

# Investigating the Contract Welders Quality of Life and the Quality of Working Life Relationship in Anzaly City in 2014

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## Abstract

**Background:** Today human resources are strategic parts of the organizations and are considered as intelligent and valuable assets. Human resources are the most valuable asset of organizations that face the major problem. Research has shown that working life and personal life have an interactive and exacerbate effect on each other. Based on the vast variety of harmful effects that endanger welders health it was tried to investigate the relationship between life quality and working life quality of contract welders in a shipbuilding factory in Bandar Anzali city. **Methods:** In this analytical descriptive cross-sectional study carried in 2014, 100 contract welders in the shipbuilding industry in Bandar Anzali was selected with the systematic method, and participated as contract welders. Data were collected with reliable and validated questionnaires include demographic information, life quality questionnaire (SF-36), and Walton life quality questionnaire (1975). Data were analyzed using SPSS18 software by using the Pearson correlation test. **Result:** %84 of contract welders were very happy with their life quality, and %60 were satisfied with working life quality. There was a significant meaningful relationship between life quality and working life quality ( $P \leq 0.00$ ,  $r = 0.4$ ). The overall living space variable from life quality had a significant meaningful relationship with life quality score changes ( $P \leq 0.042$ ,  $r = 0.342$ ). There wasn't any relationship between age, degree, and job experience with life quality and working life quality. But a single job or not having a second job had a significant meaningful relationship with life quality satisfaction and working life quality ( $P \leq 0.023$ ,  $r = 0.262$ ). **Conclusion:** This study showed that there was a relationship between life quality and working life quality. Therefore improvement in either of these two can improve the other one and also help the health promotion of welders.

**Keywords:** Contract Welders; Quality of Life; Quality of Working Life

## Introduction

Today human resources is a strategic part of each organization and is considered as an intelligent and valuable asset<sup>1</sup> this valuable asset encounter many problems.<sup>2</sup> One of these problems is health problems that affect workers

performance and efficiency.<sup>3</sup> In the recent industrial world, countries spend about 4 to 14 % of their gross domestic product for health care, that shows the high significance of health policy.<sup>4</sup> Recently the quality of life (QOL) is one of the major concerns of health

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experts.<sup>1</sup> QOL is physical, psychological, and social well-being that understood by a person and represents life blessings satisfaction.<sup>5</sup> The WHO health definition also considers QOL as an important item in healthy aging. QOL can use to estimate the burden and impact the disease, injury, and disability in a community as well as to measure "health" more broadly.<sup>6</sup> We know that having a job is important for life quality, but there is limited information about its characteristics and key factors that affect life quality and general satisfaction.<sup>7</sup> The study of working condition's effect on health started in two past decades. Studies have shown that working life and personal life interact with each other.<sup>8</sup> Quality of Working Life(QWL) was a researcher-driven social movement culminating in the early 1980s.<sup>9</sup>

QWL is an integral part of the human resource management system. The QWL and its increment contribute to the growth of enterprise productivity.<sup>10</sup> QWL has been a multi-dimensional concept.<sup>11</sup> Walton's theory defines the most comprehensive component of QWL in four dimensions: meaningful work, organizational and social suitability of work, challenging, rich and productive work, security and the field of the skills development, and continuous learning.<sup>12</sup> Janabady et al. checked out the relation between QOL and QWL in psychiatry educational, therapeutic, and research centers workers in Baharan of Zahedan in December 2010 with stratified random sampling on 55 workers. They used demographic information, the shortened WHO life quality questionnaire, and Dargahi working life quality test. The result showed that 43 percent of workers were dissatisfied with life quality and 40 percent were dissatisfied with working life quality. There was a significant meaningful relation between worker life quality and working life quality ( $r= 0.48$ ,  $P= 0.000$ ).<sup>12</sup> Soltani et al. checked out student's life quality at Gillan university in 2009.

This descriptive-analytical study with random cluster a class sampling method done in 126 students.

They used demographic information and WHO life quality questionnaire. The result indicates that life quality in 4 percent was very desirable for 4 percent, moderate for 51 percent, and undesirable for 11 percent. There is a meaningful difference ( $P<0.05$ ) between girl and boy students dimensions in physical pain, environmental relations, financing, social care, and negative emotions.<sup>4</sup> Many scientists research about QOL and QWL together or separately different employee. Merel et al. assess working life quality in employees with chronic physical disease. They mentioned that organization without a positive social climate and discrimination may lead employees to experience a negative encounter with co-worker and supervisor. Zare et al.<sup>13</sup> investigated the relationship between mental workload and general health among welders of Tehran Heavy Structure Metal Company. Jingxiang et al.<sup>14</sup> studied Health-Related quality of life and influencing factors among Welders.<sup>15</sup> Influence of serum lead level on prevalence of musculoskeletal pain, quality of life, and cardiopulmonary function among welders also assessed in Enugu metropolis, Southeast, Nigeria.<sup>16</sup> Due to daily increase in the number of contract staff number in our country, also harmful effects that this type of job has such as occupational injuries,<sup>17</sup> respiratory symptoms,<sup>17</sup> Musculoskeletal pain,<sup>15</sup> Metal fumes,<sup>17</sup> and working in open space,<sup>17</sup> we decided to investigate the relationship between contract welders' life quality and working life quality in a shipbuilding factory in Bandar Anzali.

## Methods

This descriptive-analytical cross-sectional study has been done with the participation of 100 contractor welders in a shipbuilding factory in Anzali City in 2014 from March to August. The workers in the study were employed contract welders at one of the shipbuilding factories in Anzali. Each person had the discretion to opt out if he did not want to participate in the study. For sample volume, used the Morgan table was used with 95% of the level of confidence.<sup>4</sup> For Data collection, 100 contract welders that had

more than one-year experience were selected. Three stages that were used are listed below.

a) demographic information

for collecting demographic information five questions included age, gender, education level, work experience, daily working time were used.

b) life quality SF-36 questionnaire

life quality SF-36 questionnaire that has become native by Montazeri et al., validity and reliability has been confirmed by Iranian researchers many times.<sup>1</sup> The questionnaire has eight dimensions including general health (5 questions), Physical function (10 questions), vitality and happiness (4 questions), role limitation due to physical problems (4 questions), role limitation due to emotional problems (3 questions), mental health (5 questions), social performance (2 questions) and body pain (2 questions).<sup>3</sup> The lowest score in this questionnaire is 0 and the highest score is 100. The reliability and validity of the Persian version of this questionnaire have been confirmed in Iran ( $r=0.7-0.9$ ). The score of each dimension is marked with the title of that dimension.<sup>2</sup> All scores were calculated based on clear guidelines.

c) Walton working life quality questionnaire

The questionnaire has eight dimensions including physical function role limitation due to emotional problems, vitality and happiness, mental health, social performance, body pain, and public health.<sup>3</sup> Score for each dimension based on SF-36 questionnaire instructions for three options questions is 0, 50 and 100 score, for five options is 0, 25, 50, 75 and 100 score, and for six options is 0, 20, 40, 60, 80 and 100 score.<sup>2</sup> All scores were calculated based on clear guidelines. Walton working life quality questionnaire (include eight dimensions: fare payment, safe work environment, human capabilities development, growth opportunity, integration, and social cohesion, the role of law, the general living situation, social affiliation of working life) has a 5-degree Likert scale with a difference from very low to very high.<sup>18</sup>

The questionnaire was completed as a self-declaration. After the questionnaire collection, the data were analyzed by SPSS 18 software. In quantitative data, the mean and standard deviation, and in qualitative data, the Pearson correlation coefficient was used to determine QOL and QOWL correlation.

## Results

All the subjects were male and %25 were in 30 years of age, %67 were in 30-40 years, %6 were 40 - 50 years and % 2 over 50 years old. For education level %62 had diploma and sub-diploma and %38 had a higher degree. For work experience %7 were under 5 years, %57 were 5-10 years, %34 were 10-15 years, and %2 percent over 15 years. %84 of contract welders were very pleased; %60 were happy with their working life. There has been a meaningful relationship between contract welder's life quality and Social affiliation of working life quality ( $P \leq 0.00$ ,  $r = 0.4$ ) (Table 1). But in working life quality variables only the work living situation has a significant relationship with life quality ( $r = 0.342$ ,  $P = 0.042$ ). Employee QOL and QWL satisfaction percentile have been shown in figure 1. In terms of QOL, %8 were dissatisfied, %8 were satisfied and %84 were very satisfied respectively Social affiliation of working life. Demographic information such as age, degree, work experience did not have a significant relationship. Not having a second job has a significant relationship with the satisfaction of life quality and working life quality ( $r = 0.223$ ,  $P = 0.003$ ), ( $r = 0.262$ ,  $P = 0.023$ ) (table 2, 3)

Table 1. Demographic information of contract welders

|                         | Demographic information | Percent |
|-------------------------|-------------------------|---------|
| Age (years)             | 20- 30                  | 25      |
|                         | 31-40                   | 67      |
|                         | 41-50                   | 6       |
|                         | More than 50            | 2       |
| Education               | diploma and sub-diploma | 62      |
|                         | Higher than diploma     | 38      |
| Work Experience (years) | under 5                 | 7       |
|                         | 10- 15                  | 57      |
|                         | over 15                 | 34      |

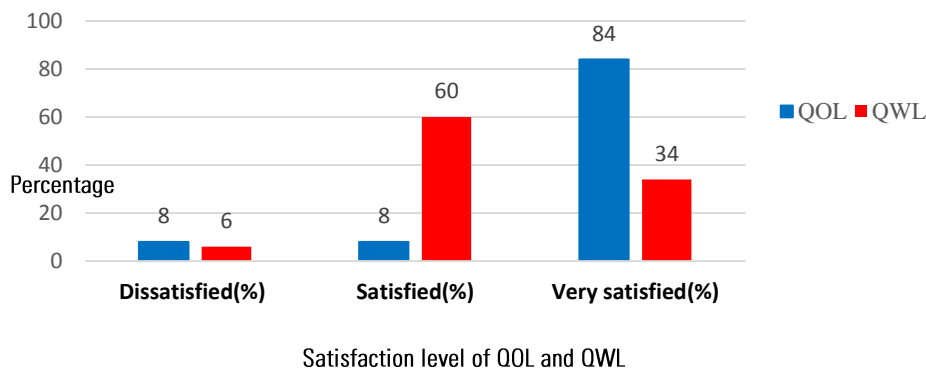


Figure 1. Employee QOL and QWL satisfaction

Table 2. Pearson test result of The QOL and QWL

| Dimension    |   | Social affiliation of working life | Fair payment | Safe work environment | Human capabilities | growth opportunity | Role of low | Overall living space | Social Integration |
|--------------|---|------------------------------------|--------------|-----------------------|--------------------|--------------------|-------------|----------------------|--------------------|
| Life quality | r | 0.000                              | -0.186       | -0.068                | -0.012             | -0.196             | -0.079      | 0.042                | 0.128              |
|              | p | 0.040                              | 0.035        | 0.257                 | 0.455              | 0.029              | 0.225       | 0.142                | 0.109              |

Significance level of the test =0.05

Table 3. Pearson test result for The QOL and QWL with employee demographic information

|     |   | age    | education | Work experience | Not having Second job |
|-----|---|--------|-----------|-----------------|-----------------------|
| QOL | P | 0.292  | 0.559     | 0.108           | 0.023                 |
|     | r | -0.450 | -0.101    | 0.086           | 0.262                 |
| QWL | P | 0.760  | 0.247     | 0.760           | 0.003                 |
|     | r | 0.093  | -0.023    | 0.120           | 0.223                 |

The significance level of the test =0

### Discussion

There was also a significant relationship between the general living situation and the quality of life component. The result of this study revealed that there is no meaningful relationship between age and quality of life that is inconsistent with Rahmani et al. study welders.<sup>19</sup> In Jingxiang et al. study there were no significant differences in age between the welder group and the control group.<sup>15</sup> Also, the results showed that there is no significant relationship between the age of the welders and the quality of the work-life score, while in Carlos et al. study, dissatisfaction was increased clearly with age. With significant differences between young workers (under 25) and mature age workers (aged 45 and above).<sup>20</sup> Perhaps the disappearance of the value of education and evidence

in the current society justifies these results or education cannot have a great impact on the health and quality of life. But in Sadeghian et al. study with the increasing level of education, there was a significant increase in the QOL of miners in terms of physical function.<sup>3</sup> The result of this study showed that is not a significant relationship between work experience and work quality, which agrees with Chubineh et al. study results and disagrees with the study of Talaei et al.<sup>21</sup> In this study, there was a significant relationship between the lack of the second job as a demographic item with QOL( $P=0.023$ ) and QWL( $P=0.003$ ) while there was no significant relation between QOL and demographic information in Mazloumi et al. study.<sup>22</sup> In this study, QOL and QWL relations were investigated in contract welders as a group that few studies have done on the subject on them. But in questionnaire studies such as this study, all of the intervening factors such as self-reporting, and bias in answering could not be controlled.

### Conclusion

This study showed that there was a relationship

between life quality and working life quality. Therefore improvement in either of these two can improve the other one and also help the health promotion of welders.

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