

International Journal of Research Publication and Reviews

Journal homepage: www.ijrpr.com ISSN 2582-7421

Lifestyle Practices of Nurses and Association with Non- Communicable Diseases in the Philippines: A Cross-Sectional Study

Stephalyn Arabani, Jhoan H. Noguera, Gerrely F. Reposar, Edna Samillano, Arvin Zubiaga

Master of Arts in Nursing, St. Bernadette of Lourdes College; Quezon, City

ABSTRACT

INTRODUCTION

This research aims to investigate the health-promoting lifestyles of nurses and their potential association with non-communicable diseases (NCDs). Nurses play a crucial role in healthcare, but their demanding profession can expose them to various health challenges, possibly leading to NCDs. Despite their importance in the healthcare sector, there exists a gap in comprehensive research exploring nurses' health behaviors. This research employs a design focused on exploring the lifestyle choices of nurses in prominent Philippine locations, utilizing the Simple Lifestyle Indicator Questionnaire (SLIQ) as the primary instrument. The study aims to provide insights for training programs, policy recommendations, and specific interventions to strengthen the well-being of nurses and improve the quality of patient care. Furthermore, the results of the study significantly found that most of the respondents were at low risk for developing non-communicable diseases of the selected College in the Philippines, as they are able to practice healthy lifestyle by involving into different physical, psychological, and physiological activities.

METHODS

The study employed a descriptive research design to assess the lifestyle of selected nurses enrolled in graduate school and its association with non-communicable diseases (NCDs .the researchers use stratified random sampling technique .The researchers choose respondents among the students who are willing to participate into the study those who can or those who can answer the given questionnaire provided by the researchers. The target population for this study comprises 85 thesis track MAN students currently enrolled in SBLC Term 1 for the school year 2023-2024

RESULTS

The study the results presented above on the correlational study of lifestyle practices of nurses and association with non-communicable diseases in the Philippines. Based on the answers given by the respondents, the potential capacity of developing healthy lifestyle is critical due to physical and mental stability. It is shown that 40.85% of the surveyed population experiencing moderate stress for their daily lifestyle, and this contributes for developing various diseases which can affects their life. Nursing students are able to balanced their physical and mental health, which is indicative for a healthy lifestyle. However, on the categories of knowing the alcohol and cigarettes intake by the respondents, it can also hindrance on achieving healthy lifestyle among students.

Thus, it is often see based on the response that the case of well-being among the respondents are well maintained despite any circumstances. The findings of the study showed that most of the respondents were at low risk for developing non-communicable diseases of the selected College in the Philippines as they are able to practice healthy.

CONCLUSION

In conclusion, there were significant associations between lifestyle among students in St Bernadette of Lourdes College, as measured by the SLIQ. This study also found significant associations between certain dimensions of lifestyle, especially diet, exercise and stress as measured by the SLIQ. Further study in this area is needed to assess whether similar associations are present in more diverse populations, and to promote the understanding of lifestyle as a source of disparity. In exploring the lifestyle choices of nurses has been deeply understand and analyze as it became a prominent issues around the world specifically in Philippines.

Despite the fact that various situations associated with the achieving a healthy lifestyle among nursing students, the study revealed that most of the nurse are able to promote ways on how to be physically fit enable to control the spread of non-communicable diseases.

Keywords: nurses, lifestyle, practices, health concern, non-communicable diseases

INTRODUCTION

Nurses serve as the cornerstone of global healthcare systems, undertaking crucial responsibilities in patient care, advocacy, and education. Prioritizing the health and well-being of nurses is essential, given that their health directly influences patient outcomes, the standard of care delivered, and the overall efficiency of healthcare systems.

Nevertheless, nursing is an occupation marked by rigorous demands, encompassing elevated stress levels, extended working hours, and exposure to emotionally taxing situations. These conditions may contribute to both physical and mental health issues among nurses, potentially predisposing them to non-communicable diseases (NCDs). The prevalence of NCDs, such as cardiovascular diseases, diabetes, obesity, and mental health disorders, is escalating worldwide. Nurses, confronted with job-related stress and lifestyle complexities, may face an elevated risk of NCD development.

Thus, nurses, being at the forefront of public health, play a pivotal role in advocating healthy lifestyle habits to patients and their relatives. However, research indicates that nurses often don't adhere to standard health guidelines related to physical activity, sedentary habits, diet, smoking, and alcohol use. Significantly, nurses exhibit a higher prevalence of overweight and obesity compared to their counterparts in other healthcare professions and non-health sectors [1]. Analyzing the lifestyle preferences of nurses provides insights into areas that require enhancement, benefiting not only their personal well-being but also positioning them as influential role models and educators for patients.

Despite the critical role of nurses in healthcare, there is a relative scarcity of comprehensive research that explores their health-promoting behaviors and their association with NCDs. This research will contribute valuable insights to address this void in the current body of literature.

Meanwhile, healthy lifestyle can be described as a mode of living that reduces the chances of severe illness or premature death. While not every disease can be prevented, many, especially coronary heart diseases and lung cancer, can be circumvented. A balanced physical and mental health is often indicative of a healthy lifestyle. Thus, it is often the case that the well-being of the mind and body are interconnected, with changes in one impacting the other. NCDs are health conditions not caused by infections and aren't transmitted between people. They typically have a prolonged course and progress slowly. The main non-communicable diseases comprise cardiovascular conditions, cancers, chronic respiratory disorders, and diabetes. The World Health Organization (WHO) attributes these diseases largely to unhealthy lifestyles. The WHO also emphasizes the importance of effective surveillance of NCDs and their determinants to guide public health interventions, especially in low- and middle-income countries, including the Philippines [2].

METHODOLOGY

Research Design

The proposed research will employ a descriptive research design to effectively address the research problem. Descriptive research is a suitable approach when researchers aim to describe a situation or problem systematically and objectively. In this study, the design will guide the researchers in assessing the lifestyle of select nurses enrolled in graduate school and explore its association with non-communicable diseases (NCDs). Descriptive research design are used to observe and gather various data on a certain topic. It also provides an accurate picture of the population or phenomenon under study. Moreover, this type of research design aims to give a better understanding about the lifestyle of select nurses enrolled in graduate school and its association with non-communicable diseases (NCDs).

Population and Sampling Technique

To ensure that all nursing students have the chance of participating in the study, the researchers use stratified random sampling technique. The researchers choose respondents among the students who are willing to participate into the study those who can or those who can answer the given questionnaire provided by the researchers. The target population for this study comprises 85 thesis track MAN students currently enrolled in SBLC Term 1 for the school year 2023-2024. Regarding the level of accuracy, a confidence level of 95% indicates that there are 95 chances in 100 (or 0.95 in 1) that the sample results accurately represent the true condition of the population within a specified precision range. In contrast, there are 5 chances in 100 (or 0.05 in 1) that the sample results do not accurately represent the true condition, and 4.62% chances in 100 (or 0.0462 in 1) that it does not. In terms of the calculation, the desired sample size is 70.

Research Instrument

The researcher used a structured questionnaire which are divided into two main sections:

The questionnaire is in three (3) parts. Part I of the adopted survey questionnaire consists of the demographic information of the respondents, which includes: age, gender, marital status, ethnic group, religion, employment status, employment, years of employment, location of employment, monthly income, MAN program enrolled in, height, and weight. This part was constructed in multiple-choice format.

Part II of the questionnaire was also constructed in a multiple-choice format and established the prevalence of NCDs in the family history of the respondents. Part III of the questionnaire, also done in multiple choice type, establishes the simple health-promoting lifestyle practices of the respondents with sub-areas of diet, exercise, alcohol consumption, smoking, and life stress.

Data Analysis

In the data analysis procedure, descriptive statistics were utilized, including frequency and percentage distribution, to analyze the profile of the respondents including age, gender, employment status, monthly income, and Body Mass Index. The following statistical treatment were used to analyze, summarize, and present all the data gathered about the lifestyle of select nurses enrolled in graduate school and its association with non-communicable diseases (NCDs). And to ensure accuracy on data computations, the researchers used Microsoft Excel.

Ethical Considerations

Ethical considerations shall be maintained throughout the study, particularly during the survey and/or interview with respondents, to ensure that the participants rights are respected.

Social Value. As this study aims to assess the lifestyle of selected nurses enrolled in graduate school and its association with non-communicable diseases (NCDs) in St. Bernadette of Lourdes College (SBLC), the researchers adhere to building awareness among individuals who are directly related to the study. Thus, helping the people to become aware on the various physical and mental lifestyle among individuals that they need to maintain. It could also be beneficial to all health professionals as they are able to be provided by less cases of diseases related to unhealthy lifestyle. study.

Ethical Considerations cont.

Informed Consent. The study will use informed consent since the respondents are 18 years old and above who are already considered of legal age. The respondents will be told about the contents of the study and will ensure that the respondents understood exactly what the study is about and the importance of his/her participation. Prior to data collection, respondents will be asked if they are willing to take part in the survey. They will be told that their participation will be voluntary and that they may quit participation anytime they decide to stop answering the questions because of discomfort and other reasons. The questionnaire will be given to them after they accept the invitation to participate in the survey, at the same time as the interview goes on. The informed consent letter will be added to the opening section of the questionnaire for formality and to reiterate their right to participate or not to the study.

RESULTS

Table 1:Distribution of the respondents according to profile

Profile	Frequency	%
Age		_
>50 years old	8	11%
20-30 years old	10	14%
31-40 years old	36	51%
41-50 years old	16	23%
Gender		
Female	57	81%
Male	11	16%
LGBTQ	2	3%
Employment Status		
Employed	67	96%
Unemployed	3	4%
Monthly Income		
10,956 pesos and below	2	3%
10957-21,914 pesos	15	21%
21,915-43,828 pesos	39	56%
43,829-76,669 pesos	9	13%
76,670-131,484 pesos	2	3%
131,485-219, 140 pesos	1	1%
219, 141 pesos and above	2	3%
Body Mass Index		
Below 18.5	2	2.82%
Between 18.5 and 24.9	35	49.30%
Between 25 and 29.9	22	30.99%
30 or over	11	15.49%
Total	70	100%

Results found out that Regarding age distribution, the largest proportion falls within the 31-40 years old category, constituting 51% of the sample. In terms of gender, a significant majority, comprising 81%, identify as female, while males and individuals from the LGBTQ community make up 16% and 3%, respectively. Employment status indicates a predominantly employed respondent pool, comprising 96%. When considering monthly income, the majority fall within the 21,915-43,828 pesos range, constituting 56% of the sample. The table also The table also includes data on Body Mass Index (BMI), revealing that 49.30% of the respondents have a BMI between 18.5 and 24.9, indicating a normal weight range.

Table 2: Distribution of the respondents according to family history

Family History	Frequency	%	
Hypertension	45	38%	
Stroke	15	13%	
Heart Attack	9	8%	
Diabetes	9	8%	
Asthma	19	16%	
Cancer	14	12%	
Kidney Disease	8	7%	
Others	0	0%	

Results showed that the family history of various health conditions among the participants, detailing both the frequency and percentage of reported cases. Notably, 38% of the participants disclosed a family history of hypertension, indicating a significant portion with relatives who had experienced high blood pressure. Additionally, 13% reported a family history of stroke, 8% mentioned heart attacks, and an equal percentage disclosed a family history of diabetes.

Table 3:Distribution of the vegetable consumption & factors

Fruit Consumption & Factors	Not available in the market or around the community	Expensive	Prefer other food	Palatability-don't like the taste	No barriers
once a day	0	1	2	0	4
once a week	3	0	6	0	5
2-3 times per week	3	7	6	2	7
2 or more times per day	0	0	0	0	4
less than once per week	11	3	3	0	3

Results showed that vegetable consumption among participants, accompanied by factors influencing their choices. Respondents were asked to identify barriers or preferences affecting their vegetable intake, with options including "Not available in the market or around the community," "Expensive," "Prefer other food," "Palatability- they don't like the taste," and "No barriers." A detailed examination of the results reveals that participants eating vegetables once a day predominantly reported no barriers (4 responses), while occasional mentions included unavailability, expense, and a preference for other foods.

Table 4: Distribution of the fruit consumption & factors

Fruit Consumption & Factors	Not available in the market or around the community	Expensive	Prefer other food	Palatability-don't like the taste	No barriers
once a day	0	1	2	0	3
once a week	3	2	3	0	5
2-3 times per week	2	11	12	0	15
2 or more times per day	0	0	0	0	6
less than once per week	0	4	3	0	1

Respondents were queried about potential barriers or preferences impacting their fruit intake, including factors such as availability, cost, taste preferences, and any absence of barriers. Analyzing the responses, individuals consuming fruits once a day reported minimal obstacles, with only one participant mentioning cost and two expressing a preference for alternative foods.

Table 5: Distribution of the cereal consumption & factors

Cereal Consumption & Factors	Not available in the market or around the community	Expensive	Prefer other food	Palatability- don't like the taste	No barriers
once a day	0	0	0	0	4
once a week	1	4	5	1	5
2-3 times per week	2	6	9	0	5
2 or more times per day	0	0	1	0	5
less than once per week	5	8	6	2	1

Analyzing the responses, individuals consuming cereals once a day reported no obstacles, indicating a smooth and consistent consumption pattern with no significant hindrances. For those consuming cereals once a week, barriers included unavailability (one response), expense (four responses), a preference for alternative foods (five responses), and taste preferences (one response).

Table 6: Distribution of the exercise frequencies & factors

Exercise Frequencies and Factors	Lack of time	Social influence (friends and family not engaging in these activities)	Lack of energy	Lack of motivation	Fear of injury	Lack of skills	Lack of resources	Weather conditions	No barriers
Never	6	0	0	1	0		0	0	0
1-3 times per									2
week	39	0	2	1	0		1	1	2
4-7 times per									7
week	2	0	1	0	1		0	3	1
8 or more per									3
week	0	0	0	0	0		0	0	3

The analysis states that the, concerning the obstacle of "Lack of Time," 6 respondents reported never facing this hindrance, 39 encountered it 1-3 times per week, and 2 faced it 4-7 times per week. No respondents in these categories reported encountering this barrier 8 or more times per week. For "Social Influence," none of the respondents reported facing this barrier across all exercise frequency categories. Regarding "Lack of Energy," 2 respondents experienced this barrier 1-3 times per week, and 1 respondent faced it 4-7 times per week. "Lack of Motivation" was reported by 1 respondent in the 1-3 times per week category, while "Fear of Injury" was reported by 1 respondent in the 4-7 times per week category. "Lack of Skills" did not emerge as a reported barrier.

Table 7: Distribution of the alcohol frequencies & factors

Alcohol Frequencies and Factors	Peer pressure	Personal preference	Income (I can afford to buy an alcohol)	Income (I can't afford to buy an alcohol)	No barriers
Never	0	31	0	1	21
1 drink	1	6	0	0	2
2 drinks	2	2	0	0	1
3 drinks	0	2	0	0	0
4 drinks	0	0	0	0	1
5 drinks	0	0	0	0	0
6 drinks	0	0	0	0	0
7 drinks	0	0	0	0	0
8-13 drinks	0	0	0	0	0
14 drinks or more	0	0	0	0	1

A notable proportion of respondents reported never consuming alcohol, with personal preference and financial ease identified as the predominant reasons for abstaining. For those opting for a single alcohol, factors such as peer pressure, personal preference, and the absence of barriers played influential roles.

Table 8: Distribution of the smoking cigarettes & factors

Smoking Cigarettes and Factors	Peer pressure	Personal preference	Income (I can afford to buy a cigarette(s)/vape)	Income (I can't afford to buy a cigarette(s)/vape)	No barriers
Yes	0	3	0	0	2
No	4	39	0	0	22

It is found that the predominant reason cited by non-smokers was personal preference, contrasting with the limited number of smokers who identified personal preference and the lack of barriers as contributing factors to their smoking habits.

Table 9: Distribution of respondents according to level of stress

Level of Life Stress	Frequency	%	
Extremely Stressful	3	4.23%	
Severely Stressful	3	4.23%	
Much Stressful	12	16.9%	
Moderately Stressful	29	40.85%	
Mildly Stressful	19	26.76%	
Not at all stressful	4	5.63%	

The results indicate that The majority of respondents fall within the category of "Moderately Stressful," constituting 40.85% of the surveyed population. There is also a notable percentage of respondents who report "Mildly Stressful" experiences, comprising 26.76%. Additionally, a significant portion reports experiencing "Much Stressful," with 16.9% out of 100%. An equal number of respondents, 4.23% each, express extreme and severe stress levels. A smaller proportion, 5.63%, indicates that they do not experience stress at all. It is also noted that the average life stress of the respondents is 4 which is moderately stressful. This breakdown provides valuable insights into the varying degrees of stress experienced by the respondents, contributing to a comprehensive understanding of their mental well-being.

DISCUSSION

The results presented above on the correlational study of lifestyle practices of nurses and association with non-communicable diseases in the Philippines. Based on the answers given by the respondents, the potential capacity of developing healthy lifestyle is critical due to physical and mental stability. It is shown that 40.85% of the surveyed population experiencing moderate stress for their daily lifestyle, and this contributes for developing various diseases which can affects their life. Nursing students are able to balanced their physical and mental health, which is indicative for a healthy lifestyle. However, on the categories of knowing the alcohol and cigarettes intake by the respondents, it can also hindrance on achieving healthy lifestyle among students. Thus, it is often see based on the response that the case of well-being among the respondents are well maintained despite any circumstances. The findings of the study showed that most of the respondents were at low risk for developing non-communicable diseases of the selected College in the Philippines as they are able to practice healthy lifestyle by involving into different physical, psychological, and physiological activities.

CONCLUSION

In conclusion, there were significant associations between lifestyle among students in St Bernadette of Lourdes College, as measured by the SLIQ. This study also found significant associations between certain dimensions of lifestyle, especially diet, exercise and stress as measured by the SLIQ. Further study in this area is needed to assess whether similar associations are present in more diverse populations, and to promote the understanding of lifestyle as a source of disparity. In exploring the lifestyle choices of nurses has been deeply understand and analyze as it became a prominent issues around the world specifically in Philippines. Despite the fact that various situations associated with the achieving a healthy lifestyle among nursing students, the study revealed that most of the nurse are able to promote ways on how to be physically fit enable to control the spread of non-communicable diseases.

COMPETING INTEREST

No conflict of interest.

ACKNOWLEDGEMENT

The authors gratefully acknowledge all participants of the study particularly the nursing students of St. Bernadette of Lourdes College, and for the College Dean and professors for allowing us to do our study.

FUNDING

This research received no external funding.

AUTHORS CONTRIBUTION

The conceptualization, methodology, validation, formal analysis, inquiry, resources, writing-original draft preparation, writing-review and editing, and visualization were all equally contributed to by the writers. After reading the published version of the manuscript, each author gave their approval.

REFERENCES

- 1. Stanulewicz, N., Knox, E., Narayanasamy, M., Shivji, N., Khunti, K., & Blake, H. (2019). Effectiveness of Lifestyle Health Promotion Interventions for Nurses: A Systematic review. International Journal of Environmental Research and Public Health, 17(1), 17. https://doi.org/10.3390/ijerph 17010017
- 2. World Health Organization. (2018). Noncommunicable diseases country profiles 2018. World Health Organization. https://www.who.int/publications/i/item/9789241514620
- 3. Al Momani, M. M. (2021). Health-promoting lifestyle and its association with the academic achievements of medical students in Saudi Arabia. Pakistan Journal of Medical Sciences, 37(2). https://doi.org/10.12669/pjms.37.2.3417
- 4. Galvan, J. A. A., Sriram, S., & Tan De Luna, S. (2020). NON- COMMUNICABLE DISEASE RISK AT A WORKPLACE: TOWARDS A HEALTHY COMMUNITY. International Medical Journal, 25(3).
- 5. Medina, C., A. Legarde, M. A., & L. Katon, J. (2019, December 30). Health Practices and Lifestyle Components of University Administrative personnel: Risk Factor Assessment of Non-Communicable Diseases. https://www.asianjournalofresilience.com/index.php/ajr/article/view/4
- 6. Kayaroganam, R., Sarkar, S., Satheesh, S., Tamilmani, S., Sivanantham, P., & Kar, S. S. (2022). Profile of non-communicable Disease Risk Factors Among Nurses in a Tertiary Care Hospital in South India. Asian Nursing Research, 16(4), 241–248. https://doi.org/10.1016/j.anr.2022.07.001
- 7. Joseph-Shehu, E. M., & Ncama, B. P. (2019). Health- promoting lifestyle behaviour of workers: A systematic review. Occupational Health Southern Africa, 25(2) https://journals.co.za/doi/epdf/10.10520/EJC-151b961429
- 8. Joseph-Shehu, E. M., Ncama, B. P., Mooi, N. M., & Mashamba-Thompson, T. P. (2019). The use of information and communication technologies to promote healthy lifestyle behaviour: a systematic scoping review. BMJ Open, 9(10), e029872. https://doi.org/10.1136/bmjopen-201902987
- 9. Williams, J., Allen, L., Wickramasinghe, K., Mikkelsen, B., Roberts, N., & Townsend, N. (2018). A systematic review of associations between non-communicable diseases and socioeconomic status within low- and lower-middle-income countries. Journal of Global Health, 8(2). https://doi.org/10.7189/jogh.08.020409
- 10. Mak, Y., Kao, A. H. F., Tam, L. W. Y., Tse, V. W. C., Tse, D. T. H., & Leung, D. Y. P. (2018). Health-promoting lifestyle and quality of life among Chinese nursing students. Primary Health Care Research & Development, 19(6), 629–636. https://doi.org/10.1017/s1463423618000208
- 11. Alzahrani, S. H., Malik, A. A., Bashawri, J., Shaheen, S. A., Shaheen, M. M., Alsaib, A. A., Mubarak, M. A., Adam, Y. S., & Abdulwassi, H. K. (2019). Health-promoting lifestyle profile and associated factors among medical students in a Saudi university. Sage Open Medicine, 7, 205031211983842.https://doi.org/10.1177/2050312119838426
- 12. Almomani, M. H., Rababa, M., Alzoubi, F., Alnuaimi, K., Al Natour, A., & Ali, R. A. (2020). Effects of a health education intervention on knowledge and attitudes towards chronic non communicable diseases among undergraduate students in Jordan.Nursing Open, 8(1), 333–342. https://doi.org/10.1002/nop2.634
- 13. Gomez Del Pulgar, García Madrid, M. G., Cuevas Budhart, M. Á., Hernández-Iglesias, S., Kappes, M., Contreras, V. a. R., Rodriguez-Lopez, E., De Almeida Souza, A. M., Jurado, M. a. G., & Crespo-Cañizares, A. (2022). Best Nursing Intervention Practices to Prevent Non-Communicable Disease: A Systematic Review. Public Health Reviews, 43. https://doi.org/10.3389/phrs.2022.1604429
- 14. Helal, H. E. B., & El-Awady, M. A. (2022). Egyptian physicians' lifestyle behaviors and health promotion activities towards patients with chronic non-communicable diseases. Medical Science, 26.
- 15 Godwin, M., Streight, S., Dyachuk, E., van den Hooven, E. C., Ploemacher, J., Seguin, R., & Cuthbertson, S. (2008). Testing the Simple Lifestyle Indicator Questionnaire: Initial psychometric study. Canadian Family Physician, 54(1), 76-77.
- 16. Gore, M., Menon, K., Safai, A. A., Shukla, S., & Yeravdekar, R. (2020). Determinants of health- promoting lifestyles amongst Indian University students. International Journal of Health Promotion and Education, 59(3), 135–144. https://doi.org/10.1080/14635240.2020.1726202
- 17. Angeles Agdeppa, I., Sun, Y., & Tanda, K. V. (2020). Dietary pattern and nutrient intakes in association with non-communicable disease risk factors among Filipino adults: a cross-sectional study. Nutrition Journal, 19(1). https://doi.org/10.1186/s12937-020-00597-x

- 18. Lopez, E. M. (2018). Health Challenges for Non- Communicable Diseases among faculty, staff and administrators in selected higher educational institutions. International Journal of Advanced Nursing Education and Research. https://doi.org/10.21742/ijaner.2018.3.2.02
- 19. Rodrigues, V. et al.(2019). Vegetable Consumption and Factors Associated with Increased Intake among College Students: A Scoping Review of the Last 10 Years. Nutrients, № 7, p. 1634. https://doi.org/10.3390/nu11071634
- 20. Boca, GD (2021). Factors Influencing Consumer Behavior in Sustainable Fruit and Vegetable Consumption in Maramures County, Romania. Sustainability. 13(4):1812. https://doi.org/10.3390/su13041812
- $21. \, Singh, \, S. \, \& \, \, Vemireddy, \, V.(2023). \, Transitioning \, diets: \, a \, mixed \, methods \, study \, on \, factors \, affecting \, inclusion \, of \, millets \, in \, the \, urban \, population. \, BMC \, Public \, Health \, . \, \, https://doi.org/10.1186/s12889-023-16872-5$
- 22. Ferreira Silva, R. M., Mendonça, C. R., Azevedo, V. D., Raoof Memon, A., Noll, P. R. E. S., & Noll, M. (2022). Barriers to high school and university students' physical activity: A systematic review. PloS one, 17(4), e0265913. https://doi.org/10.1371/journal.pone.0265913
- 23. Fernandes,M. et al.(2019). Alcohol consumption among nursing students of a university center. Vol. 15, no. 2, pp. 38-44. https://doi.org/10.11606/issn.1806-6976.smad.2019.000401
- 24. Yiğitalp G. (2015). Factors Affecting Smoking Status of Nursing Students and Their Addiction Levels. Turkish thoracic journal, 16(3), 121–127. https://doi.org/10.5152/ttd.2015.4357
- 25. Zheng, MSN, Jiao, Jia-Rua, Hao, Wen-Nv MB, RN (2022). Stress levels of nursing students: A systematic review and meta-analysis. Medicine 101(36):p e30547. https://journals.lww.com/md-journal/toc/2022/09090