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Quality of life and its associated factors among government medical officers in Uva province, Sri Lanka

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Keywords
Quality of life, Medical officers, Physical activity, Doctors, Health care, Job satisfaction

ABSTRACT

Introduction
Higher quality of life among medical officers has been identified as a key factor in increased productivity of health service delivery.

Objectives
This study was designed and conducted to determine the quality of life and its associated factors among medical officers in Uva province.

Methods
A descriptive cross-sectional study using self-administered questionnaires was carried out on the study population. The study sample of 403 of grade medical officers was selected following a multi-stage stratified random sampling method in selected health institutions. Independent t-test and one-way ANOVA were used appropriately to determine the statistical significance.

Results
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. The age category (Less than 40 years) showed a negative association with Quality of Life revealed 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 ($p < 0.05$).

Conclusions and recommendations
The level of total quality of life of government medical officers in Uva province was substantially high. Individual domain scores also showed higher acceptable levels. Similar to our findings, studies in the literature have shown a higher level of quality of life among medical officers (Liang et al., 2015).
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 medical officers. Therefore, appropriate measures are possible to be taken at the national as well as the provincial level to further increase the quality of life among these very important healthcare providers.

INTRODUCTION

World health organization defines quality of life as "the individual perception of their position in life in the context of the culture and value systems in which they live and with their goals, expectations, standards and con-

cerns"(Anon 1996b). Quality of life usually refers general well-being of the people and indicates their positive and negative characteristics of life. It includes the satisfaction of an individual's life describing physical health, wealth, finance, education, family, employment, religious beliefs, environment, and psychological well-being. The concept also observes a very wide range of contexts including healthcare, development, politics, and the environment. There is the quality of life measuring standard indicators and which are further concerned about physical health, psychological health, wealth, built environment, education, recreational activities, and leisure time.

Quality of Life of Medical Officers

Medicine is considered one of the most highly reputed professions in the universe. Many children aspire to become physicians since their early childhood in most parts of the world. However, it is also regarded as a highly stressful job. It is a known fact that professionals in medicine are encountering a considerable amount of burnout and stress (Liang, Wang, and Tao 2015). Many studies all over the world have attempted to explore the quality of life of medical doctors and its associated factors.

It is evident that medical officers are encountering many issues regarding their quality of life. There were many contributory factors described in detail that have been associated with the quality of life of medical doctors. Job satisfaction, occupational stress, internal individual characteristics, personal attitudes, administrative practices, sense of achievement, and occupational honor are a few of them. The concept of quality of life is also accepted as a multi-dimensional and important aspect which is encountering all life situations.

The quality of life of a medical doctor is of utmost importance, which is directly related to the healthcare services provided by him or her in terms of quality and quantity. The working environment of medical officers also has changed considerably during the last few decades with the improvements of online-based health care information, frequent reporting of malpractices in healthcare provision, diminished doctor-patient relationships, and busy schedules of physicians. The consequences of the poor quality of life of a medical doctor are overwhelming. It is more likely that a physician with a poor quality of life, having less satisfied patients. So it is very important to understand the factors associated with quality of life them to achieve optimal healthcare service provision which will be a benefit for the entire society.

Medical Profession in Sri Lanka

The medical profession in Sri Lanka is having a long history. Sri Lankans owned their unique scheme of indigenous traditional medicine, practiced for many years. Generally, its health system consists of Allopathic, Ayurveda, Unani, and several other systems of traditional medicine. The allopathic system of medicine is the dominant one in the current era and it is catering to the majority of the population's health needs. Western medicine is practiced more commonly compared to other practices. Similar to many other countries Sri Lankan health system consists of both government and private sector medical services. Considering the government services, it has a free health care system, which provides health services to all citizens free of charge. The system mainly consists of preventive and curative health care services and that is a national priority to provide health care to all people.

All medical doctors in the government sector in Sri Lanka are properly qualified and well-trained through an established health education system. Despite low levels of per capita health expenditures, Sri Lanka has achieved huge success in its health care. Generally, government sector medical doctors are working in government hospitals as well as private health care institutions outside their duty hours. Some of them are engaging in medical administration, healthcare planning, and special campaigns in the health system as well. A proportion of Sri Lankan medical doctors are also working as part-time general practitioners after their routine duty hours. Most private practices are carried out as individual practices and some doctors are working in private hospitals on a shift basis. Any doctor who has completed his or her internship successfully and registered in Sri Lanka Medical Council is having eligibility to engage in the practice. It is obvious that the job of Sri Lankan medical doctors too has lost its charm gradually as it has used to be in the past with the changes in society.

Healthcare Delivery System in Uva Province, Sri Lanka

Uva province is enriched with very diverse and exciting traveling attractions. It is very popular among both foreigners and the local population. The capital of the province is nearly 250 km away from the central city of Colombo. There are two districts, namely Badulla and Monaragala. The provincial borders are Eastern, Southern, Central, and Sabaragamuwa provinces. The total mid-year population estimated in 2017 in the province is 1,349,545 (nearly 1.35 Million) (Uva Statistics 2017).

In terms of providing curative health care services, there are two major tertiary care institutions namely Provincial General Hospital, Badulla, and District General Hospital Monaragala, where the majority of the medical officers are working. The curative healthcare system in the province also includes six base hospitals and twenty-nine divisional hospitals. The preventive healthcare services are mainly provided by the twenty-seven medical officer of health offices and special campaigns under both regional directorates of health areas. The two major curative institutions are under the line ministry and the rest of the health establishments are governed by the provincial council. There are seven hundred and twenty-two medical officers are currently working in the province (PDHS 2017).

Research Problem, Current literature, and Study Objectives

The research problem has derived from the adversities that were encountered by the government medical officers, especially in the rural setup. Lack of facilities, sub-optimal living conditions, difficult environmental factors, and a heavy workload were negatively affected the quality of life of the medical officers in the province. Current literature on global setup physicians 'anxiety, job satisfaction, and quality of life has been extensively investigated (Gramstad, Gjestad, and Haver 2013). However, in Sri Lankan context, there was a limited number of studies directly focused on doctors' quality of life. There were few studies carried out in the two districts in terms of researching medical doctors' job satisfaction and the correlates. There was a descriptive cross-sectional study done on job satisfaction among medical officers in Kurunegala district in 2006 revealed that 67.1% of doctors were satisfied with their current profession (Pathiraja 2006). A descriptive cross-sectional study done in 2012 on the factors affecting job satisfaction among government medical officers in Puttalam district describes that 45% of doctors were hardly satisfied with their jobs (Ponweera 2012). However, there is a knowledge gap on the overall quality of life of doctors in the local setup. The objectives of this study have focused on fulfilling those knowledge gaps on the quality of life of doctors and its associated factors. The purpose of this study has aimed to determine the quality of life of a doctor quantitatively by using the WHO-QOL-BREF questionnaire (Anon 1996a). There is a calculated summary measure for each medical officer according to their total quality of life. Each participant had a row of scores for physical health, psychological, social relationship, and environmental domains. These domain scores were calculated according to the answers given by them to the twenty-six-item questionnaire. Domain scores were transformed to a 0 – 100 scale according to the guidelines given by the WHO. Considering all four domains, an average value of quality of life has been calculated for a participant.

Justification

Uva province is the second least populated province on the island. The capital city is Badulla and the other remaining district is Monaragala. The province is underdeveloped compared with the other provinces in Sri Lanka. There are many sub-optimal living conditions including lack of facilities, gaps in human resources in all sectors, unsatisfactory environmental conditions, and difficult terrain. It has been assumed that a significant number of government medical officers must be unsatisfied with their quality of life due to many factors. These reasons have prompted to select Uva province as the study setting. The purpose of this study was to assess the quality of life of doctors in Uva province while understanding the socio-demographic, physical health, psychological health, and environmental factors associated with it. Maintaining the optimum quality of life of medical doctors in the province is very much beneficial to enhance their job satisfaction and ultimately the quality of the service. It will have an enormous amount of benefit to the people living there in their health needs. According to the WHOQOL –BREF Questionnaire the quality of life of doctors was assessed individually and transformed into final domain scores at an individual level. The quality of life scores has been calculated according to the given WHOQOL –BREF guidelines.

Socio-demographic, physical, and psychological factors were described and presented with tables to determine the relationship of quality of life with these selected characteristics. The study intended to quantitatively assess the total quality of life with the following sociodemographic characteristics namely; age, gender, working sector, marital status, place of living, mode of transport, income levels, whether doing private practice or not, living with the family or not, traveling time to the hospital from residence, years of experience. Similarly, quality of life scores was compared among study participants to find the relationships between selected physical health, and psychological and environmental characteristics. Consequently, this study can be used as ground evidence for health managers and policymakers at district, provincial and national levels to understand the issues encountered by the government medical officers and consider possible improvements in the future.

Measuring quality of life

Quality of life is considered as the general well-being of an individual and has a wide range of different contexts. The measurement of quality of life is different from per capita gross domestic production or standard of living, where they were basically concerned with financial terms. Many countries use the human development index (HDI) as a quality of life indicator which relies on life expectancy.

United Nations developed the world happiness report as a landmark survey in 156 countries to measure the quality of life of people (United Nations. Department of Economic and Social Affairs Population Division. 2017). Short form health survey (SF-36) is including a set of generic quality of life measuring units that were frequently used in the medical field. There are other QOL assessment tools available to measure the health-related quality of life namely; Assessment of quality of life, Nottingham health profile, WHO-QOL 100, and WHO-QOL-BREF.

World Health Organization -Quality of life assessment instrument (WHO-QOL-BREF)

WHO – QOL – BREF tool was derived from its original tool of WHO-QOL-100. The WHO-QOL-BREF questionnaire contains a total of twenty-six questions. The first two questions are to assess the overall quality of life and general health perceived by the participants. The rest of the questions are assessing the four main quality of life domains. The questionnaire is available in 40 different languages and it has been cross-culturally validated

and extensively used. The scoring procedures and transforming raw scores to final scores are mentioned in the WHO guidelines.

Factors associated with quality of life

Many studies in the global and local literature mainly considered the quality of life of patients or caregivers of patients. The medical doctors' quality of life was also measured but mainly focused on their job satisfaction. Many studies provided their results considering separate domain scores correlated with the associated factors. The majority of the studies used QOL mean scores and analyzed using a continuous scale considering the scores has normally distributed.

RESEARCH METHODOLOGY

Study Design

This study was a descriptive cross-sectional study.

Study Setting

Uva Province was selected as the study setting. Its estimated midyear population was 1,345,945 (nearly 1.35 million) according to the department of census and statistics, Sri Lanka. Badulla is having a population of nearly 864,000 and Monaragala is having 485,000. The total land area is 8500 km^2 and the population density of the province is 158.7 per Km^2. As far as the health care institutions in the province are concerned, there were two tertiary care hospitals under line ministry administration. There are the provincial general hospital, Badulla, and the district general hospital, Monaragala. There were 91 health care institutions that were under provincial council administration. Six and 27 out of those healthcare institutions were secondary care hospitals and preventive healthcare institutions (Table1)

Table 1. Number of Health care Institutions coming under Provincial Administration in 2017

Institution Category	Badulla	Monaragala	Total
Base hospitals	03	03	06
Divisional hospitals	21	08	29
Primary medical care units	19	11	30
Medical officers of health offices	15	11	26

Source-Annual Health Bulletin, Provincial directorate of health services, Uva Province, 2017

722-grade Medical Officers were working in preventive and curative healthcare institutions in the province during 2017 including those from two-line ministry institutions.

Study Period

The study was carried out from 1st April 2017 to 31st December 2017. The data collection was completed during August and September 2017.

Study Population and the sample size

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 for one year after the post-internship period were included in the study.

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 technique for this study

Probability proportionate to size was used as the sampling technique in this study.

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.

WHO- QOL- BREF assessment questionnaire

World health organization initiated a quality of life project in 1991 and aimed to develop a cross-culturally comparable quality of life assessment instrument. It measures individual perceptions in the context of concerns, standards, personal goals, value systems, and cultural norms. The instrument was developed using multiple centers collaborating with each of them and making it usable all over the world. The questionnaire was comprised of twenty-six questions. These questions measure the main four domains of an individual's quality of life.

a. Physical Health
b. Psychological Health
c. Social Relationships
d. Environmental

The WHO-QOL-BREF questionnaire has already been prepared in English and standardized. It has been adopted and validated for Sri Lanka. All over the world, the tool has been accepted for the assessment of the quality of life. Since the study participants were grade medical officers, the original English version was used without translation to either Sinhalese or Tamil.

Questionnaire on basic socio-demographic, physical and psychological health, and environmental characteristics

This was also a self-administered questionnaire consisting of a few broad areas namely socio-demographic characteristics, physical health, psychological health, and environmental factors. It was aimed to describe and determine the association between quality of life and following characteristics among grade medical officers in Uva province.

Pretesting

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

The pre-test was conducted by the principal investigator himself. There were a few misunderstandings and several ambiguities in the questions of the second study instrument. They were identified and re-corrected accordingly before the original study.

Study implementation

Data collection from grade medical officers in Uva province was carried out in selected health care institutions by the principal investigator and three other trained medical officers. Principle investigator participated in all data collection sessions. The rest of the three medical officers were trained two weeks before the data collection. There were two training sessions for data collectors.

During the first session, basic awareness of questionnaires was provided for them. Each session was conducted for two hours. Information on the study design, study population, selection criteria, sampling frame, and the sampling procedure were given during the second training session. The importance of obtaining informed consent, ensuring confidentiality, and minimizing the non-response rate was also emphasized during this training session. Informed written consent was taken from all medical officers who participated in this study.

Quality of data

The following measures were taken to ensure the quality of data in this study. Considering the study instruments the following psychometric properties were discussed. The WHO-QOL-BREF questionnaire was developed and widely tested at the field level. The questionnaire has been used all over the world to measure the quality of life after translating into nearly 40 different languages. It was known to be the best instrument to measure the quality of life developed for cross-cultural comparisons. Many studies have examined the psychometric properties of the tool indicating it has good to excellent psychometric properties (Kaltoss et al., 2008).

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 specific objectives of the study. The entire data analysis was carried out with SPPS 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.

RESULTS

This study was a descriptive cross-sectional study. The calculated total sample size was 426 of grade medical officers who were working in Uva province by the time of selecting study participants. The data collection was carried out in their working stations themselves. 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%). The overall quality of life score was 65.1(SD 11.4). The individual domain scores are as follows.

Table 2 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

SD = Standard Deviation, CI = Confidence Interval

Table 3 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

Table 4 Distribution of the study population by Social relationship domain core

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

Table 5 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

Table 4.16a: Distribution of the study population by the 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

Associated factors of Quality of Life

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 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.

Table 4.35: 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 Not in the normal range	-0.137	0.129	0.289	**0.87**	0.67-0.93

There were five associated factors were retained in the 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. The age category (Less than 40 years) showed a negative association with Quality of Life revealed 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 of quality of life with sociodemographic, physical health, psychological and environmental characteristics of the study participants.

The mean domain scores of physical health, psychological, social relationships and environment were ($\bar{x}$ = 67.4, SD =13.7, 95% CI 66.1, 68.8), ($\bar{x}$ = 64.3, SD =13.2, 95% CI 62.9, 65.5), ($\bar{x}$ = 65.8, SD =17.8, 95% CI 64.1, 67.5) and ($\bar{x}$ = 62.9, SD =13.1, 95% CI 61.6, 64.2) (table 4.12a, 4.13a, 4.14a and 4.15a). The mean total quality of life among grade medical officers was 65.1 (SD =11.4, 95% CI 64.0, 66.2) and it was high and 70.7% (n =285) of the study participants were having a score between 50 and 74 out of 100. 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 0.05. The age category (Less than 40 years) showed a negative association with Quality of Life revealed 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. The mean quality of life among grade medical officers in Uva Province ($\bar{x}$ = 65.1) (SD=11.4) is comparatively higher. Although there were multiple concerns with busy schedules and burnout among doctors, being a doctor is still considered to be worth it. 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 (Torres et al., 2011) revealed that good or very good scores of quality of life were found among physicians who graduated from Sao-Paulo state university (67.8%). As far as Sri Lanka has concerned 67.1% of medical officers were satisfied with their job in a study done in Kurunegala district (pathiraja, 2006).

Limitations of the Study

This study has only analyzed cross-sectional data and therefore, it was not able to explore the temporality of the associated factors.

CONCLUSIONS

This study on quality of life among grade medical officers and its associated factors was carried out to determine the levels of quality of life in the study population in the Uva province. It also aimed to describe sociodemographic, physical and psychological health, and environmental factors according to study objectives. The following conclusions were arrived at as far as the specific objectives were concerned. The level of quality of life among grade medical officers in Uva province was higher as the mean total quality of life score was 65.0 out of 100. Mean scores for the physical health domain, psychological domain, social relationship domain, and environmental domain were 67.4, 64.3, 65.8, and 62.9 respectively. 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 of medical officers' life is concerned. Those identified associated factors together with the level of quality life among grade medical officers should be considered in future human resource development at the national as well as the provincial level to further improve the level of quality life among medical officers. It is recommended to make aware of the increasing risk of having non-communicable diseases to grade medical officers as only a very low proportion of medical officers were engaging in physical exercise.

References

Ashok K. Singhal, Sandeep Sachdeva, Rajesh Kumar Modi, Rabindra Padaria, V. Ravi, Namrata Mohite, Mahadeo Shinde, Apeksha Gulavani, Y. E. S. No, Sanju Kohli, Rajni Bagga, Tarannum Jahan, U. V Kiran, Archana G. Nemmaniwar, Madhuri S. Deshpande, Abdul Salam, Munir Abu-helalah, Shari L. Jorissen, Ali Al Qarni, and Rajkumar Giridhari Singh. 2016. "Minnesota Satisfaction Questionnaire." 2(6):37–39.

Anon. 1996b. "What Quality of Life?" World Health Forum 17(4):354–56.

Bailey, James E. 2010. "Virtual Mentor (Review)." Ethics 12(5):197–201.

Campara, Jéssica Pulino, Kelmara Mendes Vieira, and Ani Caroline Grigion Potrich. 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. doi: 10.1590/0034-7612156168.

Chathurya. 2012. "Practice of Physical Activities."

Desalegn, Defaru, Shimelis Girma, Worknesh Tessema, Eyerusalem Yeshigeta, and Teshome Kebeta. 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. doi: 10.1155/2020/4065082.

Eslami Akbar, Rasool, Nasrin Elahi, Eesa Mohammadi, and Masoud Fallahi Khoshknab. 2015. "What Strategies Do the Nurses Apply to Cope With Job Stress?: A Qualitative Study." Global Journal of Health Science 8(6):55–64. doi: 10.5539/gjhs.v8n6p55.

Gabel, Paul, and Neil Simons. 2013. "January 2013." The Lancet Neurology 12(4):335. doi: 10.1016/S1474-4422(13)70064-4.

Gramstad, Thomas Olsen, Rolf Gjestad, and Brit Haver. 2013. "Personality Traits Predict Job Stress, Depression and Anxiety among Junior Physi-

cians." BMC Medical Education 13(1). doi: 10.1186/1472-6920-13-150.

Hipp, Matthias, Lothar Pilz, Salah E. Al-Batran, Matthias G. Hautmann, and Ralf Dieter Hofheinz. 2015. "Workload and Quality of Life of Medical Doctors in the Field of Oncology in Germany - A Survey of the Working Group Quality of Life of the AIO for the Study Group of Internal Oncology." Oncology Research and Treatment 38(4):154–59. doi: 10.1159/000381074.

Kathirvel, S., J. S. Thakur, and S. Sharma. 2014. "Women and Tobacco: A Cross Sectional Study from North India." Indian Journal of Cancer 51:S78–82. doi: 10.4103/0019-509X.147478.

Kautonen, Teemu, Ewald Kibler, and Maria Minniti. 2017. "Late-Career Entrepreneurship, Income and Quality of Life." Journal of Business Venturing 32(3):318–33. doi: 10.1016/j.jbusvent.2017.02.005.

Krägeloh, Christian U., Paula Kersten, D. Rex Billington, Patricia Hsien Chuan Hsu, Daniel Shepherd, Jason Landon, and Xuan Joanna Feng. 2013. "Validation of the WHOQOL-BREF Quality of Life Questionnaire for General Use in New Zealand: Confirmatory Factor Analysis and Rasch Analysis." Quality of Life Research 22(6):1451–57. doi: 10.1007/s11136-012-0265-9.

Liang, Ying, Hanwei Wang, and Xiaojun Tao. 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. doi: 10.1186/s12939-015-0199-2.

Moradi-Lakeh, Maziar, and Abbas Vosoogh-Moghaddam. 2015. "Health Sector Evolution Plan in Iran; Equity and Sustainability Concerns." International Journal of Health Policy and Management 4(10):637–40. doi: 10.15171/ijhpm.2015.160.

Patel, Rikinkumar S., Ramya Bachu, Archana Adikey, Meryem Malik, and Mansi Shah. 2018. "Factors Related to Physician Burnout and Its Consequences: A Review." Behavioral Sciences 8(11). doi: 10.3390/bs8110098.

Pathiraja. 2006. "Job Satisfaction among Medical Officers in Kurunegala District."
PDHS, UVA. 2017. "Provincial Health Data."

Ponweera. 2012. "Job Satisfaction among Medical Officers on Puttlam District."
Silva, De. 2014. "Why Do Doctors Emigrate from Srilanka."

Silva, Patrícia Aparecida Barbosa, Sônia Maria Soares, Joseph Fabiano Guimarães Santos, and Líliam Barbosa Silva. 2014. "Cut-off Point for WHOQOL-Bref as a Measure of Quality of Life of Older Adults." Revista de Saude Publica 48(3):390–97. doi: 10.1590/S0034-8910.2014048004912.

Statistics, Department of Census and. n.d. Department of Census and Statistics.(n.d.). Retrieved from Http://Www.Statistics.Gov.Lk/.

Su, Jian An, Hsu Huei Weng, Hin Yeung Tsang, and Jhen Long Wu. 2009. "Mental Health and Quality of Life among Doctors, Nurses and Other Hospital Staff." Stress and Health 25(5):423–30. doi: 10.1002/smi.1261.

Surman, Geraldine, Trevor W. Lambert, and Michael Goldacre. 2016. "Doctors' Enjoyment of Their Work and Satisfaction with Time Available for Leisure: UK Time Trend Questionnaire-Based Study." Postgraduate Medical Journal 92(1086):194–200. doi: 10.1136/postgradmedj-2015-133743.

Torres, Gian Carlo Sy, and Emmanuel Dayao Paragas. 2019. "Social Determinants Associated with the Quality of Life of Baccalaureate Nursing Students: A Cross-Sectional Study." Nursing Forum 54(2):137–43. doi: 10.1111/nuf.12306.

United Nations. Department of Economic and Social Affairs Population Division. 2017. "World Population Ageing 2017 Report." World Population Ageing 2017 2.