Assessment of Quality of Life and Associated Factors in Healthcare Workers in Primary Care

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Abstract

Background: the dynamics of the work performed by health personnel in Primary Care sometimes affect their quality of life. The deterioration of this quality leads to the appearance of absenteeism, burnout, reduced productivity, and a decrease in the quality of the service provided, which is accompanied by multiple economic and health implications.

Aim: to evaluate the quality of life of healthcare personnel working in Primary Care.

Method: observational, analytical, cross-sectional study, carried out on healthcare personnel from two Primary Care units, in Pinar del Río, May 2024. A sample of 254 participants was selected in a probabilistic, simple random manner, meeting the selection criteria. The application of questionnaires, including the WHOQOL-bref questionnaire, allowed the obtaining of data that gave rise to the variables studied. Descriptive and inferential statistical methods were used.

Results: significant differences were found in the mean scores for the physical health dimension when assessing marital status (p=.011), sex (p=.047), and ethnic group (p=.017), with the latter two showing the same behavior when assessing the social relations dimension. Statistically significant differences (p<.001) were found when comparing the mean scores for all dimensions in relation to sleeping eight hours a day, exercising, and being satisfied with income. Resident physicians predominated in the sample (45.7%), with no differences found in the dimensions of the WHOQOL-bref in relation to occupation (p>.05). Age (r=.172) and time working in the sector (r=.168) showed a weak and statistically significant correlation (p<.05) with physical health; the latter was moderately correlated with psychological health (r=.569) and the environment (r=.541), and weakly correlated with social relationships (r=.386), with these correlations being very statistically significant (p<.001). ´Psychological health was positively and moderately correlated with social relationships (r=.611; p<.001).

Conclusions: The quality of life of primary care health workers was assessed, identifying the influencing factors. It is essential to adopt measures to improve their quality of life, which will reduce absenteeism, increase retention and improve productivity, generating economic benefits.

Keywords: Healthcare Personnel; Health Status Indicators; Healthcare Workers; Primary Care; Quality Of Life; Work-Related Quality of Life

Abbreviations

PC: Primary Care; WHO: World Health Organization; QoL: Quality of life.

Introduction

Healthcare institutions around the world employ more than 59 million workers. During the performance of their work and social role, they are exposed to a wide range of complex situations that can influence their health, performance, job satisfaction, and also impact their physical and mental health. In this context, Primary Care (PC), defined as essential health care accessible to the entire community, constitutes the core of the health system. Its professionals have the responsibility of supervising most of the events that contribute to the deterioration of the health status of individuals, families, and communities [1,2].

Health professionals are exposed to various elements derived from work-related circumstances that contribute to a complex work environment. These elements may include excessive workload, shift rotation, and work configuration, among others, which constitute stressors that can negatively affect their health. These workers provide their services under very demanding circumstances in physical, emotional and spiritual terms, which requires certain qualities, which are frequently exceeded, affecting their quality of life. [3,4]

Quality of life (QoL) is a multidimensional concept, considered as a result or process, which is influenced by different factors. It is a concept with varied definitions. The World Health Organization (WHO) describes it as a perception related to the position in the life of an individual, considering the culture and values in which they develop and with respect to their expectations, goals, concerns and standards; this construct can vary depending on the conditions that a human being faces [5].

The QoL of the health professional has a crucial impact on health services and on the overall quality of any care process. This is because it affects the quality of health services provided and patient satisfaction, which cannot be addressed without considering the satisfaction of health workers. In view of this, the evaluation of the quality of professional life will allow the identification of strengths and weaknesses within organizations. Evidence suggests that appropriate practices aimed at improving the quality of professional life will bring benefits to institutions, health workers and patients [6-8]. Taking into account the above, the need to carry out this research is understood, which aimed to evaluate the QoL of health workers in Primary Care and the factors associated with it. The quality of life of healthcare workers directly impacts the efficiency and costs of the healthcare system. Poor quality of life can increase absenteeism, staff turnover and medical errors, increasing operational costs and reducing patient satisfaction. Improving the quality of life of these professionals not only benefits their well-being, but is also economically advantageous for healthcare institutions [9,10].

The well-being of healthcare workers is directly linked to the financial results of healthcare institutions. A good quality of life increases productivity and improves patient satisfaction, which optimizes operational costs. Therefore, investing in the well-being of healthcare workers is economically beneficial and improves the overall functioning of the healthcare system [11-13].

Methods

Design, Sample, and Setting

An observational, analytical, cross-sectional study was conducted on health personnel working in two Primary Care care units in the municipality of Pinar del Río in May 2024. Using simple random probabilistic sampling, a sample of 254 participants was selected, who met the inclusion criteria (being of legal age, working during the study period at the Luis Augusto Turcios Lima and Pedro Borrás Astorga University Teaching Polyclinics, and agreeing to participate in the study by signing informed consent) and exclusion criteria (having worked in Primary Care for less than six months).

To collect information in the study, an ad hoc survey was applied, which collected sociodemographic and work information; which was complemented with the application of the WHOQOL-BREF instrument. This facilitated the collection of data that gave rise to the variables studied: age, sex, marital status, religion, ethnic group, having children, sleeping eight hours a day, tobacco use, physical exercise, adequate eating habits, profession, satisfaction with income, professional experience and quality of life.

In the present study, the shortened version of the WHO QOL scale (WHOQoL-BREF) was used to assess quality of life. This instrument is derived from the WHOQOL-100. The WHOQOL-BREF questionnaire contains two items on General QOL and General Health and 24 satisfaction items that are divided into four domains: Physical health (with 7 items), psychological health (with 6 items), social relationships (with 3 items) and environmental health (with 8 items). Each item of the WHOQOL-BREF is scored from 1 to 5 on a response scale. Raw scores of the domains for the WHOQOL were transformed into a score from 4 to 20 according to the guidelines. Domain scores are scaled in a positive direction (i.e. higher scores denote higher quality of life). The mean

score of the items in each domain is used to calculate the domain score. After the scores were calculated, they were linearly transformed to a scale of 0 to 100 [14].

Data Analysis

For statistical analysis of the acquired data, the statistical package IBM SPSS version 26 was used. Univariate analysis of categorical variables involved the use of absolute frequencies and percentages, while for quantitative variables measures of central tendency and dispersion were applied (depending on their distribution, and failure to comply with the assumption of normality). Bivariate analysis included the Student t-test, the Anova test, and Spearman correlation. The predetermined level of statistical significance was set at p<.05.

Ethical Parameters

For the execution of this research, the international ethical guidelines for health-related research involving human subjects, developed by the Council for International Organizations of Medical Sciences (CIOMS) in collaboration with the World Health Organization (WHO), were followed, along with adherence to the Declaration of Helsinki. At the beginning of the study, approval was obtained from the Ethics and Research Committee of the institutions where the research was conducted, after approval of the research project by the Technical Advisory Board where the researchers of this study work. Subsequently, the questionnaire was distributed to all participants, accompanied by an explanation of the objectives of the research, the voluntary nature of participation and completion, as well as the guarantee of confidentiality and anonymity throughout the study.

Results

Quality of Life Assessment

The Cronbach's alpha coefficient of the WHOQOL-BREF was adequate (0.947) for the instrument as a whole, as well as for each of the domains evaluated: physical health domain (0.857), psychological health domain (0.831), social relationships domain (0.768) and environmental health domain (0.794). The physical health domain recorded an average of 39.68±12.40 points, while the psychological health domain recorded an average of 52.53±15.25 points; social relations 54.83±21.02 points and the environment 37.69±14.74 points.

Occupational and sociodemographic characteristics and their relationship with quality of life

The study found that the majority of the sample was doctors who were doing their residency (45.7%), followed by specialists (36.2%). Nursing staff accounted for 11.0% of the sample, and 7.1% occupied other positions (social workers, pharmacists, psychologists, dentists, physiotherapists and nutritionists). No significant differences were reported between the profession and each of the domains evaluated: physical health (p=.228), psychological health (p=.421), social relationships (p=.378) and environment (p=.393).

The sample analyzed was predominantly female (66.9%) and Caucasian ethnic group (79.5%). 48.8% of the workers were atheists, and 56.7% were married or living in a consensual union. Table 1 details the mean values for each of the domains in correspondence with the sociodemographic profile, with the physical health domain showing statistically significant differences according to sex (p=.047), skin color (p=.017) and marital status (p=.011). In turn, the means of the social relations domain showed differences according to sex (p=.006) and skin color (p<.001). No differences were found when evaluating the remaining variables or domains.

Variable [Frequency (Percentage)]	Physical health	Psychological health	Social relations	Environment health
	M±SD	M±SD	M±SD	M±SD
Sex*	.047**	.060**	.006**	.870**
Female [170 (66.9)]	38.14±11.49	51.05±15.34	51.25±20.91	37.54±12.94
Male [84 (33.1)]	42.79±13.69	56.45±14.57	62.10±19.55	38.00±18.01
Ethnic group***	.017**	.074**	<.001**	.805**
Caucasian [102 (79.5)]	39.35±12.21	52.80±14.75	57.92±19.99	37.88±14.87
Mixed [26 (10.2)]	47.69±11.90	59.77±11.80	52.46±20.66	38.69±13.64
African Americans [26 (10.2)]	34.23±11.32	46.15±19.70	33.23±17.07	35.23±15.66
Religion***	.619**	.251**	.350**	.564**
Atheist [124 (48.8)]	40.42±14.09	51.18±15.63	57.19±22.06	36.10±13.01
Catholic [10 (7.9)]	40.60±11.06	61.30±11.72	59.30±14.97	40.00±18.09

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Christian [36 (28.3)]	37.36±10.19	52.39±15.61	49.81±19.09	37.94±16.95
Other [19 (15.0)]	41.16±11.22	54.63±14.28	54.32±23.30	41.21±14.13
Marital status***	.011**	.432**	.129**	.978**
Married/common-law marriage [144 (56.7)]	41.38±12.90	53.01±14.72	56.88±21.29	37.82±14.52
Divorced [10 (3.9)]	50.20±17.53	61.0±27.39	66.40±37.79	36.40±10.41
Single [100 (39.4)]	36.18±10.07	51.76±14.64	50.74±18.06	37.64±15.62

Table 1: Score in the domains according to sociodemographic profile.
Notes: M±SD (Mean ± Standard deviation); * Student t-test; ** p Value; *** One-way ANOVA.

Quality of Life Associated with the Lifestyle and Behaviour of the Worker

Table 2 shows the characteristics of the lifestyle and behavior of the individuals studied, with statistically significant differences in the psychological health dimension (p=.001), social relationships (p=.003) and environment (p=.023) according to having children. The presence of smoking showed differences in the physical health domain (p=0.048) and psychological health domain (.047); while the presence of adequate dietary habits indicated differences in the social relationships domain (p=.006) and environment domains (p=0.02). Likewise, all the domains that make up the instrument showed differences between the means regarding sleeping eight hours a day, exercising and satisfaction with economic income (p<.05).

Variable [Frequency (Percentage)]	Physical health	Psychological health	Social relations	Environment health
	M±SD	M±SD	M±SD	M±SD
Has children*	.114**	.001**	.003**	.023**
Yes [94 (37.0)]	37.40±12.54	47.06±12.21	47.60±16.77	33.83±13.39
No [160 (63.0)]	41.01±12.21	56.23±15.89	59.09±22.17	39.96±15.10
Cares for other people*	.783**	.126**	.624**	.961**
Yes [98 (38.6)]	40.06±9.6879	55.45±13.55	53.67±20.30	37.61±14.64
No [156 (61.4)]	39.44±13.90	51.19±16.09	55.56±21.56	37.74±14.89
Sleeps eight hours a day***	.023**	.003**	.004**	.029**
> 4 times a week [46 (18.1)]	46.65±10.60	58.13±13.66	65.17±19.58	44.43±12.08
3-4 times a week [60 (23.6)]	39.30±15.92	58.20±18.18	52.30±17.99	36.63±18.77
1-2 times a week [86 (33.9)]	38.09±10.49	51.37±14.48	57.72±23.80	38.53±10.23
Never [62 (24.4)]	37.06±10.81	45.74±10.99	45.61±16.76	32.55±15.94
Does physical exercise*	.002**	<.001**	.009**	.017**
Yes [44 (17.3)]	47.09±12.38	66.32±14.55	65.45±23.45	44.50±16.38
No [210 (82.7)]	38.12±11.89	50.01±13.87	52.61±19.89	36.27±14.04
Presence of smoking*	.048**	.047**	.335**	.751**
Yes [36 (14.2)]	34.33±7.36	46.22±11.74	50.39±27.91	36.67±11.11
No [218 (85.8)]	40.56±12.86	53.93±15.52	55.57±19.73	37.86±15.29
Adequate dietary habits*	.259**	.057**	.006**	.002**
Yes [22 (8.6)]	43.73±9.69	61.18±8.88	71.45±10.26	50.55±4.20
No [232 (91.4)]	39.29±12.60	52.04±15.51	53.26±21.12	36.47±14.80
Satisfied with income economic***	.047**	.006**	.013**	<.001**
Yes [14 (5.5)]	48.57±14.21	68.71±10.21	72.14±15.13	55.43±5.83
Partially [18 (7.1)]	45.11±17.98	58.56±12.10	41.11±25.40	48.0±13.32
No [222 (87.4)]	38.68±11.54	51.37±15.13	54.86±20.31	35.74±14.20

Table 2: Worker lifestyle and behaviour.

Notes: M±SD (Mean ± Standard deviation); * Student t-test; ** p Value; *** One-way ANOVA.

The correlation matrix can be seen in Table 3, showing a statistically very significant correlation (p<.01) between all the dimensions of the WHOQOL bref assessed. Likewise, both age and time working in the sector were shown to correlate significantly (p<.05) with physical health.

	Age	Time working in the sector	Physical health	Psychological health	Social relations	Environment health
Age	1	.967**	.172*	0.052	-0.106	0.067
Time working in the sector	.967**	1	.168*	0.04	-0.087	0.057
Physical health	.172*	.168*	1	.569**	.386**	.541**
Psychological health	0.052	0.04	.569**	1	.611**	.665**
Social relations	-0.11	-0.087	.386**	.611**	1	.400**
Environment health	0.067	0.057	.541**	.665**	.400**	1

Table 3: Correlations between WHOQOL bref domains, age and time working in the sector of each profesional.

Discussion

Quality of Life Assessment

One of the main objectives of this study was to evaluate the reliability (internal consistency) of the WHOQOL-BREF questionnaire in health care personnel. The reliability analysis in this study indicated an acceptable internal consistency of the WHOQOL-BREF scale (α = 0.947) and for each of its domains were high, result that is related to that reported by Gholami A, et al. [15] where the reliability of their study indicated an acceptable internal consistency of the WHOQOL-BREF scale (α = 0.925) and for each of its domains was high, except for the social relations domain which is partially low (α = 0.65, which could be attributed to the small number of questions (3 items) in the social relations domain. Similarly, Orosa Beatriz MC, et al. [16] highlight how the calculated Cronbach's Alpha (with values close to 1) allowed to obtain guarantees on the consistency of the results collected, that is, the absence of errors in the measurement performed, which provided robustness to the data.

Occupational and Sociodemographic Characteristics and their Relationship with Quality Of Life

The QoL of healthcare workers is significantly influenced by various sociodemographic variables, which interact with the demands of the sector [17]. Factors such as age, sex, marital status, educational level and economic situation play a crucial role in the perception of well-being of this professional group, affecting both their job performance and personal satisfaction. In this sense, age is a variable that can influence the QoL through factors such as work experience, physical abilities and general health. Thus, younger workers tend to report higher levels of stress due to less experience and adaptation to work demands, while older workers may experience more physical health problems that impact their performance and well-being. For their part, women often face a double burden when balancing work and family responsibilities, compared to men, which is equally affected by quality of life [18-21].

Quality of Life Associated with the Lifestyle and Behavior of the Worker

The impact of sleep quality on the QoL of healthcare workers is a topic of growing interest, due to the high workload, rotating shifts and emotional demands inherent to the sector. Insufficient or poor quality sleep directly affects multiple dimensions of quality of life, such as physical health, unbalancing or favouring the appearance of non-communicable diseases. In turn, mental, emotional and social health, which can decrease both professional performance and personal well-being [22,23].

Physical exercise is a determining factor in improving the QoL of healthcare workers. Due to the physical, emotional and psychological demands inherent to their work, regular physical activity contributes to reducing stress, improving mood and promoting general health, which is essential for this professional group [24,25]. Despite this, according to the literature, there is a considerable percentage of workers who do little or no physical activity, which becomes a risk factor for the development of various diseases as well as indirectly affecting their quality of life [26,27].

Income satisfaction is a key determinant of physicians' quality of life, as it influences both their personal well-being and their professional performance. Physicians often face high levels of stress due to workload, emotional demands of

work, and social expectations, so the perception of adequate income can significantly mitigate these factors. When income is perceived as fair and sufficient, physicians are better able to meet their basic needs and aspirations, such as investing in continuing education, ensuring decent housing, and maintaining a work-life balance. This, in turn, fosters greater emotional stability and job satisfaction, reducing the risk of burnout, another common problem in this profession [28-30].

Conversely, the perception of insufficient income can lead to dissatisfaction, financial stress, and frustration, negatively affecting quality of life. This effect is especially evident in contexts where job demands are high and economic incentives are low or perceived as inequitable. In turn, economic satisfaction also has implications for the physical and mental health of the worker. Insufficient income can limit access to personal well-being services such as systematic exercise, healthy eating, and recreational activities, perpetuating the cycle of stress and burnout, which leads to a deterioration in quality of life [31-35].

The COVID-19 pandemic, which began in 2020, had a profound impact on the daily lives of people around the world, both in the workplace and at home. This period of global crisis significantly altered routines and family dynamics, generating uncertainty and stress in the general population. Within this context, health workers faced even greater challenges. Already a professional group with heavy workloads, during the pandemic their responsibility and workload increased exponentially. These professionals not only had to deal with the constant risk of exposure to the virus, but also with extended work days, a shortage of medical resources, and the emotional pressure of caring for a growing number of seriously ill patients. In addition, the situation exacerbated pre-existing problems in the health system, such as lack of staff and limitations in infrastructure. The sum of these factors considerably increased physical and emotional exhaustion among health workers, affecting their well-being and, therefore, the quality of care provided. This situation underlines the need to adequately recognize and support health professionals, not only during health emergencies, but in their daily work, to ensure their well-being and the long-term sustainability of the health system [36-38].

The economic impact of poor quality of life for healthcare workers is significant. Following the COVID-19 pandemic, there has been an increase in information detailing how workload and stress caused a reduction in the quality of life of healthcare workers, leading to increased staff absenteeism, generating additional costs for healthcare institutions due to the recruitment and training of new staff. In addition, mental and physical health problems, such as stress and burnout, increased healthcare costs, including treatments for musculoskeletal disorders, anxiety, depression and burnout [4,39].

The poor quality of life of healthcare workers, including that caused by stress, lack of job support and poor organizational conditions, has a significant economic impact. This situation can translate into increased workload associated with absenteeism, lower productivity and increased healthcare costs due to errors and burnout. This can undermine the public perception of healthcare systems, reducing their ability to retain talent and provide quality services. According to global studies, poor quality care is responsible for higher healthcare costs by leading to inaccurate diagnoses, medication errors and unnecessary treatments, which impact both the system and patients. Addressing these problems requires investing in programs that improve the quality of working life, such as access to psychological support, adequate break spaces and fair salary policies. This not only benefits workers, but also contributes to the economic sustainability of healthcare institutions and the quality of service they offer [9,16,19].

Conclusion

The results of this study confirm that the WHOQOL-BREF questionnaire is a reliable instrument for measuring the QoL in healthcare workers. Physical health and the environment were the most affected dimensions within the domains that made up the instrument applied. Sociodemographic factors were identified, as well as the behavioral and lifestyle characteristics of workers, which were related to quality of life, highlighting the quality of sleep, systematic physical exercise, satisfaction with income, marital status, ethnic group and biological sex.

Limitations and Recommendations for Future Research

Among the limitations of the study is its nature, since being transversal there was no possibility of establishing a follow-up of the phenomenon over time, as well as the causal relationships that lead to it. Added to this is the conception of a multivariate analysis that would allow an adequate characterization of the problem addressed. In turn, personality characteristics of the individuals were not included, as well as psychosocial elements, which have been shown to influence the quality of the individual. In light of this, future studies are recommended, where these aspects are handled, providing new results that allow the clarification of the phenomenon.

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- **Conflict of Interest**
  The authors have no conflicts of interest.

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