Research Article

The Relationship between Quality of Work Life and Productivity of Petrochemical Employees in terms of Demographic Variables

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ABSTRACT: Most experts believe that human resources are the most valuable and prominent factors to achieve organization's objectives and organizations should pay special attention to the issue. As a key factor, quality of work life can play an important role to create and maintain satisfaction and increase productivity of human resources and organizations. The purpose of this study was to assess the impact of quality of work life and its aspects on productivity of human resources using descriptive-survey study. its population consisted of all employees Fanavaran, Boo Ali Sina and Amir Kabir Petrochemical Companies (n= 2842). The sample size was calculated 338 employees using Cochran formula. The stratified random sampling was used to select the sample. Data was collected using questionnaires of quality of work life (Walton) and productivity of human resources (Hersey & Goldsmith); meanwhile, data was analyzed using Pearson correlation coefficient, t-test and ANOVA with SPSS software. Results of the study hypotheses showed a positive significant relationship between productivity with quality of work life and its aspects among petrochemical employees.

KEYWORDS: Productivity Of Human Force, Quality Of Work Life, Petrochemical, Demographic Variables

1.INTRODUCTION

In the new century, which organizations are faced with global competition environment, human resources are basic strategic resource in any organization. Undoubtedly, success of organizations and workplaces depends on efficient using human resources (Harsi, & Blanchard, 1996). Organizations have focused on their staff to not back behind the competition. They attempt to increase productivity of human resources using different methods, but the question arises continuously: which method will increase productivity of human resources? Therefore, one of main tasks of management is to evaluate productivity and factors affecting it in-depth as well as take appropriate measures to make effective use (Ahmadi, 2001).

Some experts believe that a part of reducing productivity and quality of production and services is the result of shortcomings in quality of work life. For this reason, most of industrial, commercial and even service organizations have focused on expertise, increasing satisfaction and attachment of human resources to enhance its productivity. They have related employees' productivity by improving quality of work life.

Quality of work life is a comprehensive program that increases employees' satisfaction, strengthens their learning in environment and helps them to manage changes. Lack of employees' satisfaction with quality of work life is a problem that will affect nearly all employees, regardless of their position. While in the past, there was emphasized on personal (non-work) life, in today's society, improving quality of work life has become as one of the most important objectives for organization and employees.

If there is identified the relationship between quality of work life and productivity, managers can provide proper fields for employees' productivity by improving quality of workplace. The present study aimed to investigate the relationship between both variables and their relationship. This study examines the relationship between quality of work life and productivity of employees in Fanavaran, Boo Ali Sina and Amir Kabir Petrochemical Companies in terms of demographic variables.

1.1.Reviewing Theoretical Basics and the Research History

a)   Quality of Work Life

Quality of work life was firstly introduced in Europe during 1950s and according to the conducted studies by Eric-Trist et al, Tavistock College, London, on human. Quality of work life includes reaction of employees to work, especially individual consequences on job satisfaction and mental health (Cummings, 2012). Quality of work life is a process that all members of organization involve in decisions especially those that affect their job and workplace, through appropriate created open communication channels for this purpose. As a result, their participation and satisfaction on work will be increased and work-related stress will be decreased for them (Dolan & Schuler, 2014).

There are provided several theories on quality of work life, which some of them are presented in the following:

➢   *Cast Theory:* According the theory, programs of quality of work life have a positive view on people and their ability in organizational participation (Gholami, 2009).

➢   *Harold Koonts Theory:* Harold Koonts believes that program of quality of work life is one of the most interesting methods to motivate staff. The programs represent a systematic method to design jobs and a promising way in the expanded career scope that is rooted in attitudes of technical-social systems in management (Koonts et al, 1991).

➢   *Lawler Theory:* Lawler considers quality of work life as a means to improve relationships between management and staff. For this reason, he proposes that projects of quality of work life are used to increase employees' participation in affairs of organization (Lawler, 1982).

➤ *Dobrin Theory:* According the theory, programs of quality of work life are processes created by members of organization. Accordingly, communication channels are created for this purpose. Some prepare a program of quality of work life to design employees' jobs, and others prepare it for work environment, in order to provide underlie for job satisfaction (Roodaki, 2008).

➤ *Ganingham and Ebrel Theory:* The theory believes that quality of work life does not include a set of principles because it emphasizes on technological needs of employees in social system. Principle of using quality of work life is based on socio-technical system requirements of organization (Roodaki, 2008).

➤ *Werther Theory:* According the theory, procedure of employees' participation is one of the most common methods to increase programs of quality of work life.

➤ *Zilagyi and Wallace Theory:* The scientists considered quality of work life as a process containing joint decision-making, cooperation and mutual compromise between management and staff (Zilagyi & Wallace, 1987).

➤ *Walton Theory:* Walton considers eight key variables as aim of improving quality of work life. The important matter is that all variables are related to each other. The factors include: 1) compensating fair and adequate service; 2) safe and healthy work conditions; 3) possibility of extending to use human capacities; 4) possibility of security and constant growth; 5) social integration in work organization; 6) belief in rule of law; 7) work balancing role; and 8) social valid and useful work.

Despite different perceptions on quality of work life, the conducted studies suggest that there are some common factors in most societies. Scientists and scientific institutions have considered different indicators for quality of work life that Table 1 summarizes them.

Table 1. Indicators of quality of work life

Researcher	The accepted indices
Walton	Pay fairly and adequately; safe and healthy work conditions; developing human capabilities; continuous growth and security; importance in society; labor laws; social relevance of work; meaning and challenging work (Mirsepasi, 1993)
Casio	Salaries and benefits; welfare, health and safety facilities; participation in decision-making; democracy; diversity and rich businesses; feedback of results (Casio, 1992)
Management Association of America	Salary; benefits especially health care benefits; job security; lack of work stresses in organization; participation in decisions; democracy at workplace; contributing in earnings; welfare facilities and utilities; four work days in a week (Griffin, 1996)
Moton	Salaries and benefits; work schedule; job nature; job physical aspects; job domestic and foreign institutionalized aspects; political, social and economic factors (Davoodi, 1998)
Tuttle	Security and safety; equality and fairness of wages; opportunities to frustrate skills and lifelong learning; democracy and participation in decision-making (Mirsepasi, 1993)
Desler	Having a rewarding career; adequate wage; safe and healthy work conditions; job security; competent supervision; feedback; positive social conditions; having opportunity to train; assigning roles and duties in terms of justice (Jazani, 2014)
Lewis et al.	Reducing work stress; organizational commitment and belonging; positive communication; autonomy; functionality and anticipating business activities; justice; transparency of regulatory system; professionalism; fair payment; advancement opportunities (Lewis et al, 2001)

Recent researchers	Family organizational support; emotional commitment; work-family conflict; compressed weekly work; flexibility at work; social supports; support and responsibility; work intervention in family; family intervention in work

Examining the above theories and studies focused on quality of work life show that Walton theory has more appropriate classification and it has been cited in other studies. Eight-part classification by Walton contains concepts of other theorists. This theory is used in the present study.

b) Productivity of Human Force

Today, role and importance of human resources in process of producing and providing services in human societies has been identified as the most important factor. By looking at stages of human civilization, it is obvious that role of human resources has been evolved from a simple labor to human capital because technology advances are inefficient without developing human resources. At the present time, injecting funds is not considered as main factor of development, but development and productivity of human resources improve organizations and subsequently, developing global economic systems by their proper growth, as human capital will identify financial resources. Therefore, high growth of productivity, particularly labor productivity, affects all economic and social activities. Human resources productivity is ratio of the done work by the organization (production of goods or services) during the identified time k to the spent human resources (total staff of organization) in terms of man-hours, man-weeks or man-months.

There have been provided various models on labor productivity, which we present some of them here:

✓ Davis and Newstorm Model: They believe that factors affecting labor productivity include quality leadership, mutual trust between workers and employers, development without organizational communication, fairness of rewards, employees' participation (Davis & Newstorm, 1981).

✓ Crust Model: The considered factors to improve labor productivity include commitment, communications, respect, honor, seriousness, security, support and practical training.

✓ Harsi and Goldsmith Model: The model presented in 1985 and includes aspects of performance, capacity, clarity, organizational support, motivation, evaluation, reliability and environment (Harsi, Blanchard & Kenneth, 1996).

Examining the above-mentioned models and the conducted studies on labor productivity models show that Harsi and Goldsmith model is more suitable and has been cited in other studies. Therefore, we use it in the present research.

c) Literature

There have been conducted various studies on relationship between quality of work life and productivity of human resources, which we present some of them here:

In a research, Moradi et al (2014) studied nurses' quality of work life and its influencing factors in hospitals of Kashan. The results showed a significant relationship between quality of work life with level of education and years of service of staffs, but its relationship not significant with gender, marital status, age and type of employment.

In a research, Choobineh et al (2013) assess quality of work life and the factors affecting it in among staff of Shiraz University of Medical Sciences. They concluded that there is a significant relationship between gender and income level with quality of work life. In other hand, the results showed no significant relationship between age, years of service, marital status, number of children, education, type of employment and place of service with quality of work life.

Rasooli et al (2013) conducted a study to determine situation of quality of work life among librarians in Tehran Public Libraries. The results suggested no significant relationship between quality of work life among male and female librarians. There was also no significant difference between age groups and job experience in terms of quality of work life.

In a research, Sa'adipoor et al (2013) examined the relationship between quality of work life with productivity of PNU employees, West Azerbaijan province, in academic year 2012-2013. Using Pearson's correlation coefficient, they showed a positive significant relationship between components of quality of work life with productivity of human resources.

In a research, Salimi and Saeidian (2013) investigated the relationship between quality of work life with interactive effects of demographic variables on productivity of municipal staff engaged in Zahedan. They concluded that there is a positive significant relationship between all aspects of quality of work life with productivity of employees. Meanwhile, variables of age, gender and work experience affect productivity of employees.

Emadzadeh et al (2013) examined quality of life of primary school teachers in Isfahan. According the research results, there is no significant difference in quality of work life between male and female teachers. Quality of work life is equal among single and married teachers, and they have no significant difference in terms of education level. Finally, level of their quality of work life has been increased by increasing experience level.

In a research, Mizani and Bandak (2013) analyzed the relationship between quality of work life and productivity of staff in Tehran Modernization Organization. They showed a significant relationship between employees' productivity and components of quality of work life.

In a research, Kalami et al (2012) examined mutual effect between productivity and quality of work life of human resources in Water and Sewage Organization, Maragheh. Finally, it was found a significant relationship between qualities of work life with productivity.

Moradi (2012) conducted a research to examine the relationship between qualities of work life with productivity of employees in Bahman Motor. Using Pearson and Spearman correlation coefficients, he showed that among components of quality of work life, only components of fair and adequate payment, safe and health work environment, developing human capabilities and social dependence have a significant relationship with staff productivity.

Based on Walton Model, Mousavi et al (2012) examined the relationship between variables quality of work life and productivity of human resources in Saderat Bank. Using Pearson correlation, it was found a

significant correlation between components of quality of life and productivity of human resources among the employees based on Walton Model.

In a research, Nosratpanah et al (2012) examined the relationship between quality of work life and productivity of human resources in administrative staff of Oil Company in Kermanshah Province. They showed a significant relationship between quality of work life and productivity of human resources.

In a research, Hosseininasab and Taghinia (2011) examined the relationship between quality of work life and productivity of staff in Tabriz University of Medical Sciences using descriptive-correlation method. They concluded that there is no significant relationship between quality of work life and productivity of staff in Tabriz University of Medical Sciences.

Abrifam (2009) selected a sample containing 184 members of staff in sport federations to study the relationship between quality of work life with productivity performance of the staff based on Achio Model. Its results showed a significant difference between men and women in quality of work life, but there was no significant difference in average productivity of men and women. There was also no significant difference in average productivity of married and single persons. The results showed no significant difference between years of service, age, education and most of components in quality of work life with productivity.

Indumathi and Sloan (2013) evaluated quality of work life among female and male staff in IT companies at Chnanay, India. They found a significant difference in quality of work life between female and male staff and women have better quality of work life.

Gayathiri and Ramakrishnan (2013) examined the relationship between quality of work life and job satisfaction with productivity performance of employees. They showed that aspects of quality of work life including job design, work environment and facilities, job security, health, stress and safety, wages and remuneration, the balanced work life, training and development, leadership and employees' empowerment will increase productivity of human resources among staff.

Roman Aktech et al (2012) examined the impact of quality of work life on improving productivity and performance. They found that quality of work life has a positive significant effect on improving and increasing productivity in organization.

Bolhari et al (2011) conducted a research to examine the relationship between quality of work life and some demographic characteristics. The research results showed no significant relationship between gender and level of quality of work life, but there is a significant relationship between level of quality of work life with age, work experience and income.

d) The Research Theoretical Framework

According the research theoretical bases and history, aspects of quality of work life and productivity of human resources have been designed based on Walton Model and Harsi and Goldsmith Model respectively. By summarizing internal and external studies, the research analysis model can be defined as follows:
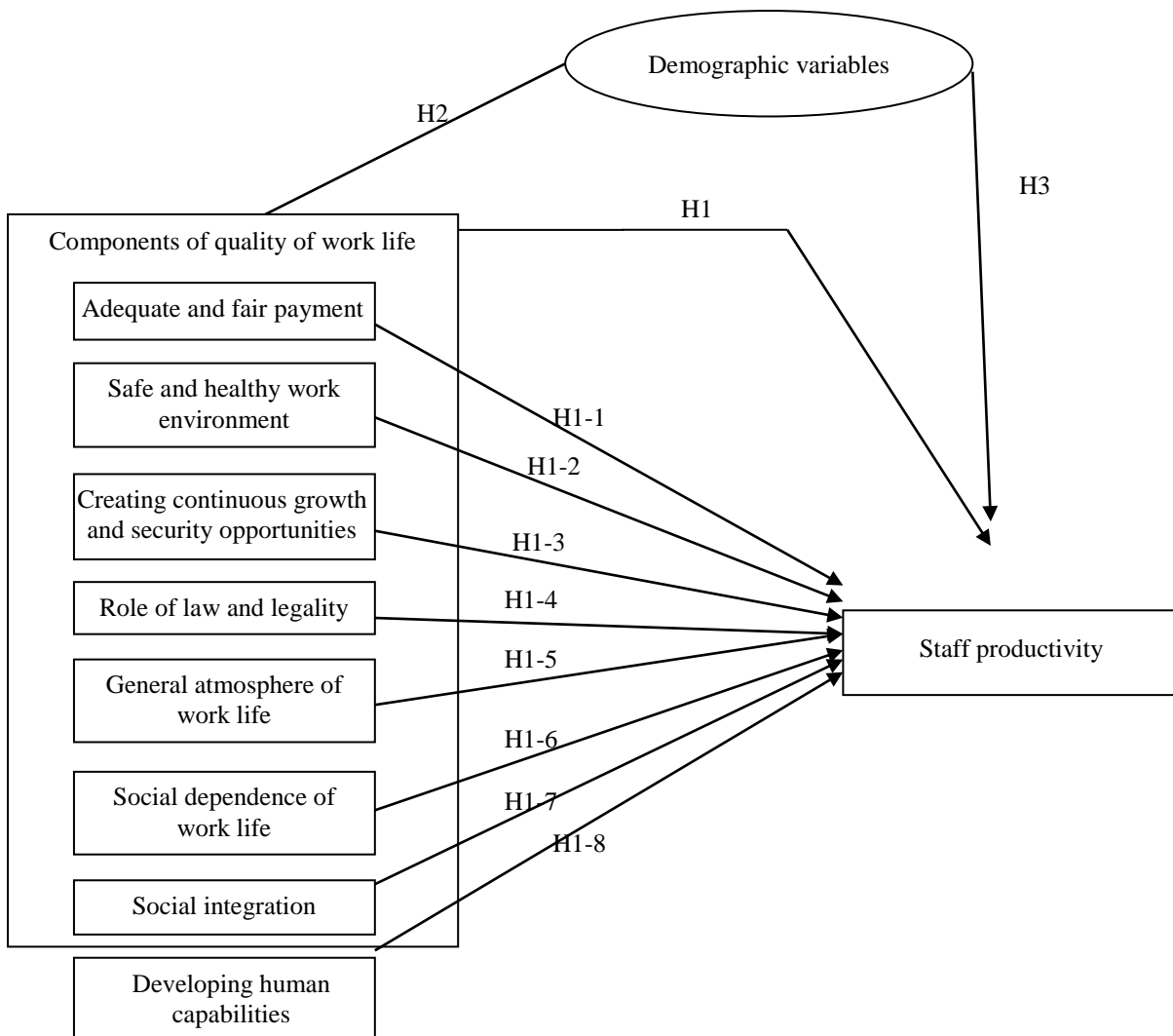
Fig. 1. The research conceptual model

1.2.The Research hypotheses

Main hypothesis: There is a significant relationship between quality of work life and productivity of petrochemical staff.

Secondary hypotheses: 1) there a s is a significant relationship between quality of work life and productivity of petrochemical staff; 2) quality of work life among petrochemical employees is different based on demographic variables (age, sex, marital status, academic paper, work experience and type of employment); 3) productivity of petrochemical employees is different based on demographic variables (age, sex, marital status, academic paper, work experience and type of employment).

2.METHODOLOGY

The present research is a quantitative study based on the collected and analyzed data. The research is applicable objectively; while it is descriptive and correlation, in terms of method to collect data. Its population consisted of all official and contractual employees in maintenance, technical and engineering, operational, commercial and administrative, financial and support units in Fanavaran, Boo Ali Sina and Amir Kabir Petrochemical Companies (n= 2842). The sample size was calculated 338 employees using Cochran formula. The stratified random sampling was used to select the sample. The employees were classified into technical-engineering, maintenance, operation, commercial, administrative, financial and support units. The sampling is chosen to ensure that subgroups are available in the sample as representative of the community with the same proportion in society. The sampling will take place from each class.

The research tool is a questionnaire that included questions on respondents' characteristics as well as items and questions in Likert scale. They are used to examine dependent and independent variables. In this study, three questionnaires were used to collect data. In the first part, we assessed quality of life of employees. Walton questionnaire on quality of work life was used for the purpose. Latin version of the questionnaire contains of 35 items with eight subsections that have been arranged using five-point Likert scale (1 for very low; 2 for low; 3 for average; 4 for much; and 5 for very much). After translating and localizing, it included the following sections: adequate and fair payment (4 items), safety and health in workplace (6 items), creating opportunity for continuous growth and security (4 items), rule of law and legality (4 items), general atmosphere of work life (3 items), social dependence of work life (5 items), developing human capabilities (5 items) and social integration (4 items).

There was used another questionnaire to evaluate productivity of human force working in the petrochemical companies. The questionnaire components derived from Harsi and Goldsmith Theory containing 26 questions and seven aspects, which they have been scored based on five-point Likert scale (from very low to very much). Harsi and Goldsmith selected seven variables. By combining the first letters of each variables, they proposed seven-letter word ACHIEVE to remember the aspects. The dimensions include ability (3 items), clarity (4 items), organizational support (4 items), evaluation or feedback (4 items), credit (4 items), motivation (4 items) and environment (3 items).

The third part of the questionnaire included individual characteristics of employees that were assessed in terms of age, sex, marital status, academic paper, work experience and type of employment variables.

- *The Questionnaire Justifiability and Reliability*

In this study, we use standard questionnaires of labor productivity (Achio Model) and quality of work life (Walton Model). Harsi and Goldsmith presented Achio Model in 1980s. Walton (1975) provided quality of work life questionnaire. Justifiability of the questionnaires is confirmed because of their standard nature.

To examine reliability of the questionnaires, we used Cronbach's alpha coefficient in SPSS software. The coefficients in questionnaires for human resources productivity and quality of work life

questionnaire were 0.889 and 0.933 respectively. As Cronbach's alpha values more than 0.7, their reliability is acceptable.

- *Data Analysis*

SPSS 16 software was used to analyze data. Its results are offered in both descriptive statistics (including mean, standard deviation and variance of the studied variables) and inferential statistics (including data normalization using Kolmogorov-Smirnov test and examining the research hypotheses through statistical tests of Pearson correlation, independent t-test and ANOVA) at significance level of 95% .

3.FINDINGS

Descriptive Findings

Total respondents in this study were 338 persons (265 men and 73 women). Most respondents are in age group 29-35 years old. Marital status of the respondents also indicates that 87.4% and 12.6% of them were married single respectively. Table of distributing education level of respondents indicates that the maximum and minimum number of the respondents had BA and PhD degrees respectively. Among the participated staff in the research, there were 64.7% and 35.3% as official and contractual employees. To study work history of the staff, there was asked to record their years of service; finally, it was identified that most of them had work experience 6-10 years (Table 1).

Table 2. Frequency distribution of respondents in terms of demographic variables

Variable	Measure indicator	Frequency	Frequency percent
Gender	Female	73	21.6
	Male	265	78.4
	Total	338	100
Age	23-28 years old	36	10.7
	29-35 years old	170	50.2
	36-45 years old	106	31.4
	46-54 years old	23	6.8
	Up than 54 years old	3	0.9
	Total	338	100
Marital status	Married	291	87.4
	Single	42	12.6
	Total	333	100
Education Level	Diploma	26	7.7
	AA	28	8.3
	MA	234	69.2
	MSc	48	14.2
	PhD	2	0.6
	Total	338	100
Employment Status	Official	218	64.7
	Contractual	119	35.3
	Total	337	100
Years of service	Less than 5 years	23	6.8
	6-10 years	145	42.9

11-15 years	110	32.5
16-20 years	32	9.5
21-25 years	20	5.9
More than 25 years	8	2.4
Total	338	100

Tables 3 and 4 represent number of questions, mean, standard deviation and variance of human resources productivity and quality of work life variables with their aspects.

Table 3. Descriptive statistics of human force productivity and its components

Statistics / Variable	Number of questions	Average	Standard deviation	Variance
Human resource productivity	26	25.4	0.483	0.233
Ability	3	24.2	0.644	0.415
Clarity	4	2.69	0.617	0.38
Organizational support	4	2.51	0.629	0.396
Motivation	4	2.22	0.717	0.515
Assessment	4	2.68	0.671	0.45
Credibility	4	2.29	0.712	0.507
Environment	3	3.14	0.993	0.985

Table 4. Descriptive statistics for quality of work life and its components

Statistics / Variable	Number of questions	Average	SD	Variance
Quality of work life	35	2.52	0.469	0.22
Adequate and fair payment	4	2.22	0.748	0.559
Safe and healthy work environment	6	26.3	0.502	0.252
Creating continuous growth and security opportunities	4	2.32	0.612	0.375
Role of law and legality	4	2.42	0.683	0.466
General atmosphere of work life	3	2.24	0.675	0.456
Social dependence of work life	5	2.62	0.623	0.388
Social integration	4	2.6	0.635	0.403
Developing human capabilities	5	2.85	0.685	0.469

❖ *Inferential Findings*

Firstly, Kolmogorov-Smirnov test was used to examine normally distribution of data.

Table 5. Results of Kolmogorov-Smirnov Test for data normality

Variable	Number	Test statistic	Sig.
Human resources productivity	338	1.245	0.09
Quality of work life	338	1.117	0.165

Given that significant level of both variables in Table 5 is more than 0.05, hypothesis of observations' normality (H0) is accepted and observations follow normal distribution. Due to normality of data, we use parametric tests to evaluate the research hypotheses.

Main hypothesis: There is a significant relationship between quality of work life and productivity of petrochemical staff.

Pearson correlation coefficient was used to test this hypothesis. Results of findings in Table 6 showed 0.761 for Pearson correlation coefficient. As significance level is less than 0.05, so there is confirmed a significant positive relationship between both variables. Correlation coefficient (0.761) showed high correlation between the variables. Therefore, staff productivity in petrochemical companies will be increased by improving their quality of work life.

Table 6. Determining the relationship between human resource productivity with quality of work life among petrochemical employees

Variable	Pearson correlation coefficient	Sig.
Human resources productivity	0.761	0.000
Quality of work life		

The first sub-hypothesis: There is a significant relationship between quality of work life and productivity among petrochemical staff.

The results showed that the Pearson correlation coefficients for the relationship between productivity of staff with adequate and fair payment, safe and healthy work environment, opportunities of continuous growth and security, rule of law and legality, general atmosphere of work life, social dependence of work life, social integration and developing human capabilities are 0.559, 0.458, 0.511, 0.593, 0.42, 0.67, 0.646 and 0.579 respectively. As significance level of the variables is less than 0.05, so there is confirmed hypothesis of a significant positive relationship between productivity of employees with aspects of quality of work life (Table 7).

Table 7. Determining the relationship between quality of work life with human resource productivity among petrochemical employees

Variable / Dimension	Human resource productivity	
	Correlation coefficient	Sig.
Adequate and fair payment	0.559	0.000
Safe and healthy work environment	0.458	0.000
Creating continuous growth and security opportunities	0.511	0.000
Role of law and legality	0.593	0.000
General atmosphere of work life	0.42	0.000
Social dependence of work life	0.67	0.000
Social integration	0.646	0.00
Developing human capabilities	0.579	0.000

The second sub-hypothesis: Quality of work life of petrochemical staff is different in terms of demographic variables (age, sex, marital status, academic paper, work experience, employment status).

Table 8. Results of ANOVA test on quality of work life in terms of age, education and work experience variables

Variable	Quality of work life	
	ANOVA test	Sig.
Age	9.952	0.000
Education	5.668	0.000
Work experience	7.398	0.000

In Table 8, as significance level of ANOVA test (0.00) is less than 0.05, H0 is rejected and it can be said that quality of work life is different in petrochemical staff in terms of age, education level and work experience.

Table 9. Results independent t-test on quality of work life in terms of sex, marital status and employment

Variable	Quality of work life	
	Independent t-test	Sig.
Sex	0.008	0.993
Marital status	1.952	0.052
Employment	-0.174	0.268

Given significant level of t-test (more than 0.05), H0 is confirmed. It indicates no significant difference in terms of quality of work life for female and male staff, single and married staff and official and contractual staff (Table 9).

The third sub-hypothesis: Productivity of petrochemical staff is different in terms of demographic variables (age, sex, marital status, academic paper, work experience, employment status).

Table 10. Results of ANOVA test on human resources productivity in terms of age, education and work experience variables

Variable	Human resources productivity	
	ANOVA test	Sig.
Age	4.873	0.001
Education	4.137	0.003
Work experience	3.467	0.005

In Table 10, as significance level of ANOVA test (0.00) is less than 0.05, H0 is rejected and it can be said that quality of work life is different in petrochemical staff in terms of age, education level and work experience.

Table 9. Results independent t-test on human resources productivity in terms of sex, marital status and employment

Human resources productivity

Variable		
	Independent t-test	Sig.
Sex	-0.696	0.487
Marital status	2.457	0.015
Employment	1.283	0.168

Given significant level of t-test for both variables of gender and employment status (more than 0.05), H0 is confirmed. It indicates no significant difference in terms of productivity for female and male staff and labor productivity between official and contractual staff. However, as significance level of the test for marital status variable is less than 0.05, as a result, it was found that human resource productivity is different in single and married staff (Table 11).

5.DISCUSSION AND CONCLUSION

Results of the study main hypothesis showed a significant relationship between quality of work life and productivity. It is consistent with the obtained results by Roman Aktech et al (2012), Mizani and Bandak (2013) and Kalami et al (2012); but it is inconsistent with the obtained results by Hosseininasab and Taghinia (2011).

According findings of this study, there is a significant relationship between aspects of quality of work (adequate and fair payment, safe and healthy work environment, creating opportunities for continuous growth and security, rule of law and legality, general atmosphere of work life, social dependence of work life, social integration and developing human capabilities) with staff productivity. It is consistent with the obtained results by Saeidipoor et al (2013), but Abrifam (2009) obtained another conclusion in his study.

The study showed a significant relationship between age and quality of work life. It is consistent with the obtained results by Bolhari et al (2011) and Mohammadi (2014); but it is inconsistent with the obtained results by Moradi et al (2014), Choobineh et al (2013), Rasooli et al (2014), Sakaki et al (2012) and Soleimani (2012).

Meanwhile, there is no significant relationship between sex and quality of work life among petrochemical employees. It is consistent with the obtained results by Indumathi et al (2013) and Moradi et al (2014); but it is inconsistent with the obtained results by Choobineh et al (2013), Rasooli et al (2014) and Abrifam (2009).

The research approved the relationship between marital status and quality of work life. However, Moradi et al (2014), Choobineh et al (2013) and Emadzadeh et al (2013) found opposite results in their research.

According the results of this study, there is a significant relationship between education level and quality of work life. It is consistent with the obtained results by Moradi et al (2014) and Rasooli et al (2014); but it is inconsistent with the obtained results by Choobineh et al (2013) and Emadzadeh et al 2013).

In the present study, we found a significant relationship between quality of work life and work experience. It is consistent with the obtained results by Bolhari et al (2011), Moradi et al (2014) and Emadzadeh et al (2013); but it is inconsistent with the obtained results by Choobineh et al (2013) and Rasooli et al (2014.

The research results showed no significant relationship between quality of work life and employment situation. It is inconsistent with the obtained results by Moradi et al (2014) and Choobineh et al (2013).

According to the research results, there is a significant relationship between labor productivity with employees' age. It is consistent with the obtained results by Salimi and Saeidian (2013); is inconsistent with the obtained results by Abrifam (2009).

In the present study, we found no significant relationship between productivity of human resources with sex. It is consistent with the obtained results by Salimi and Saeidian (2013); but it is inconsistent with the obtained results by Abrifam (2009).

In the present study, we also showed a significant relationship between productivity of human resources with marital status. It is inconsistent with the obtained results by Abrifam (2009).

There is also a significant relationship between productivity of human resources with petrochemical staff education. It is consistent with the obtained results by Abrifam (2009).

According results of the research, there is a significant relationship between productivity of human resources with work experience. It is consistent with the obtained results by Salimi and Saeidian (2013); is inconsistent with the obtained results by Abrifam (2009).

5.1.Research proposals

1.   There should be considered legal regulations in petrochemical companies. In this way, behavior of individuals is reduced according to individual interests and no one can make decisions based on personal opinions.

2.   Given importance of material and non-material rewards to increase labor productivity, managers should be aware about effects of the rewards on individuals. To encourage staff members, they can use motivations other than salary such as appreciation for doing tasks as well as participation and belonging to execute their tasks, in addition to material rewards.

3.   Petrochemical companies should consider entertainment and fun programs for employees and their families. They also take necessary actions to fulfill other family responsibilities by staff to improve their quality of work life.

4.   Due to the impact of social dependency on labor productivity in petrochemical companies, employees must be involved in teamwork and decision-making.

5.   It is recommended that managers keep contact employees in both positive and negative results of their performance. In evaluating performance of staff, they consider their real effort and activities, and relations are replaced by criteria.

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