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Occupational Stress and Work Engagement: The Psychological Capital as A Moderator

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Abstract. This study aims to examine how job stress and interactions at work are affected, as well as how psychological capital acts as a moderator. This research is descriptive, and it falls within the category of applied research in terms of its goal. The research's statistical population comprised 450 personnel and professionals from Basra Petrochemical Industry General Company. 207 people made up the sample size according to Cochran's formula, and a straightforward random sampling technique chose the sample members. The findings indicated that work interactions negatively influence job stress. Psychological capital moderates the link between occupational stress and psychological capital.

Keywords. Occupational Stress, Work Interaction, Psychological Capital

Introduction

In general, we can define occupational stress as the sensation of strain that employees feel when coping with their jobs. When a person encounters work stress, their capacity to function properly and optimally is jeopardized. The American Institute of Stress is an organization that provides stress-related knowledge. This arrangement divides stress into two groups: general and specific. The general opinion refers to strain on the body, mind, and soul. Specifically, it is a state that arises when an individual perceives that demands exceed their capacity (AIS).

Unmanaged work-related stress can lead to several short- and long-term problems that are detrimental to the business. Employees perform poorly in the short term because they lose motivation and are scared to try new things connected to their jobs. Additionally, it will undoubtedly harm the business. Employees may eventually feel that they are unable to cope with the demands of their jobs for extended periods, which enables them to search for other employment opportunities and the organization in the hopes of finding a better work environment and workplace than their previous one and quit (Sakti et al., 2024).

The literature analysis demonstrated that several factors, including employee interactions at work, can affect occupational stress. According to Lessner et al. (2020), work engagement is regarded as a critical psychological competency in organizations. In the first place, it is described as the extent to which individuals are genuinely invested in their job, encompassing employees' physical, mental, and emotional engagement while performing their duties. Kahn (1990) According to more recent studies, work engagement is an affective

cognitive state that encompasses employees' power, dedication, and involvement in their work. It is not restricted to certain objectives but rather remains steady and comprehensive (Schaffel and Bakker, 2004).

According (Rich et al., 2010), engagement can be advantageous for businesses since it has a negative correlation with intention to leave as well as a positive correlation with work performance and extra-role behaviors. Interaction between employees has long been seen as a key component in determining an organization's performance (Stram et al., 2013). Since dedicated workers are crucial for establishing a competitive edge (Baker et al., 2008), work interaction is more crucial than ever (Baker et al., 2011). This is why people should be dedicated to accomplishing sustainable organizational goals, according to Nazarchin and Wein (2012).

Gupta and Shahin (2017) assert that growing interest in workplace interactions results in individual motivation that is centered on the advantages for the organization (Stress and Galpin, 2010). Because it involves individuals who are dedicated and passionate about their profession, work engagement is always seen favorably (Schafel and Bakker, 2004). According to Kahn (1990), work engagement is the manifestation of physical, emotional, and cognitive engagement. Someone gave a description. Personal participation is the foundation of contemporary work interactions (Shak and Volard, 2010). Work engagement is different from other types of organizational behavior, according to a number of academics (Lee, 2024).

A wide range of factors are included in the concept of work engagement, such as job features (Sacks, 2006) and personal involvement (Kahn, 1990). job burnout (Lee, 2024) and job enrichment (May et al., 2004). Likewise, it is associated with extra-role conduct, attitudes (organizational commitment, workplace involvement), personal initiative, affect (positive affect, job satisfaction), and psychological states (workaholism, flow). Lee (2024). One of the factors that has been highlighted in the literature is psychological capital (Saltin and Hekaran, 2020). Numerous researches contend that employees who are in a favorable psychological state are more likely to be creative and innovative at work (Schackert et al., 2018).

The positive psychological state of employees' personal development, including their primary drivers to develop and use novel and practical ideas in operational procedures, is referred to as psychological capital (Sweitman et al., 2011). Therefore, improving people's psychological capital resources might be the best way to improve working conditions for employees, particularly in developing nations where most businesses and organizations lack the financial means to invest in things like creativity and innovation. are (Lei, 2020).

However, the mechanism by which psychological capital moderates the association between work engagement and job stress is still unknown, and in particular, the moderating role of psychological capital in the relationship between work engagement and job stress has not been well researched. Thus, the moderating role of psychological capital in the association between job stress and occupational interactions is investigated in this study. The influence of perceived organizational support and work interaction on job satisfaction is the title of a study by Emamalipour (1402).

Investigating the impact of managers' meritocracy on entrepreneurship was the aim of this study. This study is descriptive-survey in terms of performance and applied in terms of purpose. According to the study's findings, job satisfaction is positively and significantly impacted by perceived organizational support and work involvement. The influence of procedural justice on work participation with the mediating role of organizational trust and organizational commitment was the subject of a study by Zarei et al. (1402).

Investigating how procedural justice affects interactions at work while taking organizational commitment and trust into account was the aim of this study. The practical goal

and data collection method of this study were descriptive-survey. The findings of the study using PLS software demonstrate that procedural justice influences employee interactions at work. Employee interactions at work are also impacted by organizational trust. The interaction role of organizational identity and psychological capital on occupational stress was the subject of a study by Abdi et al. (2014). The findings demonstrated that psychological capital and interactions at work had an impact on occupational stress. The following is the conceptual model and research hypothesis derived from the aforementioned contents:

Research Hypotheses and Conceptual Model

H1: Job stress is negatively impacted by interactions at work.

H2: Stress at work is negatively impacted by psychological capital.

H3: The association between occupational stress and work engagement is moderated by psychological capital.

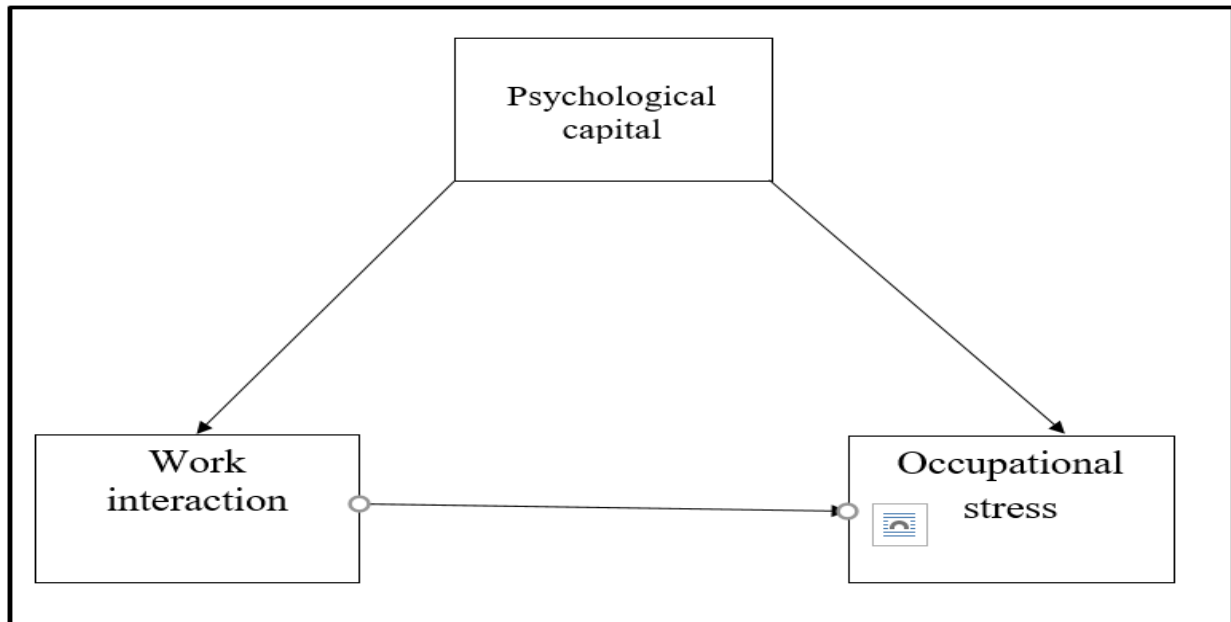


Figure (1) Research Model

Research Method

Given that the goal of this study is to examine the relationship between job stress and work interactions, specifically the moderating role of psychological capital, the current research is descriptive and falls under the category of applied research because its findings can be applied to other service sectors. Because it used the field method (questionnaire) to describe a scenario or a field of conditions, this study is descriptive and based on structural equations. The 450 personnel and specialists of Basra Petrochemical Industry General Company, who made up the statistical community of this study, were the subject of the investigation. Using Cochran's formula, the sample size was determined to be 207 individuals, and the sample were chosen by a straightforward random sampling process. The research library method, which includes the use of literature, articles, and master's and doctoral theses, has been used in this study to gather the literature and theoretical underpinnings. It has also been used to gather the data required for testing the hypotheses from the field method. A survey was employed Along with the primary questions, the questionnaire has two demographic parts. Gender and history are examples of

descriptive or general inquiries. Respondents are invited to use a Likert scale in their response letters to indicate how much or how little they agree with the key questions. The dimensions and distribution of the questions pertaining to the Likert scale and research variables are displayed in Table (1).

Table (1) Likert scale

Selective option	Very low	Low	Medium	High	Very high
Score	1	2	3	4	5

The validity of the questionnaire was implicitly established in this study because it was standardized. The average variance expanded (AVE) was used to verify the research's convergent validity. The questionnaire's validity was assessed using Cronbach's alpha & CR composite reliability. A high threshold of 0.7 for Cronbach's alpha was mentioned by Cronbach (1951). Additionally, Frenell and Locker (1981) stated that AVE should have a high level of 0.5 and CR should have a high standard of 0.7. PIs software and the structural equation approach are data analysis tools. There are two phases to the evaluation and interpretation of structural equation modeling using the PLS approach. Indicators are recorded at each of these stages, which include the measurement model test and the structural model test. An explanation of each step is provided below: one, Test of the measurement model: The measurement model test comprises the auditory validity or validity check as well as the convergent validity check (at the level of variables and at the level of indicators or questions). It has diagnostic capabilities (both at the agent and reagent levels). Two, Assessment of the structural model to examine the relationship between the construct's variables: following the external model's test, the internal model that demonstrates the connection between the research's construct variables and the structural equation of the structural equation model needs to be provided. The internal model can be used to analyze research hypotheses.

Data Analysis

1- Descriptive Section

This section describes the data pertaining to the respondents' general characteristics, including gender, education level, and service history. It also discusses each case's status, including the percentage and frequency of respondents as well as the accompanying distribution of frequencies diagram.

1-1 Frequency distribution of gender variable

Table (2) displays the findings according to the gender variable's distribution of frequencies.

Table 2: Findings Pertaining to the Gender Variable's Frequency Distribution

Gender	Frequency	Percent	Valid Percent
Male	97.6	97.6	202
Female	5	2.4	2.4
Total	207	100.0	100.0

The findings showed that men made up 97.6% of the statistical sample under study, while women made up 2.4%. The gender variable's distribution of frequencies diagram is also shown in the following.

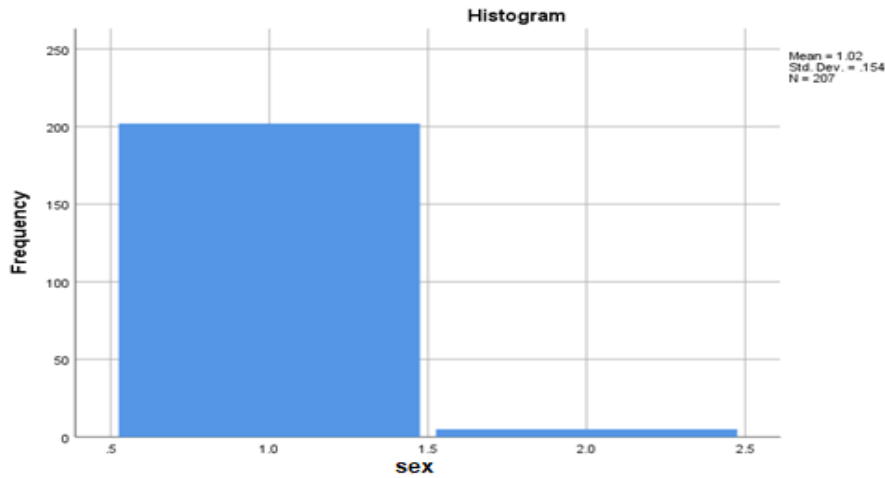


Figure (2) Shows a Graph Pertaining to the Gender Variable's Distribution of Frequencies.

1-2 Frequency Distribution Of Education Level Variable

Table (3) below displays the findings pertaining to the education level variable's frequency distribution.

Table (3) Frequency and Distribution of Educational Variables

	Valid Percent	Percent	Frequency
Postgraduate Diploma	1.0	1.0	2
Bachelor's Degree	107	51.7	51.7
Masters Degree And Higher	98	47.3	47.3
Total	100.0	100.0	207

The results of the above table show that 51.7% of the employees in the sample had a bachelor's degree, 47.3% had a bachelor's degree or higher, and 1% had a diploma. The frequency distribution chart for the education demographic variable is shown below.

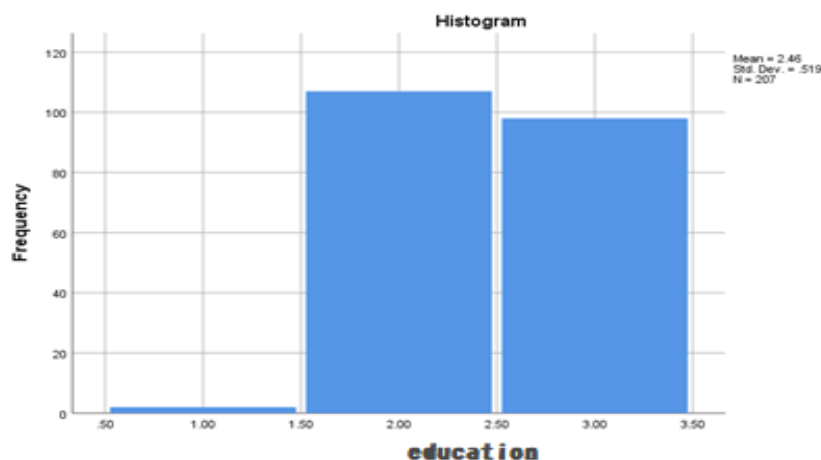


Figure (3) Show A Graph Related To The Frequency Distribution Of Educational Variables

1-3 frequency distribution of work experience level variable

Table (4) displays the findings pertaining to the job history variable's frequency distribution.

Table (4) Findings Associated to The Frequency Distribution of Work Experience Variable

	Frequency	Percent	Valid Percent
Less than 10 years	52	25.1	25.1
11 to 15	54	26.1	26.1
Above 20		25.1	52
Total	207	100	100

The findings showed that 25.1% of the sample had worked for fewer than ten years. Work experience ranged from 10 to 15 years for 26.1 percent, 16 to 20 years for 23.7 percent, and over 20 years for 25.1 percent. The frequency distribution chart for the education demographic variable is shown below.

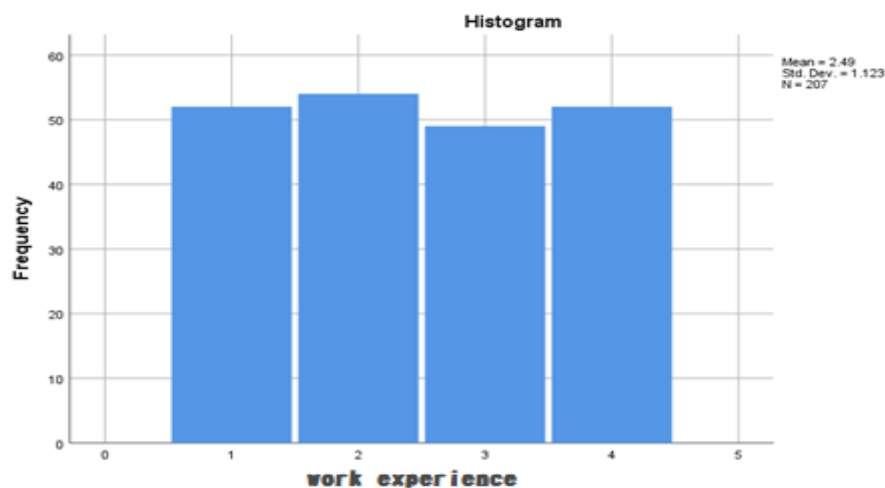


Figure (4) A Diagram Related to The Education Demographic Variable

2. The Inferential Portion

2.1. Testing the measurement model: First, Convergent validity at the indicator level: each observed variable's factor loading needs to be more than 0.4 in order to verify the validity of each observed variable or item.

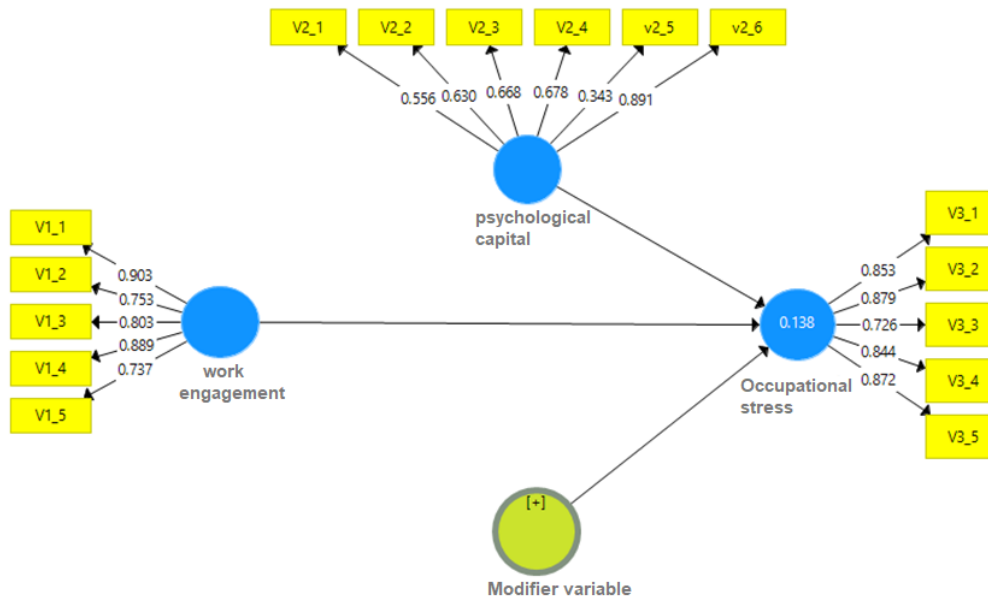


Figure (5) The Result Of Factor Loadings

At this point, the model and final model should no longer include the questions with a factor load of less than 0.4. Since the factor load for each question was greater than 0.4, it can be said that the items accurately capture the data. Second, Convergent validity employing the mean of extracted variance at the level of latent components or variables AVE: According to Frenell and Locker (1981), AVE values of 0.5 and higher indicate that at least 50% of the variance of the items in the construct Opinion can be explained. Table (2) shows the results of assessing the average variance derived for each of the structures

Table (4) Uses Average Variance Collected to Investigate Convergent Validity at Factor Level.

	Average Variance Extracted (AVE)
Job Stress	0.7
Work Interaction	0.672
Psychological Capital	0.521
Psychological Capital* Work Interaction	0.680

The results related to Cronbach's alpha and composite reliability are higher than 0.7 and can be confirmed.

2.2 Chin (1998) suggests two criteria to assess the validity or diagnostic validity of the auditor:

In order to have the least sectional stress on other structures, the items or indicators of a structure must have the highest factor load on their structure. This is known as assessor validity or diagnostic validity at the item level. According to Giffen and Ashtrab (2005), each item's factor load on its associated construct ought to be at least 0.1 higher than the item's factor load on

other constructs. Given that each structure's associated items or indicators have the lowest cross-sectional load on other structures (at most 0.4) and the largest factor load on their own structure (at least 0.4), it may be said that the test's validity The diagnosis is made at the item level. The second is assessor validity or diagnostic validity at the factor or concept divergence level: a construct's square root of AVE must be greater than its correlation with other constructs. This suggests that the structure has a stronger correlation with its indicators than it does with other structures. The following illustrates how the variables or structural divergence can be used to determine the validity of the assessment or diagnostic validity.

Table 6: Diagnostic or Auditor Validity at The Factor or Construct Divergence Level

	Job Stress	Work Interaction	Psychological Capital
V1_1	0.369	0.903	0.348
V1_2	0.108	0.753	0.4
V1_3	0.186	0.803	0.385
V1_4	0.313	0.889	0.308
V1_5	0.043	0.737	0.321
V2_1	0.039	0.345	0.556
V2_2	0.115	0.548	0.63
V2_3	0.014	0.339	0.668
V2_4	0.099	0.459	0.678
v2_5	-0.126	0.267	0.343
v2_6	0.248	0.194	0.891
V3_1	0.853	0.284	0.287
V3_2	0.879	0.283	0.209
V3_3	0.726	0.134	0.239
V3_4	0.844	0.346	0.299
V3_5	0.872	0.243	0.157

Table 7: Diagnostic or Auditor Validity at The Item Level

	Job Stress	Work Interaction	Psychological Capital	Modifier Variable
Job Stress	0.837			
Work Interaction	0.323	0.82		
Psychological Capital	0.293	0.405	0.649	
Modifier Variable	0.137	0.128	0.31	1

Fornell and Larker's technique states that in order to actualize the divergent validity of the second instance (at the level of the structure), the elements on the diameter of the matrix must be bigger than the values indicated in the cells below them. It is evident from the following table that the diagonal elements are always greater than the values below them, indicating that the criterion's validity is established at the factor level.

3. Test of Hypotheses

Hypotheses were examined and the structural model's direction assessed in the form of a structural model. The numbers on the arrows indicate the path's coefficient, and each path relates to one of the model's assumptions. The sign, magnitude, and statistical significance of the path coefficient (beta) between each variable and the dependent variable are examined in order to evaluate each hypothesis. The route coefficient illustrates how one structure directly affects another. The predictive power of the hidden variable over the dependent variable increases with the route coefficient. The importance of the impacts between the research constructs may be examined by taking into account the findings of the investigation of the link between independent and dependent constructs using the pertinent coefficient. The significance of the t-value for each path coefficient should be taken into account in order to examine the relevance of the path coefficient or beta.

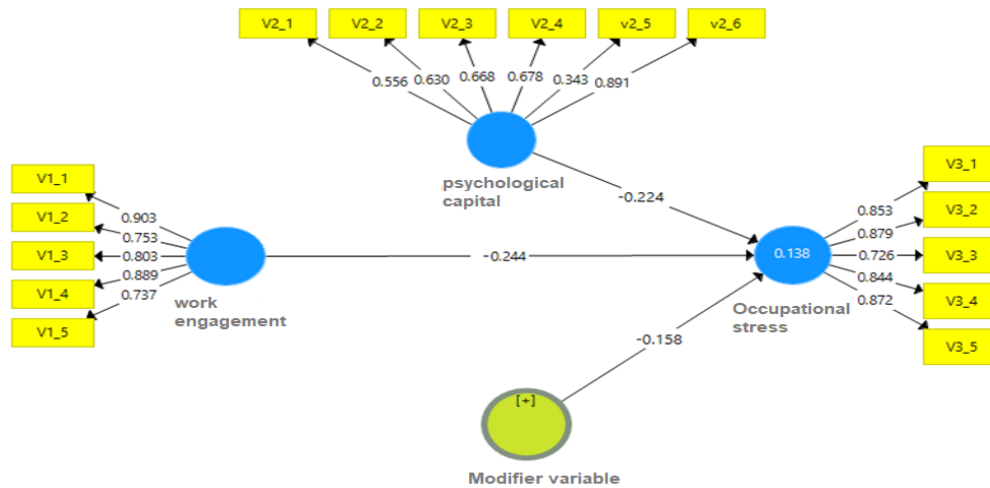


Figure 6: the tested research model of the hypotheses

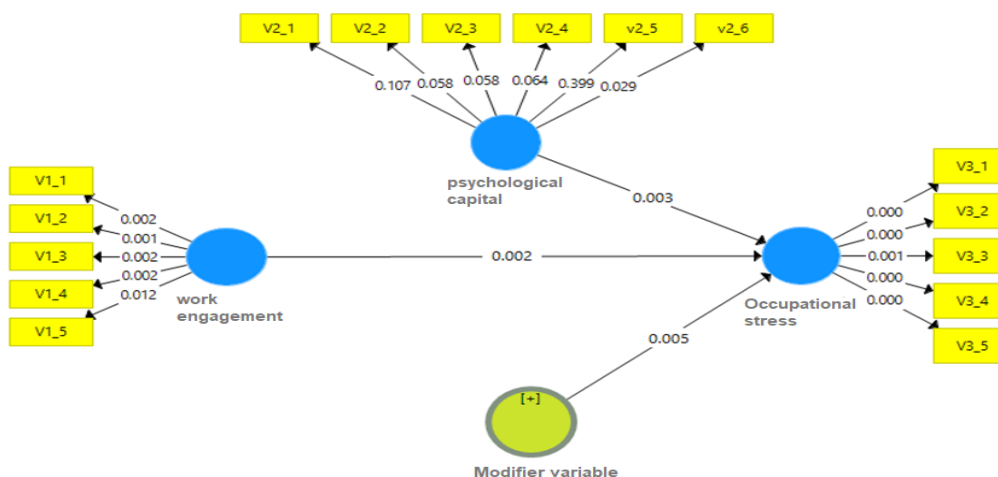


Figure:7 tested research model (P values) of hypotheses

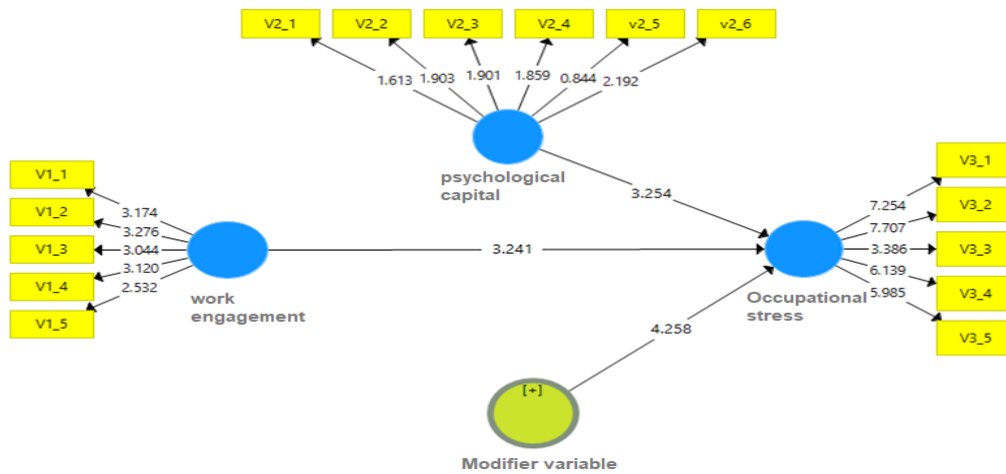


Figure: 8 The tested research model (T values) of the hypotheses

The software's results indicated that all of the hypotheses had a level of significance below 0.05. This indicates that the hypotheses are confirmed because, similar to the statistical sample, the statistical population also has a beta value that is not equal to zero.

The first hypothesis yielded a beta value of -0.244, indicating that work interaction has a -24% impact on job stress, meaning that 24% of changes in job stress are related to work interaction. This effect was negative, meaning that as work interaction increases, occupational stress levels decrease. The t statistic's value needs to be higher than 1.96 in order to validate the hypothesis. This value equals 3.24 in the software's output. As a result, this hypothesis can be considered validated.

The impact of psychological capital on job stress was found to be -24% in the second hypothesis, with a beta value of 0.224. This indicates that 22% of changes in job stress are related to psychological capital, and that this effect was obtained negatively, meaning that job stress decreases as the independent variable increases. The t statistic's value needs to be higher than 1.96 in order to validate the hypothesis. This figure equals 3.25 in the software's output. As a result, this hypothesis can be considered validated.

The third hypothesis examined the association between job stress and work interaction by examining the moderating variable of psychological capital. All of the hypotheses in this study had a significance level below 0.05. The t statistic's value ought to be higher than 1.96. This figure equals 3.25 in the software's output. Thus, it may be concluded that occupational stress is influenced by the reciprocal relationship between psychological capital and work interactions. To put it another way, the association between job stress and work interactions may be moderated by the psychological capital variable. Psychological capital has an inverse effect on the strength of the association between work interaction and job stress, according to the hypothesis's beta value of -158. In other words, workers with more psychological capital have less intense work interactions and job stress, whereas workers with lower psychological capital experience more intense relationships.

Result

This study aims to examine the moderating effect of psychological capital on the relationship between job stress and work interactions. The current study is descriptive in character, and it falls within the category of applied research in terms of its ultimate goal. The

450 workers and specialists of Basra Petrochemical Industry General Company made up the statistical population of this study. Using Cochran's formula, the sample size was determined to be 207 individuals, and the sample members were chosen by a straightforward random sampling procedure. The findings demonstrated that interactions at work had a detrimental impact on job stress. Job stress is negatively impacted by psychological capital, and the relationship between work engagement and job stress is moderated by psychological capital.

This research offers both theoretical and applied support. From an academic perspective, the study adds to the scientific treasures of psychological capital, job stress, and work engagement. From a practical standpoint, this study can assist businesses in comprehending the detrimental correlation between work engagement and work stress. This will enable them to build and implement appropriate organizational policies to enhance work engagement while establishing their programs.

There were some restrictions on this investigation. The research team's data sample was restricted to a specific number of employees due to time and budgetary constraints. Only Basra Petrochemical was involved. Furthermore, other variables like gender, age, experience, and others that can influence stress reduction and this link were not taken into account in this study. Thus, this study can be repeated with the population by future research teams. To make the findings more broadly applicable, further replicate both domestically and internationally. To further their research, future studies should also look at how other variables, like gender, might affect the connection between workplace stress and work engagement.

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