



# **AMERICAN JOURNAL OF INTERDISCIPLINARY RESEARCH AND INNOVATION (AJIRI)**

**ISSN: 2833-2237 (ONLINE)**

**VOLUME 2 ISSUE 1 (2023)**

**PUBLISHED BY  
E-PALLI PUBLISHERS, DELAWARE, USA**

## Quality of Life and its Correlates among Doctors in Uva province in Sri Lanka

Gayan Ariyadasa<sup>1\*</sup>, Nimalshantha Gamagedara<sup>2</sup>, Dasuni Jayawardane<sup>1</sup>, Nishani Fonseka<sup>1</sup>,Dilini Mataraarachchi<sup>1</sup>, Naveen Zoysa<sup>1</sup>, Mahesh Kumbukage<sup>1</sup>

### Article Information

**Received:** December 13, 2022**Accepted:** December 27, 2022**Published:** January 12, 2023

### Keywords

*Quality of Life, Medical  
Officers, Physical Activity,  
Doctors, Health Care*

### ABSTRACT

Higher quality of life among doctors has been identified as a key factor in increased productivity of health service delivery. This study was designed to determine the quality of life and its correlates among doctors in Uva province, Sri Lanka. A descriptive cross-sectional study using self-administered questionnaires was carried out. The study sample of 403 doctors was selected following a multi-stage stratified cluster sampling method. Independent T-test and one-way ANOVA were used appropriately to determine the statistical significance. The mean total quality of life score of study participants was 65.1 (SD ±11.3) and all the domains had mean scores above 50. Age category (Less than 40 years) showed a negative association with Quality of Life revealing an adjusted OR of 0.7 (95% CI: 0.45-0.92) while doctors who are involved in private practice demonstrated an adjusted OR of 2.68 (95% CI: 1.34-4.33). Involved in regular physical exercise (adjusted OR=1.34, 95% CI: 1.10-2.31), Level of qualification (Having post-graduate qualifications) (adjusted OR=2.98, 95% CI: 2.3-3.6), Not living with children (adjusted OR=0.87, 95% CI: 0.67-0.93), were the other significant predictors retained in the model ( $p < 0.05$ ). The level of total quality of life of doctors in Uva province was substantially high. Individual domain scores also showed higher acceptable levels. As far as the associated factors of quality of life among medical officers are concerned, several adjustable behavioral factors were identified and could be attended to further increase the quality of life among doctors.

### INTRODUCTION

The term “quality of life” typically refers to a person’s overall state of health and highlights both their good and unfavorable life traits. The quality of a person’s life is described in terms of their physical health, financial security, education, family life, place of employment, religious convictions, and psychological well-being. The notion also takes note of a very broad range of situations, such as politics, the environment, healthcare, and development. There are metrics for measuring the quality of life that also consider affluence, physical and mental well-being, the built environment, education, leisure activities, and leisure time.

One of the most well-respected professions in the world is medicine. In the majority of the world’s countries, many kids have had the desire to become doctors since they were little. It is also thought to be a very stressful job, too. It is well-known that medical workers experience significant levels of stress and burnout (Liang, Wang, and Tao 2015). Numerous research has been conducted in different parts of the world to investigate the elements that affect medical doctors’ quality of life. Medical professionals are having a lot of problems with their quality of life. Several contributing aspects were described in detail and linked to the quality of life of medical professionals. The advancement of online-based health information, frequent reporting of malpractice in healthcare delivery, deterioration of doctor-patient relationships, and physicians’ hectic schedules have all had a significant impact on how medical officers perform. The repercussions of a doctor’s poor quality of life are

severe. A doctor with a low quality of life is more likely to have dissatisfied patients.

To provide healthcare services at their best, which will benefit the entire society, it is vital to understand the elements related to the quality of life among them. Sri Lanka’s medical industry has a rich history. Sri Lankans have developed a distinctive system of indigenous, traditional medicine that they had long used. Generally speaking, its traditional medical systems include allopathy, Ayurveda, Unani, and several more. The allopathic medical system is now in use and meets the majority of the population’s health needs. Compared to other practices, western medicine is used more frequently. Similar to many other nations, the Sri Lankan health system combines medical services from the public and private sectors. Regarding the offerings of the government, it has a free health care system that offers medical services to all citizens without a fee. The difficulties that government medical personnel, particularly in rural settings, faced led to the research challenge. The medical officers’ quality of life was significantly impacted by a lack of facilities, poor housing conditions, challenging environmental elements, and a heavy workload. Uva province is the second least populated province on the island. The capital city is Badulla, and the other closing district is Monaragala. There are many sub-most appropriate dwelling conditions consisting of loss of centers, gaps in human sources in all sectors, unsatisfactory environmental situations, and difficult terrain.

It has been assumed that a full-size quantity of government medical officers should be unhappy with

<sup>1</sup> Community Medicine-Ministry of Health, Sri Lanka

<sup>2</sup> Maternal and Child Health, Sri Lanka

\* Corresponding author’s e-mail: [ariyadasagayan@gmail.com](mailto:ariyadasagayan@gmail.com)

their pleasant life due to many factors. These motives have brought about to pick of Uva province as the observed setting. The cause of this has a look at turned to assess the quality of lifestyles of doctors in Uva province at the same time as understanding the socio-demographic, bodily health, psychological fitness, and environmental elements associated with it. Keeping the most desirable satisfactory lifestyles of doctors inside the province may be very tons beneficial to beautify their job pride and ultimately the offerings first-class. It will have a sizable amount of benefit to the human beings dwelling there of their fitness wishes.

According to the WHOQOL –BREF Questionnaire the exceptional lifestyles of doctors were assessed and transformed into final domain scores at the man or woman level. The satisfactory life rankings have been calculated according to the given WHOQOL –BREF suggestions. The study has meant to quantitatively investigate Quality of life with the subsequent sociodemographic characteristics particularly; age, gender, operating sector, marital fame, location of residing, mode of transport, earnings degrees, whether or not doing personal exercise or no longer, residing with the family or no longer, journeying time to the medical institution from the house. In addition, a fine of existence ranking was compared among participants to find the relationships between decided bodily fitness and psychological and environmental traits. consequently, these observations can be used as floor evidence for fitness managers and policymakers at district, provincial, and country-wide levels to recognize the troubles encountered by the authorities' clinical officers and bear in mind the feasible upgrades inside the destiny. The objective of this study was to determine the quality of life and its associated factors among government medical officers in Uva province, Sri Lanka.

## LITERATURE REVIEW

Nowadays medication is practiced by well-skilled specialists. The process has dramatically changed with time. There were many historic traditions of medicine orientated in Babylon, China, Egypt, and the Indian sub-continent approximately 3 thousand years ago. historic Babylonians mentioned having provided prescriptions to their sufferers by using their healers. The towering parent within the records of drugs, properly referred to as “the father of medicine” Greek medical doctor Hippocrates (460-370 BC) made an amazing impact with the Hippocratic Oath, which is still relevant and used nowadays. medical doctors have been begun their exercise in hospitals around the ninth century. Medical colleges had been started in the twelfth century in Italy. The traditional medicinal drug and other practices largely benefited in the nineteenth century with the resource of modern-day offerings. Medical doctors have emerged as incredible heroes with the new generation. The subject has stepped forward with sound technical steerage and extensive understanding. There was sufficient evidence

in the literature pointing out that cutting-edge medical practices are associated with stress, burnout, distress, and dissatisfaction among doctors. About 30% of doctors have been suggested to have experienced repeated burnout at a given point in time. Further to that doctors are 15 times more likely to have job pressure relative to the other parallel professions (Eslami Akbar *et al.* 2015). There had been many worries about loss of control over the busy schedules, time management, poor sleep patterns, interferences with a circle of relative's sports, negative self-care, administrative issues, children's education troubles, and residing environments. A cross-sectional study was done in China titled “QOL of young clinical doctors in public hospitals in China's developed cities as measured by the Nottingham health profile” (Liang *et al.* 2015). The study aimed to measure the quality of life of young medical doctors. A multistage random sampling technique was used as the sampling method. The major finding of the study was the physical mobility and pain domain has reported very low mean values. Descriptive statistics were used in presenting data. Analysis was done with ANOVA and linear regression models. The main conclusions of the study were significantly reduced physical mobility domain scores among young doctors and female gender was having significantly low scores in quality of life. The workload and the quality of life of medical doctors in the field of oncology in Germany were researched (Hipp *et al.* 2015)

The study aimed to investigate stress and self-satisfaction among doctors. It was a cross-sectional descriptive study on German oncological physicians. The sample was 267. A nonprobability sampling technique was used. Data collection was done in one of their annual meetings. The study instrument was a forty-eight-item self-administered questionnaire developed by the QOL working group in the hospital. The results revealed that female participants were having significantly low QOL scores ( $P < 0.02$ ). A cross-sectional study has been done in Sao Paulo on “Quality of life, physical and mental health of physicians” (Torres and Paragas 2019). The study aimed to analyze the quality of life and physical health outcomes of the demographic data.

The study sample was 2864 medical doctors. The results of the study revealed that there were very good and good levels of quality of life in the majority of the medical doctors. The data were analyzed by using a logistic regression model. Nonprobability sampling methods were used, and only cross-sectional data were assessed. There was a cross-sectional study done in Taiwan, aimed to study mental health and quality of life among doctors, nurses, and other hospital staff (Su *et al.* 2009).

The objective of the study was to find out the association between stress and the quality of life of the clinical staff at Taiwan regional general hospital. The sample size was not mentioned, and they have taken all the staff of the hospital as the sample. Chinese health questionnaire and WHO–QOL–BREF tool were used as the study instrument. Multivariate analysis was done. The study

has concluded that the overall quality of life of the study sample was poor. The study recommended improving the status of the staff with psychological support.

## METHODOLOGY

### Study design

This was a Descriptive cross-sectional study with an analytical component.

### Study setting

As far as the health care institutions in the province are concerned, there were two tertiary care hospitals under line ministry administration. They were the provincial general hospital, Badulla, and the district general hospital, Monaragala. 91 healthcare institutions were under provincial council administration. Six and 27 out of those healthcare institutions were secondary care hospitals and preventive healthcare institutions.

### Study Population

Grade medical officers who were working in the government healthcare institutions in Uva province during 2017 were included in this study. Medical officers from both preventive and curative healthcare institutions who worked at least one year after the post-internship period were included in the study.

### Sample size

The minimum required sample size was 384. Having considered the nature of the study population 10% non-response rate was applied to arrive at the final sample size. Therefore, the final sample size was 426 study participants.

### Sampling method

The stratified cluster sampling method was used as the sampling technique in this study. The majority of medical officers are working at PGH Badulla and DGH Monaragala in Uva province. There are 6 base hospitals, 29 divisional hospitals, 27 MOH divisions, and several special campaigns under the two RDHS areas.

### Study instruments

Two main study instruments used in this study were the WHO-QOL-BREF assessment questionnaire and basic information, sociodemographic, physical, psychological, and environmental characteristics questionnaire.

### Pretesting

Pretesting was done at the RDHS office, in Monaragala. The participants for pretesting were a group of medical officers from primary medical care units in the district. There were twenty medical officers who participated in the pretest.

### Data entry and analysis

The data entry and analysis were conducted by the principal investigator under the guidance of the

supervisor. A detailed data entry sheet was prepared with SPSS 23.0 software. Data entry was carried out in parallel to data collection and range checks and skip functions were followed to ensure the accuracy of data entry.

Necessary corrections were made after periodic frequency analysis was done. Appropriate dummy tables for frequency distributions as well as cross-tabulations were made having considered the specific objectives of the study. The entire data analysis was carried out with SPSS 23.0 software. Independent t-test as well as One way ANOVA was used as significant tests. P values and 95% Confident Intervals were reported wherever appropriate.

### Ethical issues and clearance

The study participants of this study were grade medical officers who were working in the Uva Province at the time of data collection. A validated self-administered questionnaire was used for the data collection in this study. There were some sensitive questions in the psychological domain section. Consultant psychiatrist, BH Tangalle and the medical officer of mental health from DGH Monaragala provided the necessary guidance on preparing questions and the data collection process respectively.

All possible measures were taken to avoid disturb at for their routine work in the institution. The end of lunchtime and tea times were taken to introduce the questionnaires. Adequate time was provided for each of them. Some of the study participants were asked for their level of quality of life just after the data collection. The principal investigator provided the necessary guidance to get an idea regarding individual scores. There were no incentives provided to study participants for being participated in this study. However, the conclusions and recommendations may be very much helpful for the future planning process of medical officers' human resource management. All the completed questionnaires were collected after counting and they were kept in lock and key by the principal investigator. Nobody was allowed to access the database of the study to ensure the confidentiality of the data collected. Computerized data sheets and SPSS-analyzed data were also password protected and further ensured confidentiality. The ethical clearance was obtained by the ethics review committee, Post Graduate Institute of Medicine, Faculty of Medicine, Colombo.

## RESULTS

This study was a descriptive cross-sectional study. The calculated total sample size was 426-grade medical officers who were working in the Uva province at the time of selecting study participants. The data collection was carried out in their working stations itself. The total number of grade medical officers who participated in the study was 403. Therefore, the non-response rate in our study was 5.4%. The expected non-response rate was 10% at the designing stage of this study. Therefore, the response rate of this study was considered satisfactory (94.6%).

**Table 1:** Distribution of the study population by physical health domain score

Characteristic	Mean	SD	95% CI
Physical Health Domain	67.4	13.7	66.1, 68.8

The mean physical health domain score among study participants was 67.4 (SD = 13.7) (95% CI 66.1, 68.8). There 52.4% of study participants were between 50.0 – 74.9 scores.

**Table 2:** Distribution of the study population by psychological domain score

Characteristic	Mean	SD	95% CI
Psychological health Domain	64.3	13.2	62.9, 65.5

*SD = Standard Deviation, CI = Confidence Interval*  
The mean score of the psychological health domain was 64.3 (SD = 13.2) (95% CI 62.9, 65.5) and 67.5% of study participants were having scores between 50 and 74.9.

**Table 3:** Distribution of the study population by Social relationship domain score

Characteristic	Mean	SD	95% CI
Social relationship domain	65.8	17.8	64.1, 67.5

*SD = Standard Deviation, CI = Confidence Interval*  
The mean score for the social relationship domain was 65.8 (SD = 17.8) (95% CI 64.1, 67.5). There was a substantial amount of study participants (50.1%) who were having scores above 75.

**Table 4:** Distribution of the study population by environmental domain score

Characteristic	Mean	SD	95% CI
Environmental Domain	62.9	13.1	61.6, 64.2

*SD = Standard Deviation, CI = Confidence Interval*  
The mean score for the environmental domain was 62.9 (SD = 13.1) (95% CI 61.6, 64.2). The majority of the study participants (61.8%) were having scores for the environmental domain between 50 and 75.

**Table 5:** Distribution of the study population by a total average score

Characteristic	Mean	SD	95% CI
Total quality of life score	65.1	11.4	64.0, 66.2

*SD = Standard Deviation, CI = Confidence Interval*  
The mean overall quality of life score was 65.1 (SD = 11.4) (95%CI 64.1, 66.2) in this study population. The majority of them were having scores between 50 and 75.

**Multivariate logistic regression model with selected associated factors for quality of life in the study population**

The Omnibus test of the model coefficient was significant. There were five independent variables were

retained in the final model. The Hosmer-Lemeshow test statistic was indicated that the model adequately fits the data and supported the model ( $\chi^2=4.401$ ;  $df= 06$ ;  $p=0.634$ ). Furthermore, 54.7% of the data was correctly predicted by the new model. The independent variables which were included in the final model were presented and the association between each factor with the Quality of life was mentioned as an adjusted Odds Ratio (AOR). There were five associated factors were retained in the

**Table 6:** Multivariate logistic regression model with selected associated factors for quality of life in the study population

Factor	B	SE	Sig	AOR	95% CI for AOR )
Age category in years Less than 40 years	-0.336	0.227	0.03	0.7	0.45-0.92
Involved in private practice Yes	0.988	0.560	0.02	2.68	1.34-4.33
Involved in regular physical exercise Yes	0.297	0.434	0.494	1.34	1.10-2.31
Level of qualification Postgraduate qualifications	1.094	0.8	0.172	2.98	2.3-3.6
Status of BMI Abnormal	-0.137	0.129	0.289	0.87	0.67-0.93

final model. These variables demonstrated statistical significance with Quality of Life after adjusting for the confounders. In the final model, all the retained factors were statistically significant with the contribution to the model at a p-value less than 0.05. Age category (Less than 40 years) showed a negative association with Quality of Life revealing an adjusted OR of 0.7 (95% CI: 0.45-0.92) while doctors who are involved in private practice demonstrated an adjusted OR of 2.68 (95% CI: 1.34-4.33) with the Quality of Life. Involved in regular physical

exercise (adjusted OR=1.34, 95% CI: 1.10-2.31), Level of qualification (Having post-graduate qualifications) (adjusted OR=2.98, 95% CI: 2.3-3.6), Not living with children (adjusted OR=0.87, 95% CI: 0.67-0.93), were the other significant predictors retained in the model.

**DISCUSSION**

The medical profession is recognized as a highly stressful job due to its inherent work characteristics and changes in routine practice. The objectives of this study were

mainly focused on assessing the levels of quality of life among grade medical officers in Uva province using the WHO-QOL-BREF tool. The study was also intended to determine the relationship between the quality of life and with sociodemographic, physical health, psychological and environmental characteristics of the study participants. The mean total quality of life score of study participants was 65.1 (SD  $\pm$ 11.3) and all the domains had mean scores above 50. The mean quality of life among grade medical officers in Uva Province ( $\bar{x}$  = 65.1) (SD=11.3) is comparatively higher.

Although there were multiple concerns with busy schedules and burnout among doctors, being a doctor is still considered to be worthwhile. Children still strive hard to become doctors. A relatively high salary, personal satisfaction, job stability, ability in engaging in private practice, and well recognition in the community still make the profession in higher ranks. Similar findings were reported in a cross-sectional study that revealed that good or very good scores of quality of life were found among physicians who graduated from Sao-Paulo state university (67.8%)(Torres *et al.*, 2011).

In Bivariate analysis following characteristics were associated with a higher quality of life and the differences were statistically significant ( $p < 0.05$ ), namely, being a male, having postgraduate qualifications, having higher working experience, having two or more children, having good family income, doing private practice, living in an own house, maintaining optimal level of Body Mass Index, free of Noncommunicable diseases, doing regular physical exercises, having adequate sleep and being satisfied with the leisure time. The total quality of life was not associated significantly with age, marital status, ethnicity, religion, working sector, traveling time, or status of consuming alcohol.

There were five associated factors were retained in the final Multivariate logistic regression model. These variables demonstrated statistical significance with Quality of Life after adjusting for the confounders. In the final model, all the retained factors were statistically significant with the contribution to the model at a  $p$ -value less than 0.1.

Age category (Less than 40 years) showed a negative association with Quality of Life revealing an adjusted OR of 0.7 (95% CI: 0.45-0.92) while doctors who are involved in private practice demonstrated an adjusted OR of 2.68 (95% CI: 1.34-4.33) with the Quality of Life. Involved in regular physical exercise (adjusted OR=1.34, 95% CI: 1.10-2.31), Level of qualification (Having post-graduate qualifications) (adjusted OR=2.98, 95% CI: 2.3-3.6), Not living with children (adjusted OR=0.87, 95% CI: 0.67-0.93), were the other significant predictors retained in the model.

Grade medical officers who have worked more than 5 years were having the highest mean quality of life score ( $\bar{x}$  =67.1, SD = 12.3) and those who were less than two years of service had the lowest ( $\bar{x}$  = 63.4, SD = 10.8). The stress levels go down slowly with maturity. The majority of medical officers may reach their life targets with financial and social stability. Therefore, the level of

quality of life among medical officers could be generally good with higher working experience.

Overall satisfaction of an individual's life depends largely on his finances. The complexity of the expenses, higher cost of living, self-satisfaction, and the ability to invest and savings were all could be contributed to having a good quality of life among medical officers who were having a better monthly income. A Study was done on overall life satisfaction and financial well-being revealed that there was an enormous amount of impact on a good quality of life and better financial status (Campana, Vieira, and Potrich 2017). Further to that, another study reported "good financial prospects for the present and the future monetary security maximize the well-being of life and better quality of life (Kautonen, Kibler, and Minniti 2017).

The current study also identified that study participants who was engaging in private practice was having a better quality of life scores, even with busy schedules and time factors. This also reflects the relationship between financial stability and quality of life among medical officers. As far as physical health characteristics are concerned, it was found that 71.5% ( $n$  =288) of medical officers working in the province were not doing regular physical exercises.

Generally, medical practitioners are supposed to transfer healthy lifestyle messages to their clients in terms of preventing NCDs. This observation indicates that medical officers in Uva province have not done regular physical exercises. It is interesting that they are supposed to pass healthy lifestyle messages to people for better health. Busy working hours, lack time, lack of interest in physical exercise, attitudes, and family commitments may be possible reasons for medical officers being not involved in regular physical exercises.

The current study has also found that better quality of life scores were significantly associated with regular physical activities among medical officers. The consistency in this association indicates the importance of regular physical exercise for medical officers. There were 68.5% ( $n$ =228) of medical officers in the current study who were maintaining their BMI in the normal range which was significantly associated with good quality of life ( $p$ =0.004). However, it should be emphasized that a substantial proportion of medical officers were having either low ( $n$  = 15, 4.5 %) or high ( $n$  = 91, 27.0%) BMI levels. Sedentary lifestyles, lack of involvement in physical exercises, lack of interest, lack of facilities, and unhealthy dietary patterns could be possible reasons for the observed relationship on BMI among medical officers. Similar results were observed in a study done on "physicians BMI and weight counseling"(Bailey, 2010).

There were a number of studies around the globe to examine the WHO-QOL-BREF tool's performances and psychometric properties. A report from the WHO-QOL group revealed that "WHO-QOL-BREF has well to excellent psychometric properties on reliability and validity. A descriptive cross-sectional study indicated

that the WHO-QOL-BREF tool was “sound and cross-culturally valid” (Desalegn *et al.* 2020). There were some sensitive questions in the questionnaires on sexuality, personal behaviors, non-communicable diseases, and BMI levels. Responses to these questions may have given rise to information bias. A number of measures were taken to minimize these biases in the study. Using random sampling techniques, adhering to inclusion and exclusion criteria during the selection of the study participants, validated questionnaires being used, pre-testing study instruments, and providing adequate time to complete the questionnaires were some of them.

### Limitations of the Study

This study has only analyzed cross-sectional data and therefore, it was not able to explore the temporality of associated factors about the quality-of-life scores. The study settings selected were healthcare institutions in the Uva province. The demographic, socio-economic, and environmental characteristics, development, and economy in the province were not equally distributed within the province. This difference could not be accounted for in the analysis. WHO-QOL-BREF tool comprised four domains. As far as the feasibility of the study is concerned, associated factors were determined according to the mean total quality of life scores. It is more descriptive if the study could analyze data and determine associated factors for each domain separately. However, this was not considered in the analysis of this study. The study has not discussed work stress among medical officers in detail. However, it may be a major factor associated with the quality of life among grade medical officers.

### CONCLUSION AND RECOMMENDATION

Even though the mean total quality of life score was high, the mean environmental domain score was substantially low compared to the other three domains. Therefore, it recommended further analyzing and determining factors coming under the environmental domain which may be poor as far as the grade medical officers’ life is concerned. Those identified associated factors together with the level of quality of life among grade medical officers should be considered in future human resource development at the national as well as provincial levels to further improve the level of quality of life among medical officers. It is also recommended to make aware of the increased risk of having non-communicable diseases to grade medical officers as only a very low proportion of medical officers were engaging in physical exercise.

An emphasis should also be made on encouraging regular physical exercises, behavioral change on risk factor prevention such as smoking and alcohol consumption and maintaining optimum BMI levels. The establishment of facilities for grade medical officers to do regular exercises at their workplaces is recommended. Establishing health clubs for health staff in health institutions and implementing a regular NCD screening program is also recommended.

### Further Research Areas

It was found that there were no studies on the quality of life among medical officers conducted in Sri Lanka. Therefore, there is a large vacuum for quality-of-life studies among medical professionals. It is very important to conduct follow-up studies on behavioral factors among medical professionals to further explore factors affecting quality of life by assessing temporal relationship and strong associations.

### REFERENCES

- Campara, J. P., Vieira, K. M., & Potrich, A. C. G. (2017). Overall life satisfaction and financial well-being: Revealing the perceptions of the beneficiaries of the bolsa família program. *Revista de Administração Pública*, 51(2), 182–200. <https://doi.org/10.1590/0034-7612156168>
- Desalegn, D., Girma, S., Tessema, W., Yeshigeta, E., & Kebeta, T. (2020). Quality of Life and Associated Factors among Patients with Schizophrenia Attending Follow-Up Treatment at Jimma Medical Center, Southwest Ethiopia: A Cross-Sectional Study. *Psychiatry Journal*, 2020, 1–7. <https://doi.org/10.1155/2020/4065082>
- Eslami Akbar, R., Elahi, N., Mohammadi, E., & Fallahi Khoshknab, M. (2017). How Do the Nurses Cope with Job Stress? A Study with Grounded Theory Approach. *Journal of Caring Sciences*, 6(3), 199–211. <https://doi.org/10.15171/jcs.2017.020>
- Kautonen, T., Kibler, E., & Minniti, M. (2017). Late-career entrepreneurship, income and quality of life. *Journal of Business Venturing*, 32(3), 318–333. <https://doi.org/10.1016/j.jbusvent.2017.02.005>
- Liang, Y., Wang, H., & Tao, X. (2015). Quality of life of young clinical doctors in public hospitals in China’s developed cities as measured by the Nottingham Health Profile (NHP). *International Journal for Equity in Health*, 14(1), 1–12. <https://doi.org/10.1186/s12939-015-0199-2>
- Raphael, D., Rukholm, E., Brown, I., Hill-Bailey, P., & Donato, E. (1996). The quality of life profile - Adolescent version: Background, description, and initial validation. *Journal of Adolescent Health*, 19(5), 366–375. [https://doi.org/10.1016/S1054-139X\(96\)00080-8](https://doi.org/10.1016/S1054-139X(96)00080-8)
- Su, J. A., Weng, H. H., Tsang, H. Y., & Wu, J. L. (2009). Mental health and quality of life among doctors, nurses and other hospital staff. *Stress and Health*, 25(5), 423–430. <https://doi.org/10.1002/smi.1261>
- Torres, G. C. S., & Paragas, E. D. (2019). Social determinants associated with the quality of life of baccalaureate nursing students: A cross-sectional study. *Nursing Forum*, 54(2), 137–143. <https://doi.org/10.1111/nuf.12306>
- Vahedi, S. (2010). World Health Organization Quality-of-Life Scale (WHOQOL-BREF): Analyses of Their Item Response Theory Properties Based on the Graded Responses Model.