



Survey of the Status of Health Related Quality of life among the Middle Aged Southern Railway Employees

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Abstract

Health-related quality of life (HRQoL) is of major consequence across the whole spectrum of the human health continuum. The aim of this study is to make a survey of the status of HRQoL among the middle aged Southern Railway employees. The investigator randomly selected 25 employees from Group A, 25 employees from Group B, 100 employees from Group C and 100 employees from Group D in the age group of 40 to 50 years and administered the standard questionnaire SF 36 which has 8 dimensions such as Physical functioning, Physical roles limitation, Emotional roles limitation, Social functioning, Bodily pain, Mental health, Vitality and General health to them. The results did not show any significant differences in HRQoL of middle aged SR employees on these dimensions except of emotional roles limitation, as the obtained F values were lesser than the required F value of 2.94 to be significant at 0.05 level. The obtained F value on dimension Emotional roles limitation of 2.96 was significant at 0.05 level. The post hoc analysis through multiple comparisons of paired means proved that the top level officers have significantly greater emotional role limitations than lower grade employees. It was concluded that in view of SR providing adequate medical facilities and care irrespective of the category of employees, it was found there was no significant difference in their HRQoL. However benefits of exercise intervention in the modification of HRQoL can be studied in future.

Keywords: Survey, Railway Employees, Mental Health, Bodily Pain, Vitality.

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Introduction

Health-related quality of life is of major consequence across the whole spectrum of the human health continuum. Several studies have indicated that the assessment of quality of life does not only shed light on the life experiences of people with acute illnesses, but that it could also be invaluable in planning interventions that may improve people's quality of life. In addition, the question of which factors influence the quality of life which consequently affects all dimensions of an individual's life are well documented in numerous scientific studies which were initiated in a number of different countries and different groups of people. (Petr P. et al. (2001).

The Indian Railways is divided into zones, which are further sub-divided into divisions, each having a divisional headquarters. The Southern Railway, headquartered at Chennai, Tamil Nadu, is one of the 16 zones of the Indian Railways. The employees are recruited based on four classifications. Vacancies in the Indian Railways are filled either by recruitment by the recruitment agencies like UPSC or RRB or by

promotion from serving candidates. Group A recruitments are filled by UPSC through All India Competitive examinations. Group B posts are normally filled by promotion from serving Group C candidates. Group C recruitments are made by Railway Recruitment Boards. Group D posts are filled by Railway Recruitment Cells. In order to cater to the needs of railway employees, the Indian Railways has its own hospitals and health units, which are broadly classified into (a) Functions related to Industrial Medicine and (b) Functions related to Medical treatment to Railway beneficiaries. Under functions related to Industrial Medicine, the Railways take care of Pre employment medical examination to allow only fit and suitable candidates to join the service. On an average 50000 candidates are examined. Periodical medical examination of serving employees are conducted to allow fit persons to continue in their jobs which are related to safe running of the trains. On an average 120,000 employees are examined per year. Medical fitness of serving employees is mandatory especially those involved in train passing duties. Loss of mandays on account of sickness is kept under control by Medical officers. At present loss of mandays on sickness is only 2%.

Kossakowski JJ et al. (2015) documented that Health-Related Quality of Life (HRQoL) research has

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typically adopted either a formative approach, in which HRQoL is the common effect of its observables, or a reflective approach-defining HRQoL as a latent variable that determines observable characteristics of HRQoL. Mansikkamäki K et al. (2015) explored the long-term effects of physical activity intervention on quality of life (QoL) 4 years after an original randomised controlled trial (RCT). 95 of the 159 women from the original RCT participated in weight, height and waist circumference measurements, performed the UKK 2 km Walk Test and completed the SF-36 Health Survey questionnaire. The differences were found to be statistically insignificant. Petersen S et al. (2014) investigated the relationship between excess weight (overweight and obesity) and health-related quality of life (HRQoL) and found the assumption that a large body size is associated with a lower quality of life cannot be held universally true. Gísladóttir TL. et al. (2013) studied the relationship between adolescents' participation in sports clubs and self-reported mental and physical conditions and future expectations and found that participation in sports clubs influences adolescents positively and they are in better mental and physical condition. Bertheussen GF, et.al. (2011) studied that Health-related quality of life (HRQoL) has been characterized as the ultimate goal for health interventions such as physical activity (PA) and found that exercising at any level is associated with better physical and mental health in both genders compared with no exercise particularly among the older individuals. Although many studies have made a contribution to the understanding of health-related quality of life, most of these studies focused on the relationship between quality of life and health, and concentrate primarily on objective indicators such as

sickness, income levels and social status (Møller 1992). In contrast, indicators relating to subjective quality of life or subjective well-being such as how satisfied a person is with his/her life as a whole still remain ignored to a great extent. Hence, in this study, the investigator made a status analysis to measure the HRQoL of middle aged SR employees.

Methodology

For the purpose of this study, the investigator randomly selected 25 employees from Group A, 25 employees from Group B, 100 employees from Group C and 100 employees from Group D in the age group of 40 to 50 years. The subjects were selected from Chennai as Southern Railway headquarters is housed in Chennai and employees from all the divisions and categories of employees are available in Chennai. To assess health related qualities of life, the survey method was followed through a standard questionnaire SF 36 which has 8 dimensions such as (i) Physical functioning (ii) Physical roles limitation (iii) Emotional roles limitation (iv) Social functioning (v) Bodily pain (vi) Mental health (vii) Vitality and (viii) General health. For status analysis, the obtained scores were analysed through mean and standard deviation. To test the statistical significance of mean differences, if any, among different groups of employees, namely Group A, B, C and D on HRQoL, ANOVA was employed for each dimension separately. If significant F ratio was obtained, the results were further subjected to statistical analysis using Scheffe's Confidence Interval test to find out the paired mean difference. In all cases 0.05 level was fixed for significance.

Results

Table I. Status Analysis and Statistical Differences on Health Related Quality of Life of Middle Aged Southern Railway Employees

	Group A	Group B	Group C	Group D	Source of Variance	Sum of Squares	df	Mean Square	F
PHYSICAL FUNCTIONING									
Mean	68.00	69.00	66.90	66.92	Between	104.50	3	34.83	0.37
Std Dev	9.79	9.01	9.89	9.62	Within	23098.00	246	93.89	
PHYSICAL ROLES LIMITATION									
Mean	77.00	79.00	79.15	80.13	Between	185.35	3	61.78	0.18
Std Dev	18.98	18.65	18.19	18.12	Within	82252.75	246	334.36	
EMOTIONAL ROLE LIMITATION									
Mean	70.66	78.66	81.66	84.61	Between	4360.33	3	1453.44	2.96*
Std Dev	27.76	25.24	22.41	19.75	Within	122136.27	246	496.49	
SOCIAL FUNCTIONING									

Mean	77.50	76.50	77.50	78.21	Between	25.94	3	8.65	
Std Dev	13.01	14.12	13.18	13.09	Within	43004.69	24	174.82	0.05
BODILY PAIN									
Mean	78.60	78.60	79.20	78.21	Between	43.54	3	14.51	
Std Dev	14.22	14.20	14.01	14.02	Within	48559.19	24	197.40	0.07
MENTAL HEALTH									
Mean	69.48	68.60	70.07	69.97	Between	53.86	3	17.95	
Std Dev	7.08	7.87	7.12	7.36	Within	13076.54	24	53.16	0.34
VITALITY									
Mean	70.00	70.60	71.95	72.82	Between	221.40	3	73.80	
Std Dev	10.41	9.61	12.35	13.03	Within	36723.50	24	149.28	0.49
GENERAL HEALTH									
Mean	72.00	73.20	72.75	73.59	Between	84.90	3	28.30	
Std Dev	7.50	6.44	6.09	5.96	Within	9531.50	24	38.75	0.73

* Significant at 0.05 level.

The results on variables which found significant differences were further subjected to post hoc analysis using Scheffe’s confidence interval and the paired mean

comparisons with required confidence levels are presented in Table II.

Table II. Multiple Comparisons of Paired Means on Health Related Quality of Life of Middle Aged Southern Railway Employees

Group A	Group B	Group C	Group D	MD	C I
EMOTIONAL ROLE LIMITATION					
70.66	78.66			8.00*	4.58
70.66		81.66		11.00*	4.58
70.66			84.61	13.95*	4.58
	78.66	81.66		3.00	4.58
	78.66		84.61	5.95*	4.58
		81.66	84.61	2.95	4.58

Discussion

The SF-36 scale is suitable for self-administration to the middle aged men employees of Southern Railway. The SF-36 has been administered successfully among four categories of employees, Group A, B, C and D. It was administered in 5-10 minutes with a high degree of acceptability and data quality as found by (Ware and Sherbourne (1992). The results of the study proved that there was no significant difference in health related quality of life of middle aged SR employees in dimensions Physical functioning, Physical roles limitation, Social functioning, Bodily pain, Mental health, Vitality and General health as the obtained F values were lesser than the required F value of 2.94 to be significant at 0.05 level. However, the results proved

that there was significant difference in dimension Emotional roles limitation as the obtained F value of 2.96 was greater than the required F value of 2.94 to be significant at 0.05 level. The post hoc analysis through multiple comparisons of paired means (Table 2) proved that the top level officers have significantly greater emotional role limitations than lower grade employees.

Mansikkamaki et al. (2015) found that the completed the SF-36 Health Survey questionnaire among the groups’ differences did not reveal statistical significance. Petersen et al. (2014) found the assumption that a large body size is associated with a lower quality of life cannot be held universally true. Bertheussen et.al. (2011) documented that Health-related quality of life (HRQoL) has been characterized as the ultimate goal

for health interventions such as physical activity (PA) and found that exercising at any level is associated with better physical and mental health in both genders compared with no exercise particularly among the older individuals. These research findings were found to be true in this study as there was no statistical significance among different groups of employees of SR, their large body size during the middle age did not influence their health related quality of life style and the HRQoL can be improved through better physical activities programme.

Conclusion

In view of SR providing adequate medical facilities and care irrespective of the category of employees, it was found that there was no significant difference in their HRQoL. However, benefits of exercise intervention in modification of HRQoL can be studied in future.

References

- Bertheussen GF, et.al. (2011), “Associations between physical activity and physical and mental health--a HUNT 3 study.”, *Med Sci Sports Exerc.* Jul;43(7):1220-8.
- Gísladóttir TL, et.al. (2013), “The effect of adolescents' sports clubs participation on self-reported mental and physical conditions and future expectations.”, *J Sports Sci.*; 31(10):1139-45.
- Kossakowski JJ et al. (2015), “The application of a network approach to Health-Related Quality of Life (HRQoL): introducing a new method for assessing HRQoL in healthy adults and cancer patients.”, *Qual Life Res.* Sep 14.
- Mansikkamäki K et al. (2015), “Long-term effect of physical activity on health-related quality of life among menopausal women: a 4-year follow-up study to a randomised controlled trial.”, *BMJ Open.* Sep 11;5(9):e008232.
- Møller V (1992) “A place in the sun: Quality of life in South Africa”. *Indicator SA.* 9(4): 101 - 108, 1992.
- Petersen S et al. (2014), “Relationship between overweight and health-related quality of life in secondary school children in Fiji: results from a cross-sectional population-based study.”, *Int J Obes (Lond).* Apr;38(4):539-46.
- Petr P. et al. (2001), P. Záškodný, P. Vondrouš, A. Soukupová, H. (2001) Kalová: Regionální standard “Kvality života podmíněné zdravím” – HRQOL. [The Regional Standard of the “Health-related Quality of Life” - HRQOL]. *Kontakt.* 3(1): 146 – 150.
- Ware J.E. and C.D. Sherbourne (1992): “The MOS 36-item short-form health survey (SF-36). Conceptual framework and item selection”. *Medical Care.* 30(6): 473 – 483.
- Suthakar, S., and A. Pushparajan. "Effects of Silambam and Karate with Yogic Training on Agility and Arm Explosive Power of Collegiate Male Students." *International Journal of Innovative Research and Development* (2014).