



NURSING STUDENTS' POST COVID-19 PANDEMIC QUALITY OF LIFE BASED ON DEMOGRAPHIC CHARACTERISTIC

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Introduction: Post Covid-19 pandemic, there was a change in nursing student habits that needed adaptability and it is important to pay attention to their quality of life. The aim of this research is to describe the Quality of Life of Post-Covid-19 Nursing Students Based on Individual Demographic Characteristics. **Method:** A quantitative descriptive design with a proportional stratified sampling technique to 276 of 892 nursing students was conducted in April 2023. Data were collected using the WHOQOL-BREF questionnaire to measure quality of life. This study used descriptive analysis for numerical data displayed in cross tables. **Results:** it was found that the quality of life of respondents tended to be good in the physical (68.25+11.27), psychological (59.78+13.62), social (68.18+15.78), and environmental (66.42+12.68) Based on the total of quality of life domains, male respondents had a higher average score than female respondents. Based on education level, it was found that respondents who were in professional programs had a higher quality of life score than those in Undergraduate Nursing Study Programs, while for history of exposure, it was found that in total, people who had been exposed had a higher quality of life than those who had not been exposed to COVID-19. **Conclusions:** The quality of life for nursing students after the Covid-19 pandemic has tended to be the highest level of well-being. It is necessary to identify students' barriers in maintaining and improving their quality of life, especially in the psychological domain identified as the lowest domain.

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BACKGROUND

The Covid-19 pandemic that occurred in 2020 has had a significant impact on the physical, psychological, social, and environmental conditions of individuals worldwide, including students (Jojoa et al., 2021). The pandemic has affected various aspects of life, such as physical and mental health, economy, social relationships, daily activities, and quality of life (Zheng et al., 2021). Quality of Life defined as an individual's perception of

their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns (WHO, 2012). Quality of life is influenced by physical factors, psychological factors, social factors, and environmental factors, and all these factors are interconnected with each other (Rohmah et al., 2017).

Health-related faculties are perceived to have a higher stress level than other faculties (Singh et al., 2020). The Faculty of Nursing is an educational institution in the field of health sciences that faces high stressors due to high academic demands, clinical work demands, interpersonal demands with patients and families, and tight time constraints (Uzziel Pérez-Gress et al., 2021). Research conducted by Ribeiro et al., (2018) showed that 33.92% of nursing students experience moderate to high stress levels, which harms their psychological and physical well-being and ultimately reduces their quality of life.

After more than two years of the Covid-19 pandemic, which eventually lifted the pandemic status, society is now adapting to the new normal. Nursing students are among the groups affected by the post-pandemic situation. During online learning, offline practical sessions were cancelled. However, practical experience during these sessions is crucial for developing the clinical skills of aspiring nurses. As a result, students have become less confident in their abilities when performing nursing procedures while adapting to new habits, as they feel they have insufficient knowledge due to the online learning approach (Rohde et al., 2023).

Quality of life is influenced by demographic factors such as gender, education level, and age (Wahid et al., 2021). A study by Kiling & Prawitasari (2020) stated that demographic factors contribute to 76.5% of the quality of life. Additionally, health history is also a factor that affects the quality of life. Previous health conditions can impact physical, cognitive, social, and emotional development, ultimately affecting the quality of life (Laili, 2022).

In carrying out its activities in the undergraduate program at the Faculty of Nursing, Padjadjaran University offers one study program at two levels, namely the Bachelor of Nursing Study Program, the Nursing Professional Program. The naming of this study program is adjusted to the laws and regulations in Indonesia.

Nursing Professional Program students engaged in clinical practice during the post-Covid-19 pandemic period must adapt to clinical tasks involving patient care, dealing with urgent medical situations, and interacting with patients and healthcare teams. Additionally, they have to face the risk of infection and transmission of Covid-19 during clinical practice or patient care-related tasks (Ramelet et al., 2022). These situations may cause the students experiencing more stress, ultimately harming their overall quality of life. The aim of this research is to describe the Quality of Life of Post-Covid-19 Nursing Students Based on Individual Demographic Characteristics.

RESEARCH METHOD

Study Design

This study used a quantitative descriptive research design. Researchers used this method to get an overview of the quality of life of nursing students after the Covid-19 pandemic.

Population, Samples, and Sampling

The population of this study consisted of 892 nursing students at the Faculty of Nursing, Padjadjaran University Bandung, which consisted of 679 Undergraduate Nursing

Study Program and 213 students from the Nursing Professional Program. The sampling technique used was proportional stratified random sampling using Slovin's formula with a degree of freedom of 0,05 resulting a total sample of 276 students consisting of 210 Bachelor of Nursing students and 66 students of the Nursing Professional Program. The variables in this study are the quality of life of nursing students in the post-Covid-19 pandemic period and students' characteristics.

Instruments

The instruments used in this study were students' characteristics questionnaire and the World Health Organization (WHOQOL-BREF) Indonesian version. Students' characteristics questionnaire consisting gender, education level, and health history. The WHOQOL-BREF is a 26-item instrument consisting of four domains: physical health (7 items), psychological health (6 items), social relationships (3 items), and environmental health (8 items); it also contains QOL and general health items. Domain scores are scaled in the positive direction (i.e. higher scores indicate higher quality of life). The average score of items within each domain was used to calculate the domain score. The mean score was then multiplied by 4 to make the domain scores comparable to the scores used in the WHOQOL-100 (WHO, 2012). Translation of this revisions document have been made in 2014 and 2016 by Fredrick Dermawan Purba, Padjadjaran University, Jatinangor (World Health Organization, 2020).

Procedure

Questionnaires were distributed to respondents via Google Forms. The researcher was assisted by five enumerators who assisted in the data collection process. Respondents fill out the questionnaire by giving a rating of 1 to 5 in the column provided based on their opinion. When filling out the questionnaire, the researcher accompanies the respondent and the respondent is allowed to ask questions if there is content that they do not understand. Respondents complete the questionnaire by pressing the submit button. After data collection, the next step is data processing which includes editing, coding, data entry, cleaning, and data tabulation.

Data Analysis

In this study, descriptive analysis was conducted using proportion formulas. Cross-tabulation was performed using contingency tables to examine the distribution of students' quality of life based on their characteristics. For the quality-of-life instrument, since the measurement is on a numeric scale, analysis was conducted on the numeric data, such as the mean, median, standard deviation, minimum, and maximum scores. The quality-of-life scores obtained by calculating each domain's raw scores will be transformed into a transformed score on a scale of 0-100 according to WHOQOL-BREF guidelines. Within this score range, the median value is 50, where a quality-of-life score >50 is considered good, and vice versa. Furthermore, the data is interpreted such that higher scores indicate better quality of life.

Ethical Clearance

Ethical clearance for this research was granted by the ethics research committee of Padjadjaran University with letter no. 193/UN6.KEP/EC/2023. To ensure that this research does not violate research ethics, respondents were given complete information about the research objectives, procedures and then respondents gave their consent to become research respondents by selecting the "NEXT" button on the g-form provided.

RESULTS AND DISCUSSION

Characteristics of Participants

Table 1 displays the nursing respondents characteristics. Of the 276 respondents who participated in this study, 255 (92.4%) were female. The educational level of the respondents was mostly Undergraduate Nursing Study Program (76.1%), and the majority stated that they had never been infected by Covid-19 (71%).

Table 1. Characteristics of respondents (n = 276)

Variables	Characteristics	f	Percentage
Gender	Female	255	92.4
	Male	21	7.6
Educational level	Undergraduate Nursing Study Program	210	76.1
	Nursing Professional Program	66	23.9
Covid-19 history	Yes	80	29.0
	No	196	71.0

Overview of the Quality of Life of Nursing Students

Here is an overview of the quality of life of nursing students following the Covid-19 pandemic, based on each domain. The reference point of the median value, which is 50, is used to determine the high and low scores of the quality of life.

Table 2. Overview of the Quality of Life of Nursing Students (n = 276)

	Mean	Median	SD	Min - Max	95% CI
Total QoL	89.01	89.00	9.62	61.00 – 100.00	87.87 – 90.15
Physical Domain (7 items)	68.25	69.00	11.27	25.00 – 100.00	66.91 – 69.58
Psychological Domain (6 items)	59.78	63.00	13.62	19.00 – 94.00	58.17 – 61.40
Social Domain (3 items)	68.18	69.00	15.78	19.00 – 100.00	66.31 – 70.05
Environmental Domain (8 items)	66.42	69.00	12.68	31.00 – 100.00	64.42 – 67.93

Based on Table 2, it can be concluded that the quality of life of respondents as indicated by a median value of 50 tends to be good with an overall average quality of life score (89.01). The physical domain has the highest average quality of life score (68.25), followed by the social domain (68.18), and the environmental domain (66.42). The psychological well-being domain has the lowest average score (59.78) compared to other domains.

Overview of Nursing Students' Quality of Life Post-Covid-19 Pandemic Based on Characteristics (Gender, Education Level, and Covid-19 History).

Here is an overview of the quality of life among nursing students based on individual characteristics, such as gender, educational level, and health history, in the post-Covid-19 pandemic period.

Table 3. Overview of the Quality of Life of Nursing Students Based on Individual Characteristic (n = 276)

Variables		Gender		Educational Program		History	
		Female	Male	Undergraduate	Nursing Profession	Been Infected	Not Infected
Total QOL	Mean	88.74	92.28	87.91	92.48	89.45	88.83
	SD	9.29	12.80	9.49	9.24	9.00	9.87
Physical	Mean	68.18	69.09	67.47	70.72	67.42	68.59
	SD	10.98	14.66	11.34	10.77	9.53	11.92
Psychological	Mean	59.46	63.71	57.90	65.80	58.68	60.23
	SD	13.26	17.30	13.41	12.58	14.12	13.43
Social	Mean	67.98	70.52	66.35	74.00	67.66	68.39
	SD	15.56	18.44	15.78	14.40	15.29	16.00
Environmental	Mean	66.39	66.80	65.76	68.53	68.88	65.42
	SD	12.31	16.93	12.48	13.17	13.16	12.37

Table 3 found that men tended to have higher mean quality of life scores than women. The quality of life domain for women, namely the physical domain, has an average score (68.18), the psychological domain (59.46), the social domain (67.98) and the environmental domain (66.39), while the quality of life for men in the physical domain has an average score (69.09), psychological domain (63.71), social domain (70.53) and environmental domain (66.80). Table 3 shows that respondents tend to have higher average quality of life scores than Undergraduate Nursing Study Program. The psychological domain identified as the lowest one both in the Undergraduate Nursing Study Program (57.90) and Nursing Professional Program (65.80). In the environmental and psychological domains, it was found that respondents from the Nursing Profession Program had a relatively higher average score than respondents from the Nursing Undergraduate Nursing Study Program. The highest average score domain was found in physical domain (67.47), while social domain found as the highest average score domain among Nursing Professional Program (74.00).

Based on Table 3, it is shown that, in terms of the total scores, respondents who have been infected with Covid-19 slightly have higher scores of quality-of-life compared to those who have not been infected. The physical domain has the highest average score among respondents who have not been infected with Covid-19 (68.59), while the environmental domain identified as the highest average score among respondents who have been infected with Covid-19 (68.88). The psychological domain has the lowest average score, both for respondents who have been infected with Covid-19 (58.68) and those who have not (60.23). The average score of the social domain for respondents who have been infected with Covid-19 (67.66) is lower than those who have not been infected (68.88).

Quality of life is defined as an individual's perception of their position in life within the cultural and value system they live in and concerning their goals, expectations, and standards (WHO, 2012). Quality of life is influenced by physical, psychological, social, and environmental factors, all of which are interconnected (Rohmah et al., 2017). Quality of life comprises four domains: physical health, psychological well-being, social relationships, and environment (WHO, 2012).

Quality of life must be considered among all groups, including students. Nursing students, who experience higher stress levels than students from other faculties, are at risk of experiencing a decline in quality of life (Singh et al., 2020). The stress levels of nursing

students increased during the Covid-19 pandemic (Jojoa et al., 2021). The reduced access to academic and social resources during online learning during the pandemic limited the clinical skills nursing students should have learned during the preclinical period. Therefore, nursing students lack confidence in performing direct nursing practice while adapting to the new normal (Rohde et al., 2023). The academic burden of nursing students as frontline healthcare providers in disease management is further exacerbated by the emergence of hoax news related to Covid-19, which continues to occur to this day, potentially affecting the stress levels of nursing students (Muslim, 2020).

Public concerns, including those students, can trigger panic and decrease the quality of life due to the spread of hoax news that continues to circulate even after the pandemic, coupled with the need to adapt to the new normal (Muslim, 2020). However, this is contrary to the findings of this study. The research on the quality of life of nursing students after the Covid-19 pandemic based on individual characteristics shows that the impact of the Covid-19 pandemic on students' quality of life is not proven. The research findings indicate that in the post-pandemic period, the quality of life of nursing students is generally good.

The good quality of life among nursing students may be attributed to the habits developed during the Covid-19 pandemic, such as regular exercise, digital communication, and a healthy lifestyle, which are still being practiced, especially by healthcare students, even after the end of the pandemic (Abdullah et al., 2020; Algamdi, 2021). Furthermore, the lack of decline in the quality of life of nursing students after the Covid-19 pandemic is because nursing students have deep knowledge and understanding of the importance of maintaining physical and mental health. Nursing students are empowered to care for themselves and maintain a balanced life. This awareness helps nursing students implement self-care practices that positively influence their quality of life (Jang & Lee, 2023). Good quality of life indicates that students can meet the needs of the four domains of quality of life, thus ensuring that the quality of life of nursing students remains well-maintained after the Covid-19 pandemic (Normalita, 2022).

In this study, the physical domain had the highest average quality of life score among all domains (68.25), followed by the social domain (68.18), the environmental domain (66.42), and the psychological domain (59.78). This is consistent with a study conducted by Cagri et al., (2020) on the quality of life of dental students, which stated that the physical domain had the highest quality of life score compared to other domains, with an average value of 71.31.

The highest score in the physical domain reflects good physical condition, adequate energy levels, and optimal functional abilities (Kupcewicz et al., 2020). High quality of life in the physical domain is often associated with good health, strength, and the ability to perform daily activities smoothly (Cruz et al., 2018). On the other hand, the lowest score in the psychological domain is related to the high level of stress among nursing students (Ribeiro et al., 2018). High and prolonged stress levels can interfere with cognitive functions such as concentration, problem-solving, and decision-making, leading to difficulties in meeting academic, work, or daily life demands, ultimately affecting the quality of life in psychological domains (Parsaei et al., 2020).

Gender dramatically influences an individual's quality of life (Gordon et al., 2017). Research findings indicate that males have higher average quality of life scores than females across all domains. Previous studies conducted on students in the health sciences faculty stated that the physical and psychological domains consistently had lower scores among female respondents compared to males (Torres & Paragas, 2019). Females have a

lower quality of life compared to males, which may be due to emotional fatigue experienced by females compared to males (Paro et al., 2014).

Studies show that females have a higher likelihood of experiencing emotional instability, anxiety, and depression than males (Torres & Paragas, 2019). In contrast to females, males have lower awareness of healthcare and psychological well-being (Kusev et al., 2017). In healthcare education, female students tend to feel anxious about academic achievement compared to male students (Paro et al., 2014). Therefore, males' quality of life scores are higher compared to females. Likewise, based on our study found that the quality-of-life score of male students has a score difference of 3.54 greater than that of female students, even though the two genders are in the range of good quality of life.

When considering educational levels, the quality-of-life scores of Nursing Professional Program students in this study was higher in all domains than Undergraduate Nursing Study Program students. Previous research mentioned that preclinical students, particularly first-year and final-year students, tend to face academic pressures that ultimately affect their quality of life (Lins et al., 2016). Previous study found that the experiences and knowledge gained before engaging in direct patient care significantly impact students' quality of life (Grande et al., 2021). For nursing professional program, the preclinical program conducted before field practice inspires, provides optimistic hope, and helps in achieving the necessary skills for direct nursing care (Mansour et al., 2016).

Social and financial support can influence students to cope with academic pressures, potentially leading to higher quality-of-life scores (Lins et al., 2016). This aligns with the findings of this study showed that Nursing Professional Program have the highest average scores in the social domain (74.00). In this case, nursing professional program are older compared to Undergraduate Nursing Study Program students. Consistent with the research conducted by Grande et al., (2021) on nursing students, the quality of life tends to improve as age increases.

During the Covid-19 pandemic, more than 6.7 million people in Indonesia have been infected with Covid-19, and 1.1 million cases have been recorded in West Java (Kemenkes, 2023). In Sumedang Regency, the Sumedang Regency Health Office reported 11,836 Covid-19 cases. In this study, 80 out of 276 respondents had experienced Covid-19 infection. The results of this study indicate that individuals who have never been infected with Covid-19 tend to have a higher quality of life scores in each domain compared to those who have been exposed, except in the environmental domain. Factors influencing the quality of life among Covid-19 patients include age, comorbidities, disease severity, and long Covid symptoms (Poudel et al., 2021). Covid-19 survivors experience significant and long-lasting physical and psychosocial health impacts, including relationships with partners and other family members (Shah et al., 2021). This is consistent with the findings of this study found that individuals who have had Covid-19 infection have a higher quality of life scores than those who have never been infected in the physical, psychological, and social domains. This can happen because a survivor has experience in dealing with the disease so they have better self-confidence to be able to overcome the fear of contracting the disease compared to those who have never suffered from the disease.

The quality of life among nursing students, which tends to be already good, needs to be maintained and even improved, as good quality of life will facilitate students in achieving productivity. Several efforts that can be made to improve the quality of life include providing education to respondents regarding: determining clear life goals, managing time effectively, actively participating in learning, utilizing existing resources, maintaining a balance between studies and personal life. Productivity and success in the

academic field will ultimately create healthy, productive nurses capable of providing optimal patient care (Nurjaman et al., 2023).

CONCLUSION

The quality of life of the nursing students in the post-pandemic era is good, as both the overall average scores of quality-of-life scores and its' domain are above the midpoint. The physical domain has the highest average score, while the psychological well-being domain has the lowest average score. Differences in individual characteristics indicated differences in the level of quality of life, including that male gender, students in professional programs and experience as survivors have higher quality of life scores. It is necessary to identify physical, psychological, social, and environmental barriers in students to maintain and even improve their quality of life, especially in the psychological domain, as the domain with the lowest score

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