

 <p>ISSN NO. 2320-5407</p>	<p>Journal Homepage: - www.journalijar.com</p> <h2>INTERNATIONAL JOURNAL OF ADVANCED RESEARCH (IJAR)</h2> <p>Article DOI: 10.21474/IJAR01/8434 DOI URL: http://dx.doi.org/10.21474/IJAR01/8434</p>	 <p>INTERNATIONAL JOURNAL OF ADVANCED RESEARCH (IJAR) ISSN 2320-5407 Journal Homepage: http://www.journalijar.com Journal DOI: 10.21474/IJAR01</p>
---	--	--

RESEARCH ARTICLE

DEMOGRAPHIC FACTORS FOR THE QUALITY OF WORKING LIFE OF HEALTHCARE WORKERS IN BULGARIA.

Todor G. Kundurzhiev and Yanka P. Prodanova.

Department "Occupational Medicine", Faculty of Public Health, Medical University of Sofia.

Manuscript Info

Manuscript History

Received: 20 November 2018

Final Accepted: 22 December 2018

Published: January 2019

Key words:-

Quality of work life (QWL), work satisfaction, health organizations, health workers.

Abstract

This study investigates the subjective perception of the quality of working life of workers in healthcare organizations in Bulgaria. The study was conducted through an anonymous questionnaire. The survey includes a system of indicators that form a quality of life at the workplace. A cluster analysis was used to group the respondents into two groups according to their quality of life. The relationship between the quality of working life and the basic demographic characteristics has been studied. The results showed that QWL has a significant relationship with some socio-demographic characteristics of respondents (age, work experience, marital status, staff and unit profile). Some results are consistent with the results of other researchers, but there are others that differ. It will be a good idea to include additional variables in future research to clarify the complex interactions between socio-demographic characteristics and the quality of working life.

Copy Right, IJAR, 2018,. All rights reserved.

Introduction:-

Gogoleva et al (2017) reviewed various quality of work life (QWL) studies and revealed - a lack of clear and specific understanding of QWL, different approaches to QWL content and its metrics. However, there is a lack of academic discussion on the multi-dimensionality of the "quality of working life" category and the need for a high level of quality of working life in an organization (Rethinam, & Ismail, 2008; Sandrick, 2003).

The healthcare sector is one of the largest sectors in Europe. According to the European Commission (2011), about 10% of workers in the European Union are employed in the health and welfare sector. According to data from the National Statistical Institute (2017) in Bulgaria as of 31.12.2015 the number of doctors is 29 073 and the health care professionals 47 428 (2017). Against this background and the problems of healthcare systems, the importance of the quality of working life of healthcare workers is highlighted. Changing labor demographics, increasing employee expectation and increased stress are major challenges for health organizations, but if these issues are managed strategically, the organization can get the desired benefits (Garg et al, 2012) and to save human values (Walton, 1975; Timossi et al, 2008).

Aim:-

The aim of the present study is to identify the main demographic factors influencing the quality of working life of people working in healthcare organization of different types.

Corresponding Author:-Todor g. Kundurzhiev.

Address:-Department "Occupational Medicine", Faculty of Public Health, Medical University of Sofia.

Methodology:-

We conducted a QWL study through a survey. To that end, we adapted Egorishin's questionnaire "Quality of working life" (Egorashin, 2003). The rating scale is reduced from 10-degree to 5-degree. Each question has a rating of 1 to 5.

The validity of the adapted questionnaire was evaluated using the Cronbach Alpha coefficient for the whole scale it was 0.966, and for the individual subscale was as follows: Workforce – 0.886; Remuneration – 0.918; Workplace – 0.918; Organization management – 0.941; Professional careers – 0.946; Social guarantees – 0.831; Social benefits – 0.884

The questionnaire contains questions that allow us to examine the main indicators that characterize the quality of working life of medical and non-medical staff in healthcare organizations (workforce, remuneration, workplace, organization management, professional careers, social guarantees and social benefits) and to assess QWL. Furthermore, the questions allow the socio-demographic characteristics of the group to be assessed (age, sex, marital status, place of residence, education, length of service, etc.) because the diversity of employees of an organization implies that demographic variables are also potential predictors.

The subject of the survey is the workers in 8 health organizations, hospitals, medical centers and emergency medical care centers

We investigated the relationship between the quality of working life (the different clusters) and the basic demographic characteristics.

Sample size

Workers in the healthcare system in Bulgaria are approximately 161 300.

The sample size is calculated using the formula (Charan, Biswas 2013; Cochran, 1977):

$$n = \frac{z^2 \times p \times (1 - p) \times N}{\Delta^2 \times N + (z^2 \times p \times (1 - p))}, \text{ where:}$$

N - population size; n - sample size; z - standard normal variate (at 5% type I error (P<0,05) it is 1,96); p - expected proportion in population (50%); Δ-absolute error or precision (5%).

Under these conditions, the sample size is n = 480.

The study involved 510 employees from the health sector.

Statistical Methods:-

1. Cluster analysis. In the present analysis, the K-Means Cluster method is used, in which the number of clusters is predetermined. Variables for comparison are the seven components of the quality of working life. In this study, respondents are grouped into 2 clusters. They are formed by respondents with different assessments of the quality of working life.
2. A clustering procedure is chosen in which the cluster centers change after the integration of each object into the corresponding cluster.
3. Kolmogorov-Smirnov test to check the distribution.
4. Chi-square test or Fisher's exact test for examining the relationship between two categorical variables.
5. Man-Whitney test for comparing two independent groups when distributions are not normal.
6. Binary logistic regression - to assess the factors of quality of working life. The dependent variable has two categories (Cluster 1 and Cluster 2). Independent variables (predictors) can be categorical or quantitative.
7. Results with a level of significance p<0.05 were considered statistically reliable. In statistical processing of the data we used SPSS version 16.

Results:-**Cluster analysis**

For each subscale total score was calculated.

After the formation of two clusters are calculated mean scores for QWL in each subscale. The results are presented in Table 1.

Higher average scores are in Cluster 2, i.e. this group is formed by respondents with a higher quality of working life. Accordingly, Cluster 1 is the lower rated.

Table 1:-Mean and SD values of QWL by subscale in the two clusters.

Подскали	Cluster 1 (n=235)	Cluster 2 (n=275)	F*
	Mean (SD)	Mean (SD)	
Workforce	33.64 (6.80)	41.59 (5.36)	217.57
Remuneration	23.99 (7.46)	37.68 (6.87)	465.13
Workplace	32.12 (7.54)	42.01 (5.84)	277.72
Organization management	34.06 (7.72)	43.60 (5.49)	263.63
Professional careers	25.91 (8.13)	39.43 (6.13)	456.31
Social guarantees	28.85 (7.33)	36.61 (4.23)	222.09
Social benefits	14.52 (8.05)	29.68 (11.03)	305.08

*F – Fisher 's criterion at ANOVA test

The coefficient F (criterion Fisher) allows to determine the degree of influence of each subscale in the formation of separate clusters. The biggest impact is subscale "Remuneration", because the value of F-criterion is highest, respectively with at least influence is subscale 'workforces. "

The relationship between clusters and the basic demographic characteristics has been studied. The results are presented in Table 2.

In the group with a high degree of satisfaction (Cluster 2) 23.3% were male, while in the other group (Cluster 1) men 20.4%. This observed difference was not statistically significant ($p=0.439$), ie. no significant relationship between gender and the quality of working life..

When examining the relationship between education and QWL not establish statistical significance ($p=0.303$). QWL depends on family status. A higher proportion of married was observed in the group with higher QWL (Cluster 2), the same was observed in the group of divorced. ($p=0.009$).

A statistically significant association is established between QWL and type of personnel (medical / non-medical) ($p=0.006$). Higher quality of working life is the non-medical staff, a higher frequency is observed in cluster 2 (34.9%) and in cluster 1 this proportion is 23.8% (Table 2).

There is a statistically significant relationship between the QWL and the area of work ($p=0.002$). QWL is lower in the units with surgery, therapeutic and diagnostic profile compared to QWL in units of administrative profile (Table 2).

Participation in management has not been associated with QWL ($p=0.100$).

The comparative analysis of age, total work experience and work experience of the current job between the two clusters revealed significant differences in the mean values ($p<0.05$). Older respondents and those with longer work experience have a higher QWL (Figure 1).

Table 2:-Demographic characteristics of respondents by clusters.

Characteristic		Cluster 1	Cluster 2	p-value
Sex /n (%) /	Male	48 (20,4)	64 (23,3)	0,439 ^x
	Female	187 (79,6)	211 (76,7)	
Education /n (%) /	Secondary	48 (20,4)	72 (26,2)	0,303 ^x
	Bachelor	110 (46,8)	117 (42,5)	

	Master	77 (32,8)	86 (31,3)	
Marital status /n (%) /	Married	132 (56.2)	186 (67.6)	0,009 ^X
	Cohabitation without marriage	32 (13.6)	18 (6.5)	
	Singles	43 (18.3)	39 (14.2)	
	Divorced	17 (7.2)	26 (9.5)	
	Widower/widow	11 (4.7)	6 (2.2)	
Staff /n (%) /	Medical	179 (76,2)	179 (65,1)	0,006 ^X
	Non-medical	56 (23,8)	96 (34,9)	
Place of residence /n (%) /	Village	29 (12,3)	36 (13,1)	0,872 ^X
	Town	153 (65,1)	182 (66,2)	
	District town	53 (22,6)	57 (20,7)	
Participation in management /n (%) /	No	207 (88,1)	228 (82,9)	0,100 ^X
	Yes	28 (11,9)	47 (17,1)	
Unit profile /n (%) /	Surgery	45 (19,8)	39 (14,6)	0,002 ^X
	Therapeutic	101 (44,5)	94 (35,2)	
	Diagnostic	33 (14,5)	35 (13,1)	
	Administrative profile	48 (21,1)	99 (37,1)	
Age /Median (Min;Max)/		44,0 (20,0;75,0)	48,0 (21,0;71,0)	0,009 ^U
Total work experience /Median (Min;Max)/		20,0 (0,0;47,0)	25,0 (0,0;46,0)	0,004 ^U
Work experience of the current job /Median (Min;Max)/		6,0 (0,0;43,0)	8,0 (0,0;44,0)	0,017 ^U

Note: U - Mann-Whitney test; X - Chi-square test

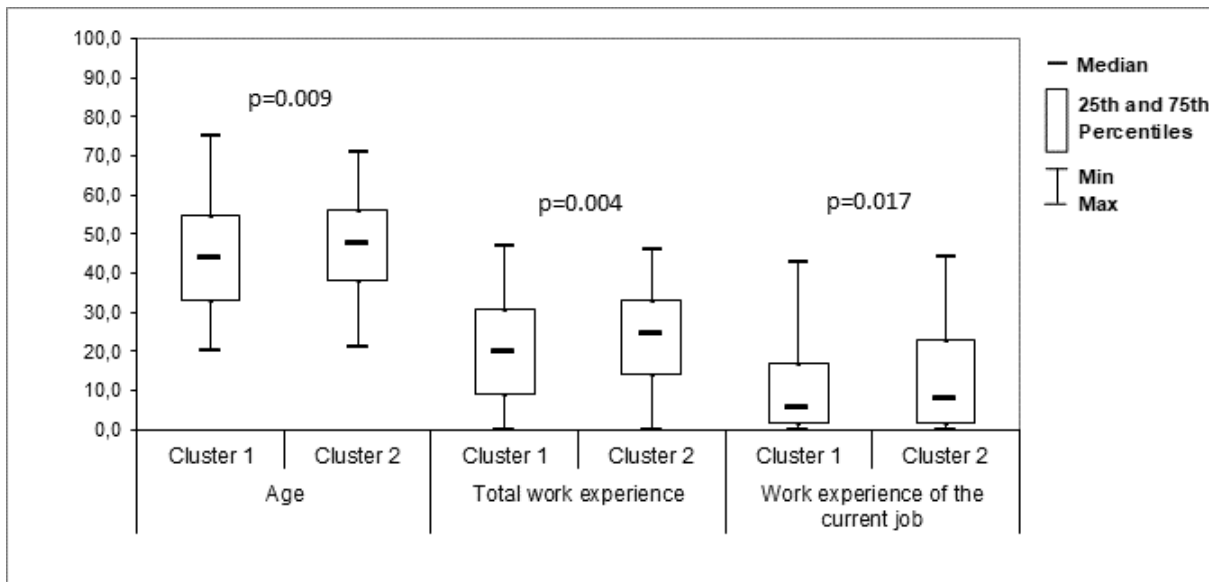


Figure 1:-Summary statistical characteristics of age, total work experience and work experience of the current job.

Multiple regression model (binary logistic regression)

To identify the significant factors influencing QWL, multiple binary logistic regressions have been applied. The dependent variable in this model is the group of clusters. Independent (factor) variables include those in which a significant relationship is established.

For the analysis, a stepwise procedure was used with the addition of a new factor at each step, the inclusion criterion in the model was $p < 0.05$. Significant factors in the model are total work experience and unit profile. The results are presented in Table 3.

Any increase in total work experience by one year increases the chance of a higher QWL by 1,018 times [OR = 1.018, 95% CI: (1.003-1.033), p = 0.019].

In surgical, therapeutic and diagnostic units, the chances of higher QWL decrease by about 50% in comparison with administrative units (Table 3).

Table 3:-Multiple binary logistical regression results.

Factor	OR	95% CI	p
Total work experience	1.018	1.003 ÷ 1.033	0.019
Unit profile			0.004
Surgery	0.452	0.259 ÷ 0.787	0.005
Therapeutic	0.467	0.298 ÷ 0.730	0.001
Diagnostic	0.524	0.290 ÷ 0.946	0.032
Administrative profile	1.000		

Discussion:-

The analysis showed - the level of QWL is similar for both sexes, i.e. their perception is the same in terms of their quality of work. This result is consistent with previous studies conducted by Bhuvanewari et al (2012), Ahmad (2017) and Bolhari et al (2011).

Age is identified as associated with QWL and is the most common test individual influence on the working attitudes. The results are consistent (Ahmad, 2017; Stamps, Piedmonte, 1986; Bolhari et al, 2011; Hossain, 1997) older workers generally have a higher quality of working life than younger workers and our research confirms them.

Mowday et al (1982), employees with higher education tend to be aware of the best available alternatives for changing jobs and are usually less likely to develop strong feelings about their current jobs and organizations. The same note is made by Mishra et al. (1997): a higher level of education leads to a higher level of QWL. The results of our study show that a higher level of education does not lead to a higher QWL level, the results of these studies are not confirmed.

Some studies show that happy family life correlates with a high level of job satisfaction and objective career success (Shaffer, 1987). Rapoport and Rapoport (1980) supported this by showing that family moral support is an important factor influencing QWL. Rose et al. (2006) found that there was a significant difference in QWL between married and unmarried. Those who are married and have children, have a higher level of QWL compared to those living alone. Our study confirms these findings.

The relationship between professional experience and QWL is confirmed. The same result was observed by Ahmad (2017), Bharti et al. (2010), and by Rose et al. (2006) and other researchers (Hossain, 1997; Bolhari et al, 2011).

The medical staff has a lower QWL than non-medical staff, which explains the lower QWL of those working in the surgical, therapeutic and diagnostic unit.

Conclusion:-

In this study it was investigated the relationship between QWL and gender, age, work experience, kind staff and the type of unit of work, marital status and level of education. The results show that QWL has a significant relationship with some socio-demographic characteristics of the respondents: age, work experience, marital status, staff and unit profile. It is assumed that there is a significant difference in employees' satisfaction with working life with respect to the listed characteristics. However, it is rejected in terms of gender, place of residence, participation in management and education. Our findings suggest that further studies are needed to clarify the reasons for these results. Future studies should include other significant variables and also explore more complex interactions of quality of working life with demographics and other variables in healthcare collectives.

References:-

1. Ahmad, S. (2017). The co-relation between qwl and demographic factors of private university employees in india. People: *International Journal of Social Sciences*, 3(2).
2. Bharti, P. S. et al. (2010). Quality of work life: Perception of college teachers. Available at: <http://mpr.ub.uni-muenchen.de/27868> (accessed 10 November, 2013).

3. Bhuvanewari, P et al (2012). A study of quality of work life among employees in Neyeli Lignite Corporation Limited, Tamil Nadu. *The International Journal –Research journal of commerce & Behavioural Science*, 1(4), 29-32.
4. Bolhari, A., Rezaeean, A., Bolhari, J., Bairamzadeh, S., & Soltan, A. A. (2011). The relationship between quality of work life and demographic characteristics of information technology staffs.
5. Bolhari, A., Rezaeean, A., Bolhari, J., Bairamzadeh, S., & Soltan, A. A. (2011). The relationship between quality of work life and demographic characteristics of information technology staffs.
6. Charan, J., & Biswas, T. (2013). How to calculate sample size for different study designs in medical research?. *Indian journal of psychological medicine*, 35(2), 121.
7. Cochran, W.G. (1977) Sampling Techniques. 3rd Edition, John Wiley & Sons, New York.
8. Egorshin, A.P. (2003). Motivation of work: teaching manual. Novgorod: NIMB, 320
9. European Commission. (2011). Occupational health and safety risks in the healthcare sector – Guide to prevention and good practice. *Luxembourg: Publications Office of the European Union*, – 275 pp. ISBN 978-92-79-19454-2, doi:10.2767/27263
10. Garg, C. P., Munjal, N., Bansal, P., & Singhal, A. K. (2012). Quality of work life: an overview. *International Journal of Physical and Social Sciences*, 2(3), 231-242.
11. Gogoleva, A. S., Sorokin, P. S., & Efendiev, A. G. (2017). Problems and perspectives in research into the quality of work life in organisational studies. *Society and Economy*, 1-20.
12. Hossain, J. A. (1997). Quality of Working Life of Industrial workers in Bangladesh: A case study in Greeter Kushtia District. *Unpublished Research Monograph*.
13. Hossain, J. A. (1997). Quality of Working Life of Industrial workers in Bangladesh: A case study in Greeter Kushtia District. *Unpublished Research Monograph*.
14. Mishra, P. K., Mehta, S., & Bhardwaj, G. (1997). Motivation and role stress in entrepreneurs. Studies in organisational role stress and coping. New Delhi/Jaipur: Rawat Publications
15. Mowday, R. T. et al. (1982). Employee-Organizational Linkages: The Psychology of commitment, absenteeism and turnover, Academic Press, New York.
16. National statistical institute. (2017). Healthcare 2016. ISSN 1313-1907 <http://www.nsi.bg/sites/default/files/files/publications/Zdrave2016.pdf>
17. Rapoport, R. and R.N. Rapoport, 1980. Balancing work, family and leisure: a triple helix model. In C.B. Derr (Ed.). *Work, family and the career*. New York: Praeger.
18. Rethinam, G. S., & Ismail, M. (2008). Constructs Of Quality Of Work Life: A Perspective Of Information Technology Professionals. *European journal of social sciences*, 1.
19. Rose, R. C., Beh, L., Uli, J., & Idris, K. (2006). Quality of work life: implications of career dimensions. *Journal of Social Sciences*, 2(2), 61-67.
20. Sandrick, K. (2003). Putting the emphasis on employees. *Trustee: the journal for hospital governing boards*, 56(1), 6-10.
21. Shaffer, G.S., 1987. Patterns of work and non-work satisfaction. *J. Appl. Psychol.*, 72: 115-124.
22. Stamps, P. & Piedmonte, E. (1986). Nurses and work satisfaction: An Index for Measurement, Health Administration Press, Ann Arbor.
23. Timossi, L., Pedroso, B., Francisco, A., & Pilatti, L. (2008). Evaluation of QWL: An Adaptation from the Walton's QWL Model. In *XIV International Conference On Industrial Engineering and Operations Management, Rio de Janeiro, Brazil* (Vol. 13).
24. Walton, R. E. (1975). Criteria for Quality of working Life. In LE, Davis, and AB, Cherns (Eds), *The quality of working life*.