983). The McMaster Family Assessment Device. *Journal of Marital and Family Therapy, 9*(2), 171-180.
14. Epstein, N. B., Uskup, D. S., & Levin, S. (1978). Model Family Functions McMaster. *Journal of Marital and Family Therapy, 4*(1), 19-31.
15. Ferrari Junior, G. J., da Silva, A. B., Meneghetti, A., Leite, C. R., Brust, C., Moreira, G. C., & Felden, É. P. G. (2024). Relationships between internet addiction, quality of life, and sleep problems: A structural equation modelling analysis. *Jornal de Pediatria, 100*(3), 283-288.
16. Fikra, A. (2024). *Digital-native behavior and internet addiction among Generation Z: A qualitative review*. Jakarta: Digital Society Press.
17. Fridolin, A., Musthofa, S. B., & Suryoputro, A. (2022). Factors affecting the quality of life of elderly in the work area of the Gayamsari Health Center Semarang City. *Jurnal Kesehatan Komunitas, 8*(2), 381-389.
18. Gondodiputro, S., Wiwaha, G., Lionthina, M., & Sunjaya, D. (2021). Reliability and validity of the Indonesian version of the World Health Organization Quality of Life-Old (WHOQOL-OLD): A Rasch Modelling. *Medical Journal of Indonesia.*
19. Griffiths, M. D. (2019). Internet Addiction: An Overview of Psychosocial

Characteristics and Treatment. *Behavioral Sciences, 9*(2), 62.
20. Hadadian, F., Tehranizadeh, M., & Pakdel, M. (2020). The Roles of Family, Emotion Regulation Strategies, and Mental Health in Problematic Internet Use. *Journal of Studies on Psychology and Neuroscience, 1*(1), 317-327.
21. Harini, N. S., & Irwanto, I. (2010). Characteristics of internet addiction. *Journal of Internet Addiction, 5*(1), 45-56.
22. Herrero, J. A. M., Mora, K. F., & Fernández, A. M. (2024). Assessing the reliability, dimensions, and variance of Young's Internet Addiction Test by applying it to adolescents at the National Psychiatric Hospital in Costa Rica. *Actas Españolas de Psiquiatría, 52*(5), 598-606.
23. Hidayat, A. R. (2021). *Hubungan antara Family Functions dan adiksi internet pada remaja* [Skripsi, Universitas Gadjah Mada]. Universitas Gadjah Mada Repository.
24. Huang, L. (2024). The impact of family functionality on internet addiction in left-behind children. *International Journal of Education and Humanities.*
25. Jiménez Boraita, R., Ibort, E. G., Torres, J. M. D., & Alsina, D. A. (2020). Gender differences relating to lifestyle habits and health-related quality of life of adolescents. *Child Indicators Research, 13*(6), 2135–2156.
26. Kadu, M., Takar, J., & Jiri, T. (2023). Rethinking family support in addiction recovery. *International Journal of Creative Research Thoughts (IJCRT), 11*(9).
27. Kardefelt-Winther, D. (2017). How does the time children spend using digital technology impact their mental well-being, social relationships, and physical activity? *Innocenti Discussion Papers*. UNICEF Office of Research.
28. Khehra, N. (2020). Association of Internet addiction with social support, loneliness, and stress: A cross-sectional study among female college students. *Indian Journal of Public Health Research & Development, 11*(3), 887-888.
29. Khehra, N. (2020). *Role of family environment in managing internet addiction: A narrative review*. International Journal of Mental Health Promotion, 22(1), 34–42.
30. Kim, D., Nam, J. K., & Keum, C. (2022). Adolescent internet gaming addiction and personality characteristics by game genre. *PLOS ONE, 17*(2), e0263645.
31. Kuss, D. J., Griffiths, M. D., Karila, L., & Billieux, J. (2014). Internet addiction: A systematic review of epidemiological research for the last decade. *Current Pharmaceutical Design, 20*(25), 4026–4052.
32. Laili, N., & Muchsin, E. N. (2022). Faktor-faktor yang mempengaruhi kualitas hidup penyintas COVID-19. *Jurnal Keperawatan, 14*(1), 95-104.
33. Laili, N., & Muchsin, E. N. (2022). Sistem dukungan Social memiliki hubungan signifikan dengan peningkatan kualitas hidup penyintas COVID-19 (p-value 0,001). *Jurnal Keperawatan, 14*(1), 95-104.
34. Livingstone, S., & Helsper, E. J. (2007). Gradations in digital inclusion: Children, young people and the digital divide. *New Media & Society, 9*(4), 671–696.
35. Livingstone, S., & Helsper, E. J. (2007). Parental mediation of children's internet use. *Journal of Broadcasting & Electronic Media, 52*(4), 581–599.
36. Lo, C. K. M., Ho, F. K. W., Mak, W. W. S., & Wong, R. S. (2020). Family-based intervention for internet addiction in adolescents: A meta-analysis. *Journal of*

Behavioral Addictions, 9(3), 678–690.
37. Lo, C. K. M., Yu, L., Cho, Y. W., & Chan, K. L. (2021). A qualitative study of practitioners' views on family involvement in the treatment process of adolescent internet addiction. *International Journal of Environmental Research and Public Health, 18*(86), 1-12.
38. Lu, X., Zhang, M., & Zhang, J. (2023). The relationship between social support and internet addiction among Chinese college freshmen: A mediated moderation model. *Frontiers in Psychology, 13*, 1031566.
39. Lumiling, F. O., Kojo, C., & Taroreh, R. N. (2023). Pengaruh motivasi, Environment kerja, dan kompensasi terhadap kualitas kehidupan kerja karyawan (studi pada FreshMart Department Store Bahu). *Jurnal EMBA, 11*(1), 236-247.
40. Margaretta, E. E., & Risnawaty, W. (2021). The role of family functioning in emotional regulation among undergraduate students. *Advances in Social Science, Education and Humanities Research, 570*, 993-999.
41. Maslow, A. H. (1943). A theory of human motivation. *Psychological Review, 50*(4), 370–396.
42. Morishita-Kawahara, M., Kawahara, T., & Kamibeppu, K. (2020). Relation between family functioning and quality of life among family caregivers of patients with terminal cancer hospitalized in general wards. *Open Journal of Nursing, 10*(12), 1233–1240.
43. Muliani, T., & Widjaja, Y. (2022). Hubungan kecanduan internet dengan prestasi akademik pada mahasiswa Fakultas Kedokteran Universitas Tarumanagara tahap akademik. *Tarumanagara Medical Journal, 4*(1), 212–221.
44. Mutiah, D., Mayasari, R., & Deviana, T. (2021). Validating an Indonesian version of the Family Assessment Device among Indonesian Muslim university students during the COVID-19 pandemic. *Mental Health, Religion & Culture.*
45. Noroozi, F., Hassanipour, S., Eftekharian, F., Eisapareh, K., & Kaveh, M. (2021). Internet addiction effect on quality of life: A systematic review and meta-analysis. *The Scientific World Journal.*
46. Nugroho, H., Irmina, M., & Wijayanti, R. (2020). An evaluation of Internet Addiction Test (IAT). *2020 Fifth International Conference on Informatics and Computing (ICIC),* 1-6.
47. Oktowaty, S., Sasongko, E. P. S., & Arisanti, N. (2018). Hubungan Family Functions dengan kualitas hidup pasien penyakit kronis degeneratif di fasilitas kesehatan tingkat pertama. *Jurnal Sistem Kesehatan, 4*(1), 1–6.
48. Oktowaty, S., Sasongko, E. P. S., & Arisanti, N. (2018). Hubungan Family Functions dengan kualitas hidup pasien penyakit kronis degeneratif di fasilitas kesehatan tingkat pertama. *Jurnal Sistem Kesehatan, 4*(1), 1–6.
49. Palit, I. D., Kandou, G. D., & Kaunang, W. J. P. (2021). Hubungan antara aktivitas fisik dengan kualitas hidup pada lansia di Desa Salurang Kecamatan Tabukan Selatan Tengah Kabupaten Kepulauan Sangihe. *Jurnal Kesmas, 10*(6), 93–100.
50. Permata Sari, A. D., & Roswiyani, R. (2021). The impact between quality of life and self-compassion on the emergence of depression symptoms in university students.

Advances in Health Sciences Research, 41, 265-270.
51. Pradina, E. I. V., Marti, E., & Ratnawati, E. (2022). Hubungan antara dukungan keluarga dengan kualitas hidup pada lansia di Padukuhan Pranan, Sendangsari, Minggir, Sleman. *Jurnal Keperawatan Klinis dan Komunitas, 6*(2), 112–124.
52. Pradina, E. I. V., Marti, E., & Ratnawati, E. (2022). Hubungan antara dukungan keluarga dengan kualitas hidup pada lansia di Padukuhan Pranan, Sendangsari, Minggir, Sleman. *Jurnal Keperawatan Klinis dan Komunitas, 6*(2), 112–124.
53. Pradina, T., Lestari, N. D., & Nuraini, R. (2022). Peran gaya hidup sehat terhadap kualitas hidup mahasiswa selama pandemi COVID-19. *Jurnal Psychological dan Kesehatan Mental, 7*(1), 45–56.
54. Purba, F. D., Hunfeld, J. A. M., Iskandarsyah, A., Fitriana, T. S., Sadarjoen, S. S., Passchier, J., & Busschbach, J. J. V. (2018). Quality of life of the Indonesian general population: Test-retest reliability and population norms of the EQ-5D-5L and WHOQOL-BREF. *PLOS ONE, 13*(5), e0197098.
55. Putri, R. D. (2020). Keberfungsian keluarga sebagai prediktor kecanduan internet pada remaja. *Psychologicalka: Jurnal Pemikiran dan Penelitian Psychological, 25*(1), 34–45.
56. Ramadhana, B., & Meitasari, I. (2023). Kajian tingkat pendidikan terhadap kualitas hidup masyarakat. *Jurnal Penelitian Pendidikan Geografi, 8*(2), 38-45.
57. Ramadhana, M. R., Sari, D. P., & Nugraha, H. (2023). *Pendidikan tinggi dan kematangan emosional dalam menghadapi tantangan hidup*. Jurnal Psychological Indonesia, 20(2), 112–124.
58. Salim, O. C., Sudharma, N. I., Kusumaratna, R. K., & Hidayat, A. (2007). Validitas dan reliabilitas World Health Organization Quality of Life-BREF untuk mengukur kualitas hidup lanjut usia. *Universa Medicina, 26*(1), 27-38.
59. Salmiyati, A., Nurhidayah, F., & Setiawan, A. (2020). *Peran Tahap Perkembangan Dewasa Awal Dalam Penyesuaian Diri Mahasiswa Perantauan*. *Jurnal Ilmiah Psychological Terapan, 8*(3), 141–152.
60. Salmiyati, S., & Asnindari, L. N. (2020). Hubungan usia dan Gender dengan kualitas hidup lanjut usia penderita gout arthritis. *Intan Husada: Jurnal Ilmiah Keperawatan, 8*(2), 23–28.
61. Sari, A. D. P., & Roswiyani, R. (2021). The impact between quality of life and self-compassion on the emergence of depression symptoms in university students. *Proceedings of the 1st Tarumanagara International Conference on Medicine and Health (TICMIH 2021)*.
62. Saxena, S., Orley, J., & WHOQOL Group. (1997). Quality of life assessment: The world health organization perspective. *European Psychiatry, 12*(Suppl 3), 263s–6s.
63. Shi, Y., Tang, Z., Gan, Z., Hu, M., & Liu, Y. (2023). Association between family atmosphere and internet addiction among adolescents: The mediating role of self-esteem and negative emotions. *International Journal of Public Health, 68*, 1605609.
64. Souza Júnior, E. V., Viana, E. R., Cruz, D. P., Silva, C. S., Rosa, R. S., Siqueira, L. R., & Sawada, N. O. (2022). Relationship between family functionality and the quality of life of the elderly. *Revista Brasileira de Enfermagem, 75*(2), e20210106.

65. Suárez, L., Tay, B., & Abdullah, F. (2018). Psychometric properties of the World Health Organization WHOQOL-BREF Quality of Life assessment in Singapore. *Quality of Life Research, 27*(11), 2945–2952.
66. Sulistyorini, E., & Roswiyani, R. (2021). Social support and quality of life on online-learning university students. In *Proceedings of the 1st Tarumanagara International Conference on Medicine and Health (TICMIH 2021)* (pp. 259-263). Atlantis Press.
67. Sulistyorini, E., & Roswiyani, R. (2021). Social support and quality of life on online-learning university students. *Advances in Health Sciences Research, 41*, 259-264.
68. Syahirah, S., El-Bagiz, K., Karimulloh, K., & Kinanthi, M. R. (2021). Peran keberfungsian keluarga terhadap kualitas hidup terkait kesehatan pada remaja miskin menurut perspektif Islam. *Proceedings of the Inter-Islamic University Conference on Psychology, 1*(1), 1-13.
69. Syahirah, S., El-Bagiz, K., Karimulloh, K., & Kinanthi, M. R. (2021). Peran keberfungsian keluarga terhadap kualitas hidup terkait kesehatan pada remaja miskin menurut perspektif Islam. *Proceedings of the Inter-Islamic University Conference on Psychology, 1*(1), 1-13.
70. Syifak, N. A., Karmiyati, D., & Suryaningrum, C. (2023). Pengaruh kecanduan internet dan future time perspective terhadap prokrastinasi akademik di kalangan pelajar. *Psychological Journal: Science and Practice, 3*(1), 154–161.
71. Tao, R., Huang, X., Wang, J., Zhang, H., Zhang, Y., & Li, M. (2010). Proposed diagnostic criteria for internet addiction. *Addiction, 105*(3), 556-564.
72. Thompson, G., Pawson, J., & Evans, M. (2021). *Education and emotional resilience: A study of life readiness among postgraduates*. Journal of Adult Development, 28(1), 33–47.
73. Thompson, M., Pawson, C., & Evans, B. (2021). Navigating entry into higher education: The transition to independent learning and living. *Journal of Further and Higher Education, 45*(6), 843-859.
74. Wahyuni, L., Hasanah, U., & Permana, D. (2024). *Perbedaan gender dalam persepsi kualitas hidup mahasiswa pasca-pandemi*. Jurnal Ilmiah Psychological Social, 12(1), 25–38.
75. Wahyuni, S., Apriyanto, B. S., Pujiastutik, Y. E., & Colis, E. P. (2024). Faktor-Faktor Yang Berhubungan Dengan Kualitas Hidup Penyandang Diabetes Mellitus di Kediri: Studi Cross-Sectional. *Jurnal Sintesis, 5*(1), 61-67.
76. Wang, H., Li, X., Lok, G. K. I., Meng, C., Tan, Y., Lee, U. M., & Lei, L. S. M. (2024). Family-based therapy for internet addiction among adolescents and young adults: A meta-analysis. *Journal of Behavioral Addictions, 13*(2), 295-312.
77. Wang, W., Wang, Y., Wu, H., & Liu, W. (2019). Family function and internet addiction among adolescents: The mediating role of self-esteem. *Cyberpsychology, Behavior, and Social Networking, 22*(2), 116–121.
78. Wutsqo, B. U., Hanim, W., & Wahyuni, E. (2023). Figurean Kecanduan Internet Pada Remaja. *Jurnal EDUCATIO (Jurnal Pendidikan Indonesia), 9*(1), 531–536.
79. Zhao, Y., Liu, X., & Chen, L. (2022). Intergenerational conflict and life satisfaction in young adults living with parents in urban China. *Journal of Family Studies, 28*(3),

402–419.