

## RESEARCH ARTICLE

# Disentangling the relationship between Big-Five personality characteristics and work engagement: Evidence from India

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## ABSTRACT

This study aims to empirically examine the effect of Big-Five personality traits on employee engagement. A carefully crafted survey instrument was developed, and data were collected from 486 employees working in the banking sector in southern India. After checking the instrument's measurement properties, data was analyzed using covariance-based structural equation modeling by the Smart-PLS (partial least squares). The results indicate (i) extraversion and agreeableness were positively related to vigor, (ii) conscientiousness is positively related to dedication and absorption, (iii) neuroticism is negatively related to dedication, and (iv) openness to experience is positively related to vigor and absorption. Contrary to what was hypothesized, the results suggest that (i) extraversion is negatively related to absorption, (ii) agreeableness is negatively related to dedication, (iii) neuroticism is positively related to vigor, and (iv) openness to experience is negatively related to dedication. This research demonstrates that all five dimensions of personality characteristics have different impacts on employee engagement. This research advances the burgeoning literature on personality and employee engagement. Implications for theory and practice are discussed.

**Keywords:** Big-Five personality; vigor; dedication; absorption; India

## 1. Introduction

The last three decades have witnessed extensive research on Big-Five personality theory<sup>[1]</sup>, and there is consensus among researchers that human behavior is determined mainly by personality characteristics and environment<sup>[2-7]</sup>. The popularity of personality construct can be vouched from the famous equation entered the standard textbooks in organizational behavior [behavior = f (personality, environment)]. Furthermore, it has been well-documented in the literature about the effect of personality characteristics on employee commitment<sup>[8]</sup>, financial decisions, organizational performance<sup>[9-11]</sup>, and employee engagement<sup>[12-14]</sup>.

The success of any organization depends on the performance of employees, and work engagement is one of the essential variables that positively affect performance<sup>[15]</sup>. Researchers in industrial/organizational psychology provided mounting evidence that employee work engagement is a precursor to superior performance<sup>[16-21]</sup>. As individual behavior depends on personality and the environment in which they belong

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or work, the predisposition of personality cannot be underestimated in its influence on behavior. Therefore, various studies were conducted during the last five decades on the effect of personality on work-related outcomes such as performance, satisfaction, turnover intention, commitment, etc. Studies on personality have taken center stage by researchers. While the literature documenting the effect of personality on various organizational outcomes has been exhaustive, researchers have only recently attempted to identify the linkage between each personality dimension and work-related outcomes. A literature search reveals that most of the studies were conducted in the context of developed nations, and a relatively small number of studies were focused on developing countries. The existing studies in developing countries were sporadic and fragmented, especially concerning the research in the context of a thickly populated developing country, India. The present study aims to explore the relationship between each personality dimension and work engagement (in terms of vigor, dedication, and absorption). Though there is no shortage of studies in this area, the present study investigates the effect of the Big-Five personality characteristics of employees in the banking sector on work engagement.

This study makes four significant contributions to the burgeoning literature on personality and work-related outcomes. First, a simple model showing the relationship between various dimensions of Big-Five personality characteristics on each dimension of work engagement adds to the existing studies. Second, this research found that extraversion, agreeableness, and openness are positively related to vigor, and conscientiousness is unrelated to vigor. Conscientiousness and openness are related to dedication and absorption. Third, we found that neuroticism is negatively associated with dedication and positively related to vigor and absorption. Finally, the study revealed diametrically opposite relationships between neuroticism and dedication, extraversion and absorption, agreeableness and dedication, and openness and dedication. These results indicate that personality characteristics play different roles in the banking industry in influencing work engagement. Overall, this study provides some insights into the other effects of each dimension on work engagement. The results also suggest that Big-Five personality as a global measure needs to be interpreted cautiously as various dimensions may play opposite roles in multiple components of work engagement.

## **2. The study context and variables in the study**

### **2.1. Variables in the study**

#### **2.1.1. Big-Five personality characteristics**

Long back,<sup>[21]</sup> described that personality traits play a crucial role in an individual's thoughts, actions, and behaviors. Researchers have advanced several theories on personalities (e.g., Cattell's 16 Factor Model; Eysenck's Giant Tree), and there is consensus that personality is one of the significant predictors of individuals' emotional and physical well-being. Of late, two competing theories of personalities surfaced in the literature: the Myers-Briggs Type Indicator (MBTI), which falls into 'type' theories, and the Five-Factor Model (FFM), which is popularly known as Big-Five personality traits<sup>[1]</sup>, which falls into the category of 'trait' theories. Literature review reveals that Big-Five personality traits have been one of the widely used taxonomies in personnel psychology and organizational behavior<sup>[7]</sup>.

This study investigates the effect of Big-Five personality traits on employee engagement, especially in a developing country, India. These traits are extraversion, agreeableness, conscientiousness, neuroticism, and openness to experience. These traits are expressed along a continuum (e.g., extraversion-introversion). Individuals high on extraversion tend to be outgoing, assertive, friendly, and talkative. On the other hand, individuals who are low on extraversion tend to be reserved, less sociable, less talkative, and avoid being the center of attraction. The Agreeableness trait is related to the extent to which individuals are reliable, generous, and well-mannered. Individuals high on agreeableness tend to exhibit a helping nature and kindness and engage

in pro-social behaviors.

On the other hand, people who are low on agreeableness neglect others, engage in manipulation of others for self-benefit and do not show concern for others' problems—conscientiousness trait related to the degree to which individuals are organized, time-conscious, and trustworthy. Individuals high on conscientiousness pay attention to every detail, engage in goal-directed behavior, and complete tasks on time. People who are low on conscientiousness tend to be disorganized, dislike schedules, and are unable to complete the given tasks. Neuroticism is related to the extent to which individuals are emotionally stable. Individuals characterized by neuroticism tend to be unstable and unbalanced. People with emotional stability (another end of the continuum of neuroticism) tend to be vigilant, stable, relaxed, balanced, and deal with stressful situations effectively. Openness to experience trait is related to the degree to which individuals are dynamic, versatile, original, and imaginative. People high on openness to experience tend to be creative, eager to learn new things, conduct further experiments, and accept new ideas. Individuals who are low on openness tend to dislike change, dislike new ideas, and are not imaginative<sup>[22]</sup>. Extant research documented the effect of these personality traits on various outcomes: performance, self-efficacy, stress, burnout, job satisfaction, and employee engagement, among others<sup>[10,23,24]</sup>.

### **2.1.2. Work engagement**

In organizational behavior and human resource management literature, engagement at work by employees has been conceptualized by different scholars differently<sup>[16-18]</sup>. Researchers have voiced three types of engagement: employee engagement, work engagement, and organizational engagement. According to Kahn<sup>[16]</sup>, employee engagement involves physical, emotional, and cognitive components that employee spends while performing tasks. On the contrary, Schaufeli et al<sup>[18]</sup> argued that work engagement is related to the vigor, dedication, and absorption the employees exhibit while performing tasks. According to<sup>[25]</sup> organizational engagement refers to an individual's psychological presence while performing a given role in the organization. Though these types of engagement have received attention from researchers, the most frequently used in scientific research fields is the work engagement propagated by Schaufeli et al.<sup>[18]</sup>.

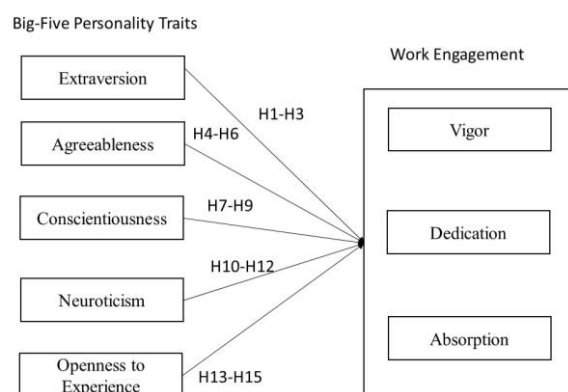
In this research, we use the construct 'work engagement' which is defined as "a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption. Rather than a momentary and specific state, engagement refers to a more persistent and pervasive affective-cognitive state that is not focused on any particular object, event, individual, or behavior"<sup>[18]</sup>. The three components of work engagement are vigor, dedication, and absorption.

Vigor is related to the degree to which employees feel bursting with energy. Individuals feel strong and like going to work and are interested in continuing the work till it is done. Individuals high in vigor also tend to be mentally resilient and prepared to work for extended periods<sup>[26]</sup>. One attractive characteristic of people with high vigor is that they show perseverance when things do not go well. They are willing to take on tasks when assigned<sup>[18]</sup>.

Dedication refers to the degree to which individuals feel their work is meaningful and purposeful. Individuals who are high on dedication tend to be enthusiastic about their jobs, and they are proud of the work they do. Further, dedicated individuals get inspired by their jobs and tend to perform tasks carefully<sup>[18]</sup>.

Absorption is the degree to which individuals are immersed in jobs. When absorbed into the work, individuals get carried away with it and forget everything else around them. Further, the individuals do not get detached from work and feel happy to work intensively. They think that time flies when they are at work<sup>[18]</sup>.

This research investigates the impact of Big-Five personality characteristics on work engagement. The conceptual model is presented in **Figure 1**.



**Figure 1.** Conceptual model.

### 2.1.3. Hypotheses development

The effect of extraversion on vigor, dedication, and absorption

Extraverts tend to be socially connected, courteous, and supportive and derive energy from social interactions<sup>[1,27,28]</sup>. An individual who possesses extraversion attributes seems to be more socially connected, happy, less introverted, more externally and objectively focused, and more concerned about other people and the world around them. In organizations, extroverted individuals tend to show enthusiasm and attachment toward work<sup>[29]</sup>. A recently conducted meta-analytic study revealed that extraversion is positively associated with work engagement<sup>[12]</sup>. Some early scholars found that extraversion relates to work engagement (vigor, dedication, and absorption)<sup>[9,10]</sup>. In a recent study on 152 employees of small and medium-sized organizations in Bosnia, the researchers found that extroverted individuals showed higher levels of work engagement<sup>[30]</sup>. A recent study conducted on 383 employees in the information technology sector in India found that extraversion was positively associated with work engagement<sup>[31]</sup>. Extraverted people enjoy working and do not get tired; they continue to work till the work is done (vigor). It is also a characteristic of extroverts who show high devotion and enthusiasm to perform work (dedication). Finally, the proactive nature of extroverts makes them absorbed in their work. The alertness and motivation they exhibit result in completing work, as they do not get detached from work (absorption). Several researchers reported a positive association between extraversion to work engagement<sup>[21,29,32-34]</sup>. Thus, we offer the following hypothesis based on empirical evidence from the extant research.

H1-H3: Extraversion is positively related to (H1) vigor, (H2) dedication, and (H3) absorption.

The effect of agreeableness on vigor, dedication, and absorption

The second trait of the Big-Five personality, agreeableness, concerns how individuals trust others, show generosity, and agree with others' points. Early scholars empirically demonstrated that agreeable individuals exhibit a high level of affective commitment<sup>[35]</sup> and work engagement<sup>[36]</sup>. In addition, a recently conducted meta-analysis of 36 research papers revealed that agreeableness is positively associated with work engagement<sup>[9,10,12,29]</sup>. These findings are supported by additional studies conducted among public sector employees<sup>[8]</sup> and 239 private sector employees<sup>[37]</sup>.

Agreeable individuals tend to show concern for others, exhibit pro-social behavior, and feel that it is part of work engagement. Researchers also pointed out that agreeableness individuals are influenced by peers, friends, parents, and other family members who motivate them to perform well at their jobs<sup>[38]</sup>. Some of the latest studies showed a positive association between Agreeableness and vigor, dedication, and absorption individuals show at work. Based on the available empirical evidence, we offer the following hypothesis:

H4-H6: Agreeableness is positively related to (H4) vigor, (H5) dedication, and (H6) absorption.

The effect of conscientiousness on vigor, dedication, and absorption

Conscientious individuals exhibit intense aspiration levels and a strong sense of responsibility for performing tasks<sup>[39]</sup>. Individuals high on conscientiousness tend to be organized and disciplined and understand the importance of reaching set goals. Conscientiousness is reflected in an individual's tendency to be dutiful and competent. Several researchers documented that conscientious employees have a strong sense of responsibility and strive to reach the goal of completing tasks<sup>[1,3,9,10,31]</sup>. As individuals high on conscientiousness tend to be trustworthy, time-conscious, and well-organized it is more likely that they show higher levels of work engagement. Self-discipline is a precursor to work engagement, and organizations rely on conscientious individuals<sup>[40]</sup>. In a study conducted in India, researchers found a positive association between conscientiousness and work engagement<sup>[41]</sup>. Researchers in other countries also vouched for the positive effect of conscientiousness and work engagement<sup>[4]</sup>, and the recently completed meta-analysis also supports this finding<sup>[12,21,29]</sup>. Thus, based on the mounting evidence, we offer the following hypothesis:

H7-H9: Conscientiousness is positively related to (H7) vigor, (H8) dedication, and (H9) absorption.

The effect of neuroticism on vigor, dedication, and absorption

Neuroticism, the opposite of emotional stability, is another vital trait of individuals that profoundly influences their behavior. Neurotic individuals are unstable and unbalanced and react poorly to situations they encounter. Some researchers found that neurotic individuals face emotional outbursts, quickly get frustrated and irritable, and experience swinging moods that may have a negative effect on work engagement<sup>[11,42]</sup>. Depression and anxiety make neurotic individuals show less dedication toward work. The relationship between Neuroticism and work engagement is documented in the literature<sup>[43,44]</sup>. The inability to concentrate on work makes them less absorbed at work, and hence the level of work engagement of neurotic individuals is very low. Since neurotic individuals are predisposed to having less emotional stability, they are likelier to be less involved in work. Therefore, based on the intuitive logic and available empirical evidence, we offer the following hypothesis:

H10-H12: Neuroticism is negatively related to (H10) vigor, (H11) dedication, and (H12) absorption.

The effect of openness to experience on vigor, dedication, and absorption

The final trait of the Big-Five personality is openness to experience, according to which individuals exhibit creativity and engage in new ways of doing things<sup>[1]</sup>. Extant research reported that individuals with high Openness to experience exhibit a high level of work engagement<sup>[45-47]</sup>. In relatively recent studies on the relationship between openness to experience and work engagement, researchers found a strong positive association<sup>[4,14,30]</sup>. Individuals high on openness tend to exhibit curiosity and creativity linked to finding new ways of engaging in work. Openness also makes individuals adaptable to changing demands and provides an opportunity to implement new ideas. Thus, based on intuitive logic and logos, we offer the following hypothesis:

H13-H15: Openness to experience is positively related to (H13) vigor, (H14) dedication, and (H15) absorption.

### **3. Methodology**

#### **3.1. Sample**

Data was collected from 486 respondents in the banking industry to test the hypothesized relationships. A carefully crafted survey instrument was developed and distributed to 650 employees working in banks in southern India. We received 512 completed surveys, out of which 26 were incomplete. Therefore, we included

486 surveys in the analysis.

The demographic profile of the respondents is presented in **Table 1**.

**Table 1.** Demographic profile of respondents.

Category	Profile	Total number	Percentage
Gender	Male	197	40.5
	Female	289	59.56
Age	Below 35	52	10.7
	36–45	249	51.2
	46–55	80	16.5
	Above 55	105	21.6
Educational qualification	Undergraduate (Bachelors’ degree)	79	16.3
	Post-graduate (Masters’ degree)	327	67.3
	Others (not declared)	80	16.5
Annual income	Below Rs. 240,000 (\$3000)	160	32.9
	Rs. 240,000–Rs. 480,000 (\$3000–\$6000)	209	43.0
	Rs. 480,000–720,000 (\$6600–\$9000)	117	24.1
Experience	Below 10 years	35	7.2
	10–20 years	227	46.7
	20–30 years	224	46.1
Marital status	Married	160	32.9
	Single	326	67.1

The mean<sub>age</sub> = 44.89; standard deviation<sub>age</sub> = 0.948; skewness<sub>age</sub> = 0.417; kurtosis<sub>age</sub> = -0.89. The standard deviation<sub>experience</sub> = 0.618; skewness<sub>experience</sub> = -0.49; kurtosis<sub>experience</sub> = -0.64. The standard deviation<sub>income</sub> = 0.751; skewness<sub>income</sub> = 0.14; kurtosis<sub>income</sub> = -1.22.

### 3.2. Measures

We measured Big-Five personality variables [from the Five Factor Theory<sup>[1]</sup> using the indicators adapted from variables<sup>[48]</sup> and used by<sup>[7]</sup>; extraversion (3 items: Cronbach’s alpha = 0.72), agreeableness (2, Cronbach’s alpha = 0.73), conscientiousness (2: Cronbach’s alpha = 0.74), neuroticism (3 items: Cronbach’s alpha = 0.72), and openness to experience (3 items: Cronbach’s alpha = 0.71). The Cronbach’s alpha for personality, for all the 13 items taken together, was 0.78. The employee engagement measures were adapted from Schaufeli et al.<sup>[18]</sup>. The vigor (4 items: Cronbach’s alpha = 0.81), dedication (2: Cronbach’s alpha = 0.71), and absorption (2: Cronbach’s alpha = 0.72).

## 4. Analysis

### 4.1. Descriptive statistics and multicollinearity

The means, standard deviations, and zero-order correlations were mentioned in **Table 2**.

A preliminary analysis of correlation reveals that the highest correlation between the variables was 0.64 (between conscientiousness and openness to experience) and the lowest correlation which was significant was 0.11 (between extraversion and openness to experience). Since correlations were lower than 0.75, multicollinearity is not a problem with the data<sup>[49]</sup>.

**Table 2.** Descriptive statistics: means, standard deviations and zero-order correlations.

	Mean	S. D	1	2	3	4	5	6	7	8	Cronbac h's Alpha	CR	AVE
1) Extraversion	4.50	0.24	<b>0.78</b>								0.72	0.75	0.62
2) Agreeableness	4.05	0.49	0.02	<b>0.78</b>							0.73	0.76	0.61
3) Conscientiousness	3.98	0.58	0.00	0.25***	<b>0.80</b>						0.74	0.78	0.64
4) Neuroticism	4.10	0.37	-0.02	0.20***	0.26**	<b>0.75</b>					0.72	0.79	0.57
5) Openness to experience	4.05	0.47	0.04	0.10**	0.64**	0.27***	<b>0.78</b>				0.71	0.82	0.61
6) Vigor	4.03	0.42	0.18**	-0.28***	0.02	0.26***	0.42***	<b>0.81</b>			0.81	0.88	0.65
7) Dedication	4.20	0.43	0.02	0.02	0.25***	-0.51***	0.06	-0.13**	<b>0.80</b>		0.71	0.76	0.64
8) Absorption	4.02	0.35	-0.32***	-0.33***	0.26***	0.28***	0.57***	0.61***	-0.29***	<b>0.78</b>	0.72	0.75	0.62

\*\*\*  $p < 0.01$ ; \*\*  $p < 0.05$ ; S. D = standard deviation; CR = composite reliability; AVE = average variance extracted estimate; numbers in the bold and diagonals are square roots of AVE.

#### 4.2. Measurement properties of the instrument, convergent validity, and discriminant validity

We checked the measurement properties of the instrument by performing structural equation modeling with Smart-PLS (partial least squares) package and presented the results in **Table 3**.

**Table 3.** Measurement properties outer loadings (CFA).

Indicators constructs	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics ( O/STDEV )	P values
EXT1 ← EXT	0.566	0.564	0.052	10.823	0.000
EXT2 ← EXT	0.917	0.917	0.013	69.147	0.000
EXT3 ← EXT	0.569	0.565	0.063	8.982	0.000
AGR1 ← AGR	0.651	0.645	0.055	11.934	0.000
AGR2 ← AGR	0.916	0.916	0.019	48.325	0.000
CONSC1 ← CONSC	0.721	0.714	0.089	8.066	0.000
CONSC2 ← CONSC	0.823	0.818	0.075	10.927	0.000
NEU1 ← NEU	0.797	0.795	0.028	28.817	0.000
NEU2 ← NEU	0.590	0.590	0.038	15.660	0.000
NEU3 ← NEU	0.845	0.846	0.013	66.190	0.000
OPEN1 ← OPEN	0.857	0.857	0.013	63.987	0.000
OPEN2 ← OPEN	0.768	0.767	0.018	42.175	0.000
OPEN3 ← OPEN	0.713	0.713	0.025	28.941	0.000
VIGOR1 ← VIGOR	0.807	0.807	0.018	45.617	0.000
VIGOR2 ← VIGOR	0.840	0.840	0.015	57.374	0.000
VIGOR3 ← VIGOR	0.851	0.850	0.014	59.318	0.000
VIGOR4 ← VIGOR	0.690	0.687	0.041	16.810	0.000
DEDI1 ← DEDIC	0.894	0.892	0.020	44.157	0.000
DEDI2 ← DEDIC	0.654	0.656	0.058	11.329	0.000
ABSORP1 ← ABSORP	0.946	0.945	0.009	103.170	0.000
ABSORP2 ← ABSORP	0.596	0.597	0.044	13.608	0.000

Abbreviations: EXT = extraversion; AGR = agreeableness; CONSC = conscientiousness; NEU = neuroticism; OPEN = openness to experience; DEDI = dedication; ABSORP = absorption.

The factor loadings for all the constructs are in a satisfactory range above the recommended level of 0.70, except for some items which are loaded between 0.50 and 0.70. Despite low factor loadings of some of the

indicators, there is no problem with the data as the average variance extracted estimate (AVE) for all the variables ranged from 0.57 and 0.65 which are larger than the cut off value of 0.50<sup>[50]</sup>. Further, the composite reliability (CR) for all the variables ranged from 0.75 and 0.88 and acceptable<sup>[49]</sup>. We also observed that the correlations between the variables are less than the square root of AVEs. These statistics provide discriminant validity, convergent validity, and reliability to the constructs used in this research.

### 4.3. Common method variance (CMV)

As survey-based research has an inherent problem of CMV, it is essential to check for its presence. We have followed the procedures suggested by<sup>[51]</sup> and did conduct Harman’s one-factor method and found that a single factor accounted for less than 30 percent of variance, thus suggesting the data is not infected by CMV. Further, we also conducted latent variable method by loading all the indicators into one factor each time and observed that the inner VIF values were less than 3.3, suggesting that CMV is not a problem in this research<sup>[52]</sup>.

### 4.4. Structural model

We tested the structural model with structural equation modeling and presented the path coefficients in **Table 4**.

As can be seen **Table 4**, the path coefficients were significant for extraversion to vigor ( $\beta = 0.342, p < 0.001$ ) [H1], agreeableness to vigor ( $\beta = 0.124, p < 0.01$ ) [H4], conscientiousness to dedication ( $\beta = 0.129, p < 0.001$ ) [H8], conscientiousness to absorption ( $\beta = 0.233, p < 0.001$ ) [H9]; neuroticism to dedication ( $\beta = -0.344, p < 0.001$ ) [H11]; openness to experience to vigor ( $\beta = 0.357, p < 0.001$ ) [H13]; openness to experience to absorption ( $\beta = 0.463, p < 0.001$ ) [H15].

This study did not find support for H2, H6, H7, and H12. This study supported the reverse hypotheses H3, H5, H10, and H14. In all, seven hypotheses found support, four hypotheses did not find support, and four hypotheses supported reverse hypotheses.

**Table 4.** Structural model: path coefficients.

Hypothesis		Path coefficients	T statistics	P values	Result
H1	Extraversion → vigor	0.342	6.478	0	Supported
H2	Extraversion → dedication	0.004	0.074	0.941	Not Supported
H3	Extraversion → absorption	-0.479	14.11	0	Supported
H4	Agreeableness → vigor	0.124	3.106	0.002	Supported
H5	Agreeableness → dedication	-0.317	8.07	0	Supported
H6	Agreeableness → absorption	0.047	1.685	0.093	Not Supported
H7	Conscientiousness → vigor	0.068	1.78	0.076	Not Supported
H8	Conscientiousness → dedication	0.129	3.597	0	Supported
H9	Conscientiousness → absorption	0.233	6.222	0	Supported
H10	Neuroticism → vigor	0.572	13.831	0	Supported
H11	Neuroticism → dedication	-0.344	9.42	0	Supported
H12	Neuroticism → absorption	0.044	1.169	0.243	Not Supported
H13	Openness to experience → vigor	0.357	6.01	0	Supported
H14	Openness to experience → dedication	-0.197	3.782	0	Supported
H15	Openness to experience → absorption	0.463	12.641	0	Supported

The path diagram is presented in **Figure 2**.



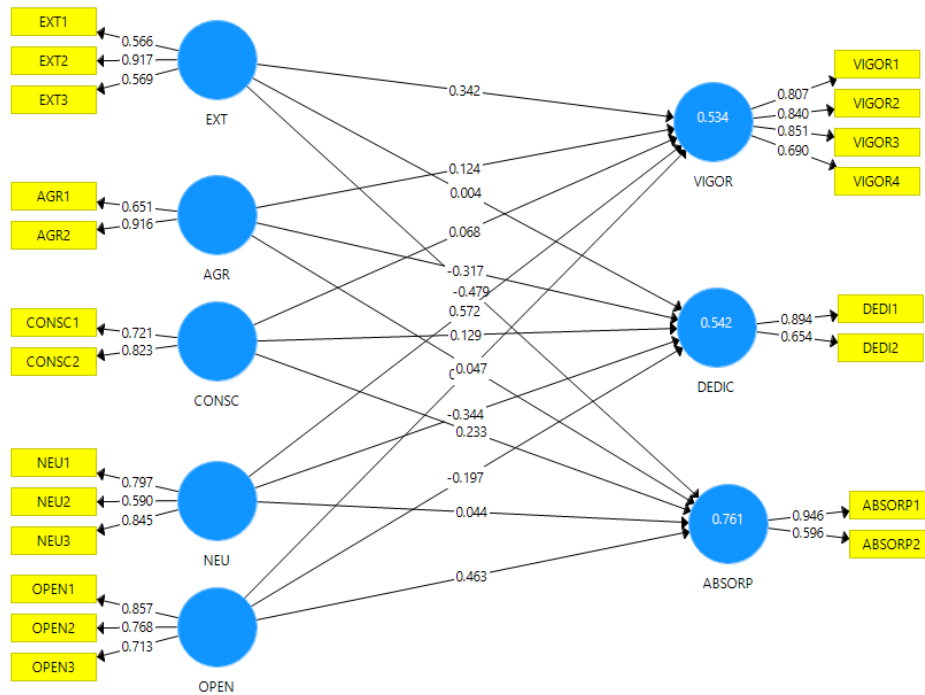


Figure 2. Path diagram.

## 5. Discussion

This research aims to investigate the effect of Big-Five personality characteristics on the work engagement of employees working in the banking sector in an emerging country, India. The data collected from 486 respondents were analyzed using structural equation modeling and found exciting results.

First, the findings suggest that Big-Five personality characteristics (extraversion, agreeableness, conscientiousness, neuroticism, and openness to experience) have different impacts on three dimensions of work engagement (vigor, dedication, and absorption). The findings indicate that extraversion, agreeableness, and openness are positively related to vigor (H1, H4, and H13); the results are consistent with other studies from the literature<sup>[21,29,32,33]</sup>. However, the results did not support a positive association between conscientiousness and vigor (H7), which is surprising. Second, the results suggest that conscientiousness and openness to experience are positively related to dedication and absorption (H3 and H14), and these are consistent with the literature<sup>[1,9,10,31,40,45-47]</sup>. Third, the results provide empirical evidence in support of the negative association of neuroticism with dedication (H11) but the diametrically opposite effect concerning vigor and absorption (H10 and H12). In the banking industry, it is noteworthy that neuroticism did not significantly negatively influence vigor and absorption; instead, the employees were devoted to their work. In other words, work engagement did not suffer because of the neurotic personalities of some employees. One plausible explanation for the positive association of neuroticism with vigor and absorption could be that, though the employees have neurotic personalities, they do not surface at work.

The fourth key finding in this study is that extraversion to dedication (H2), agreeableness to absorption (H6), and neuroticism to absorption (H12) was not supported. These results are consistent with some studies reported in the meta-analysis<sup>[12]</sup>. Finally, the results demonstrate that while some of the Big-Five personality characteristics have a significant positive association with some dimensions of work engagement, some characteristics did not find an association with work engagement. Surprisingly, the positive association of extraversion to absorption and agreeableness to dedication was absent in bank employees. These suggest further investigation into the relationships between personality characteristics and work engagement.

## **5.1. Theoretical implications**

The findings from this study contribute to the literature on personality and industrial psychology in several ways. First, the results underscore the importance of decoupling the Big-Five personality characteristics and see their effect on vigor, dedication, and absorption (i.e., components of work engagement). The literature is rich with several studies that include meta-analyses done at frequent intervals<sup>[9,12,21,28]</sup>. The researchers have constantly been wrestling with explaining the cognitive mechanisms underlying the personality-work engagement relationship in organizations. Each meta-analysis resulted in a different type of relationship, and there is no consistency in the findings. This gives rise to the opportunity of investigating the relationships time and again. The present study corroborates the results from earlier studies that each dimension of the Big-Five personality has a different impact on the three-component model of work engagement. Second, the conceptual model provides a convenient route map to guide the identification of structural and cognitive mechanisms underlying the personality-work engagement relationship.

The third contribution of this research is that extraversion, agreeableness, and openness to experience play a vital role in work engagement, as opposed to neuroticism and conscientiousness. As the research was conducted in the context of a developing country, the results from surveys conducted in a developed country may vary slightly. For example, in one of the studies undertaken on bank employees in Vietnam, the researchers found that work engagement largely depends on a friendly working environment whereby employees vent their feeling of stress and frustration to supervisors who listen to them. Thus, besides personality characteristics, work engagement will be influenced by other factors such as work environment, supervisor behavior, supervisor's leadership style, and promotional opportunities. Therefore, a critical reason for getting skewed results regarding the effects of Big-Five personality factors. Overall, this research is provocative in motivating the researchers to investigate the micro-foundations of individual behavior that result in work engagement.

## **5.2. Practical implications**

The conceptual model presented and tested in this research has several implications for practicing managers:

- 1) Supervisors need to understand that the personality of individuals plays a crucial role in influencing work engagement, performance, and productivity. Though we did not study the effect of personality on productivity and performance, the primary focus was on work engagement which is a precursor to performance and productivity.
- 2) Supervisors and managers need to understand that the cognitive mechanism that explains the relationship between personality and work engagement is complex. Out of the five dimensions of Big-Five personality, extraversion, agreeableness, and openness to experience are crucial in seeing that employees exhibit vigor.
- 3) Extraversion, conscientiousness, and openness to experience are essential in influencing bank employees to show dedication toward the work.
- 4) Though neuroticism has a negative effect on dedication, the results suggest that neurotic individuals also show vigor and absorption in banks. One of the reasons could be that getting employment in banks is not very easy, and employees see that they exhibit emotional stability while at work. So, contrary to the findings from the literature, individuals may show emotional stability and higher levels of work engagement.
- 5) Supervisors need to create a convenient work environment so that Big-Five personality characteristics positively affect work engagement, resulting in superior performance.

### **5.3. Limitations and future research**

The results from this study should be interpreted in light of some inherent limitations.

First, the study focuses on a developing country, India. The results, therefore, are generalizable across other developing nations. In developed countries, the banking environment is different compared to banks in developing countries; therefore, the effect of different dimensions on work engagement may differ. Second, the limitations of social desirability bias and common method variance inherent in survey-based research must be acknowledged. We have taken care of common method variance (as explained in the analysis) by performing necessary statistical tests. Again, we attempted to minimize social desirability bias by anonymizing the survey results.

Third, we have focused only on two sets of significant variables in this study and did not include several outcomes such as performance, satisfaction, turnover, and job satisfaction.

Fourth, the effects of work engagement on productivity and performance are not studied in this research.

This study provides several avenues for future research. First, future studies may include additional variables, such as supervisor leadership style, social support, and emotional exhaustion, that may interfere with the relationship between personality characteristics and work engagement. Second, researchers may also compare developed and developing nations and see if cultural differences exist. Third, future studies may involve larger samples to test the relationships conceptualized in the model.

### **5.4. Conclusion**

In this study, by using a five-factor model, the direct relationships between each of the dimensions of personality (extraversion, agreeableness, conscientiousness, neuroticism, and openness to experience) on work engagement were investigated. It was found that extraversion, agreeableness, and openness were crucial in seeing that employees in the banking industry in India show vigor at work. That is to say, bank employees in India work with energy and are mentally ready to work for long hours. It is not uncommon for the employees in the bank to stay beyond scheduled hours and show devotion to their work. As banking is the backbone of any country, the employees share the responsibility, with happy and mentally resilient, and perform given tasks till completion. The results also indicate that the employees in Indian banks perceive their work to be meaningful and show a high level of dedication.

Furthermore, anecdotal pieces of evidence suggest that employees in Indian banks are enthusiastic and feel proud of the work they do and perform tasks successfully. Finally, bank employees also get immersed in their jobs, showing a high level of absorption. To conclude, the study results indicate that in the banking industry, personality characteristics play different roles in influencing work engagement.

### **Author contributions**

Conceptualization, SN and MSJ; methodology, SN and SP; software, SN and SP; validation, SN, MSJ and SP; formal analysis, SN and SP; investigation, SN and MSJ; resources, SN and MSJ; data curation, SN and SP; writing—original draft preparation, SN and SP; writing—review and editing, SN, MSJ and SP; visualization, SN and MSJ; supervision, MSJ; project administration, SN and MSJ. All authors have read and agreed to the published version of the manuscript.

### **Conflict of interest**

The authors declare no conflict of interest.

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