

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 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.

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.

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