Original Article

Assessment of quality of life among plantation workersusing WHOQOL-BREF

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Abstract

Introduction: The progress to evidence based practice of medicine implies the need for shift from recognizing disease to risk factor identification for early preventive management. Health status measures, which are multilevel and multi-dimensional, have emerged to fill this gap. There are many published QOL (Quality of Life) measures but there is still a lack of consensus among researchers about its definition and this is reflected in the choice of items for their instruments. **Objectives:** Assess the Quality of life using the WHOQOL-BREF recommended by World Health Organization andexplore socio-demographic relationship to quality of life. **Material and methods:** A cross-sectional study to assess the quality of life of plantation workers was designed in an effort to analyze their quality of life. A total of 270 households with 342 (females 240 and males 102) rubber tappers were included in this study. **Results:** QOL scores when compared between males and females showed that the overall QOL score was almost same for both. But males had higher scores for physical and environment domains, which was statistically significant using unpaired t-test.QOL scores decreased as age advanced in all domains but this difference in mean scores was found to be statistically significant only for the social relationships domain. However the post–hoc test (LSD) revealed that the difference in scores was statistically significant between the age groups of < 35yrs and > 45 years.

Key Word: WHOQOL-B.

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INTRODUCTION

Disease has been the core focus in measurement of health, and medical research has concentrated information on disease. This is subject to the spectrum of diseases affecting mankind who have access to limited resources. The progress to evidence based practice of medicine implies the need for shift from recognizing disease alone to risk factor identification and management. Two classes of complementary health status measures have emerged to fill the information gap – objective measures of functional health status and subjective measures of health and well-being. [1–4] These measures are multilevel and multi-dimensional. There are many published QOL (Quality of Life) measures but there is still a lack of consensus among researchers about its definition and this is reflected in the choice of items for their instruments. The WHO (World Health Organization) defines QOL as 'an individual's perception of their position in life in the context of the culture and value systems in which they live, and in relation to their goals, expectations, standards and concerns'.[5]

MATERIAL AND METHODS

A cross-sectional study to assess the quality of life of plantation workers was designed in an effort to analyze and make recommendations for plantation workers to live with a better quality of life. The chosen study subjects were permanent employees of rubber plantations in Dakshina Kannada district in Karnataka. The study subjects and their families have been sheltered in settlements situated within the rubber plantations. A total of 270 households with 342 (females 240 and males 102) rubber tappers with an experience of more than one year of rubber tapping were included in this study. The principal investigator with the help of trained medical personnel conducted interview with the plantation workers. Physical and

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systemic examination was done. Individually for each participant assessment of work and work site was conducted and related data was collected. Implementation of study design was achieved in the following stages starting with the preparatory phase, phase of data collection, phase of data analysis and the phase of documentation

Preparatory phase

Constructing tools for the data collection

A semi-structured, pretested questionnaire was designed for collection of socio-demographic data and the questionnaire contained the World Health Organization, Quality of life questionnaire (WHOQOL-BREF) to assess quality of life. In measuring QOL therefore, the WHOQOL Group takes the view that it is important to know how satisfied or bothered people are by important aspects of their life, and this interpretation will be a highly individual matter. The World Health Organization Quality of Life assessment – the WHOQOL-100 – is a cross-culturally valid assessment of well-being. Assessment is operationalized through 100 items representing 25 facets organized in six domains.[6, 7] The WHOQOL-BREF was developed as a short version of the WHOQOL-100 for use in situations where time is restricted, where respondent burden must be minimized and where facet-level detail is unnecessary. WHOQOL-BREF has the ability to explain a substantial proportion of variance within their parent facet and domain, for their relationship with the overall WHOQOL model and for their discriminant validity.[8] Although this contrasted with the original concept of a 6-domain model for the WHOQOL, it was consistent with empirical results from the previous WHOQOL-100 field trials.[8] Based on these results, the WHOQOL-BREF was developed in the context of four domains of QOL: physical, psychological, social and environment. It was predicted that sick participants would report poorer QOL than healthy participants but no predictions were made for other socio-demographic differences.[8]

Instruments needed for study

Standardized instruments like weighing scale, measuring tape, torch, sphygmomanometer, and stethoscope for the study were procured.

Phase of data collection

The study population was surveyed by house-to-house visit. Visits to each study subject's place of work were made. The data collection was carried out fromAprilto December 2014.

Phase of data analysis

The data collected was entered, analyzed and tabulated using a Microsoft Excel package of MS Office and SPSS 21 package of statistics.The QOL scores of the WHOQOL- BREF version questionnaire were calculated as one overall score and four domains scores. These score were later transformed to 0–100 scale which represents the scores if the respondents would have been subject to the WHOQOL-100 questionnaire.

RESULTS

QOL scores were calculated as one overall scores and four domain scores. The mean score was highest for social relationships domain followed by environment domain, physical health and psychological domains (Table 1). QOL scores when compared between males and females showed that the overall QOL score was almost same for both. But males had higher scores for physical and environment domains, which was statistically significant using unpaired t-test (Table 2).

Table 1: Mean Quality of Life scores of the study population

WHOQOL domains	Minimum	Maximum	Mean	Std. Deviation
Physical health	31	81	56.95	9.08
Psychological	31	81	55.15	10.45
Social relationships	25	94	59.41	14.54
Environment	25	88	57.73	12.46
Overall score	16	36	28.50	4.40

Table 2: Comparison of Mean Quality of Life scores among the genders

WHOQOL domains	Sex	Mean	Std. Deviation	t	df	p value
Physical health	Female	55.508	8.567	-3.264	169	0.001
	Male	60.333	9.462			
Psychological	Female	55.333	10.588	0.346	169	0.729
	Male	54.725	10.225			
Social relationships	Female	59.641	14.915	0.311	169	0.755
	Male	58.882	13.776			
Environment	Female	56.5	12.217	-1.997	169	0.047
	Male	60.627	12.696			
Overall score	Female	28.533	4.305	0.191	169	0.848
	Male	28.392	4.682			

Table 3: Comparison of Mean Quality of Life scores among the age groups

WHOQOL domains	Age groups	N	Mean	Std. Deviation	F	Sig.
Physical health	<35 years	80	57.25	10.79	0.621	0.538
	36 - 45 years	104	57.92	8.25		
	> 45 years	158	56.15	8.70		
	Total	342	56.94	9.08		
Psychological	<35 years	80	55.45	8.94	0.034	0.965
	36 - 45 years	104	55.25	11.10		
	> 45 years	158	54.93	10.84		
	Total	342	55.15	10.45		
Social relationships	<35 years	80	63.47	13.98	3.706	0.026
	36 - 45 years	104	60.94	14.29		
	> 45 years	158	56.35	14.50		
	Total	342	59.41	14.54		
Environment	<35 years	80	60	13.43	1.358	0.256
	36 - 45 years	104	58.36	13.27		
	> 45 years	158	56.16	11.31		
	Total	342	57.73	12.46		
Overall score	<35 years	80	29.2	3.96	1.220	0.297
	36 - 45 years	104	28.76	4.34		
	> 45 years	158	27.94	4.64		
	Total	**342**	**28.49**	**4.40**		

ANOVA was used to determine whether age, education and socioeconomic status had any influence on the quality of life. It was found that Educational and socioeconomic status did not have any influence on the quality of life among the study population. However, it was observed that the QOL scores decreased as age advanced in all domains but this difference in mean scores was found to be statistically significant only for the social relationships domain. However the post–hoc test (LSD) revealed that the difference in scores was statistically significant between the age groups of < 35yrs and > 45 years. The QOL scores among subjects with no musculoskeletal disorders compared to those with musculoskeletal disorders was higher for all domains except for psychological domain. However this difference in scores was not statistically significant (t-test).It was predicted that sick participants would report poorer QOL than well participants but no predictions were made for other socio-demographic differences. [38] In the present study, the mean overall QOL score was almost same for both males and females. But males had higher scores for physical and environment domains, which was statistically significant. Also it was observed that the QOL scores decreased as age advanced in all domains but this difference in mean scores was found to be statistically significant only for the social relationships domain. The mean QOL score was highest for social relationships domain. Males had higher mean QOL scores for physical and environment domains, which was statistically significant. It was observed that the QOL scores decreased as age advanced but was found to be statistically significant only for the social relationships domain.

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