Exploring DSS for Personality Assessment: Influence of Personality on Citizenship

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ABSTRACT

The research has been undertaken with the objective of studying the factors of personality and its impact on organization citizenship behaviour (OCB) among information technology (IT) sector employees. The study will help human resource managers in devising a strategy for selecting personnel who will exhibit OCB, thus helping organisations in improving their output. For fulfilling the objectives, descriptive analysis has been conducted on the data of 504 IT sector employees who have relevant technical background. The variables have been measured with the help of self-administered questionnaire. Data was analysed through structural equation modelling technique. IBM SPSS Amos software has been used to fit the SEM model. The outcome demonstrated that variables of OCB and personality traits are significant representatives as proved in the first order constructs. The authors find a high positive relation between personality traits and OCB.

KEYWORDS

Correlation, Decision Support System, IT Sector, Organisation Citizenship, Personality Variables, SEM, Traits

1. INTRODUCTION

Employees who go the extra mile and engage in Organisation Citizenship Behaviour, greatly benefit the business organizations (Hemaloshinee & Nomahaza, 2017; Muller & Weigl, 2017). Organization Citizenship Behavior (OCB) is a behavior that indicates the employee's high involvement in organization processes, which enhances the effectiveness of their output (Mackenzie et.al., 2018; Ocampo et.al, 2017; Organ, Podsakoff & Mackenzie, 2018). Examples of OCB can be seen by helping behavior towards co-workers, following rules, low absenteeism, not complaining about the organization systems, to name a few. OCB is called a discretionary behavior because it is not an obligation for the employee; it is not directly compensated by the employer and depends on the employee's inclination. However, organizations can motivate employees to exhibit OCB by designing systems/ processes that benefit employees to reciprocate by good behavior. If the organization is doing good for its employees, there is a reciprocal exchange (Bhattacharya, S., Trehan. & Kaur, 2018) by which the employee feels a need to compensate; thus, he/she engages in OCB. Organizations can hire managers with a suitable personality type that exhibit such good behavior, which benefits the organization's performance (Heimann et.al., 2020). Personality traits are significant predictors of Job performance (Dhani & Sharma, 2018). In comparison, personality traits are relatively more important predictors of

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motivational performance like OCB (Cortina & Luchman, 2013) than job-specific performance. OCB may be directed towards individual members of the organization and promote social relations (William & Anderson, 1991) or directed towards the overall benefit of the organization (Organ et. al). OCB may also be focused on bringing about improvement and changes in the organization system (Tammy & Allen,2006). Thus, OCB may be directed towards individuals, organizations, or change-related behavior, but it directly or indirectly enhances the organization's performance. Personality factors are important traits to study the difference in individuals and their behavior as not everyone will exhibit OCB (Dilchert,2019), unlike task performance which is mandatory and structured (Cortina & Luchman,2013). It is important to consider the personality traits of individuals while hiring so that we can hire the ideal recruits (Gebreiter, F., 2019). Organizations can design a DSS system in which the personality data of every employee can be used as inputs for taking crucial human resource decisions (Biblic E, 2020).

2. LITERATURE REVIEW

2.1 Personality Traits, OCB and IT Industry

Information Technology Industry, in India, is a young and dynamic Industry. The sector is characterized by an ever-changing need for technical and managerial skills, making it a big challenge for Human Resource (HR) managers. Managers have to frequently take important HR decisions regarding hiring, promotions, job fit, appraisals, and leadership development. On one hand, there is a need for the upgradation of technical skills, whereas, on the other hand, there is high relevance of improving soft skills for managerial positions (Cano, Fernández-Sanz, & Misra, 2013). Soft skills are proved to be equally important as technical skills (Fernández-Sanz, Villalba, Medina, and Misra, 2017) due to the need of discharging managerial responsibilities. We require employees whose personality traits are relevant to the industry's needs and those who are ready to go the extra mile to add value to the organization and, more importantly, the industry.

2.2 Personality Traits

Individual differences among employees can be explained with the help of the five-factor theory. It is a prevalent and robust theory of personality and is widely used. It helps define and describe people's behavior (Ojedoukn, 2018; John et.al., 2008). The theory gives five independent dimensions for measuring personality traits. Conscientiousness is the extent of responsibility taking and rule-following behavior of individuals (Robert et.al., 2009). These are important characteristics in the case of an employee as these lead to better performance and less likelihood of making mistakes (Morgeson, Reider & Campion, 2005). People high on Conscientiousness do not ignore issues, making them good problem solvers and process owners (Robert et.al., 2009; Will, Burke, Barrick & Mount, 2002). Thus, they are likely to engage in displaying OCB. Extraversion is a trait that is depicted by an individual's social and outgoing behavior. Such people like social interactions and are assertive (Wilmot et. al, 2019). People high on this trait are likely to interact with others in the organization, increasing the probability of displaying OCB. Openness to Experience is a trait that makes individuals more enterprising, imaginative, and curious. Such people have varied interests and hobbies (Tan et.al, 2019). They are broad-minded and capable of taking up challenging tasks which require innovation and creative idea generation. Thus, a person open to Experience will seek novelty in his/her job, which makes him likely to generate new ideas and at the same time be flexible towards the change process. Agreeableness is characterized by individuals' cooperative and tolerant behavior. Such person makes friends easily as they are social and have the tendency to collaborate (Song & Shi, 2017; Krishnan et.al., 2017). Employees high on Agreeableness are likely to exhibit OCB due to their friendly characteristics. Neuroticism means getting affected by negative emotions. A person high on neuroticism will be anxious, worried most of the time, and will easily get depressed (Smith et.al, 2020), lowering his/ her performance.

2.3 Organization Citizenship Behaviour

Organization Citizenship Behavior is the intended behavior of employees that are not directly rewarded by the organization systems but indirectly helps the organization work by creating a conducive social environment (Organ, 1997). This social environment serves as a lubricant for enhancing the performance of employees. Organizations are made of interdependent units, which are made of interdependent tasks and people. OCB serves as a link to manage these interdependencies, leading to enhanced collective outcomes (Podsakoff et.al., 2018). If OCB is properly channelized, it can improve individual performance (Mart & William, 2003). OCB goes beyond individual designated duties and is done to give extra input to the organization. It gives a basis to another finding that an employee exhibits OCB after spending some substantial time in an organization, getting acquainted with the system, and feels comfortable (V Jaswal, 2019; Remus Illies et. al, 2006). A longer stay also increases the organization's commitment, which provides solid ground for demonstrating OCB (V Jaswal & P Chand, 2019; Harif Amali Rifai, 2005). It is a kind of reciprocation behavior as employees try to reciprocate the good that the organization does towards them thus enhancing the organization's performance (Cardona, Lawrence & Bentler, 2004). The agreeableness trait among employees is a likely indicator that he will be engaged in OCB (Elanain, 2007). OCB has different roles to play, such as prosocial and change-related. The prosocial role of OCB is directed towards individuals as well as organizations. It helps build good social relations among members and thus helps create a conducive environment for people to work. This enhances and contributes to both individual and organizational performance. The change-oriented OCB is the proactive nature of employees learning new things and coming up with constructive solutions to problems (Parker, Williams & Turner, 2006; Grant& Ashford, 2008). The most widely used theory has defined five components of OCB, namely Conscientiousness, altruism, courtesy, civic virtue, and Sportsmanship (Organ, 1998). Conscientiousness trait means that employee follows the rules and procedures. A conscientious employee is usually organized, disciplined, meticulous, and careful (Kamdar & Van Dyne, 2007). Such discipline is required in the workplace, and thus we can establish a logical relation between Conscientiousness and OCB. The tendency of individuals to feel empathetic towards others and work towards their welfare is known as altruism (Batson, 2012). Employees high on this trait help their team members perform their work and learn new skills to perform their job in a better way. It is a consistent indicator of OCB as it augments helping behavior. Courtesy relates to the respect extended by an individual towards his relations with others in the organization like team members and team leaders. This behavior helps in avoiding problems/ misunderstandings for better relations so that work can be completed efficiently. The trait of Civic Virtue relates to the tendency of an employee to do things that is not mandatory for them to do but he/ she still engages in it as they think it will contribute towards the organization's benefit. A person high on this trait helps in an organization's policy/ system formation, which will help improve organizational performance. Sportsmanship relates to the enthusiasm of employees towards the organization and its systems (Podsakoff et al., 2018). This characteristic makes an employee identify himself with the organization's values and stand by them even if the conditions are adverse. He/ She does not complain and defends his/ her organization in front of others.

2.3 Personality and OCB

The review of research papers on OCB has highlighted the factors of OCB, building up a case towards the requirement of some characteristic traits of an individual which makes him/ her more likely to display OCB. Personality Traits are strong predictors of OCB (Colbert et.al.,2004; Indarti, et al., 2017; Heimann et.al.,2020). Research has established this relation between Personality factors and OCB (Heimann et.al.,2020; Jett et.al., 2004). However, the relationship has not been studied in the Indian IT sector. It is also true that personality traits are a stronger indicator of OCB than Job performance. This is because of the structured performance indicators driven by systems and procedures rather than personality traits. At the same time, the discretionary nature of OCB makes it driven by personality indicators. The five-factor theory of personality has been widely used for research (Kamdar, Mayer

& Takeuchi, 2008). The strongest relation has been established with Agreeableness, Extraversion, and Conscientiousness (Anglim et al., 2018; Hurtz & Donovan, 2000). Conscientiousness trait indicates that an individual is responsible, disciplined, and organized in his/ her work. These are important requirements for an employee, making him sought after by the HR department (Heimann, 2020). A low level of Conscientiousness is barely a requirement for any job. This leads us to form our first hypothesis:

H_{1a}: Conscientiousness has a significant impact on the OCB of employees working in the IT sector.

Neuroticism trait signifies that the person is highly stressed, anxious, and worried most of the time. This is because he/ she is very emotional and thus cannot complete his/ her task properly. Contrary to this, employees low on this trait perform their tasks better, which makes them high performers (Smith et.al, 2020). The hypothesis thus formed:

 H_{10} : Neuroticism has a significant impact on the OCB of employees working in the IT sector.

Certain characteristics and traits among individuals are socially desirable like Agreeableness, Conscientiousness, and emotional stability (Krishnan et.al.,2017). The trait of Agreeableness signifies that an individual is friendly, good-natured, flexible, tolerant, and likes to interact with people. He is helpful and liked by others. Therefore, employees high on this trait get comfortable with co-workers, subordinates, and team members very easily (Anglim et al., 2018; Hogan & Holland, 2003) and are more likely to display OCB. The hypothesis thus formed:

 H_{lc} : Agreeableness has a significant impact on the OCB of employees working in the IT sector.

The Extraversion trait among individuals signifies his/her proactive and energetic nature (Hogan & Holland, 2003). Employees, high on Extraversion desire power, status, and ambition (Wilmot et. al,2019; Anglim et al., 2018). To gain high status and power, such an employee wants to contribute extra input to the organization through their efforts, suggestions, and ideas. The hypothesis thus formed:

 H_{id} : Extraversion has a significant impact on the OCB of employees working in the IT sector.

Openness to Experience signifies that an individual has an artistic and creative mindset and incorporates "out of the box" thinking. He/she is broad-minded and comes up with novel solutions to improve the organization's processes and systems (Tan et.al, 2019). Employees high on this trait are enthusiastic about giving suggestions, ideas, feedback for improvement. The hypothesis thus formed:

 H_{i} : Openness to Experience has a significant impact on the OCB of employees working in the IT sector.

3. MATERIALS AND METHODS

3.1 Methodology

A process workflow diagram is created to show the basic steps taken for research on the topic and give clarity to readers. The same has been discussed further in subsections. Existing research papers on the topic were reviewed both with national and international data. The papers were classified as per the date of publication and journals. Identification of variables was made, which was further mapped with the expert's opinion of variables. The questionnaire was then designed, followed by data collection, data filtering, and coding. Structural equation modeling was then applied to check the model fit. Data analysis followed with conclusion and suggestions.

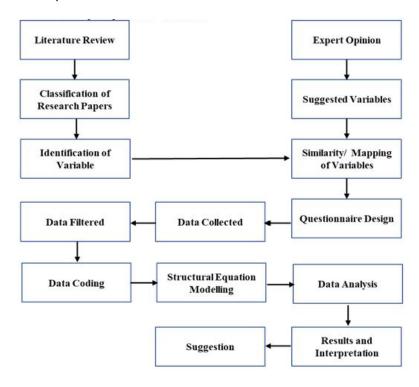


Figure 1. Flowchart of the process of research

3.2 Objective

This paper aims to examine the association between the personality variables and Organization Citizenship Behavior.

3.3 Data Collection and Sampling

The research data has been collected through questionnaires filled by IT sector employees (working on technical jobs) who work in the National Capital Region with Information Technology Organizations. The judgmental sampling method or Purposive method is used to collect the data collection. 800 questionnaires were distributed, but only 504 responses could be collected. These responses were collected from employees who belong to diverse profiles of gender, age, and designation. Employees with at least 5 years of experience in the IT industry and having an IT educational background were considered for the study.

Table 1. Demographic profile of respondents

Demographic Profile	Category	Respondents
Gender	Male	245 (48.6%)
	Female	259 (51.4%)
Age	Young	234 (46.4%)
	Old	270 (53.6%)
Experience	Senior	176 (34.9%)
	Junior	328 (65.1%)

3.4 Variables and Measures

Five factors of personality, namely Agreeableness, Conscientiousness, Extraversion, Neuroticism, and Openness to Experience, are taken for the study. The measurement of the different personality factors has been done with the help of the Big five questionnaire statements by John and Srivastava, 1999. The factors of OCB taken for the study are Altruism, Courtesy, Civic Virtue, Conscientiousness, and Sportsmanship. A questionnaire of thirty-two questions, six to eight questions for each factor, was used for data collection.

3.5 Software/s

Data were analyzed through the Structural Equation Modelling technique. IBM SPSS Amos software has been used to fit the SEM model.

4. RESULTS AND ANALYSIS

4.1 Validity Analysis

The internal consistency and reliability for the statements were checked with the help of Cronbach alpha. The value of Cronbach alpha was 0.908 which is more than the minimum requirement of 0.70. It shows that there are enough statements to represent each construct and that the items are interrelated. Next, the construct validity for confirming the model for measuring the personality traits of employees was done. The model for measurement includes the different traits of personality with corresponding statements to measure each. To measure the correlations, each construct is linked to other constructs. Convergent and discriminant validity is tested to measure the validity of the construct. Convergent validity indicates that the statements of the constructs are there representative. The first-order construct assumes that the personality traits are signifying the presence of the traits in an individual employee. By standardized construct loading of statements, the convergent validity is found to be greater than 0.7. Composite reliability and average variance extracted are also measured for convergent validity. The statements of the study directed toward only one personality trait proving uni-dimensionality. Composite reliability of more than 0.7 and average variance extracted of more than 0.5 are indicators of reliability. The same can be observed in table 2. This indicates personality trait variance given by statistics. If the maximum shared variance is less than the variance extracted of every trait, we can say that discriminant validity is achieved. This is an indicator of the fact that the different personality traits are assumed differently by respondents.

Personality Traits

The results of the CFA analysis are shown and discussed below:

By looking at the probability value of the critical ratio, which is less than 5%, we can say that the statements significantly represent the personality trait. All statements are having positive construct loading of more than 0.5. Convergent validity of the scale measuring personality traits of employees is indicated by the high value of construct loading. The correlation is also measured and represented in the table. The correlation between the dimensions is moderately strong. All personality traits, namely Agreeableness, Extraversion, Openness to Experience, and Conscientiousness except Neuroticism, were positively correlated. Neuroticism has a negative correlation. A very high correlation is not expected to achieve the discriminant validity of the instrument. For checking discriminant validity, composite reliability and average variance extracted are calculated and the results are shown in the table. The composite reliability calculated for every personality trait is more than 0.7. The AVE is also more than 0.5. We can say that every statement sufficiently represents the employee's respective personality as AVE for every trait is more than MSV. Thus, we can prove the validity of the scale measuring the personality trait of IT sector employees.

Table 2. Regression Weights

Item Code			Construct Loading	Cronbach Alpha	CR	AVE	MSV	P value
Open10	<- 		.658					
Open9	<- 		.620					*
Open8	<- 		.691					*
Open7	<- 		.719					*
Open6	<- 	Openness to	.769		0.909			*
Open5	<- 	experience	.757		0.909			*
Open4	<- 		.673					*
Open3	<- 		.752					*
Open2	<- 		.771					*
Open1	<- 		.643			0.529	0.468	*
Cons9	<- 		.816					
Cons8	<- 		.648					*
Cons7	<- 		.738					*
Cons6	<- 		.676					*
Cons5	<- 	Conscientiousness	.755		0.909	0.500	0.327	*
Cons4	<- 		.774					*
Cons3	<- 		.660					*
Cons2	<- 		.753					*
Cons1	<- 		.670					*
Extra8	<- 		.703					*
Extra7	<- 		.747					*
Extra6	<- 		.639					*
Extra5	<- 	Extravarsion	.761		0.008	0.522	0.210	*
Extra4	<- 	Extroversion	.700		0.908	0.523	0.310	*
Extra3	<- 		.734					*
Extra2	<- 		.710					*
Extra1	<- 		.771					

Item Code			Construct Loading	Cronbach Alpha	CR	AVE	MSV	P value
Agree9	<- 		.677					
Agree8	<- 		.716					*
Agree7	<- 		.677					*
Agree6	<- 		.696					*
Agree5	<- 	Agreeableness	.667		0.897	0.521	0.468	*
Agree4	<- 		.741					*
Agree3	<- 		.790					*
Agree2	<- 		.868					*
Agree 1	<- 		.689					*
Neuro8	<- 		.837					*
Neuro7	<- 		.765					*
Neuro6	<- 		.770					*
Neuro5	<- 	Neuroticism	.825		0.900	0.535	0.229	*
Neuro4	<- 	1 veuroticisiii	.805		0.200	0.555	0.229	*
Neuro3	<- 		.554					*
Neuro2	<- 		.575					*
Neuro1	<- 		.662					

In table three, the variance measured is represented in bold. For discriminant validity, it should be more than other values in the column. Further, the statistical fitness model is also shown in table four. We can see the CMIN/df is less than the required value of 5. GFI is more than the .8 requirement. CFI is greater than 0.9, NFI is greater than 0.8TLI is more than 0.8 and RMSEA is less than .08. The statistics thus indicate that there is a model fit.

Table 3. Covariance estimated

	Agreeableness	Openness to Experience	Conscientiousness	Extroversion	Neuroticism
Agreeableness	0.727				
Openness to experience	0.539	0.707			
Conscientiousness	0.511	0.440	0.723		
Extroversion	0.684	0.572	0.557	0.722	
Neuroticism	-0.291	-0.313	-0.368	-0.479	0.732

Table 4. Statistical fitness model

CMIN/df	GFI	CFI	NFI	TLI	RMSEA
1.730	.875	.946	.881	.942	.038

Organization Citizenship Behavior

The questionnaire used to measure OCB included different statements relating to the five dimensions: altruism, civic virtue, Conscientiousness, courtesy, and sportsmanship. The internal consistency and reliability were checked with the help of Cronbach Alpha. The construct validity of OCB was then tested. The model comprises the different dimensions of OCB with its statements. To measure the correlation between constructs, each construct was joined to all others. Convergent validity indicating that the statements represent the personality trait was checked. First-order constructs as assumed were reflective in nature, which means they represented OCB in the employee. For this, the statements' standardized construct loading was predicted to be more than 0.7. The other way of checking convergent validity is when composite reliability is more than 0.7 and the average variance extracted is more than 0.5. Uni- dimensionality is presumed which means that any statement included in the study demonstrates only one dimension of OCB. When every statement included in the study seems different to the employees working in the IT sector, we can say that discriminant validity is achieved. It can also be checked by comparing the maximum shared variance with the average variance extracted. In case MSV is less than the AVE of every OCB dimension, we can say that discriminant validity is achieved. Discussion of the results follows.

Table 5. Regression Weights

			Construct Loading	CR	AVE	MSV	P value
Alt6	<		.836				
Alt5	<		.840				*
Alt4	<	Altruism	.850				*
Alt3	<	Aitruism	.581				*
Alt2	<		.795				*
Alt1	<		.677	0.894	0.588	0.190	*
Consc8	<		.820				*
Consc7	<		.807				*
Consc6	<		.760				
Consc5	<	Consciousness	.802	0.896	0.592	0.179	*
Consc4	<	Consciousness	.741				*
Consc3	<		.546				*
Consc2	<		.737				*
Consc1	<		.600				*
Courtesy6	<		.782				
Courtesy5	<		.775				*
Courtesy4	<		.830	0.001	0.525	0.170	*
Courtesy3	<	Courtesy	.784	0.901	0.537	0.179	*
Courtesy2	<		.766				*
Couetesy1	<		.630				*

			Construct Loading	CR	AVE	MSV	P value
Civic6	<		.795				
Civic5	<		.791				*
Civic4	<	Civic Virtue	.841	0.893	0.502	0.190	*
Civic3	<		.832		0.583		*
Civic2	<		.766				*
Civic1	<		.532				*
Sport6	<		.766				
Sport5	<		.790			0.178	*
Sport4	<	Country with 's	.818	0.898	0.595		*
Sport3	<	Sportsmanship	.772	0.898	0.595		*
Sport2	<		.726				*
Sport1	<		.751				*

By looking at the probability value of the critical ratio, which is less than 5%, we can say that the statements significantly represent OCB. All statements are having positive construct loading of more than 0.5. Convergent validity of the scale measuring OCB of employees is indicated by the high value of construct loading. The correlation is also measured and represented in the table. The correlation between the dimensions is moderately strong. All OCB dimensions namely Conscientiousness, altruism, courtesy, civic virtue, and sportsmanship are positively correlated. Very high correlation is not expected to achieve the discriminant validity of the instrument. For checking discriminant validity, composite reliability and average variance extracted are calculated and the results are shown in the table. The composite reliability calculated for every OCB is more than 0.7. The AVE is also more than 0.5. We can say that every statement sufficiently represents the employee's respective personality as AVE for every trait is more than MSV. Thus, we can prove the validity of the scale measuring the personality trait of IT sector employees. We can also see the variance and covariance estimates.

As indicated in the table, CMIN is less than 5, GFI is more than 0.8, CFI is more than 0.9, NFI is more than 0.8, TLI is more than 0.8, and RMSEA is less than 0.08. Thus, we can say that the measurement model fit is achieved.

Table 6. Variance and covariance estimates

	Civic_Virtue	Altruism	Consciousness	Courtesy	Sportsmanship
Civic_Virtue	0.767				
Altruism	0.350	0.770			
Consciousness	0.423	0.362	0.733		
Courtesy	0.436	0.423	0.386	0.764	
Sportsmanship	0.418	0.402	0.422	0.360	0.771

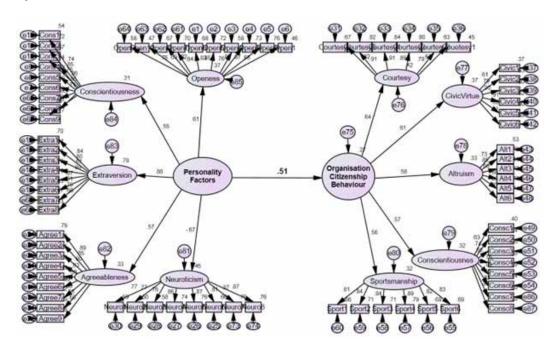
Table 7. Model fitness

CMIN/df	GFI	CFI	NFI	TLI	RMSEA
2.386	0.880	0.934	0.891	.927	0.052

4.2 Structural Equation Modelling

Structural Equation Modelling is a tool to assess the causal relationship between variables. In this study, we have used it to evaluate the impact of personality traits on OCB. Personality factors are key determinants of the behavior of an employee in an organization. They help in understanding the individual differences among people, thus predicting the outcome of their performance. The first-order constructs of Personality traits include Agreeableness, Consciousness, Neuroticism, Openness to Experience, and Extroversion. In the same manner, the first-order construct of OCB includes five dimensions courtesy, civic virtue, altruism, Conscientiousness, and sportsmanship. The structural model examines the causal relationship between both. There are two second-order constructs with the first order. Testing of the model is done with the help of SEM analysis, as shown.

Figure 2.SEM



The results of the SEM analysis indicate that the probability value of the critical ratio for the cause-and-effect relationship in the direction of Personality Trait to OCB is found to be less than a 5 percent level of significance. Hence with a 95 percent confidence level, the null hypothesis that the Personality Trait of employees in the IT sector has a significant impact on OCB can be accepted. The standardized beta of the cause-and-effect relationship is 0.515 which indicates that there exists a high positive impact of PT on OCB. The R square of the relationship is found to be 26.5 percent which indicates that 61.2 percent of the variance in the OCB can be explained with the help of the SEM model. The SEM diagram also indicates the relationship between Personality Traits, OCB with their respective first-order constructs. The results indicate that the probability value of the critical ratio for each relationship represents that the first-order construct and the two second-order constructs.

The results indicate that the CMIN/df value is 2.108 which is less than the required value of 5, GFI value is 0.751 which is more than the required value of 0.8, CFI value is 0.911 which is more than the required value of 0.9, NFI value is 0.844 which is more than the required value of 0.8, TLI value is 0.908 which is more than the required value of 0.8 and finally the RMSEA value is 0.047

Table 8. Regression Weights in SEM Analysis

Endogenous Construct		Exogenous Construct	Standardized beta	Estimate	Standard Error	Critical Ratio	P value	R Square
Organisation Citizenship Behavior	<- 	Personality Factors	0.515	.442	.063	7.014	*	26.5%
Openness	<-	Personality Factors		1.000				36.9%
Conscientiousness	<-	Personality Factors		.683	.079	8.651	*	32.4%
Extraversion	<-	Personality Factors		1.144	.103	11.065	*	77.8%
Agreeableness	<-	Personality Factors		.807	.086	9.386	*	32.6%
Neuroticism	<-	Personality Factors		-1.124	.111	-10.111	*	45.1%
Courtesy	<-	Organisation Citizenship Behavior		1.000				41.6%
Civic Virtue	<-	Organisation Citizenship Behavior		.565	.070	8.088	*	36.8%
Altruism	<-	Organisation Citizenship Behavior		.896	.108	8.312	*	33.2%
Conscientiousness	<-	Organisation Citizenship Behavior		.774	.096	8.061	*	32.4%
Sportsmanship	<- 	Organisation Citizenship Behavior		1.068	.126	8.471	*	31.6%

Table 9. Model fitness

CMIN/df	GFI	CFI	NFI	TLI	RMSEA
2.108	.751	.911	.844	.908	.047

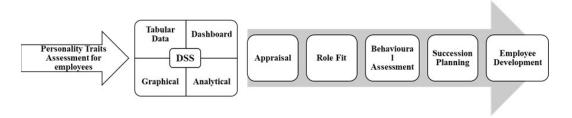
which is less than the required value of 0.08. Hence it can be concluded that the measurement model is fit and can be used further.

4.3 System Design

Personality traits of employees are important variables for predicting the behavior of employees. They help management in taking important decisions regarding the appraisal, mapping the personality with role fit, behavioral assessment, succession planning, and employees' development. Thus, it is proposed that organizations can have a Decision Support System, basically a computerized program that will have the personality traits of all employees. Personality traits may be assessed and recorded so that proper mapping can be done before making decisions. It can be as per the client's need in the form of tables, graphs, dashboard, or analysis or all options may be given for convenience. This data will help to support judgments and taking a course of action by managers. This process will increase the accuracy of decisions and remove the errors that may be committed, which will be expensive for the system and delay the overall process.

The model of DSS explains the step-by-step integration of the system. First, data will be collected by individual assessment through questionnaires and other tools. The computerized system will then store the data in the tabular, dashboard, graphical or analytical form. Managers will access the data whenever they want to take important HR decisions like an appraisal of employees, assessing if the

Figure 3.Model for integration with DSS



employee is fit for doing the job, assessing his/her behavior, deciding the succession planning for leadership positions, and finding the suitability of the employee for higher-level responsibilities. This will reduce the scope of errors that may take place due to incorrect decisions.

5. DISCUSSION ON RESULTS

The probability value of the critical ratio of less than 5 percent shows the causation relation of Personality factors and OCB. With a 95 percent confidence level, we can say that personality factors have a significant impact on OCB in the IT sector and can be accepted. The same has been observed in a few of the important pieces of literature referred (Kamdar, Mayer & Takeuchi, 2008; Colbert et.al.,2004; Hurtz & Donovan, 2000). It can be inferred that there exists a positive relationship between the two with the help of standardized beta. There is 26.5 percent R square, which explains the 61.2 percent variance explained through the SEM model. The relationship between personality traits and OCB and their first-order constructs is also indicated through the SEM figure. The first-order constructs are indicative that they signify personality and OCB, respectively. The suggested DSS recommends how the important personality traits can be recorded to serve as the basis for human resource management decisions.

6. CONCLUSION

Information Technology organizations are technology-driven, which creates pressure on employees (Thomas et. al, 2018; Dubey et.al, 2017). Members of such organizations must engage in OCB to create a conducive atmosphere of mutual trust to grow and flourish. Personality traits are important factors that indicate if an employee will engage in OCB (Heimann et.al., 2020). We can observe that the findings of this study are at par with earlier literature reviewed that show a positive effect of personality factors on OCB (Kamdar, Mayer & Takeuchi, 2008; Colbert et.al., 2004; Hurtz & Donovan, 2000). We have witnessed the growth of the IT industry in the last few years as IT has changed the way business is done. It has been a significant contributor to the progress and expansion of business activities. It is important to study the behavior of IT sector employees as it impacts the growth of the industry. We want employees who can come up with innovative and creative ideas, who can go beyond their duties to help people and the organization and contribute towards the growth of the industry. This paper helps in exploring the variables of personality and OCB and gives an understanding of the personality factors that lead to OCB. These factors can be considered by the Human Resource department while making decisions regarding hiring, promotions, and development of employees. Employees who rate high on personality traits like extraversion, Conscientiousness, Openness to Experience, Agreeableness, and rate low on Neuroticism, should be hired, promoted, and developed for leadership positions as they are more likely to exhibit Organisation Citizenship Behaviour. OCB is important for creating a positive climate of helpfulness among fellow employees and benefits the organizations' overall performance.

7. MANAGERIAL IMPLICATION

The study establishes the relationship between personality traits and OCB. Modern organizations are looking for improved performance and sustainable processes which will give them an edge over their competitors. OCB helps in creating this overall environment of cooperation which is sustainable and also leads to enhanced performance. Thus, human resource managers can devise a strategy for selecting personnel who will exhibit OCB. The way of doing this is by keeping personality traits as a key basis for HR decisions namely hiring, promotions, leadership development, and others. A decision support system (DSS) can be further created for keeping an inventory of traits of each employee which will enhance quick and correct human resource decisions.

8. LIMITATIONS AND SCOPE FOR FUTURE RESEARCH

The research has important implications and learning, however, some limitations can be further worked on. Firstly, the research only studies the impact of the big five personality factors on OCB, thus the impact of other factors can also be explored. Moderating and mediating the impact of other factors on the relationship can also be studied. Secondly, the scope of research is narrow. It can be extended by studying the relation of personality and OCB in other countries, industries, and occupations. A longitudinal study may help to explore the long-term impact on the relationship. The system design suggested can be applied in organizations which will ease out the data available for further studies. New dimensions of personality and OCB can be explored.

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REFERENCES

Allen, T. D. (2006). Rewarding Good Citizens: The Relationship Between Citizenship Behavior, Gender, and Organizational Rewards. *Journal of Applied Social Psychology*, 36(1), 120–143.

Anglim, J., Lievens, F., Everton, L., Grant, S. L., & Marty, A. (2018). HEXACO personality predicts counterproductive work behavior and organizational citizenship behavior in low-stakes and job applicant contexts. *Journal of Research in Personality*, 77, 11–20. doi:10.1016/j. irp.2018.09.003

Barrick, M. R., & Mount, M. K. (1991). The big five personality dimensions and job performance: A meta-analysis. Personnel Psychology, 44(1), 1–26.

Bhattacharya, S., Trehan, G., & Kaur, K. (2018). Factors determining psychological contract of IT employees in India. *International Journal of Human Capital and Information Technology Professionals*, 9(1), 37–52. doi:10.4018/IJHCITP.2018010103

Bilgic, E. (2020). Human Resources Information Systems: A Recent Literature Survey. Contemporary Global Issues in Human Resource Management, 73.

Cano, C., Fernández-Sanz, L., & Misra, S. (2013). Featuring CIO: Roles, Skills and Soft Skills. *International Journal of Human Capital and Information Technology Professionals*, 4(1), 22–33. doi:10.4018/jhcitp.2013010103

Cardona, P., Lawrence, B. S., & Bentler, P. M. (2004). The Influence of Social and Work Exchange Relationships on Organizational Citizenship Behavior. *Group & Organization Management*, 29(2), 219–247. doi:10.1177/1059601103257401

Colbert, A. E., Mount, M. K., Harter, J. K., Witt, L. A., & Barrick, M. R. (2004). Interactive Effects of Personality and Perceptions of the Work Situation on Workplace Deviance. *The Journal of Applied Psychology*, 89(4), 599–609. doi:10.1037/0021-9010.89.4.599 PMID:15327347

Cortina, J. M., & Luchman, J. N. (2013). Personnel selection and employee performance. In Handbook of psychology: Industrial and organizational psychology (2nd ed., vol. 12, pp. 143–183). John Wiley & Sons Inc.

Dhani, P., & Sharma, T. (2018). Emotional Intelligence and Personality Traits as Predictors of Job Performance of IT Employees. *International Journal of Human Capital and Information Technology Professionals*, 9(3), 70–83. doi:10.4018/IJHCITP.2018070105

Dilchert, S., Ones, D. S., & Krueger, R. F. (2019). Personality assessment for work: Legal, I-O, and clinical perspective. *Industrial and Organizational Psychology: Perspectives on Science and Practice*, 12(2), 143–150. doi:10.1017/iop.2019.27

Fernandez-Sanz, L., Villalba, M. T., Medina, J. A., & Misra, S. (2017). A study on the key soft skills for successful participation of students in multinational engineering education. *International Journal of Engineering Education*, 33(6), 2061–2070.

Gebreiter, F. (2019). Making up ideal recruits: Graduate recruitment, professional socialization and subjectivity at Big Four accountancy firms. Accounting, Auditing & Accountability Journal, 33(1), 233–255. doi:10.1108/AAAJ-11-2017-3250

Grant, A. M., & Ashford, S. J. (2008). The dynamics of proactivity at work. Research in Organizational Behavior, 28, 3–34. doi:10.1016/j. riob.2008.04.002

Heimann, A. L., Ingold, P. V., & Debus, M. E. (2020). Who will go the extra mile? Selecting organizational citizens with a personality-based structured job interview. *Journal of Business and Psychology*. Advance online publication. doi:10.1007/s10869-020-09716-1 PMID:34789961

Hogan, J., & Holland, B. (2003). Using theory to evaluate personality and job-performance relations: A socioanalytic perspective. *The Journal of Applied Psychology*, 88(1), 100–112. doi:10.1037/0021-9010.88.1.100 PMID:12675398

Hurtz, G. M., & Donovan, J. J. (2000). Personality and job performance: The Big Five revisited. *The Journal of Applied Psychology*, 85(6), 869–879. doi:10.1037/0021-9010.85.6.869 PMID:11125652

Indarti, S., Fernandes, A. A. R., & Hakim, W. (2017). The effect of OCB in relationship between personality, organizational commitment and job satisfaction on performance. *Journal of Management Development*, 36(10), 1283–1293. doi:10.1108/JMD-11-2016-0250

Jaswal, V., & Chand, P. (2019). The demographics' effects on organization citizenship behaviour: Evidence from human service and information technology professionals. *International Journal of Management Practice*, 12(3), 360–375. doi:10.1504/IJMP.2019.100410

John, O. P., Naumann, L. P., & Soto, C. J. (2008). Paradigm shift to the integrative Big Five trait taxonomy: History, measurement, and conceptual issues. Academic Press.

John, O. P., & Srivastava, S. (1999). The Big-Five trait taxonomy: History, measurement, and theoretical perspectives (Vol. 2). University of California.

Kamdar, D., & Van Dyne, L. (2007). The joint effects of personality and workplace social exchange relationships in predicting task performance and citizenship performance. *The Journal of Applied Psychology*, 92(5), 1286–1298. doi:10.1037/0021-9010.92.5.1286 PMID:17845086

International Journal of Human Capital and Information Technology Professionals

Volume 13 • Issue 1

Krishnan, R., Ismail, S., Loon, K. W., Muthusamy, G., & Melaka, K. B. (2017). The Moderating Effect of Employee Personality in the Relationship Between Job Design Characteristics and Organizational Citizenship Behavior. *Social Sciences*, 12(6), 1014–1023.

McCrae, R. R., & John, O. P. (1992). An introduction to the five-factor model and its applications. Journal of Personality, 60(2), 175-215.

Moon, H., Kamdar, D., Mayer, D. M., & Takeuchi, R. (2008). Me or we? The role of personality and justice as other-centered antecedents to innovative citizenship behaviors within organizations. *The Journal of Applied Psychology*, 93(1), 84–94.

Mount, M. K., & Barrick, M. R. (1995). The Big Five personality dimensions: Implications for research and practice in human resources management. Research in Personnel and Human Resources Management, 13(3), 153–200.

Müller, A., & Weigl, M. (2017). SOC strategies and organizational citizenship behaviors toward the benefits of co-workers: A multi-source study. Frontiers in Psychology, 8, 1740.

Ocampo, L., Acedillo, V., Bacunador, A. M., Balo, C. C., Lagdameo, Y. J., & Tupa, N. S. (2018). A historical review of the development of organizational citizenship behaviour (OCB) Organizational citizenship behaviour at shop floor 1393 and its implications for the twenty-first century. *Personnel Review*, 47(4), 821–862.

Organ, D. W. (1997). Organizational citizenship behavior: It's construct clean-up time. Human Performance, 10(2), 85-97.

Parker, S. K., Williams, H. M., & Turner, N. (2006). Modelling the antecedents of proactive behavior at work. *The Journal of Applied Psychology*, 91(3), 636–652.

Penner, L. A., Midili, A. R., & Kegelmeyer, J. (1997). Beyond job attitudes: A personality and social psychology perspective on the causes of organizational citizenship behavior. *Human Performance*, 10(2), 111–131.

Podsakoff, P. M., MacKenzie, S. B., & Podsakoff, N. P. (Eds.). (2018). The Oxford handbook of organizational citizenship behavior. Oxford University Press.

Smith, R. W., Kim, Y. J., & Carter, N. T. (2020). Does it matter where you're helpful? Organizational citizenship behavior from work and home. *Journal of Occupational Health Psychology*, 25(6), 450.

Song, Y., & Shi, M. (2017). Associations between empathy and Big Five personality traits among Chinese undergraduate medical students. *PLoS ONE*, 12, 1–13. . pone.0171665.10.1371/journal

Tan, C. S., Lau, X. S., Kung, Y. T., & Kailsan, R. A. L. (2019). Openness to Experience enhances creativity: The mediating role of intrinsic motivation and the creative process engagement. *The Journal of Creative Behavior*, 53(1), 109–119.

Van Dyne, L., & LePine, J. A. (1998). Helping and voice extra-role behaviors: Evidence of construct and predictive validity. *Academy of Management Journal*, 41(1), 108–119.

Wilmot, M. P., Wanberg, C. R., Kammeyer-Mueller, J. D., & Ones, D. S. (2019, May 23). Extraversion Advantages at Work: A Quantitative Review and Synthesis of the Meta-Analytic Evidence. *Journal of Applied Psychology*. Advance online publication. 10.1037/apl0000415

Witt, L. A., Burke, L. A., Barrick, M. R., & Mount, M. K. (2002). The interactive effects of Conscientiousness and Agreeableness on job performance. *The Journal of Applied Psychology*, 87(1), 164–169.

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