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# Investigation of the Relationship of Depression, Stress and Social Support with Quality of Life in Construction Workers

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# Investigation of the Relationship of Depression, Stress and Social Support with Quality of Life in Construction Workers

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**Abstract.** Background: Construction workers work under difficult conditions and with inflexible working hours. Quality of life is important in the lives of individual, and to evaluate and analyze the factors affecting construction workers. Objective: This study aims to examine the relationship between depression, stress, social support levels and quality of life in construction workers. Methods: The study included 88 individuals. Quality of life was assessed using the WHOQOL-Brief; for depression level was used Beck Depression Inventory; for social support was used the MSPSS, and stress levels were used the PSS-4. Results: There was a negative correlation between WHOQOL-Brief and Beck Depression Inventory ($r=-0.507$, $p<0.01$) and PSS-4 ($r=-0.423$, $p<0.01$), and there was a positive correlation between the MSPSS and WHOQOL-Brief ($r=0.328$, $p=0.002$). Discussion: In construction workers, increased levels of depression and stress and decreased levels of social support negatively affect their quality of life. Therefore, stress, social support, and depression should be evaluated in detail, and employers should consider these factors to improve the quality of life and well-being of their employees.

**Keywords:** Construction Workers, Quality of Life, Depression, Social Support, Stress.

## 1 Introduction

Working life constitutes a large part of life. Many factors from the working environment affect the employee's health and work efficiency [1]. The construction sector is one of the largest sectors affecting production areas and contributing to national economies [2]. Construction work is one of the most hazardous sectors with significant health risks due to dust, noise, chemicals, manual handling, vibrating tools, overloads and lack of safety awareness [3]. The physically demanding nature of construction work and the resulting health effects have been extensively studied [4]. Work-life in the construction industry has changed over the years, and the increase in work intensity due to new forms of employment and other work demands, such as doing

too much work in too little time and working long hours, has brought psychosocial problems [5]. It has also been reported that 83% of workers in the construction industry experience moderate to severe mental health problems [6]. especially depression [7]. Another common problem in construction workers is stress [8]. In various studies, stress levels of construction workers ranged from moderate (19.2%) to very high (33%) [7, 9]. This factor may also affect individuals' quality of life. On the other hand, social support is important in reducing the impact of psychosocial problems on construction workers. It has been stated that social support may positively affect physical and mental health and balance life pressures [10]. Poor working conditions, increased insecurity in the workplace, and lack of health insurance led to increased stress and decreased quality of life [11]. Quality of life is a broad concept that covers people's physical, mental and social well-being [12]. While the quality of life of workers dissatisfied with their work decreases, changes in the cognitive, mental and social spheres are an influential variable on the quality of life of workers [13]. Therefore, it is important to evaluate construction workers' psychosocial risk factors and address their impact on the quality of life [14].

Although there are studies in the literature that examined depression, stress and social support parameters separately in construction workers, there is no study that examined the relationship between depression, stress and social support together with quality of life. Therefore, this study aimed to examine the relationship between depression, stress and social support with quality of life in construction workers.

## 2. Method

### 2.1. Participants

This study was conducted with 88 construction workers aged 18-65 years. Data were collected from construction workers in Bursa province by snowball sampling method. G*Power version 3.1.9.4 software was used to determine the sample size [15]. The inclusion criteria were (1) being a construction worker, (2) being over 18 years of age, and the exclusion criteria were (1) having any psychiatric problem and (2) having an additional job.

**Measurements**

*Beck Depression Scale:* This scale was developed by Beck et al. in 1961 to measure the depression in adults [16]. The highest score is 63, and the lowest is 0. The severity is interpreted as 0-9= Minimal, 10-16= Mild, 17-29= Moderate, 30-63= Severe. Turkish validity and reliability were conducted by Hisli [17].

*Perceived Stress Scale (PSS-4)*: This scale was developed by Cohen et al. (1983) [18]. It consists of 14 items. This scale was developed as a five-point Likert-type (0 never – 4 very often) rating scale. A high total score means a high level of perceived stress. The Turkish validity and reliability was conducted by Eskin et al. [19].

*Multidimensional Perceived Social Support Scale (MSPSS):* The scale was developed by Zimet et al. (1988) [20]. It is a 7-point Likert-type self-assessment scale. A high value indicates that the perceived social support is high. Turkish validity and reliability were conducted by Eker et al. [21]

*World Health Organization Quality-of-Life Scale (WHOQOL-BREF):* It was developed by the World Health Organization (WHO) [22]. The WHOQOL-BREF is a 26-item instrument consisting of four domains: physical health (7 items), psychological health (6 items), social relationships (3 items), and environmental health (8 items); it also contains QOL and general health items. Turkish validity and reliability were conducted by Eser et al. [23].

## 3. Results

The study included 88 male construction workers. The age of the included individuals was 39.09 ± 11.83 years (min: 18 years, max: 64 years). Table 1 gives other demographic information of the participants.

**Tablo 1.** Demographic information of construction workers

| | | ***n*** | **%** |
|---|---|---|---|
| **Marital status** | *Maried* | 70 | 79.54 |
| | *Single* | 18 | 20.46 |
| **Education level** | *High School* | 65 | 73.86 |
| | *University* | 23 | 26.13 |
| **Construction Worker Occupational branch** | *Paint* | 8 | 9.09 |
| | *Iron* | 20 | 22.7 |
| | *Wall* | 9 | 10.22 |
| | *Mold* | 18 | 20.5 |
| | *Sheathing* | 8 | 9.1 |
| | *Plaster* | 21 | 23.9 |
| | *Installation* | 4 | 4.5 |

Table 2 shows the mean values and standard deviations of WHOQOL-Bref, Beck Depression scale, MPSSS, and PSS-4.

**Tablo 2**: Mean scores of Construction Workers' Quality of Life, Depression, Social Support and Stress

| | *M* ± SD |
|---|---|
| **WHOQOL Bref Quality of Life Scale Total Score (26-130)** | 46,94 ± 14,60 |
| Physical Space (4-20) | 8,60 ± 2,55 |
| Psychological Field (4-20) | 10,53 ± 2,57 |
| Social Relations Area (4-20) | 9,64 ± 3,84 |
| Peripheral Area (4-20) | 13,36 ± 2,86 |
| **Beck Depression Scale (0-63)** | 31,26 ± 10,14 |
| **Multidimensional Perceived Social Support Scale (MPSS) (12-84)** | 65,85 ± 14,70 |
| **Perceived Stress Scale-4 (PSS-4) (0-16)** | 10,02 ± 2,92 |

There was a positive correlation between the perceived social support level of construction workers and their quality of life (r=0.328; p=0.02). There was a negative correlation between quality of life and depression levels (r=-0,507; p<0,01) and stress levels (r=0,-423; p<0,01) (Table 3).

**Tablo 3.** Correlation between WHOQOL-Bref Quality of Life scale, Beck Depression scale, Multidimensional Perceived Social Support Scale and Perceived Stress Scale-4 parameters

| | | WHOQOL Brief | Beck Depression | MSPSS | PSS-4 |
|---|---|---|---|---|---|
| **WHOQOL Brief** | r | 1 | -,507** | ,328** | -,423** |
| | p | | ,000 | ,002 | ,000 |
| **Beck Depression** | r | **-,507**** | 1 | -,316** | ,311** |
| | p | **,000** | | ,003 | ,003 |
| **MSPSS** | r | **,328**** | -,316** | 1 | -,319** |
| | p | **,002** | ,003 | | ,002 |
| **PSS-4** | r | **-,423**** | ,311** | -,319** | 1 |
| | p | **,000** | ,003 | ,002 | |

**p<0,01

## 4. Discussion

This study aimed to examine the relationship between depression, stress and social support level with quality of life in construction workers. Accordingly, there was a positive correlation between perceived social support level and quality of life, while there was a negative correlation between depression and stress and quality of life. Increased levels of stress and depression in construction workers had a negative impact on quality of life.

Unregulated occupational groups such as the construction sector are exposed to various psychosocial problems [24]. Our study found that construction workers experience high levels of depression and moderate to high levels of stress, especially those with family responsibilities. There is a significant negative correlation between depression, stress levels, and quality of life among workers in different construction branches (e.g., sheathing, masonry, concrete work). This aligns with previous research showing that work stress and inadequate social lives negatively impact occupational balance and quality of life [25]. Goldenhar et al. also stated that construction workers cannot predict how long they will work on which day, at which time interval, and how long they will work, so they do not have a planned life and occupational balance in the desired way. Individuals have high levels of depression and stress [26].

Irregular working conditions and high workloads also affect quality of life, leisure time, and self-care activities. Despite these challenges, our study participants reported high levels of social support, attributed to Turkish culture's emphasis on support and spirituality. [27]. A significant positive relationship exists between perceived social support and quality of life, suggesting that strengthening social support networks for construction workers is vital. Employers should create supportive workplace environments and encourage family and friend support. Assessing workers' quality of life and promoting psychological health is critical for individual and societal well-being. Similarly, in their study, Yang et al. found a significant relationship between social support and quality of life among nomadic workers [28]. A study conducted among construction workers reported that social relations affect quality of life [29].

## 5. Conclusion

This study provides important data for studies to be conducted to improve the quality of life of construction workers. According to the results, depression, stress levels and

perceived social support of construction workers affect their quality of life. To increase productivity in the workplace, it is important to evaluate these factors at certain intervals and to take necessary measures and interventions.

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