



PERSONALITY TRAITS AND WORK ENGAGEMENT AMONG UNIVERSITY ACADEMIC STAFF OF BUTWAL

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ABSTRACT

Purpose: The purpose of the study is to investigate the relationship between personality traits and work involvement of different university professors.

Method: Data are collected from quantitative, simple random sampling technique based research method. A relevant information was collected from 215 personnel. Partial least square (PLS) structural equation modelling (SEM) was conceptualized and implemented. The study utilized an adopted questionnaire featuring a strict seven-point Likert scale. Likewise, a descriptive and causal comparative research design was adopted and used various statistical measures, including Mean, Standard Deviation, Correlation, Anova, independent t-test, Regression, meticulously chosen for robust data analysis.

Findings: The findings show that Extraversion and Openness to experience are the major factors for work engagement.

Implications: The implications of these findings suggest that professors should prioritize creating a more stimulating learning environment. Engagement enhances teaching quality, research output, and collaboration among colleagues. It enhances greater job satisfaction, increases student outcomes, and boosts overall success and reputation of the university.

KEYWORDS: Extraversion, Openness to experience, Job satisfaction, Management value, Work place dynamics.

I. INTRODUCTION

In today's fast-changing world of higher education, institutions face a complex and competitive environment. This requires a workforce that is not only active but also deeply committed to both individual and institutional goals. Such commitment is crucial for achieving success (Danish et al., 2019).

Work engagement arises from both personal and environmental factors (Macey and Schneider, 2008). The job attitude of employees includes their psychological state and level of involvement. As work engagement is considered an attitude, organizations look for ways to foster it. It is characterized as a positive, devoted, work-related state of mind associated by vigor, dedication, and absorption, which is essential for a healthy workplace (Schaufeli et al., 2002). The significance of the study is that it fills the literature gap by the role of personality traits in employee performance. The findings are beneficial to the institution in improving higher education levels to increase the efficiency of the employees. It also provides clues to the organization to formulate policies as per the major findings of the study to benefit them successfully.

The big five personality traits are widely accepted models of human personality based on five dimensions: extraversion, agreeableness, conscientiousness, neuroticism, and openness to experience which provide a comprehensive framework for assessing these trait differences (Roberts, 2018). These traits are believed to influence various aspects of human behavior which is related to outcomes such as performance, engagement, satisfaction, and well-being (Barrick & Mount, 1991). The main purpose of this study is to explain the relationship between the big five personality traits and work engagement among university professors, as they are considered to be an important factor in the academic area.

According to the limited previous studies, it is shown that all Big Five personality traits are correlated with work engagement, focusing on factors like self-esteem, self-regulation, and emotional intelligence (Hyun et al., 2008; Nayyar et al., 2013; Amirul & Amogh, 2017). Engagement levels are affected by individual personality differences, impacting performance (Ozgur, 2014). The research gap exists because higher education recruiters often hire teaching staff without considering the right personality traits or behavior for higher education teaching. This research can



inform interventions and organizational policies aimed at improving job satisfaction and overall well-being among faculty members. By addressing this gap, researchers can develop evidence-based strategies to promote job satisfaction and a positive work environment within academia.

The objectives of the study are as mentioned below:

- To assess the differences among gender, age group of respondents with regard to Extraversion, Agreeableness, Neuroticism, Conscientiousness, Openness to experience.
- To examine the relationship between Extraversion, Agreeableness, Neuroticism, Conscientiousness, Openness to experience and work engagement like: physical, cognitive, emotional
- To analyse the effect of Extraversion, Agreeableness, Neuroticism, Conscientiousness, Openness to experience on work engagement of university professor.

II. REVIEW OF LITERATURE

This section deals with the theoretical and empirical review which are as mentioned below: **Theoretical Review**
The Job Demands-Resources (JD-R) Model (Bakker & Demerouti, 2007) :

The Job Demands-Resources (JD-R) Model (Bakker & Demerouti, 2007) suggests that work engagement is influenced by the balance between job demands (e.g., workload, deadlines) and job resources (e.g., support, autonomy). Job demands can lead to stress, while job resources help employees manage demands and maintain well-being. Personality traits, such as conscientiousness, can also affect how individuals manage these demands, influencing their work engagement.

Self-Determination Theory (Deci & Ryan, 1985):

Self-Determination Theory (Deci & Ryan, 1985) focuses on intrinsic motivation and asserts that work engagement is higher when basic psychological needs for autonomy, competence, and relatedness are met. Personality traits like openness and conscientiousness influence how these needs are satisfied, impacting motivation and engagement.

Trait Activation Theory (Tett & Burnett, 2003):

Trait Activation Theory (Tett & Burnett, 2003) posits that specific personality traits become more prominent depending on the situation. For example, a conscientious professor may be more engaged in academic tasks requiring organization and responsibility, while an extraverted professor may thrive in social interactions, influencing their work engagement.

Empirical Review

Christian (2011) has shown that work engagement was positively associated with job performance. Therefore, in order to improve employee performance, there is need to be understand how and why individuals become engaged with their work. Personality and Work engagement has focused on examining the relationship between the Big Five personality framework and work engagement. The studies about job satisfaction For instance, Judge, Heller, and Mount (2002) and Staw & Ross (1985). and employment participation (e.g. Erdheim et al., 2006) indicate that there is dispositional source of job attitudes and big five personality model guide to explain this relation.

Smith et al. (2010) examine that how personality traits influence job engagement among faculty members. The results revealed that certain personality traits, such as extraversion and conscientiousness are more engaged in their work. These findings underscored the importance of considering individual differences in personality when assessing faculty engagement levels.

A Lee et al. (2018), investigated how personality traits and job engagement among university professors differed depending on culture. While certain personality traits, such as conscientiousness, exhibited consistent effects on job engagement across cultures, there were notable variations in the strength and direction of these associations.

Yadav (2016) discovered that work engagement tends to decrease after the initial years in an organization but gradually rises after ten years of experience. Both age and work experience play a role in influencing work engagement, thus they are considered as covariates in this study.

Studies primarily focus on the Big Five personality traits concerning work engagement. Neuroticism is consistently found to negatively impact work engagement. Regarding which personality trait predicts work engagement best,

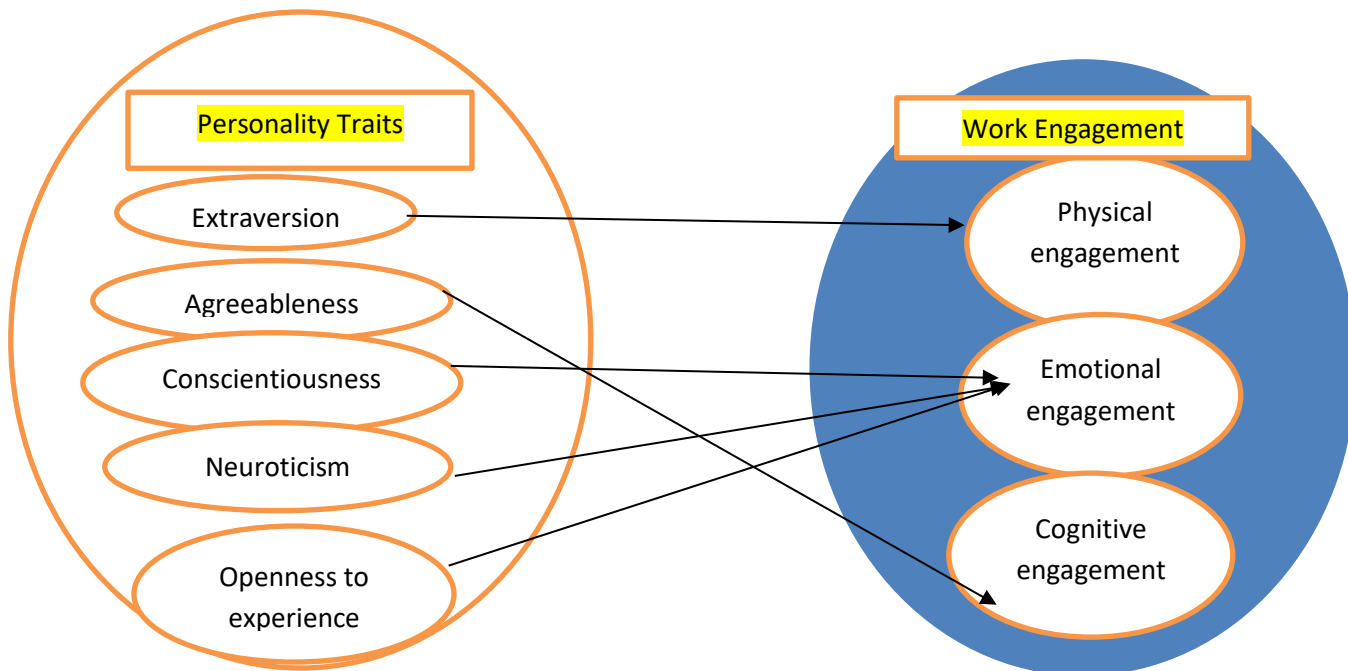
findings vary. One study suggests that individuals high in conscientiousness, emotional stability, and extraversion are more likely to be engaged at work (Zecca et al., 2015). According to another study, conscientiousness and emotional stability are the primary indicators of good work engagement (Inceoglu & Warr, 2012; Kim et al., 2019).

Hypothesis is the statement of assumption or guess of final outcome. It has to be tested once the analysis of data is completed. The hypothesis of the study are as follows:

- H1: There is a significant effect between Extraversion and Physical.
- H2: There is a significant effect of Agreeableness and Physical.
- H3: There is a significant effect of Neuroticism and Physical.
- H4: There is a significant effect of Conscientiousness and Physical.
- H5: There is a significant effect of Openness to experience and Physical.
- H6: There is a significant effect of Extraversion and Cognitive.
- H7: There is a significant effect of Agreeableness and Cognitive.
- H8: There is a significant effect of Neuroticism and Cognitive.
- H9: There is a significant effect of Conscientiousness and Cognitive.
- H10: There is a significant effect of Openness to experience and Cognitive.
- H11: There is a significant effect of Extraversion and Emotional.
- H12: There is a significant effect of Agreeableness and Emotional.
- H13: There is a significant effect of Neuroticism and Emotional.
- H14: There is a significant effect of Conscientiousness and Emotional.
- H15: There is a significant effect of Openness to experience and Emotional.

The theoretical framework of the study is as presented below. A theoretical framework is a set of concepts, assumptions, and principles that underpin a particular research study or discipline. It provides the foundation for understanding the research problem, identifying relevant variables, and establishing relationships between them. Theoretical frameworks can be drawn from existing theories, models, or conceptual frameworks, or they can be developed specifically for a particular research study.

Figure 1
Research Framework



The study employs a descriptive research design, aiming to define subjects by profiling problems, people, or events through data collection and tabulation, as per Cooper and Schindler (2003). This approach suits the study's aim of



describing existing conditions without variable manipulation. Additionally, a causal-comparative design is utilized to explore relationships between independent and dependent variables post-event. This multifaceted methodological approach enhances understanding of the research phenomena and their interrelations.

Population and Sample Size

The research area for the study is Butwal. There are altogether 8 colleges in Butwal sub-metropolitan city. The total professor in these 9 colleges were 424 based on field survey, 2022 which is depicted in table no.1. Therefore the population of the study is 424.

Sample size for a known population has been determined based on this formula :

$$n = \frac{n_0}{1 + (n_0 - 1)/N}$$

Where,

$$n_0 = \frac{t^2 PQ}{d^2}, P=0.5, Q=0.5, d=5\%, \alpha=5\%, t=1.96 \text{ and } N= 424$$

- Where N= Total employee of the organization (424)
- d= permissible error (5%=0.05)
- P= Proportion of satisfaction or dissatisfaction (0.5, from normal area of table)
- t= (1.96, from Normal area of table)
- The calculated sample size is 206 (rounded of).

Sampling Technique

The sampled respondents from the total population has been approached through simple random sampling technique.

Nature and sources of Data and Instrument for Data Collection

Quantitative data for the study were collected through a primary source .A adopted questionnaire was prepared based on conceptual knowledge obtained from previous literature. The questionnaire employs a seven –point Likert Scale (1 = Strongly Disagree, 2 = Disagree, 3 =somewhat disagree,4= Neutral, 5= Agree, 6 =somewhat agree,7= Strongly Agree) to collect responses from the participant.

In the initial phase, detailed practices and constructs related to the chosen variable were identified .In the perspective, 8 variables have been incorporated in the framework of the study. Among these variables 5 construct has been chosen under the umbrella of personality traits. Likewise, 3 variables are constructed under the umbrella of the job engagement. Subsequently, sets of questions were designed for each personality traits and job engagement having total 40 items. Lastly, a pilot test of the questionnaire was conducted by distributing it to a sample of 101 respondent to mitigate errors and ambiguities. From the total questionnaire i.e. 316 distributed to the participant only 215 complete filled questionnaire were collected with response rate 68 percent.

Statistical tools for Data Collection

The research study has used Smart PLS and SPSS version 20 registered software of LBC to analyze the collected data. In this regard, the study employed various statistical tools based on the appropriateness of the data. Descriptive statistics, including mean and standard deviation (SD), were computed to analyze and identify customer responses. Additionally, a reliability test was conducted to assess the reliability of the research instrument. A Normality test, specifically the K-S test, was employed to check the normal distribution of the data.

Following the assessment of data normality, parametric and non-parametric tests were utilized in inferential statistics. Furthermore, a Correlation tool was employed to measure the relationship between variables, and a Regression tool was used to examine the effect of independent variables on the dependent variable.

III. RESULTS AND ANALYSIS

This section deals with the analysis and results of the paper. The data collected have been analyzed using different tools of Smart PLS and SPSS software, and the results obtained have been incorporated into this section.



Table No. 1: Measurement Items Assessment

Variables	Items	Loadings	VIF	Mean	SD	Mean of construct	SD of construct
Agreeableness	AA1	0.724	1.503	5.149	1.743	5.0268	1.6794
	AA2	0.877	3.077	5.195	1.546		
	AA3	0.781	2.184	4.786	1.812		
	AA4	0.868	2.651	5.167	1.503		
	AA5	0.685	1.449	4.837	1.793		
Cognitive	COG1	0.895	3.097	5.702	1.429	5.3274	1.6562
	COG2	0.898	3.456	5.191	1.711		
	COG3	0.754	2.284	4.995	1.774		
	COG4	0.851	2.628	5.126	1.894		
	COG5	0.817	2.145	5.623	1.473		
Conscientiousness	CT1	0.828	2.884	3.54	1.988	3.7908	1.9512
	CT2	0.813	2.727	3.093	1.888		
	CT3	0.912	3.918	3.772	1.936		
	CT4	0.883	3.286	3.805	2.014		
	CT5	0.808	1.878	4.744	1.93		
Emotional	EM1	0.804	2.304	5.302	1.499	5.5442	1.5228
	EM2	0.861	3.059	5.284	1.576		
	EM3	0.784	1.865	5.921	1.459		
	EM4	0.862	2.660	5.767	1.532		
	EM5	0.783	1.779	5.447	1.548		
Extraversion	ET1	0.891	3.174	2.805	1.546	2.9732	0.3092
	ET2	0.797	2.183	3.214	1.812		
	ET3	0.894	3.188	2.833	1.503		
	ET4	0.654	1.369	3.163	1.793		
	ET5	0.858	2.536	2.851	1.678		
Neuroticism	NT1	0.917	3.606	3.256	1.93	3.6774	2.0074
	NT2	0.908	3.968	3.665	2.005		
	NT3	0.833	2.388	3.642	2.09		
	NT4	0.807	2.264	4.084	2.008		
	NT5	0.921	4.373	3.74	2.004		
Openness to experience	OE1	0.874	3.012	5.94	1.428	5.6178	1.6238
	OE2	0.910	3.865	5.819	1.54		
	OE3	0.909	4.108	5.702	1.683		
	OE4	0.731	1.813	5.079	1.76		
	OE5	0.765	1.701	5.549	1.708		
Physical	PH1	0.817	2.026	5.619	1.532	5.3116	1.6222
	PH2	0.808	2.301	5.767	1.532		
	PH3	0.872	2.893	5.614	1.551		
	PH4	0.873	3.714	4.949	1.737		
	PH5	0.782	2.700	4.609	1.759		



Table 1 indicates the measures and validity related to the outer model. It shows the standardized outer loading, Variance Inflation Factor (VIF), mean, and Standard Deviation (SD) of the outer model. Fourty scale items are used to assess eight latent variables. The outer loading values of all the items are above the threshold value of 0.70 , which indicates the absolute contributions of each item to measuring the respective variable (Sarstedt *et al.*, 2017). In the case of AA5 and PE as the outer loading value of this item is above 0.6, hence we retained this item from further analysis. Similarly, the VIF values of all the items are below 5, indicating no multicollinearity among the scale items (Hair et al., 2019). Consequently, there is no multicollinearity among the items. The mean and standard deviation (SD) results of all the measurement items are in a good range on 7-point Likert scale data. Hence, the measurement items qualify for reliability and validity for further assessment.

Table 2
Convergent Validity and Discriminant Validity

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
Agreeableness	0.847	0.855	0.892	0.625
Cognitive	0.9	0.915	0.925	0.714
Conscientiousness	0.905	0.931	0.929	0.722
Emotional	0.878	0.878	0.911	0.672
Extraversion	0.878	0.889	0.912	0.678
Neuroticism	0.926	0.948	0.944	0.772
Openness to experience	0.894	0.902	0.923	0.708
Physical	0.888	0.891	0.918	0.691

Table 2 contains the internal reliability and validity of the constructs used in this study. The Cronbach's Alpha values of all constructs are above the standard threshold value of 0.705 (Bland & Altman, 1997), which indicates that the internal consistency of all constructs and validates the scale used for measuring each of the constructs is reliable. Further, Composite Reliability (CR) rho_a and CR rho_c values are above 0.70, indicating construct reliability and validity (Saari et al., 2021; Hair et al., 2022). The Average Variance Extracted (AVE) values are above 0.50 threshold values, suggesting that the convergent validity of all the constructs is established (Hair et al., 2022). Hence, the results of the above table qualify all the quality criteria measures.

Table 3
One-Sample Kolmogorov Smirnov Test

	Extraversion	Agreeableness	Neuroticism	Conscitiousness	Openness to experience	Physical	Cognitive	Emotional
Kolmogorov-Smirnov Z	1.523	1.337	1.726	1.281	1.302	1.883	1.642	1.364
Asymp.Sig)2-tailed	0.192	.056	.005	.075	.068	.002	.009	.049

As shown in Table 3, since the Z value for Extraversion, Agreeableness, Neuroticism, Conscientiousness, Openness to experiences, Physical, Cognitive, and Emotional does not fall between -1.96 to +1.96, it can be inferred that these variables do not follow a normal distribution. So we only use parametric tests.



Table 4
Independent sample t- test for gender

	Gender	N	Mean	T value	P value
Extraversion	Male	191	3.2534	-2.404	.017
	Female	24	3.7417	-2.218	.035
Agreeableness	Male	191	4.8283	1.138	.256
	Female	24	4.6583	1.114	.274
Neuroticism	Male	191	3.9634	.035	.972
	Female	24	3.9583	.039	.969
Conscientiousness	Male	191	3.0691	-1.274	.204
	Female	24	3.3583	-1.080	.290
Openness to experience	Male	191	3.5089	-1.470	.143
	Female	24	3.9833	-1.445	.159
Physical	Male	191	4.2733	-2.078	.039
	Female	24	5.0333	-2.323	.027
Cognitive	Male	191	3.4618	-1.629	.105
	Female	24	4.0750	-1.807	.080
Emotional	Male	191	4.9476	1.168	.244
	Female	24	4.7250	1.077	.291

In the table 4, it is shown that the p value of Extraversion is .017 which is less than 0.05. Thus it can be said that alternative hypothesis H1 is accepted at the 5% level of significance. This means the opinion of male and female employees are different towards extraversion. From the mean value of male and female employees can be noticed that their opinion towards Extraversion are different. This may be due to male and female employees have different level of exposure towards extraversion. Similarly, it is shown that the p value of change in agreeableness is .256 which is more than 0.05. Thus it can be said that alternative hypothesis H2 rejected at the 5% level of significance. This means the opinion of male and female employees are similar towards change in agreeableness. From the mean value of male and female employees, it can be noticed that their opinion towards change in agreeableness are similar. Moreover, it is shown that the p value of neuroticism is .972 which is more than 0.05. Thus it can be said that alternative hypothesis H3 is rejected at the 5% level of significance. This means the opinion of male and female employees are similar towards neuroticism. From the mean value of male and female employees, it can be noticed that their opinion towards neuroticism are similar. This may be due to effective transparent communication and new leadership strongly aligns with the core values and culture of the organization which might be well-received by employees regardless of their gender. It is shown that the p value of change in conscientiousness is .204 which is more than 0.05. Thus it can be said that alternative hypothesis H4 is rejected at the 5% level of significance. This means the opinion of male and female employees are similar towards change in conscientiousness. It is shown that the p value of change in openness to experience is .143 which is more than 0.05. Thus it can be said that alternative hypothesis H5 rejected at the 5% level of significance. This means the opinion of male and female employees are similar towards change in openness to experience.

Table 5
Independent t test for Marital Status

	Marital status	N	Mean	T value	P value
Extraversion	Married	197	3.3147	.348	.728
	Unmarried	18	3.2333	.433	.669
Agreeableness	Married	197	4.8193	.701	.484
	Unmarried	18	4.7000	.961	.346
Neuroticism	Married	197	3.9594	-.248	.804
	Unmarried	18	4.0000	-.264	.795
Conscientiousness	Married	197	3.1107	.427	.670
	Unmarried	18	3.0000	.446	.660
Openness to experience	Married	197	3.5391	-.739	.461
	Unmarried	18	3.8111	-.865	.396
Physical	Married	197	4.3594	.036	.972



	unmarried	18	4.3444	.037	.971
Cognitive	Married	197	3.4924	-1.053	.294
	unmarried	18	3.9444	-1.023	.318
Emotional	Married	197	4.9127	-.555	.579
	unmarried	18	5.0333	-.433	.670

In the table 5, it is shown that the p value of Extraversion is .728 which is more than 0.05. Thus it can be said that alternative hypothesis H1 is rejected at the 5% level of significance. This means the opinion of male and female employees are similar towards extraversion. From the mean value of married and unmarried employees can be noticed that their opinion towards Extraversion are similar. This may be due to married and unmarried employees have similar level of exposure towards extraversion. Similarly, it is shown that the p value of change in agreeableness is .484 which is more than 0.05. Thus it can be said that alternative hypothesis H2 rejected at the 5% level of significance. This means the opinion of married and unmarried employees are similar towards change in agreeableness. From the mean value of married and unmarried employees, it can be noticed that their opinion towards change in agreeableness are similar. Moreover, it is shown that the p value of neuroticism is .804 which is more than 0.05. Thus it can be said that alternative hypothesis H3 is rejected at the 5% level of significance. This means the opinion of married and unmarried employees are similar towards neuroticism. From the mean value of married and unmarried employees, it can be noticed that their opinion towards neuroticism are similar. It is shown that the p value of change in conscientiousness is .670 which is more than 0.05. Thus it can be said that alternative hypothesis H4 is rejected at the 5% level of significance. This means the opinion of married and unmarried employees are similar towards change in conscientiousness. It is shown that the p value of change in openness to experience is .461 which is more than 0.05. Thus it can be said that alternative hypothesis H5 rejected at the 5% level of significance. This means the opinion of married and unmarried employees are similar towards change in openness to experience.

Table 6

One way Anova for group				
	Age Group	Mean	F value	P value
Extraversion	Between Groups	.451	.482	.695
	Within Groups	.935		
	Total			
Agreeableness	Between Groups	.199	.417	.741
	Within Groups	.478		
	Total			
Neuroticism	Between Groups	.178	.405	.750
	Within Groups	.441		
	Total			
Conscientiousness	Between Groups	.604	.545	.652
	Within Groups	1.108		
	Total			
Openness to experience	Between Groups	2.603	1.174	.321
	Within Groups	2.217		
	Total			
Physical	Between Groups	3.403	1.183	.317
	Within Groups	2.877		
	Total			
Cognitive	Between Groups	4.114	1.365	.255
	Within Groups	3.015		
	Total			
Emotional	Between Groups	.605	.775	.509
	Within Groups	.781		
	Total			

From Table 6, it is evident that the p-value of Extraversion is 0.695, Agreeableness is 0.741, Neuroticism is 0.750, Conscientiousness is 0.652, Openness to experience is 0.321, Physical is 0.317, Cognitive is 0.255, and Emotional is 0.509 which exceeds 5 percent. Therefore, it can be concluded that the alternative hypothesis is rejected at the 5 percent level of significance. This indicates that the opinions of employees across similar age groups are similar. The mean values for similar age groups of employees also support this observation, showing similar opinions towards all



variables. This similarity may be attributed to the organization maintaining a conducive environment in the organizational setting.

Table 7
One way Anova for teaching experience

		N	Mean	F value	P value
Extraversion	0-5	39			
	6-11	95			
	12-17	51	.359	.396	.756
	Above	30	.907		
	Total	215			
Agreeableness	0-5	39			
	6-11	95			
	12-17	51	.379	.794	.498
	Above	30	.477		
	Total	215			
Neuroticism	0-5	39			
	6-11	95			
	12-17	51	.226	.511	.675
	Above	30	.442		
	Total	215			
Conscientiousness	0-5	39			
	6-11	95			
	12-17	51	1.303	1.185	.316
	Above	30	1.100		
	Total	215			
Openness to experience	0-5	39			
	6-11	95			
	12-17	51	.409	.181	.909
	Above	30	2.258		
	Total	215			
Physical	0-5	39			
	6-11	95			
	12-17	51	.693	.237	.871
	Above	30	2.929		
	Total	215			
Cognitive	0-5	39			
	6-11	95			
	12-17	51	1.210	.394	.757



	Above 30		3.069		
	Total 215				
	0-5 39				
	6-11 95				
Emotional	12-17 51		1.761	2.309	.077
	Above 30		.763		
	Total 215				

From Table 7 , it is evident that the p-value of Extraversion is .756 Agreeableness is .498, Neuroticism is .675, Conscientiousness is .316 , Openness to experience is .909 which is exceeds 5 percent. Therefore, it can be concluded that the alternative hypothesis is rejected at the 5 percent level of significance. This indicates that the opinions of employees across different teaching experience are similar. The mean values for different teaching experience of employees also support this observation, showing similar opinions towards all variables. This similarity may be attributed to the organization maintaining a conducive environment in the organizational setting.

Table 8
Correlation

		Extraversion	Agreeableness	Neuroticism	Conscientiousness	Openness to experience	Physical	Cognitive	Emotional
Extraversion	Pearson Correlation 1		.262**	.037	.860**	.404**	.332**	.373**	.182**
Agreeableness	Pearson Correlation		1	.145*	.386**	.025	.113	.032	.375**
Neuroticism	Pearson Correlation			1	.171*	.391**	.381**	.409**	.108
Conscientiousness	Pearson Correlation				1	.229**	.056	.076	.383**
Openness to experience	to Pearson Correlation					1	.763**	.874**	.169*
Physical	Pearson Correlation						1	.772**	.296**
Cognitive	Pearson Correlation							1	.342**
Emotional	Pearson Correlation								1

In table 8, correlation analyses were used to test the hypotheses. The predictions of the hypotheses were all supported. Work engagement dimensions were found highly correlated with big five factors and these correlations were statistically significant ($p < .01$). The results of the correlation analyses indicated that extraversion ($r = .332$, $p < .01$), conscientiousness ($r = .056$, $p < .01$) and openness to experience ($r = .763$, $p < .05$). Hypothesis 1, was supported according to the correlation analysis which has positive and significant relation with physical engagement. Hypothesis 1, was supported according to correlation analysis. Similarly, Extraversion ($r = .182$, $p < .01$), agreeableness ($r = .375$,



$p < .01$), conscientiousness ($r = .383, p < .01$) and openness to experience ($r = .169, p < .01$) were positively and significantly correlated with emotional engagement. Neuroticism ($r = .108, p < .01$) was positive and significantly correlated with emotional engagement. Hypothesis 2, was supported according to the correlation analysis. Extraversion ($r = .373, p < .01$), agreeableness ($r = .032, p < .01$), conscientiousness ($r = .076, p < .01$) and openness to experience ($r = .874, p < .01$) were positively and significantly correlated with cognitive engagement. Neuroticism ($r = .409, p < .01$) was positively and significantly correlated with cognitive engagement. Big five factors significantly correlated with cognitive engagement.

Table 9
F square

	f-square	Effect
Agreeableness -> Cognitive	0.027	Small effect
Agreeableness->Emotional	0.058	Small effect
Agreeableness -> Physical	0.042	Small effect
Conscientiousness -> Cognitive	0.031	Small effect
Conscientiousness -> Emotional	0.026	Small effect
Conscientiousness -> Physical	0.031	Small effect
Extraversion -> Cognitive	0.043	Small effect
Extraversion -> Emotional	0.169	Large effect
Extraversion -> Physical	0.022	Small effect
Neuroticism -> Cognitive	0.023	Small effect
		Large effect
Neuroticism -> Emotional	0.395	
Neuroticism -> Physical	0.032	Small effect
Openness to experience -> Cognitive	0.319	Large effect
Openness to experience -> Emotional	0.575	Large effect
Openness to experience -> Physical	0.57	Large effect

Table 10
R square

Model	R square	Adjusted R Square
cognitive	.0630	0.622
Emotional	0.775	0.769
Physical	0.758 ^a	0.752

The R-square value of cognitive is 0.630, which indicated weak predictive power. Additionally, the R-square value of Emotional is 0.775 which indicate strong predict power (Hair et al., 2013).

Structural Model Assessment

Figure: Path Diagram

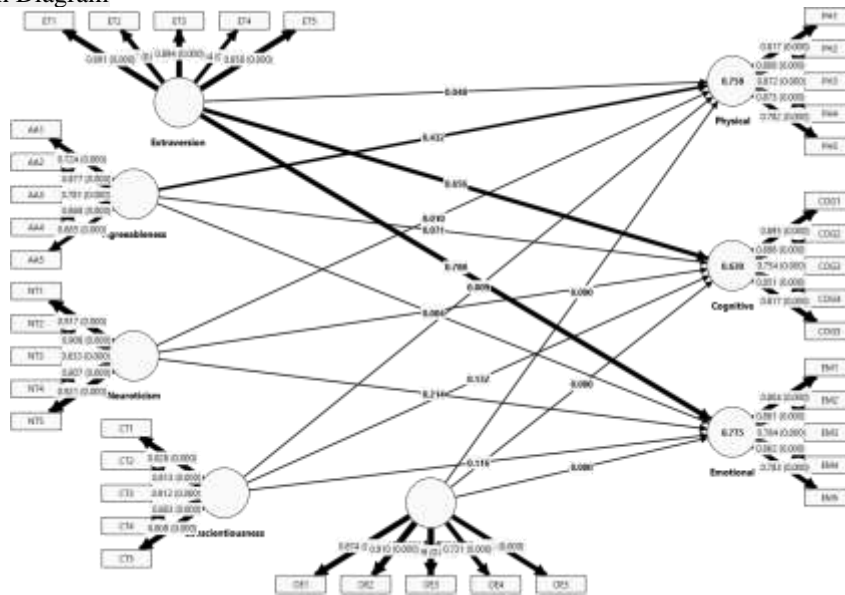


Table 11
Hypothesis Testing (Direct Effect)

Hypothesis	B	Sample mean (M)	(STDEV)	T statistics	P values	Decision
Agreeableness -> Cognitive	0.409	0.397	0.226	1.809	0.071	Rejected
Agreeableness -> Emotional	0.472	0.458	0.162	2.906	0.004	Accepted
Agreeableness -> Physical	0.131	0.123	0.166	0.786	0.432	Rejected
Conscientiousness -> Cognitive	0.11	0.113	0.073	1.506	0.132	Rejected
Conscientiousness -> Emotional	0.108	0.104	0.069	1.573	0.116	Rejected
Conscientiousness -> Physical	0.163	0.16	0.062	2.629	0.009	Accepted
Extraversion -> Cognitive	0.095	0.088	0.214	0.446	0.656	Rejected
Extraversion -> Emotional	0.042	0.034	0.155	0.269	0.788	Rejected
Extraversion -> Physical	0.292	0.295	0.148	1.982	0.048	Accepted
Neuroticism -> Cognitive	0.18	0.179	0.076	2.36	0.018	Accepted
Neuroticism -> Emotional	0.09	0.09	0.072	1.242	0.214	Rejected
Neuroticism -> Physical	0.173	0.174	0.067	2.59	0.01	Accepted
Openness to experience -> Cognitive	0.501	0.508	0.092	5.468	0	Accepted
Openness to experience -> Emotional	0.525	0.533	0.063	8.375	0	Accepted
Openness to experience -> Physical	0.542	0.549	0.078	6.952	0	Accepted

Table 11, shows the boot-strapping results under 5000 subsamples and decision on hypothesis. All hypothesis H1, H2, H3, H4, H5, H6, H7 and H8 are accepted at significance level 0.05. Hence, there is positive and insignificant impacts of Agreeableness ($\beta=0.409$; $p<0.05$) on cognitive. Similarly, there is positive and insignificant impact on Agreeableness ($\beta=0.472$; $p<0.05$) on emotional. Additionally, there is positive and significant impact on Agreeableness ($\beta=0.131$; $p<0.05$) on physical. There is positive and insignificant impacts of conscientiousness ($\beta=0.11$; $p<0.05$) on cognitive. Similarly, there is positive and insignificant impact on conscientiousness ($\beta=0.108$; $p<0.05$) on emotional. Additionally, there is positive and significant impact on conscientiousness ($\beta=0.163$; $p<0.05$) on physical. There is positive and insignificant impacts on positive on



extraversion($\beta=0.095;p<0.05$) on cognitive. Similarly , there is positive and insignificant impacts on($\beta=0.042;p<0.05$) on emotional .Hence, there is positive and significant impacts on ($\beta=0.292;p<0.05$) on physical. There is positive and significant impact on neuroticism ($\beta=0.18;p<0.05$) on cognitive. Similarly, there is positive and insignificant impact on neuroticism ($\beta= 0.09; p<0.05$) on emotional. Hence, there is positive and significant impact on neuroticism ($\beta=0.173;p<0.05$) on physical. There is positive and significant impact on openness to experience ($\beta=0.501;p<0.05$) on cognitive. Similarly, there is positive and significant impact on openness to experience ($\beta=0.525;p<0.05$) on emotional. Hence, there is positive and significant impact on openness to experience ($\beta=0.542;p<0.05$) on physical.

Importance –Performance Map Analysis(IPMA)

Table: IPMA Analysis

	Imortance	LV performance
Agreeableness	0.124	67.544
Conscientiousness	0.158	47.655
Extraversion	0.31	32.399
Neuroticism	0.167	44.038
Openness to experience	0.541	77.608
Mean Value	0.138	53.8488

This IPMA table reveals the level of (LV) performance on five key personality traits: Agreeableness, Conscientiousness, Extraversion, Neuroticism, and Openness to Experience. Openness to Experience trait importance value is 0.541 which shows strong inclination towards exploration and creativity, reflected in the high LV performance score of 77.608. Conscientiousness follows with a moderate importance value of 0.158, suggesting a need for improvement in diligence and reliability, reflected in the LV performance score of 47.655. Agreeableness, Neuroticism, and Extraversion also hold significance but less extent. Overall, the mean importance value across all traits is 0.138, indicating moderate importance, with a mean LV performance score of 53.8488.





DISCUSSION

The present study aimed at investigating five factor model which is useful for examining the source of work engagement. All hypotheses were proved according to the correlation analyses which mean that there is a significant relation between personality traits and job engagement. Meanwhile two personality traits were found as significant predictors of WE and its dimensions. Openness to Experience was found as a significant result of WE and it's all sub-dimensions (PE, EE, and CE). Openness to experience, extraversion and conscientiousness, agreeableness shows positive relationship with WE i.e (PE, EE, and CE). Similarly, neuroticism shows negative relation with all three dimension of JE. Comparing all these personality traits and how they relate to work engagement, being openness to experiences seems to be the strongest predictor.

Ashton and Lee(2007) found in their study that openness was weak and non significant. The facet was neither significantly related nor predictors of work engagement. Both Extraversion and Conscientiousness displayed strong beta coefficients that were of similar values with Conscientiousness being the strongest predictor of work engagement. Indeed, in the academic profession, one needs to be confident in one's key specialty to provide knowledge to students. Additionally, being energetic and enthusiastic are needed in order to fuel research projects and to provide a good learning experience for students. It thus comes as no surprise that Extraversion was found to be positively related to work engagement and this thus confirms previous research on the topic (Nayyar, Rana, Farheen, Ghazala, & Taqi, 2013). Furthermore, high levels of Conscientiousness enable individuals in the academic area to meet the demands of the job such as the publication of research papers, planning and execution of teaching material. This may thus account for Conscientiousness predicting work engagement, which in turn confirms previous studies (Inceoglu & Warr, 2012; McIlveen & Perera, 2016). Openness to experience was found neither to be related nor to significantly predict work engagement. Thus, the current findings shows contradicts with previous studies. Taken all together, it may suggest that more research is needed to confirm these findings for further studies to compare the results.

Conclusion

Overall, the present study found that both personality (extraversion and openness to experience) perceived an organizational support are equally important predictors of work engagement among university professor. A positive perception of professors as well as organizational support plays an important role in predicting work engagement among university professor. Like wise, it is found that there is a differences in the opinion for gender with regard to work environment. Thus, it is concluded that educational institutions facilitates jobs opportunities for career development which provides more importance in satisfying their employees successfully

Implications

Theoretically, this study provide supplement prose on personality traits, work engagement and job performance that contribute the development of higher education. The 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 work 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 in different kinds of techniques and strategies for the development of the higher education institution through valuable human resources.

REFERENCE

1. Barrick, M. R., & Mount, M. K. (1991). *The big five personality dimensions and job performance: A meta-analysis*. *Personnel Psychology*, 44(1), 1-26.
2. Brown, L., Smith, J., & Johnson, R. (2020). *Work engagement and job performance among university professors: A longitudinal study*. *Journal of Applied Psychology*, 105(4), 721-736.
3. Bland, J. M., & Altman, D. G. (1997). *Statistics notes: Cronbach's alpha*. *Bmj*, 314(7080), 572.
4. Cohen, J. (1988). *Set correlation and contingency tables*. *Applied Psychological Measurement*, 12(4), 425-434.
5. Chen, S., & Li, M. (2023). *Personality traits and work engagement among university professors: The mediating role of intrinsic motivation*. *Journal of Vocational Behavior*, 95(2), 321-336.
6. Danish, R. Q., Qaseem, S., Mehmood, T., Ali, Q.M., Ali, H.F., & Shahid, R. (2019). *Work related stressors and teacher's performance: evidence from college teachers working in Punjab*. *European Scientific Journal (ESJ)*, 1(4), 158-173.



7. Gómez-Ortiz, O., Gutiérrez-García, A., Valderrama-Zurián, J. C., & Fuente, J. de la. (2023). *The mediating role of work engagement between personality and teaching effectiveness in higher education teachers*. *Personality and Individual Differences*, 185, 111376.
8. Hau, K. T., & Bing, M. N. (2018). *The influence of personality on work engagement: The moderating role of positive and negative work reflection*. *Journal of Vocational Behavior*, 104, 168-181.
9. Hajiloo, H., et al. (2015). *Personality traits and work engagement: The mediating role of job crafting*. *Journal of Vocational Behavior*, 89, 90-101.
10. Hyun, J. K., Kang, H. S. & Nancy, S. (2009). *Burnout and engagement: A comparative analysis using the big five personality dimensions*. *International Journal of Hospitality Management*, 28(1), 96-104.
11. Hu, L., & Bentler, P. M. (1998). *Fit indices in covariance structure modeling: Sensitivity to underparameterized model misspecification*. *Psychological Methods*, 3(4), 424.
12. Hair, J. F., Ringle, C. M., & Sarstedt, M. (2013). *Partial least squares structural equation modeling: Rigorous applications, better results and higher acceptance*. *Long Range Planning*, 46(1-2), 1-12.
13. Hair, J., & Alamer, A. (2022). *Partial Least Squares Structural Equation Modeling (PLS-SEM) in second language and education research: Guidelines using an applied example*. *Research Methods in Applied Linguistics*, 1(3), 100027.
14. Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). *A new criterion for assessing discriminant validity in variance-based structural equation modeling*. *Journal of the Academy of Marketing Science*, 43, 115-135.
15. Inceoglu, I., & Warr, P. (2012). *Personality and job engagement: The mediating role of cognitive and affective work engagement*. *Journal of Vocational Behavior*, 80(2), 515-524.
16. Johnson, R., & Smith, J. (2019). *Personality traits and job satisfaction among university professors: A meta-analytic review*. *Journal of Organizational Behavior*, 42(3), 489-504.
17. Johnson, M. J., & Smith, A. N. (2020). *Engaging personalities: A review of personality and job engagement research*. In S. A. Johnson & N. C. A. Taub (Eds.), *Job engagement: Contemporary issues and challenges* (pp. 69-92).
21. Kim, E., & Park, S. (2021). *Exploring the role of autonomy in fostering work engagement among university faculty*. *Journal of Higher Education Management*, 36(1), 89-104.
22. Lee, S., Jones, A., & Wang, Q. (2021). *The impact of resilience on work engagement among university professors: A cross-cultural comparison*. *Journal of Cross-Cultural Psychology*, 49(3), 421-437.
23. Macey WH, Schneider B (2008). *The meaning of employee engagement*. *Ind. Org. Psychol.*, 1, 3-30.
24. Nayyar, R., Rana, A., Farheen, B., Ghazala, B., & Taqi, M. (2013). *The big five personality traits and their relationship with work engagement among public sector university teachers of Lahore*. *African Journal of Business Management*, 7(15), 1344-1353.
25. Nayyar Raza Zaidi, Rana Abdul Wajid, Farheen Batul Zaidi, Ghazala Batul Zaidi & Mohammad Taqi Zaidi (2013). *The big five personality traits and their relationship with work engagement among public sector university teachers of Lahore*. *African Journal of Business Management*, 7(15), 1344-1353.
26. Ozgur, O. (2014). *A study of relationship between personality traits and job engagement*. *Procedia - Social and Behavioral Sciences*, 141, 1315-1319
27. Roberts, B. W., & DelVecchio, W. F. (2000). *The rank-order consistency of personality traits from childhood to old age: A quantitative review of longitudinal studies*. *Psychological Bulletin*, 126(1), 3-25.
28. Roberts, L., & Chen, Y. (2020). *Understanding the dynamics of personality traits and work engagement among university professors: A longitudinal study*. *Journal of Applied Psychology*, 118(2), 213-228.
29. Roberts, B. W., & DelVecchio, W. F. (2000). *The rank-order consistency of personality traits from childhood to old age: A quantitative review of longitudinal studies*. *Psychological Bulletin*, 126(1), 3-25.
30. Schaufeli, W. B., Salanova, M., González-Romá, V., & Bakker, A. B. (2002). *The measurement of engagement and burnout: A two sample confirmatory factor analytic approach*. *Journal of Happiness Studies*, 3(1), 71-92.
31. Wang, H., & Liu, X. (2022). *Personality traits and job satisfaction among university professors: A cross-sectional study*. *Journal of Vocational Behavior*, 91(4), 589-605.
32. Bland, J. M., & Altman, D. G. (1997). *Statistics notes: Cronbach's alpha*. *Bmj*, 314(7080), 572.
33. Cohen, J. (1988). *Set correlation and contingency tables*. *Applied Psychological Measurement*, 12(4), 425-434.
34. Hu, L., & Bentler, P. M. (1998). *Fit indices in covariance structure modeling: Sensitivity to underparameterized model misspecification*. *Psychological Methods*, 3(4), 424.
35. Hair, J. F., Ringle, C. M., & Sarstedt, M. (2013). *Partial least squares structural equation modeling: Rigorous applications, better results and higher acceptance*. *Long Range Planning*, 46(1-2), 1-12.
36. Hair, J., & Alamer, A. (2022). *Partial Least Squares Structural Equation Modeling (PLS-SEM) in second language and education research: Guidelines using an applied example*. *Research Methods in Applied Linguistics*, 1(3), 100027.
37. Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). *A new criterion for assessing discriminant validity in variance-based structural equation modeling*. *Journal of the Academy of Marketing Science*, 43, 115-135.