The Effect of Psychological Capital on Work Engagement

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ABSTRACT

The aim of this study is to examine the effect of psychological capital on work engagement. For this purpose, the data obtained from questionnaires applied to 280 research assistants working at Selcuk University (in Turkey) was evaluated in SPSS 21.0 program. In the evaluation, measures of central tendency and descriptive statistics were used, correlation and regression analysis were performed. According to the findings, it was found that the linear combination of values of durability, hope, optimism, durability and work engagement from psychological capital components to predict work engagement at a significant level. In terms of value into the regression equation, it was found that the component of hope, durability and optimism to be significant to predict work engagement, and self-sufficiency component was found to have no effect on work engagement statically. In addition, durability component was seen to be the psychological capital component predicting the work engagement best. In this context, as research assistants' levels of self-sufficiency, hope and durability increases, their work engagement can be said to increase. In the study, the effect of psychological capital dimensions on each dimension of work engagement was examined. According to the obtained results, hope, durability and optimism dimensions predict vigor dimension; self-efficacy, hope, durability and optimism predict concentration dimension.

Keywords: Psychological Capital, Work Engagement, Effect, Research Assistants, University

1. INTRODUCTION

Psychological capital is one of the subjects of organizational behaviour literature that is highly discussed. The effects of psychological capital, which is fed by positive organizational behaviour trend, on performance of the employees in the organization, their organizational engagement or job satisfaction have been debated in the literature. Despite studies examining these relationships, the number of studies examining the effect of the employees' levels of psychological capital on their work engagement is very limited. The model of this study was established starting from the assumption that the organization employees with high self-sufficiency, hopeful, resistant to adverse conditions and have optimistic outlook will have high level of work engagement. In this context, the effect of psychological capital on work engagement was studied in the universe of research assistants working at Selcuk University, in Konya, in Turkey. For this purpose, conceptual framework related to the concepts of psychological capital and work engagements were created first, in this process, various hypotheses were developed for the purpose. Afterwards, the information on the methodology of the research was given, and the results were discussed through transferring the application process.

2. CONCEPTUAL FRAMEWORK

2.1. Psychological Capital

Although positivism's value has been recognized for years, its study, application and development in the field of psychology and organizational behavior have become operational in recent years (Luthans for Youssef, 2007: 321). The extension of positive psychology trend in organizations has led to the concept of positive organizational behavior. The concept of psychological capital is also used as a positive organizational behavior in literature.

Positive organizational behavior has four basic variables: Self-sufficiency, hope, durability and optimism. The concept of psychological capital takes shape with the combination of these dimensions. "Self-efficacy is having confidence to take on and put in the necessary effort to succeed at challenging tasks. Optimism is making a positive attribution about succeeding now and

in the future. Hope is persevering toward goals and, when necessary, redirecting paths to goals in order to succeed. Resiliency is when beset by problems and adversity, sustaining and bouncing back and even beyond to attain success" (Luthans et al., 2007: 3).

2.2. Work Engagement

The concept of work engagement is the provision of burnout concept. Work engagement is a multidimensional structure consisting of the employee's work-related mental expressions (Gonzalez et al., 2006: 166). Work engagement has three basic variables: Vigor, engagement, absorption. "Vigor is refers to high levels of energy and resilience, the willingness to invest effort, not being easily fatigued, and persistence in the face of difficulties. Engagement is refer to deriving a sense of significance from one's work, feeling enthusiastic and proud about one's job, and feeling inspired and challenged by it. Absorption is refer to being totally and happily immersed in one's work and having difficulties detaching oneself from it so that time passes quickly and one forgets everything else that is around" (Schaufeli and Bakker, 2003: 4-6).

The concept of work engagement is mixed up with the concepts of organizational engagement and engagement to the organization. While the work is prominent in the concept of work engagement, the organization is prominent in the concepts of organizational engagement and engagement to the organization. While an employee is very devoted to his/her work, they may not be devoted to their organizations. Therefore, it is not very suitable to use these concepts interchangeably.

Langelaar et al. (2006) did studies examining the relation between work engagement and personality, Schaufel et al. (2008) did studies examining the relation between work engagement, workaholism and burnout, Bakker and Demerouti (2008) did studies examining the conceptual structure of work engagement, and Bostancı and Ekiyor (2015) did studies examining the relation between work engagement and intrapreneurship. It is possible to increase the number of these studies. However, we consider that it is appropriate to give a place to a special study directly concerning to our research. Çalışkan (2014) tired to reveal the effects of positive organizational behaviour variables (self-efficacy, hope, durability, optimism) on employee behaviour. According to the research findings, it was revealed that positive organizational behaviour variables have a positive and significant explanatory power on work engagement. It was detected that optimism and hope factors from psychological capital components have a high level of effect on work engagement. Accordingly, the dimensions and optimism and hope disclose the work engagement significantly by 40%. Consequently, the author emphasizes that as optimism and hope increase; employees' work engagement will increase positively.

From these findings in the literature, the following main hypothesis was formed:

H1: Psychological capital has an effect on work engagement.

In order to examine the effects of sub-components of psychological capital on psychological capital, self-sufficiency, hope, durability, and optimism, this main hypothesis is divided into sub-hypotheses. The sub-hypotheses generated in this respect are as follows:
H1a: Self-sufficiency factor has an effect on work engagement.
H1b: Hope factor has an effect on work engagement.
H1c: Durability factor has an effect on work engagement.
H1d: Optimism factor has an effect on work engagement.

In the study, those hypotheses have been developed to study the relationship between each sub-components of psychological capital and sub-components of work engagement.
H2: Psychological capital components have an effect on the vigor level of individual.
H3: Psychological capital components have an effect on the engagement level of individual.
H4: Psychological capital components have an effect on the concentration level of the individual.

Starting from these assumptions, the model of the study is formed as in Figure 1.

3. RESEARCH METHOD

3.1. Research Design

This research is designed in a kind of quantitative research approaches, in the research, relational research method of the non-experimental methods was used.

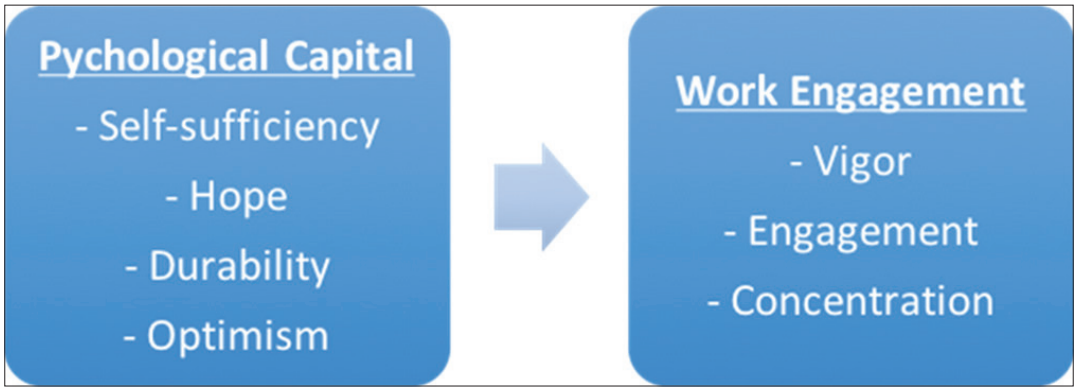

Figure 1: Research Model

3.2. The Question of the Study and its Purpose

This study seeks an answer for the question "What is the relationship between psychological capital level of research assistants and work engagement?" Based on this problematic, the main purpose of the research is to examine the effect of psychological capital on work engagement.

3.3. Population and Sample

The population of this research consists of the research assistants working at Selcuk University. The questionnaire was not applied to those who were not willing to fill in it, the ones who were not at the university due to various reasons, and the research assistants who were not to be reached, in this context, questionnaires were handed out to 300 research assistants working at Selcuk University. The number of research assistants questionnaire retrieved is 228. Therefore, the return rate of the survey was 87%. In collecting the data, survey method (printed on paper) which takes about 6-7 minutes was used. 8 questionnaires were removed from the survey analysis as a result of examination on lost data and basic variables; analysis was performed with data obtained from a sample of 280 people. The number of research assistants working at Selcuk University is 910 (Selcuk University Strategic Plan 2014-2018, 2013: 22). The number of samples that will represent this population in 95% confidence interval is calculated as 271. In this respect, the sample of 280 people taken for analysis has the ability to adequately represent the universe.

When demographic characteristics of the sample is studied, it is seen that 67.9% of respondents is in 20-29 age range, and 32.1% is in 30-46 age range; 46.4% is female and 53.6% is male; 27.5% has doctoral, 65% has post graduate and 7.5% has graduate degrees.

3.4. Data Analysis

The statistical program SPSS version 21.0 has been used in this study to perform the statistical analysis. Descriptive analysis, scale measurement (reliability test and validity test) and inferential analysis (correlation and regression analysis) will be carried in the data analysis.

3.5. Measurement Tools Used in the Study

The questionnaire was divided into three sections. The variables that appear in the first section include the demographic profiles, such as gender, age and education. In the second part of the study, 24 questions "Psychological Capital Questionnaire (PCQ-24)", which was developed by Luthans et al. (2007) and was translated into Turkish by Erkuş (2013), is used. In the third and last part of the study, 17 questions Utrecht Work Engagement Scale-UWES, developed by Schaufel and Bakker (2003), was used. In both scales located in the second and third sections of the questionnaire, 5 Likert scale ranging from "1. Strongly disagree". "5. Strongly agree". (1) represents low psychological capital and low work engagement., (5) represents high psychological capital and high work engagement. Therefore, in evaluations, it was commented that psychological capital and work engagement increase toward 5, psychological capital and work engagement decrease toward 1.

Exploratory factor analysis was conducted in order to check the size of scales used in the study, and provide one-dimensionality of the relationship between variables. The results related to KMO and Bartlett tests are shown in Table 1.

The result of the KMO test of the appropriateness of the data set is decided as 0,888 for psychological capital scale and 0,870 for work engagement scale. These results are quite higher than acceptable ratio 0.60 (0,50 for applications in the social sciences in some sources). Thus, It was reaches the conclusion that paired variable correlations are announced at a high level by other variables, the sample size is adequate and the data set is suitable to the principal component analysis. Bartlett test result, which testing the hypothesis whether the correlation matrix is equal to the unit matrix, revealed χ^2 result that is statistically significant for both scales (for psychological capital scale $\chi^2 = 1741.091$, df = 210, P = 0.000 and for work engagement $\chi^2 = 2271,741$, df = 136, P = 0,000), and the null hypothesis was rejected. Accordingly, the data are normally distributed, and there is a relation between variables (variables are appropriate).

Factor analysis was conducted to test the validity of the scale and therefore the factor structure used in this study, and the findings are presented in Table 2. Each research variables are loaded onto the related factors statistically significant, and this case reveals convergent validity of the research variables. As a result of the analysis, psychological capital scale with 4 factors and 21 questions, and work engagement scale with 3 factors and 17 questions were reached. When the questions and the dimensions they were loaded onto are taken into consideration, the questions 13, 20 and 23, which were determined to reduce the scale reliability in "Psychological Capital Questionnaire (PCQ-24)" developed by Luthans et al. (2007) and translated into Turkish by Erkuş (2013), were removed from the scale, and analysis was continued on 21 questions. According to the Utrecht Work Engagement Scale-UWES scale of 17 questions developed by Schaufel and Bakker (2003), no changes in the questionnaire, and analysis continued based on 17 questions with 3 factors.

Exploratory factor analysis results indicate that the higher the variance ratio, the stronger the scale. In analysis conducted in the social sciences, variance ratios ranging between 40% and 60% are considered adequate (Tavşancıl, 2010: 46). According to the research findings of the exploratory factor analysis, it has revealed that psychological capital components can be examined in 4 dimensions by naming them as self-efficacy, hope, durability and optimism. Self-sufficiency component represents 34.607% of the total variance, hope component represents 9.271%, durability component represents 6.943%, and optimism component represents 6,392% of it. The four components disclose 57.214% of the total variance. It has been revealed that work engagement scale, from exploratory factor analysis findings, can be examined in 3 dimensions by naming them as vigor, engagement, and concentration, Vigor component represents 45.905% of the total variance, engagement component represents 17.148%, and concentration component represents 6.734% of it. Three components disclose 69,787% of the total variance.

In addition, for reliability tests of scales, Cronbach's alpha coefficients were calculated and shown opposite the dimensions in Table 2. Accordingly, self-sufficiency dimension consisting of 6 expressions in psychological capital scale has 0,864 Cronbach Alpha value, hope dimension consisting of 6 expressions has 0,804 Cronbach Alpha value, durability dimension consisting of 5 expressions has 0,680 Cronbach Alpha value, and positivism dimension consisting of 4 expressions has 0,642 Cronbach Alpha value. When psychological capital scale was entirely subject to reliability analysis, the Cronbach Alpha value of the scale with 21 questions was found as 0,890. In work engagement scale, vigor dimension with 8 expressions has 0,906 Cronbach Alpha value, engagement dimension with 5 expressions has 0,838, and concentration dimension with 4 expressions has 0,736 Cronbach Alpha value. When work engagement scale was entirely subject to reliability analysis, the Cronbach Alpha value of the scale with 17 questions was found as 0,922.

4. FINDINGS

In this study, in order to uncover the relationships between dependent and independent variables, Pearson correlation analysis was made and correlation results are shown in Table 2. According to the results, the dimensions in the scales have relations among themselves at an acceptable level.

The mean is the most commonly used method of describing central tendency and standard deviation is a detailed estimate of dispersion and shows the relation that set of scores has to the mean of the sample. When analysing the average and standard

Table 1: The results of KMO and Bartlett tests

	Psychological capital scale	Work engagement scale
Kaiser Meyer Olkin (KMO) measure of sampling adequacy	0.888	0.870
Bartlett's test of sphericity		
Approx. Chi-Square (χ^2)	1741.091	2271,741
df	210	136
Sig. (p)	0.000	0.000

Table 2: Exploratory factor analysis findings and Cronbach's alpha values

Psychological capital scale (α = 0.890)	**Standard factor loads**
Self-Sufficiency	α.=0.864
I am confident while doing analysis in order to find a solution to a long term problem.	0,767
I am confident about the issues related to my work (my area of expertise) during the meetings with the senior management or my supervisors.	0.815
I am confident while contributing to the debates about the organization's strategy and goals I work for.	0.740
I am confident while helping determine work related goals and objectives.	0.766
I am confident while discussing various issues with the people I contact outside the organization.	0.630
I am confident while informing my colleagues.	0.686
Hope	α=0.804
I know there are lots of ways to get rid of the mess if I find myself stuck in issues while working.	0.632
I can follow the goals related to my job energetically at the moment.	0.516
I consider that there may be many solutions to a problem.	0.648
I consider myself quite successful in my job.	0;603
I can find lots of ways to reach my objectives related to my current work.	0.768
I think I have realized my work related goals I set so far.	0.670
Durability	α=0.680
I can usually somehow cope with the challenges arise in my job.	0,548
I can work by myself in my job if I have to.	0,619
I try to stay away from things that are troubling me ay work.	0.732
Through experience I have gained previously, I can overcome difficulties in my workplace.	0.538
I feel that I can overcome lots of things in my work respectively.	0.608
Optimism	α=0.642
When issues related to my job are obscure and complicated to me, I usually hope to do the best.	0.460
I always try to see the glass half full about my job.	0.831
When my job is concerned, I am optimistic about what I will live in the future.	0.728
I always approach my jop saying that "every cloud has a silver lining".	0.531
Work Engagement Scale (α = ,922)	
Vigor	α=0.906
I look forward to going to work when I wake up every morning.	0.606
I get full of energy while doing my job.	0.673
I feel myself strong and vigorous at work.	0.687
My job gives me opportunities to try out my talents.	0.753
My job gives me inspiration.	0.787
I am very willing to do my job.	0.748
I feel proud of my job.	0.657
I think my job is significant and it serves an aim.	0.659
Engagement	α=0.838
I forget everything around me while working.	0.776
I don't figure out how fast the time passes while working.	0.811
I abandon myself to my work while working.	0.852
I do not give up even things go wrong at work.	0.571
It is difficult for me to separate myself from my job.	0.776
Concentration	α=0.736
I am always patient even thing do not go right in my job.	0,521
I can work very long hours.	0.638
Even if I encounter an unpleasant situation in my work, I focus on again quickly and continue my work.	0.752
I focus on quickly and strongly in my work.	0.701

deviation values of variables, it seems that psychological capital's average is 3,67, and work engagement's average is 3,57 in Table 3.

In this study, in order to examine the effects of psychological capital component on work engagement, multiple regression analysis was done. Findings are shown in Table 4. The findings obtained from the regression analysis revealed that the linear combination of values of self-sufficiency, hope, durability and optimism from psychological capital components predicts work engagement at a significant level (R2 = 0,401, P < 0,05). In terms of values into the regression equation, it is seem that hope component (B = 0,221, P < 0,05), durability component (B = 0,350, P < 0,05), and optimism component (B = 0,182, P < 0,05) are significant to predict work engagement. However, it was found that self-sufficiency component has no statistically significant effects on work engagement. According to the findings, among the components of psychological capital, it was seen that durability component is the strongest predictor of work engagement. Accordingly, it is seen that psychological capital explains the variance of work engagement by 40.1%, in other words, work engagement takes shape depending on psychological capital by 40.1% rate. In this context, the conclusion was reached that as self-sufficiency, hope and durability levels of research assistants increase, their work engagement increase, as well.

After examining the effects of psychological capital dimensions on work engagement, regression analysis was performed again on the basis of each dimension in order to examine the effect of these dimensions on each dimensions of dedication to work. The findings are shown in Table 5. Accordingly, hope (B = 0,272, P < 0,05), durability (B = 0,315, P < 0,05) and optimism (B = 0,249, P < 0,05) dimensions predict vigor dimension (R2 = 0,355, P < 0,05); durability dimension (B = 0,504, P < 0,05) predicts dedication dimension (R2 = 0,249, P < 0,05); self-sufficiency (B = 0.227, P < 0.05), hope (B = 0.191, P < 0.05), durability (B = 0.228, P < 0.05) and optimism (B = 0.251, P < 0, 05) dimensions predict concentration dimension (R2 = 0,309, P < 0,05).

5. CONCLUSIONS AND DISCUSSION

Psychological capital is the characteristics employees are supposed to have for creating a positive organizational behaviour environment in organizations. Therefore, psychological capital is also a concept that states the expectations of the organization from human factor. When the literature is reviewed, it is seen that psychological capital has a positive effect on the subjects of organizational behaviour such as performance, job satisfaction and organizational commitment. It is obvious that employees with high self-sufficiency, hopeful, resistant to adverse conditions and optimistic will contribute more to the organization they are in.

Table 3: Variables' findings of average, standard deviation and correlation (n=280)

Scales	Average	S.D.	1	2	3	4	5	6	7	8
1. Psychological capital	3.67	0.341	1							
2. Self-sufficiency	4.10	0.519	0.694*	1						
3. Hope	3.63	0.568	0.617*	0.530*	1					
4. Durability	3.88	0.465	0.684*	0,613*	0.537*	1				
5. Optimism	3.59	0.571	0.639*	0.323*	0.460*	0.413*	1			
6. Work engagement	3.57	0.576	0.591*	0.466*	0.516*	0.547*	0.436*	1		
7. Vigor	3.67	0.661	0.540*	0.416*	0.497*	0.489*	0.442*	0.624*	1	
8. Engagement	3.55	0.667	0.461*	0.366*	0.373*	0.476*	0.249*	0.643*	0.646*	1
9. Concentration	3.40	0.664	0.523*	0.432*	0.442*	0.445*	0.415*	0.688*	0.601*	0.563*

*p<0,05

Table 4: Multiple regression analysis between psychological capital dimensions and work engagement

Dependent variable	R^2	Independent variable	B	Standard mistake	t	p	F
Work engagement	0.401	Self-sufficiency	0.132	0.082	1.63	0.106	32.68
		Hope	0.221	0.073	3.01	0.003	
		Durability	0.350	0.093	3.75	0.000	
		Optimism	0.182	0.065	2.82	0.005	

p<0,05

Table 5: Regression analysis between psychological capital dimensions and work engagement dimensions

Dependent variable	R^2	Independent variable	B	Standard mistake	t	p	F
Vigor	0.355	Self-sufficiency	0.111	0.097	1.14	0.257	26.88
		Hope	0.272	0.087	3.12	0.002	
		Durability	0.315	0.111	2.83	0,005	
		Optimism	0.249	0.077	3.24	0.001	
Engagement	0.249	Self-sufficiency	0.092	0.106	0.869	0.386	16.19
		Hope	0.163	0.095	1.722	0.087	
		Durability	0.504	0.121	4.157	0.000	
		Optimism	0.019	0.084	0.233	0.816	
Concentration	0.309	Self-sufficiency	0.227	0.101	2.249	0.026	21.84
		Hope	0.191	0.091	2.104	0.037	
		Durability	0.228	0.116	0.970	0.050	
		Optimism	0.251	0.080	3.147	0.002	

$p<0.05$

In this study, the effect of psychological capital, known as positive organizational behaviour too, on work engagement was examined. To this end, hypotheses that will form conceptual framework were developed first, and then the research model was established and application was carried out. The surveys obtained from 280 research assistants working at Selcuk University were taken into consideration in the study. For starters, validity and reliability analyses were performed on data, and then statistical analyses were made in order to test the hypothesis. According to the findings, it was found that linear combination of values of psychological capital components of self-sufficiency, hope, durability and optimism predicts work engagement significantly. From this result, the hypothesis "H1: Psychological capital has an effect on work engagement." was accepted.

When it was examined in term of values into the regression equation, it was found that hope, durability and optimism are significant to predict work engagement, and self-sufficiency component has no effect on work engagement statistically. In addition, it was found that durability component is the strongest psychological capital component to predict work engagement. From these findings, the hypothesis "H1: Self-Sufficiency factor has an effect on work engagement." was rejected; the hypotheses "H1B: Hope factor has an effect on work engagement."; "H1c: Durability factor has an effect on work engagement."; and "H1d: Optimism factor has an effect on work engagement." were accepted. In this context, as research assistants' levels of self-sufficiency, hope and durability increases, their work engagement can be said to increase. These results partially support Çalışkan's (2014) evaluation for optimism and hope factors from positive organizational behaviour variables have positive effect on work engagement, self-sufficiency and durability factors have no effect on work engagement. Because according to our research results, while hope, durability and optimism factors have effect on work engagement, self-sufficiency factor has no effect on it. In the results Çalışkan obtained (2014), optimism and hope factors have positive effect on work engagement, self-sufficiency and durability factors have no effect on work engagement. Thus, the results we obtained support Çalışkan's results (2014) in terms of H1a, H1b and H1d, in term of H1c they don't.

In addition, the effect of psychological capital dimensions on each dimension of work engagement was examined. According to the results, hope, durability and optimism dimensions predict vigor dimension; durability dimension predicts engagement dimension; self-sufficiency, hope, durability and optimism dimensions predict concentration dimension. Based on these results, "H2: Psychological capital components have effect on an individual's level of vigor." and "H3: Psychological capital components have an effect on an individual's level of engagement." hypotheses were partially accepted; "H4: Psychological capital components has an effect on the concentration level of the individual." hypothesis was accepted. The obtained results partially support Çalışkan's (2014) results. Because according to Çalışkan (2014), hope and optimism dimensions predict (in our study, hope, durability and optimism) vigor dimension; optimism and durability dimensions predict (in our study, durability) engagement dimension and optimism dimension predicts (in our study, self-sufficiency, hope durability and optimism) concentration dimension. Although there is a similar tendency, there are partly variations in the obtained results.

There are some limitations to our study. Firstly, the sample didn't spread over a very large area, and it includes research assistants who in only one university. It is possible to expand the sample by including research assistants working in other universities, and thus, the results become more meaningful. In addition, beside research assistants, it can be possible to compare the results through performing the same questionnaire to other lecturers. Again, factors such as differences in the perspective of the teaching staff in public and private universities, differences in the perspectives of educators at different levels of education

can be demonstrated by a new research. Also, examining the mediation role of different organizational behaviour variables in the relation between psychological capital and work engagement can make this study one step ahead and it can be an offer to later studies.

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