

Big-5 Personality Traits of Leadership and Job Performance: Investigating the Mediating Role of Work Engagement among University Lecturers

Dr. Muhammad Naveed Jabbar

Assistant Professor Superior University Lahore. Email: m.naveedjabbar@gmail.com

Dr. Irfana Rasul*

Assistant Professor, University of Education, Lahore. Email: irfana.rasul@ue.edu.pk

Dr. Muhammad Nadeem

Principal Officer, Mines & Minerals Department Punjab. Email: mnadeem439@gmail.com

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Abstract

The purpose of this research was to examine the mediating effect of work engagement between personality traits and job performance of the university lecturers. The public university lecturers from Punjab, Pakistan were the population of this study whereas 583 participants were selected as a sample through stratified random sampling technique. The research design of the study was quantitative based on cross sectional. Data was collected by using standardized questionnaire through survey method. Smart PLS-SEM was computed to analyze data according to the proposed hypothesis. The findings of this study revealed that there was a significant and positive relationship between personality traits and work engagement. Moreover, there was a significant and positive influence of personality traits and work engagement on job performance. Moreover, the personality traits had more significant effect on job performance than work engagement. Additionally, there was a positive and significant mediating effect of work engagement between personality traits and job satisfaction. The study is beneficial for the development of higher education institutions through skillful human capital by adopting various innovative techniques and strategies.

Keywords

Job Performance, Partial Least Square, Personality Traits; University Lecturers, Work Engagement

Introduction

Today's higher education institutions are operating in highly competitive and tumultuous economic environment that demand proactive and well committed workforce to thrive both at individual and institutional level (Danish et al., 2019; Klassen et al., 2018; Zubair et al., 2019). Employees' activities and behaviors that are align with organizational goals, define organizational performance (Asrar-ul-Haq, Anwar & Hassan, 2017; Hashim & Shawkataly, 2017). Moreover, job performance is not the result and consequences of some activities, but denotes behavior and action itself (Zafar & Ali, 2018). In 1993 Borman highlighted the two main dimensions of job performance i.e., task and contextual performance (Zamin & Hussin, 2021). Task performance describes employee's core job responsibilities and contributes to technical core of organizations (Torlak & Kuzey, 2019). It is measured through the quality and quantity of specific work outcomes and deliverable actions. It may contribute directly to execute some part of technical work or may indirectly provide, needed service and material (Zafar, Karim, & Abbas, 2017). Task performance is the ability of employees to express competency and expertise in conducting, maintaining and serving technical requirements of an organization (Lai et al., 2020; Zafar, Karim & Abbas, 2017). Contextual performance includes those activities which do not have direct relation with tasks but social, psychological, and intellectual elements of an organization are positively affected by it as it serves as a catalyst for task activities (Ribeiro, Yücel, & Gomes, 2018; Schneider & Preckel, 2017; Steinberg & Garrett, 2016; Tremblay & Simard, 2018).

Big five personality traits model believes individual differences as the intrinsic nature of humans (Widiger, 2017a). Differing nature of personality indicates its dimensions and characteristics, which is a significant issue that can help organizations to achieve performance expectations by recruiting desired employees and managing their behaviors and deliverable actions (Roberts et al., 2017). A significant and over the time and cultures confirmed classification about personality traits involves five factors: agreeableness, extraversion, conscientiousness, openness and neuroticism (Roberts, 2018). Each factor covers a wide range of traits instead of covering a single trait. Extraversion demands a vigorous approach and includes traits such as cordiality, decisiveness, and positive sentimentality, psychology, and activity. Agreeableness contains selflessness, compassion, visionary mind, modesty and trust traits ((Hudson & Fraley, 2015; Widiger, 2017b). Traits involves in conscientiousness are organization, thoroughness, and reliability. Neuroticism involves tempera mentality, nervousness and moodiness traits. Traits involves in openness to experience involves are passion, inquisitiveness, and imagination (Kim, Dar-Nimrod & Mac Cann, 2017).

Work engagement described as a mental condition at work which is positive, fulfilling and illustrate by dedication, vigor, and absorption dimensions (Puspitasari & Darwin, 2021), agreed upon the fact that engagement is a positive concept and connected to work settings. Moreover, engagement yoke employees with their work and they express physical, cognitive and emotional attachment with their role at work (Hosani, Elanain & Ajmal, 2018), summarized physical engagement from the concept of Kahn as how much employee put effort and energy during their job (Kooij et al., 2020). Therefore, the physical concept of engagement related to the energy exerted by employees to perform specific tasks at work. Bayona, Caballer & Peiró (2020) defined emotional engagement in the opinion of Kahn as a positive and affective

reaction to employees' job. The emotional facet of work engagement concerns about whether employees have positive feelings about their work and leaders or think negatively. Wang & Chen (2020) explained cognitive engagement as explained as attention and absorption employees assert during their job. The cognitive facet of job engagement explains employees' beliefs about their organizational work environment and leadership (Lai et al., 2020).

Hypothesis

- H1. There is a significance effect of Big-5 personality traits on job performance.
- H2. There is a significance association between Big-5 personality traits and work engagement.
- H3. There is a significance effect of work engagement on job performance.
- H4. There is a significance mediating effect of work engagement between the correlation between Big-5 personality traits and job performance.

Literature Review

Personality Traits and Job Performance

Past researches on personality conducted across different times and cultures investigated that different personality traits affect employees' performance at work depending upon nature of job. For example, agreeableness trait of personality demonstrates social attitude of employees at work which help them to interact with other people within an organization (Chandrasekara, 2019; Kramer, Bhavé & Johnson, 2014; Lin, Lamond, Yang & Hwang, 2014; Widiger, 2017b). The person with agreeableness personality trait finds himself easy in social interaction, create social capital and associations earlier and mingle into a team quicker. Hence, Kell (2019) concluded that agreeableness is an effective predictor of job performance. Moreover, he underscored that agreeableness might be the only effective predictor of job performance for work requires substantial interpersonal interaction and collaboration with others (Ma, Guo & Fang, 2021). Contrarily, some of the significant traits of conscientiousness persons include righteousness, reliability, comprehensiveness, carefulness, earnestness, perseverance, and capability of effective planning. Thus, his performance fits in most of fields and he is better at work (Bastian, McCord, Marks & Carpenter, 2017). Furthermore, Bastian, McCord, Marks & Carpenter, (2015) revealed that conscientiousness is over the time tested and most compatible and congruous predictor of work performance. Meanwhile, Acaray & Yildirim (2017) concluded in a Meta-analysis that conscientiousness has positive relationship with job performance. Researches on Extraversion personality trait also reveal that it affects job performance positively as well the main feature of extraversion as sociable, assertiveness and activeness.

People with this trait are more energetic in direct involvement, have confidence in presenting their ideas, do not criticize others out of mere jealousy, and do not hold differences: therefore, they have improved job performance. Furthermore, there is a notable association among extraversion and job performance (Acaray & Yildirim, 2017). Likewise, task performance is predicted by extraversion and contextual performance is predicted by the remaining four of the Big Five traits (Hashim & Shawkataly, 2017). Because extraverted trainees are expected to be smarter than the others assertive, active, and they tend to interrogate their concepts deeply and

ask about their queries in detail during their training. They have tendency to be more proficient in training (Hudson & Fraley, 2015). Furthermore, there is a strong relationship between emotional equilibrium and job performance (Holmes, Kirwan, Bova & Belcher, 2015). In addition to this, emotional equilibrium plays a key role in enhancing job performance in jobs involving team work as it helps to stabilize the temper, increase personal security and endure pressure, thus making a worker pleasant to others and produce desired job performance (Asrar-ul-Haq, Anwar & Hassan, 2017). People with a trait of open mindedness have tendency of striving for new experiences and would happily accept new tasks thus achieving better job performance (Tremblay & Simard, 2018). It was concluded by Widiger (2017a) that extraversion, conscientiousness, and emotional stability are closely related to vocational behavior (job satisfaction, job search and job performance and job interests etc.). Moreover, worker's motivation can also be affected by his personal attributed strong motivation for allows the workers to strive to be efficient in their work, thus they will produce better job performance (Roberts, 2018).

Personality Traits and Work Engagement

Level of engagement of workers is greatly affected by another factor i.e., personality traits. For example, workers may have varying levels of engagement while working in similar environments. Contrasting personality traits are the reason behind the existence of this variation in engagement levels (Jackson, 2014; Janssens, Zutter, Geens, Vogt, & Braeckman, 2019). Jobs which are suitable for workers according to their level of psychic and physical skills help for the success of employees and organizations. Employees do know about the kind of jobs which are suitable for them because well-being of workers is negatively affected by unsuitable jobs (Ababneh, 2021). Employees may develop a condition of irritation, unhappiness, stress, and dissatisfaction because of unsuitable jobs. It can also negatively affect organizations. Organizations fail to achieve positive results and their planned financial benefits, maximum productivity, job efficiency, and employee strength is affected. The reason is that employees are an important part of production in jobs related to service sector (Li, Wang, Gao & You, 2017). Nevertheless, workers probably have contrasted personality traits and the types of their jobs. Thus, to engage the workers on working platform, big-5 personality traits of leadership is considered to be a tool of utmost importance (Chong, Van Dyne, Kim, & Oh, 2021). Furthermore, job performance is improved because of it. Research conducted by Janssens, De Zutter, Geens, Vogt and Braeckman (2019) depicted that personality traits (goal directedness, conscientiousness) have an influence in determining whether the relationship between work engagement and job performance is positive or negative. Moreover, it has also been studied that employee with special personality traits (conscientiousness) experience "flow" at work (involvement, pleasure, satisfaction, and dedication) and their performance levels are positively affected (Hosani, Elanain & Ajmal, 2018; Ongore, 2014). Many of the researches conducted earlier found similar relationship that, workers who have higher levels of engagement and improve their individual job performance tend to be more self-disciplined, hard-working, optimistic and reliable (Akhtar, Boustani, Tsivrikos, & Chamorro-Premuzic, 2015; Mróz, & Kaleta, 2016; Zaidi et al., 2013).

Work Engagement and Job Performance

Construct of job performance has been the center of attention consistently while studying the well-being of workers (Demerouti, Bakker & Leiter, 2014; Klassen et al., 2018) and it provided a typically submissive experience of low-to-moderate activation. Keeping in view these advantages, organizations would try to develop and initiate those programs which suit the workers and thus encourage work engagement (Puspitasari & Darwin, 2021). As a result, retention and performance of workers might improve (Alessandri, et al., 2014) and a more vitalized form called job engagement complements this kind of well-being. The workers who are engaged in their work have a satisfied state of mind, have more practical approaches towards different circumstances, and are prompted to work vigorously on the given task (Topchyan & Woehler, 2021). Hence, the definition of job engagement can be stated as work-related well-being having an affective, fulfilling, motivational, and satisfactory state (Jayus, 2021). In a review given by Lai, Tang, Lu, Lee, & Lin (2020), it can be defined with regard to higher level of participation in work and higher level of vigor. From earlier researches, it was found out that work engagement plays a vital role in a number of outcomes related to job such as performance and activity learning (Kooij, Nijssen, Bal & van der Kruijssen, 2020). But, in spite of the fact that work engagement and its relationship with performance in organizations holds popularity, there is a lack of empirical researches in engagement in educational literature regarding employees' performance on the job (Alessandri et al., 2014; Kim, Kolb & Kim, 2013; Bayona, Caballer & Peiró, 2020; Wang & Chen, 2020).

Problem Statement

The ultimate goal of higher education in Pakistan is to produce competent human capital in order to make country a developed nation. This goal can be achieved through effective teaching conducted by the university lecturers. However, the teaching conducted by the university lecturers is less effective due to the lack of their job performance. Although, various methods have been used to increase the level of job performance of the lecturers but other variables such as the practice of personality traits and work engagement have not been put into consideration. The theories of personality traits and work engagement claim that performance of the internal customers is increased if personality traits and work engagement appropriately practiced by the universities. There is contradiction among the theories and findings of the past studies. It raises a desire for a researcher to conduct a further study in order to clarify the real issues regarding job performance of the university's lecturers along with these variables.

Methodology

This study based on Cross sectional and quantitative research approach whereas big-5 personality traits and work engagement were treated as independent variables and job performance as dependent variable. The public university lecturers were administered as a population while, sample of the study was 583 lecturers by ordered stratified random sample technique however, Krejcie & Morgan (1970) was followed to choose the sample size. Moreover, Structured questionnaires were adopted for various constructs such as; Big Five Inventory Scale (BFIS) was adopted from (John & Srivastava, 1999) and Utrech Work

Engagement Scale was adopted from (Schaufeli, Bakker & Salanova, 2006). Whereas Job Performance Scale (JPS) was adopted from (Goodman & Svyantek, 1999). Seven points Likert scale ranging from 1. Strongly Disagree to 7. Strongly Agree was used to collect respondents' point of view on different constructs by survey method. The content and face validity (Content & face) was guaranteed by senior colleagues and academicians and Cronbach's Alpha coefficient administered to measure the reliability that was > 0.7 (Chin, 1998, Nunnally, 1978). Partial Least Square was used to analyse the proposed hypothesis of this research (Hayes, 2012; Henseler et al., 2009).

Findings

Table 1 Descriptive Statistics

Variables	Dimensions	N	M	SD
	Agreeableness	583	5.54	.96
	Extraversion	583	5.33	.98
	Conciseness	583	5.31	.86
	Neuroticism	583	4.83	1.06
	Openness	583	5.21	.93
Personality Traits		583	5.24	.96
	Professional Engagement	583	4.92	.94
	Cynicism Engagement	583	4.97	.86
	Exhaustion Engagement	583	5.03	1.01
Work Engagement		583	4.97	.93
	Task	583	5.37	.97
	Contextual	583	4.59	.98
Job Performance		583	4.98	.97

Mean of the statements about personality traits presented by the university lecturers was (M= 3.92, SD= .95), about work engagement (M= 3.51, SD= .89) and job performance (M= 3.73, SD= .93). The findings show that the university lecturers were moderately responds to the personality traits, work engagement and job performance.

Test of Normality

The distributions of the observations are normal when both skewness and kurtosis are near to the zero (0). Generally, statistical processes consist of diagnostic hypotheses test for normality and a thumb rule that is pretty close to normal if the its values of skewness and kurtosis are in range of -1 and +1. The distribution is considered skewed when the value of skewness is greater than +1 or less than -1. While, when the value of kurtosis is greater than + (> +1), the distribution is viewed as too peaked and when its value is less than -1 (< -1), the distribution is viewed as flat (Tabachnick & Fidell, 2007).

Table 2 Values of Skewness and Kurtosis of measured variables

Constructs	Skewness		Kurtosis	
	Statistic	Std. Error	Statistic	Std. Error
Personality Traits	-.985	.114	1.295	.228
Work Engagement	-1.047	.114	2.050	.228
Job Performance	-1.143	.114	1.642	.228

Multicollinearity Test

To examine the multicollinearity test there was applied VIF and Tolerance statistics. Tolerance characterizes the variance of the variables, the threshold numeric of Tolerance is > .20, VIF < 5.0 and CI < 30 (Götz, Liehr-Gobbers & Krafft, 2010). Thus, there was no problem in this research. Moreover, Pearson Correlation was administered to examine the association among the constructs. The table 4 indicates that there was positive relationship between personality traits and job performance with R value of .643. Furthermore, there was significant relationship between work engagement and job performance with R value of .485. Additionally, there was also significant association between personality traits and work engagement with R value of .389.

Table 3 Tolerance and Variance Inflated Factor

Variables	Collinearity Statistics		
	Tolerance	VIF	Condition Index
Personality Traits	.801	1.56	16.36
Work Engagement	.752	1.33	13.80

Table 4 Correlate Matrix

Constructs	PT	WE	JP
Personality Traits	1		
Work Engagement	.389(**)	1	
Job Performance	.643(**)	.485(**)	1

** Correlation is significant at the 0.01 level (2-tailed).

Measurement Model

For this study in measurement model internal consistency reliability, discriminant validity and convergent validity was assessed. Internal consistency was measured by Alpha coefficient value that should be greater than 0.7 (Chin, 2010), Additionally, by administered PLS the threshold value of (α) is greater than 0.7 and loading > 0.4 and AVE >0.5 (Hair et al., 2014; Urbach & Ahlemann, 2010; Hulland, 1999; Bagozzi & Yi, 1988; 1991). Therefore, the results of internal consistency reliability were acceptable. The figure 1 also shown the individual and cumulative 0.527 average of the constructs which was more than 0.5. Whereas, discriminant validity was assessed by employed Fornell-Larcker criterion (Fornell & Larcker, 1981; Basheer

et al., 2019; Hameed et al., 2018). The AVE's square root should be higher than its correlations with other constructs (Hair et al., 2014; Urbach et al., 2010).

Table 5 Internal consistency and convergent validity

Constructs	Alpha	CR	AVE
Personality Traits	.886	.857	.581
Work Engagement	.858	.803	.524
Job Performance	.871	.829	.553

Table 6 Fornell-Larcker Criterion

Constructs	PT	WE	JP
Personality Traits	0.782		
Work Engagement	.734	.702	
Job Performance	.708	.523	.686

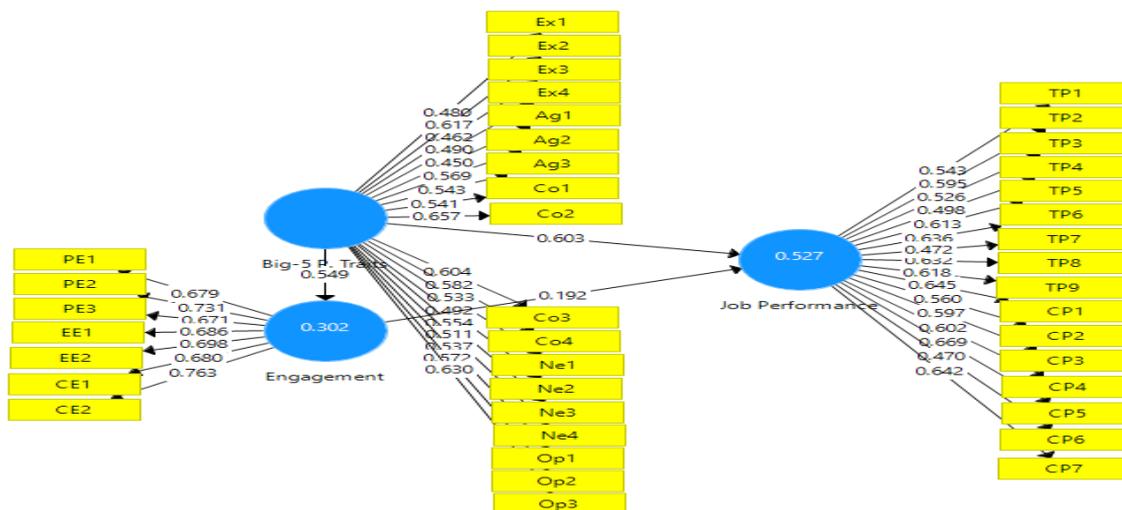


Figure 1 Measurement Model

Structural Model

The structural model is the stage for testing the hypothesis formulated for this research. As pointed out by Selya et al (2012), Sang, Lee and Lee (2010) the informal relationship between the constructs, path coefficient and specific indirect effect in the model that roughly calculate the t-value that should be higher than 1.96 and p-value that should be less than 0.5 are indicated by the structural model. This was done by following the instructions given by renowned researchers and scholars in their previous researches (Callaghan et al., 2007; Hair et al., 2011, 2014; Henseler et al., 2009).

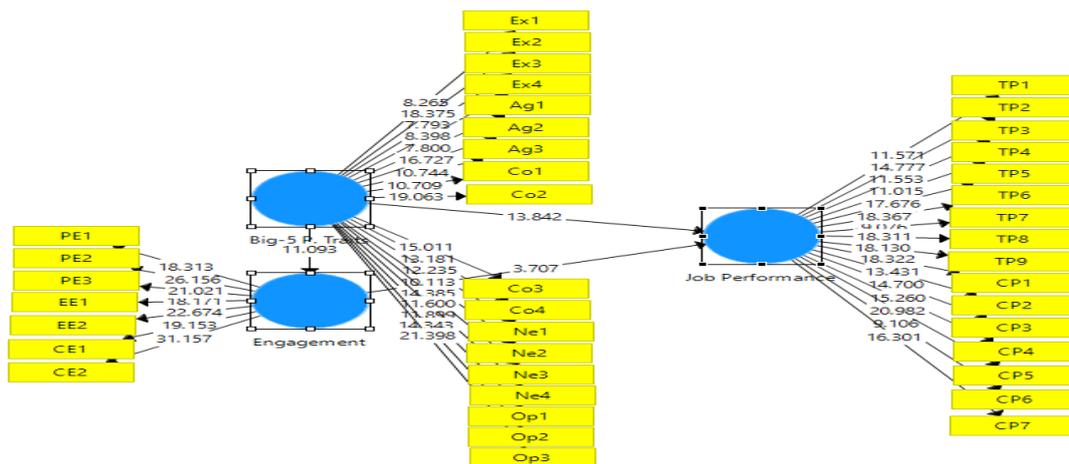


Figure 2 Structural Model (t-value)

Table 7 Path Coefficient

Constructs	Beta	SD	t	P
H1. Personality Traits → Job Performance	.603	.044	13.842	.00*
H2. Personality Traits → Work Engagement	.549	.050	11.093	.00*
H3. Work Engagement → Job Performance	.239	.064	3.707	.00*

Table 8 Specific Indirect Effect (Mediating)

Constructs	Beta	SD	t	P
H4. Personality Traits → Work Engagement → Job Performance	.327	.033	9.873	.00**

Regression Analysis

In order to differentiate the effect of different factors of the exogenous variables on endogenous variables. The effect size was calculated with the Beta value and significant value was administered with the p-value that should be less than .05.

Table 9 Multiple Regression analysis

DV	Constructs	SE	Beta	t	p
Job Performance	(Constant)				
	Personality Traits	.045	.429	9.46	.00**
	Work Engagement	.039	.207	5.19	.00**

Dependent Variable: JP

Table 10 Multiple Regression analysis

DV	Constructs	SE	Beta	t	p
Job Performance	(Constant)				
	Agreeableness	.044	.422	9.47	.00**
	Extraversion	.039	.245	6.28	.00**

Conciseness	.040	.162	4.09	.02*
Neuroticism	.034	.11	3.22	.04*
Openness	.029	.09	3.06	.05*

Dependent Variable: JP

Table 11 Multiple Regression analysis

DV	Constructs	SE	Beta	t	p
Work Engagement	(Constant)				
	Agreeableness	.055	.345	6.28	.00**
	Extraversion	.048	.431	8.92	.00**
	Conciseness	.058	.239	4.09	.00**
	Neuroticism	.063	.18	2.82	.03*
	Openness	.037	.12	3.21	.02*

Dependent Variable: WE

Table 12 Multiple Regression analysis

DV	Constructs	SE	Beta	t	p
Job Performance	(Constant)				
	Professional Engagement	.039	.421	10.48	.00**
	Cynicism Engagement	.040	.163	4.08	.00**
	Exhaustion Engagement	.039	.246	6.27	.00**

Dependent Variable: JP

The ability of all the exogenous constructs in anticipating the endogenous constructs is demonstrated by the determination coefficient (R^2), and it also highlights the strength of proposed model that is in range of 0-1 (Hair et al., 2014). Thus, R^2 value is considered as .19 weak, .33 moderate and .67 strong (Chin, 1998; Gim et al., 2015). Moreover, Preacher et al (2011) Q^2 functions as a practical guide to understand the position of a anticipated model. Cohen (1988) suggested > 0 statistical value of the Q^2 is acceptable as recommended by (Henseler et al., 2009).

Table 13 Cross-validated redundancy (Q^2)

Construct	SSO	SSE	$Q^2 = (1-SSE/SSO)$	R^2
Job Performance	7312.00	6053.98	0.172	0.527

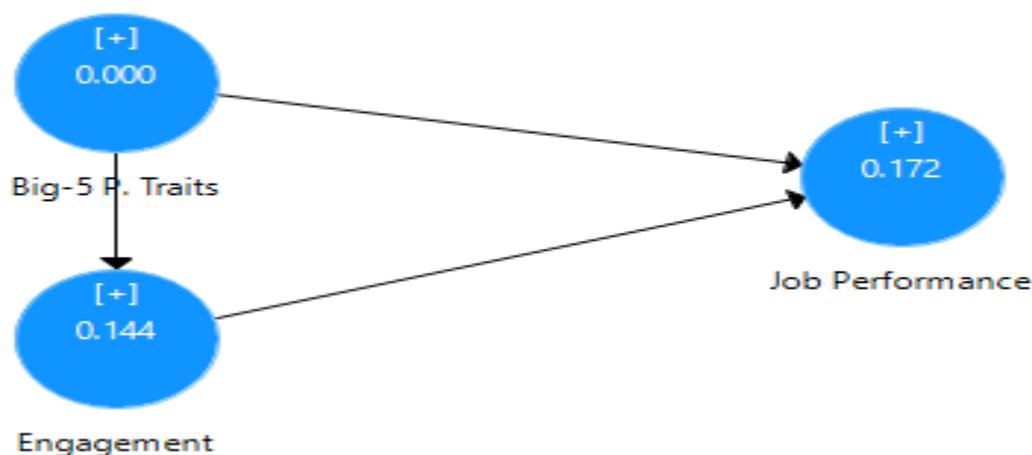


Figure 3 Cross-validated redundancy (Q^2)

Conclusions and Recommendations

It concluded that the university lecturers were moderately responds to the job performance regarding personality traits and work engagement. Moreover, personality traits and work engagement are predictor of job performance. Moreover, personality traits have more significant effect on job performance from work engagement. Furthermore, the dimensions of personality traits; Agreeableness and Extraversion have more effect on job performance than Conscientiousness, Neuroticism and Openness (Bastian, McCord, Marks, & Carpenter, 2017; Bayona, Caballer & Peiró, 2020; Chandrasekara, 2019; Kell, 2019; Wang & Chen, 2020). Additionally, there was a significant and positive relationship between personality traits and work engagement. Additionally, the dimensions of personality traits; Agreeableness, Extraversion and Conscientiousness have more effect on work engagement than Neuroticism and Openness (Ababneh, 2021; Chong, Van Dyne, Kim & Oh, 2021; Hosani, Elanain & Ajmal, 2018; Janssens, De Zutter, Geens, Vogt & Braeckman, 2019). Consequently, the dimensions of work engagement; Professional Engagement and Exhaustion Engagement have more effect on job performance as compare to Cynicism Engagement (Kooij et al., 2021; Puspitasari & Darwin, 2021). Additionally, there was a positive and significant mediating effect of work engagement between the correlation personality traits and job performance (Lai et al., 2020). The R^2 value of .527 means that there was 52.7% effect on job performance of these variables and the 47.3% job performance of the university lecturers is affected by others variables. Higher education institutions' significant role in the socio-economic growth of the country cannot be ensured without effective contribution of teaching faculty for the completion of the organizational objectives. This study was carried out among public universities in Punjab, Pakistan. The future studies should be conducted to investigate the job performance of the academic faculty with other variables.

Implications

Theoretically, the study strived to supplement prose on personality traits, work engagement and job performance that contribute the development of higher education. The unique conceptual framework including work engagement as a mediator between personality traits and their effect on job performance in this study was also contribution. Moreover, framework was designed on gaps of the past researches. Methodologically, to analyze the measurement model and proposed hypothesis by administered the PLS-SEM advance software was contribute to enhance the strength of this research. Furthermore, the effect size of the exogenous variables on endogenous variables and to examine the job performance of the university's lecturers with various constructs was investigated at micro level through dimensions. Practically, this research is beneficial for the educational leaders to adopt different kinds of techniques and strategies for the development of the higher education institution through valuable human resources.

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