

The Effect of Employee Engagement on Organizational Citizenship Behaviour: An Empirical Study on an Egyptian University

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Abstract

The goal of the study is to examine the effect of Employee Engagement (EE) as an independent variable on Organizational Citizenship Behaviour (OCB) as a dependent variable. The study was carried out in an Egyptian public university (Ain Shams University). The data was collected through questionnaires distributed to faculty members. The sample consisted of 318 questionnaires valid for statistical analysis. The methodology used was regression analysis, and structured equation model (path analysis). The study found a positive direct effect of EE on OCB.

Keywords: Egypt, Employee Engagement, Organizational Citizenship Behaviour, Path Analysis

1. Introduction and Literature Review

Organizations have been focusing on the role of management in how it relates to how committed and loyal employees are to their jobs. In this structural context, organizations have been putting great emphasis on behaviours that might influence organizational performance and effectiveness. As a result, organizations attempt to hire staff who perform their formal role requirements, in addition to going above and beyond their job duties. This paper examines two of the important behaviours that Human Resource Developers (HRD) have recently focused on due to their major role in the development and advancement of the organization. These two behaviours are EE and OCB.

The concept of EE is rapidly gaining recognition as a comparison measurement in organizations (Little and Little, 2006). To say the least, EE is one of the drivers of success for any organization (Lakshmi, 2012). OCB has been the focus of attention for management researchers (Podsakoff et al., 2000; Organ and Ryan, 1995; Organ, 1997) since Organ (1988) proposed that OCB could have an effect on the performance of the individual and the organization and thus, it is desirable because it deals with major variables such as: organizational effectiveness and organizational productivity.

There has been a large amount of previous research that has studied the following aspects of EE: the concept and evolution of EE (Kaliannan et al., 2015; Maslach, Schaufeli and Leiter, 2001; Schaufeli and Bakker, 2004). How to measure and create models for EE (Harter et al., 2002; Saks, 2006; Shuck et al., 2011; Soeib et al., 2013). The different dimensions of EE (Ariani, 2013; Bakker, 2005; Brown and Leigh, 1996; Cooper-Hakim and Viswesvaran, 2005; Langelann et al., 2006; Llorens et al., 2007; Mauno, Kinnunen and Ruokolainen, 2007; Schaufeli et al., 2006). The main drivers of EE (Markos and Sridevi, 2010; Shaw, 2005). The relationship between EE and the following concepts: job burnout (Babcock-Roberson and Strickland, 2010; Gonzalez-Roma, Schaufeli and Bakker, 2006), job involvement (Mauno, Kinnunen and Ruokolainen, 2007), job satisfaction (Ariani, 2013), self management (Breevaart, Bakker and Demerouti, 2014; Murphy and Ensher, 2001; Raabe, Frese and Beehr, 2007) and organizational success (Avery et al., 2007; Kaliannan and Adjovu, 2015). The different antecedents (predictors) of EE such as: job fit (Resick, Baltes and Shantz, 2007; Shuck, Reio and Rocco 2011), rewards and recognition (Sahoo and Mishra, 2012), perceived organizational/supervisory support (Bates, 2004; Rasheed, Jehanzeb, and Rasheed, 2013; Rhoades and Eisenberger, 2002), organizational justice (Colquitt, 2001), job characteristics (May, Gilson and Harter, 2004), organizational commitment (Ariani, 2013; Soieib, Othman and D'Silva, 2013) and job satisfaction (Abraham, 2012). The different consequences of EE such as: turnover intent (Harter, Schmidt and Hayes, 2002, Saks, 2006) and discretionary behaviours (Lloyd, 2008; Macey and Schneider, 2008).

There has also been a large amount of previous research that has studied the following aspects of OCB: the origin and evolution of OCB (Kataria, Garg and Rastogi, 2013; Mohammed, Habib and Alias, 2011; Murphy, Athanasou and King, 2002; Organ, 1988; Podsakoff et al., 2000; Zarea, 2012). The benefits of OCB (Javadi and Yavarian, 2011; Organ, Podsakoff and MacKenzie, 2006). The dimensions of OCB (Kolade, Oluseye and Omotayo, 2014; Mohammed, Habib and Alias, 2011; Zarea, 2012). The relationship between OCB and the following concepts: organizational performance (Rasheed, Jehanzeb and Rasheed, 2013; Sahafi et al., 2013), contextual performance (Ariani, 2013; Miles et al., 2002), transformational leadership behaviour (Asgari et al., 2008; Krishnan, 2005), leader-member-exchange (Ibrahim, Abd Ghani and Embat, 2013), organizational communication (Ayatse and Ikyanyon, 2012; Berger, 2008; Kandlousi, Ali and Abdollahi, 2010) and trust (Jung and Avolio, 2000). The different antecedents (predictors) of OCB such as: individual disposition (personality) (Rasheed, Jehanzeb and Rasheed, 2013; Sun, Aryee and Law, 2007), fairness perception (Lee, Kim and Kim, 2013; Muhammad, 2004), motivation (Rasheed, Jehanzeb and Rasheed, 2013; Rioux and Penner, 2001), role perception (Podsakoff et al., 2000); feedback (Bacharach, Bendoly and Podsakoff, 2001; Klein, 2003), organizational commitment (Javadi and Yavarian, 2011) job satisfaction (Aronson et al., 2005; Babcock-Roberson and Strickland, 2010; Lee and Allen, 2002) and leadership characteristics (Organ, Podsakoff and MacKenzie, 2006). The different consequences of OCB such as: its effect on evaluating performance in how it relates to promotions and pay raises (Podsakoff et al., 2000).

There is sparse previous research that examines the relationship between EE and OCB. OCB relates to EE in that it focuses on the context of employee involvement and commitment. While OCB focuses on voluntary behaviour that can be helpful to employees and organizations, EE focuses only on formal behaviours. Rukkm and Bartlett (2012) studied the relationship of EE on OCB in Thailand and found a positive significant relationship between EE and all components of OCB. Our study examines how a formal work behaviour represented in EE will lead to an informal discretionary behaviour represented in OCB. The contribution of our study is that it is conducted in Egypt which is an Arab/Middle Eastern country. Despite of a recent focus on this part of the world when it comes to management research, there is still relatively very little research conducted on Arab/Middle Eastern countries. Being able to conduct research in different geographical regions that have different cultures, tradition and religions will allow us to test whether the findings of previous research, which is mainly conducted in North America and Western Europe, can be generalized to other parts of the world. Another contribution of our study is that it is conducted in a university setting. Ain Shams University is a public not-for-profit educational institution. To the best of our knowledge, most of the past research done on EE, OCB and the relationship between EE and OCB was conducted in for profit corporations.

2. Hypothesis Development

2.1 EE Dimensions

The three main dimensions of EE are vigor, dedication and absorption. Vigor is high energy, openness to exert significant effort on the assigned task, the ability not get tired easily, and resilience when faced with difficulties (Ariani, 2013; Bakker, 2005). Dedication is a significant investment in the task, getting excited about the job, and sense of joy and contentment (Brown, 1996; Cooper-Hakim and Viswesvaran, 2005; Mauno, Kinnunen and Ruokolainen, 2007). Absorption is an experience of being consumed by the work, not realizing how quickly time passes, and not being able to leave the job (Ariani, 2013; Langelann et al., 2006; Llorens et al., 2007; Schaufeli, & Bakker, 2004).

Atkinson (1964) considered vigor to be part of the motivational concept. Therefore, vigor is a main feature of engagement. As vigor is part of the motivational concept, it is crucial to know that it shares the most resemblance and characteristics with intrinsic motivation (Mauno, Kinnunen and Ruokolainen, 2007). Dedication was found to have some common characteristics with job involvement. Dedication seems to be a deeper concept than job involvement. It includes feelings of excitement, contentment and conceit, while job involvement relies mainly on the spiritual matters of the employee's job (Mauno, Kinnunen and Ruokolainen, 2007).

The final dimension of EE is absorption. Absorption was related to flow by many previous studies (González-Roma, Schaufeli, & Bakker, 2006; Langelann et al., 2006; Llorens et al., 2007). The significant difference between the two is that absorption takes place at work whereas flow usually takes place in any field of life, mainly personal life outside work (Mauno, Kinnunen and Ruokolainen, 2007; Schaufeli, Bakker and Salanova, 2006).

2.2 OCB Dimensions

The research into the dimensions of OCB dimensions started in the 1980s, where Smith, Organ and Near (1983) divided the dimensions of OCB into two categories: altruism: '*behaviour targeted specifically at helping individuals*', and generalized compliance: '*behaviour reflecting compliance with general rules, norms and expectations, i.e. doing what a good employee should do*'. This was modified by Organ (1988), who came up with the five main dimensions of

OCB as altruism, conscientiousness, sportsmanship, courtesy and civic virtue (Babcock-Roberson and Strickland, 2010).

Although different classifications were presented by many researchers, Organ's distinction of the five main OCB dimensions are the most widely used and considered in various studies. Therefore, in this study we will use these five OCB dimensions: altruism, conscientiousness, sportsmanship, courtesy, and civic virtue.

2.3 Hypotheses

Hypothesis 1: Employee Engagement has a significant impact on Organizational Citizenship Behaviour for faculty members at Ain Shams University

Hypothesis 1a: Employee Engagement has a significant impact Altruism

Hypothesis 1b: Employee Engagement has a significant impact on Sportsmanship

Hypothesis 1c: Employee Engagement has a significant impact on Civic Virtue

Hypothesis 1d: Employee Engagement has a significant impact on Courtesy

Hypothesis 1e: Employee Engagement has a significant impact Conscientiousness

3. Data Collection and Sample

3.1 Instruments/Questionnaire

All items will be rated on a five point Likert scale ranging from 1 "Strongly disagree" to 5 "Strongly agree."

3.1.1 EE Survey

In this study, the 17-item Utrecht Work Engagement Scale (UWES), which is a three-scale self-report instrument, will be utilized to assess the engagement level of the employees (Schaufeli et al., 2002; Barkhuizen and Rothmann, 2006). UWES includes a 6-item "vigor" subscale (1,4,8,12,15,17), a 5-item "dedication" subscale (2,5,7,10,13), and a 6-item "absorption" subscale (3,6,9,11,14,16) (Rose, 2012).

As reported in the UWES Test Manual, the coefficient alphas which were tested with 31,916 employees from 16 countries, were acceptable for the engagement subscales ranging from: 0.81 to 0.90 for vigor, from 0.88 to 0.95 for dedication, and from 0.70 to 0.88 for absorption (Schaufeli and Bakker, 2003). Also, the confirmatory factor analyses (CFA) results support the three dimensional structures of the UWES (Schaufeli, Bakker, and Salanova 2006). Thus the reliability and validity of this measure was proven to be high and therefore will be used in our study.

3.1.2 OCB Survey

In this study, the 24 items of OCB scale developed by (Podsakoff et al., 1990) will be employed to measure the five types of subordinate OCB (Azar, 2018). The validity and reliability of this instrument indicates that the 24 items used to measure OCB in previous studies did successfully measure those five behaviours. The reliability reported by Podsakoff et al., (1990) for each of the five leadership behaviours indicated a Cronbach Alpha value of 0.82 for conscientiousness, 0.85 for sportsmanship, 0.70 for civic virtue, 0.85 for courtesy, and 0.85 for altruism. The OCB scale includes the following items for each of the five constructs –altruism (7 items), courtesy (2 items), sportsmanship (6 items), conscientiousness (4 items) and civic virtue (5 items).

Table 1 includes the Cronbach Alpha values for all the scales used for the measurement of EE and OCB. Since all of the Cronbach Alpha values are greater than 0.6, we can conclude that there is a high validity and internal consistency among the research variables tool regarding both EE and OCB.

Table 1. Reliability of Scales

Items	Cronbach's Alpha
Employee Engagement	
Vigor	.733
1-At my work, I feel that I am bursting with energy.	.686
4-At my job, I feel strong and vigorous.	.649
8-When I get up in the morning, I feel like going to work.	.649
12-I can continue working for very long periods at a time.	.725
15-At my job, I am very resilient, mentally.	.709
17-At my work I always persevere, even when things do not go well.	.745

Dedication	.805
2-I find the work that I do full of meaning and purpose.	.752
5-I am enthusiastic about my job.	.724
7- My job inspires me	.780
10- I am proud of the work that I do.	.742
13-To me, my job is challenging.	.828
 Absorption	.778
3- Time flies when I'm working.	.753
6- When I am working, I forget everything else around me.	.755
9- I feel happy when I am working intensely.	.762
11- I am immersed (absorbed) in my work.	.720
14- I get carried away when I am working.	.722
16- It is difficult to detach myself from my job.	.760
 Organizational Citizenship Behaviour	
Altruism	.831
18- I willingly help others who have work related problems.	.787
19- I help others who have heavy workloads.	.800
20- I help orient new people even though it is not required.	.786
21- I am always ready to lend a helping hand to those around me.	.784
22- I help others who have been absent and are behind in their work.	.825
23- I believe in giving an honest day's work for an honest day's pay.	.828
24- I obey faculty rules and regulations even when no one is watching.	.815
 Sportsmanship	.672
25- I do not abuse the rights of others.	.609
26- I consider the impact of my actions on co-workers.	.687
 Civic virtue	.679
27- I try to avoid problems with co-workers.	.613
28- I take steps to prevent problems with other co-workers.	.651
29- I am mindful of how my behaviours affect other peoples' jobs.	.665
30- I am one of my organization's most conscience employees.	.710
 Courtesy	.687
31- I tend to make mountains of molehills.	.620
32- I always focus on what's wrong rather than the positive side.	.699
33- I attend company functions that are not mandatory but help the faculty's image.	.685
34- I always find fault with what the faculty is doing.	.690
35- I am the classic "squeaky wheel" that always needs greasing.	.668
36- I consume a lot of time complaining about trivial matters.	.606

Conscientiousness	.727
37- I keep abreast of changes of the faculty.	.686
38- I read and keep up with faculty's announcements, memos and so on.	.607
39- Attend meetings that are not mandatory, but are considered important.	.643
40- My attendance at work is above the norm.	.717
41- I do not take extra breaks.	.727

3.2 Research Sample

The study population consists of faculty members at Ain Shams University. The researchers received 318 valid questionnaires for analysis out of more than 400 questionnaires that were distributed with a response rate of approximately 79.5 %. Table 2 includes the sample distribution according to gender, age and academic degree.

Table 2. Sample Distribution

Panel A: Sample Distribution according to Gender

	Frequency	Percent	Valid Percent	Cumulative Percent
Male	104	32.7	32.7	32.7
Female	214	67.3	67.3	100.0
Total	318	100.0	100.0	

Panel B: Sample Distribution according to Age

	Frequency	Percent	Valid Percent	Cumulative Percent
Less than 30	128	40.3	40.3	40.3
30 - Less than 40	136	42.8	42.8	83.0
40 - Less than 50	39	12.3	12.3	95.3
50 - Less than 60	12	3.8	3.8	99.1
60 & above	3	.9	.9	100.0
Total	318	100.0	100.0	

Panel C: Sample Distribution according to Academic Degree

	Frequency	Percent	Valid Percent	Cumulative Percent
Teaching Assistant/ Demonstrator	112	35.2	35.2	35.2
Assistant Lecturer	121	38.1	38.1	73.3
Assistant Professor	51	16.0	16.0	89.3
Associate Professor	26	8.2	8.2	97.5
Professor	8	2.5	2.5	100.0
Total	318	100.0	100.0	

3.3 Descriptive Statistics

Table 3 shows the descriptive statistics (mean, standard deviation and coefficient of variation) for each of the dimensions of the independent variable EE (Panel A) and the dependent variable OCB (Panel B).

Table 3. Panel A: Descriptive statistics for EE

Items	Mean	Std. Dev	C.V.	Rank
Employee Engagement				
Vigor				
1-At my work, I feel that I am bursting with energy.	3.4434	.98327	.285552	2
4-At my job, I feel strong and vigorous.	3.5377	1.04027	.29405	3
8-When I get up in the morning, I feel like going to work.	3.1667	1.05700	.333789	6
12-I can continue working for very long periods at a time.	3.6469	1.12675	.308932	4
15-At my job, I am very resilient, mentally.	3.9214	.83503	.212942	1
17-At my work I always persevere, even when things do not go well.	3.4497	1.08429	.314317	5
Dedication				
2-I find the work that I do full of meaning and purpose.	4.2862	.88976	.207588	2
5-I am enthusiastic about my job.	4.0094	.99996	.249401	4
7- My job inspires me	3.5723	1.01073	.282932	5
10- I am proud of the work that I do.	4.3491	.84856	.195113	1
13-To me, my job is challenging.	4.1226	.95352	.231289	3
Absorption				
3- Time flies when I'm working.	3.7547	1.08745	.289623	3
6- When I am working, I forget everything else around me.	3.6415	1.09650	.301111	5
9- I feel happy when I am working intensely.	3.3585	1.18233	.352041	6
11- I am immersed (absorbed) in my work.	3.7799	.98984	.261871	2
14- I get carried away when I am working.	3.9340	.89797	.228261	1
16- It is difficult to detach myself from my job.	3.4823	1.04392	.299837	4

Table 3 Panel B: Descriptive statistics for OCB

Items	Mean	Std. Dev	C.V.	Rank
Organizational Citizenship Behaviour				
Altruism				
18- I willingly help others who have work related problems.	4.1792	.79188	.189479	2
19- I help others who have heavy workloads.	3.9277	.83936	.213705	4
20- I help orient new people even though it is not required.	4.1101	.80446	.195729	3
21- I am always ready to lend a helping hand to those around me.	4.1447	.78098	.18843	1
22- I help others who have been absent and are behind in their work.	3.6226	.87862	.242536	7
23- I believe in giving an honest day's work for an honest day's pay.	3.9906	.92114	.230828	5
24- I obey faculty rules and regulations even when no one is watching.	3.8365	.89777	.234008	6

Sportsmanship				
25- I do not abuse the rights of others.	4.4214	.70495	.159441	1
26- I consider the impact of my actions on co-workers.	4.1761	.78660	.188357	2
Civic virtue				
27- I try to avoid problems with co-workers.	4.3616	.76890	.176287	1
28- I take steps to prevent problems with other co-workers.	3.9843	.82722	.207621	2
29- I am mindful of how my behaviours affect other peoples' jobs.	3.9434	.86097	.218332	3
30- I am one of my organization's most conscience employees.	3.6604	.88328	.24131	4
Courtesy				
31- I tend to make mountains of molehills.	2.3491	1.10954	.472336	5
32- I always focus on what's wrong rather than the positive side.	2.4971	1.07382	.43011	4
33- I attend company functions that are not mandatory but help the faculty's image.	2.9340	1.08563	.370021	2
34- I always find fault with what the faculty is doing.	2.9497	1.00346	.340191	1
35- I am the classic "squeaky wheel" that always needs greasing.	2.5943	1.11013	.427906	3
36- I consume a lot of time complaining about trivial matters.	1.8836	1.00894	.535632	6
Conscientiousness				
37- I keep abreast of changes of the faculty.	3.6667	.85303	.232644	1
38- I read and keep up with faculty's announcements, memos and so on.	3.3931	1.06842	.314883	3
39- Attend meetings that are not mandatory, but are considered important.	2.9717	1.11873	.376462	5
40- My attendance at work is above the norm.	3.4403	.97341	.282947	2
41- I do not take extra breaks.	3.3152	1.06048	.319969	4

3.4 Correlation Coefficients between EE and OCB Dimensions

Table 4 represents the correlation coefficients between the EE and OCB dimensions. EE dimensions are listed as follows; X₁: Vigor, X₂: Dedication, X₃: Absorption. While, OCB dimensions are listed as follows; Y₁: Altruism, Y₂: Sportsmanship, Y₃: Civic Virtue, Y₄: Courtesy, Y₅: Conscientiousness.

Table 4. Correlation Coefficients

	(X1)	(X2)	(X3)	(Y1)	(Y2)	(Y3)	(Y4)	(Y5)
Vigor (X1)	1.00							
Dedication (X2)	0.723 **	1.00						
Absorption (X3)	0.751 **	0.691 **	1.00					
Altruism (Y1)	0.467 **	0.436 **	0.470**	1.00				
Sportsmanship (Y2)	0.345 **	0.392 **	0.383**	0.597 **	1.00			
Civic virtue (Y3)	0.362 **	0.383 **	0.389**	0.583 **	0.677 **	1.00		
Courtesy (Y4)	-0.390**	-0.259**	-0.285**	-0.274**	-0.194**	-0.125**	1.00	
Conscientiousness (Y5)	0.409 **	0.359 **	0.442**	0.475**	0.362**	0.455**	-0.182**	1.00

** indicates significance at the 0.01 level, * indicates significance at the 0.05 level

4. Methodology and Findings

Regression analysis was used to find the effect of EE on each of the five main dimensions of OCB independently. Table 5 shows the kind and degree of impact of EE on Altruism (Y₁) in Panel A, Sportsmanship (Y₂) in Panel B, Civic Virtue (Y₃) in Panel C, Courtesy (Y₄) in Panel D and Conscientiousness (Y₅) in Panel E. These regressions are represented in the following equation:

$$Y_i = B_0 + B_1 X_1 + B_2 X_2 + B_3 X_3 + e_i$$

Where: Y₁: Altruism, Y₂: Sportsmanship, Y₃: Civic Virtue, Y₄: Courtesy, Y₅: Conscientiousness, X₁: Vigor, X₂: Dedication, X₃: Absorption, B₀, B₁, B₂, B₃: Estimated Parameters

Table 5 Panel A: Regression Model of EE on Altruism (Y₁)

Independent Variable	Model Abstract		Model		Model
	R	R ²	F-value	P	
EE	.508	.258	36.460	.000	$Y_1 = 2.203 + .177 X_1 + .113 X_2^{(*)} + .187 X_3$

(*) variable non-significant

The results in Table 5 Panel A indicate that there is a direct significant impact of EE on Altruism. The value of the coefficient of determination (R²) is .258, which means that EE affects Altruism by 25.8% and the remaining 74.2% is explained by other variables. Also the F-value supports this effect since it is equal to 36.460 at a significance level less than 0.01. As a result we accept Hypothesis 1a: EE has a significant impact on Altruism.

Table 5 Panel B: Regression Model of EE on Sportsmanship (Y₂)

Independent Variable	Model Abstract		Model		Model
	R	R ²	F-value	P	
EE	.422	.178	22.658	.000	$Y_2 = 2.680 + .020 X_1^{(*)} + .215 X_2 + .184 X_3$

(*) variable non-significant

The results in Table 5 Panel B indicate that there is a direct significant impact of EE on Sportsmanship. The value of the coefficient of determination (R^2) is .178, which means that EE affects Sportsmanship by 17.8% and the remaining 82.2% is explained by other variables. Also the F-value supports this effect since it is equal to 22.658 at a significance level less than 0.01. As a result we accept Hypothesis 1b: EE has a significant impact on Sportsmanship.

Table 5 Panel C: Regression Model of EE on Civic Virtue (Y_3)

Independent Variable	Model Abstract		F-value	P	Model
	R	R^2			
EE	.422	.178	22.636	.000	$Y_3 = 2.496 + .065 X_1^{(*)} + .160 X_2 + .167 X_3$

(*) variable non-significant

The results in Table 5 Panel C indicate that there is a direct significant impact of EE on Civic Virtue. The value of the coefficient of determination (R^2) is .178, which means that EE affects Civic Virtue by 17.8% and the remaining 82.2% is explained by other variables. Also the F-value supports this effect since it is equal to 22.636 at a significance level less than 0.01. As a result we accept Hypothesis 1c: EE has a significant impact on Civic Virtue.

Table 5 Panel D: Regression Model of EE on Courtesy (Y_4)

Independent Variable	Model Abstract		F-value	P	Model
	R	R^2			
EE	.391	.153	18.917	.000	$Y_4 = 3.839 - .448 X_1 + .047 X_2^{(*)} + .002 X_3^{(*)}$

(*) variable non-significant

The results in Table 5 Panel D indicate that there is a direct significant impact of EE on Courtesy. The value of the coefficient of determination (R^2) is .153, which means that EE affects Courtesy by 15.3% and the remaining 84.7% is explained by other variables. Also the F-value supports this effect since it is equal to 18.917 at a significance level less than 0.01. As a result we accept Hypothesis 1d: EE has a significant impact on Courtesy.

Table 5 Panel E: Regression Model of EE on Conscientiousness (Y_5)

Independent Variable	Model Abstract		F-value	P	Model
	R	R^2			
EE	.458	.210	27.793	.000	$Y_5 = 1.459 + .175 X_1^{(*)} + .042 X_2^{(*)} + .306 X_3$

(*) variable non-significant

The results in Table 5 Panel E indicate that there is a direct significant impact of EE on Conscientiousness. The value of the coefficient of determination (R^2) is .210, which means that EE affects Conscientiousness by 21% and the remaining 79% is explained by other variables. Also the F-value supports this effect since it is equal to 27.793 at a significance level less than 0.01. As a result we accept Hypothesis 1e: EE has a significant impact on Conscientiousness.

From the above results it is clear that we accept Hypothesis 1: Employee Engagement has a significant impact on Organizational Citizenship Behaviour for faculty members at Ain Shams University.

3.5 Robustness Check

The authors check the correctness of accepting Hypothesis 1 by conducting a path analysis using (AMOS.20) to show the effect of EE represented in its three main dimensions on OCB that is represented in its five main dimensions. Structural equation modelling was used to test the overall consistency of the proposed model. Table 6 represents the path coefficients for the structural equation model.

Table 6. Path Coefficients for the Structural Equation Model

Path Coefficients			Estimate	Standardized Estimate	S.E	C.R.	P value
Altruism	<---	Vigor	.177	.215	.072	2.454	.014
Sportsmanship	<---	Vigor	.020	.022	.082	.242	.809
Civic virtue	<---	Vigor	.065	.077	.076	.861	.389
Courtesy	<---	Vigor	-.448	-.419	.091	-4.910	.000
Conscientiousness	<---	Vigor	.175	.165	.093	1.880	.060
Altruism	<---	Dedication	.113	.146	.063	1.815	.070
Sportsmanship	<---	Dedication	.215	.245	.072	3.011	.003
Civic virtue	<---	Dedication	.160	.199	.066	2.429	.015
Courtesy	<---	Dedication	.047	.046	.079	.590	.555
Conscientiousness	<---	Dedication	.042	.042	.081	.521	.602
Altruism	<---	Absorption	.187	.247	.064	2.943	.003
Sportsmanship	<---	Absorption	.184	.214	.073	2.524	.012
Civic virtue	<---	Absorption	.167	.213	.067	2.486	.013
Courtesy	<---	Absorption	.002	.002	.081	.019	.985
Conscientiousness	<---	Absorption	.306	.312	.082	3.715	.000

The regression weight for Vigor in the prediction of Altruism and Courtesy is significantly different from zero at the 0.05 and 0.01 levels respectively. The regression weight for Dedication in the prediction of Sportsmanship and Civic Virtue is significantly different from zero at the 0.01 and 0.05 levels respectively. The regression weight for Absorption in the prediction of Altruism, Sportsmanship, Civic Virtue and Conscientiousness is significantly different from zero at the 0.01, 0.05, 0.05 and 0.01 levels respectively. In addition, Table 7 represents the total effect, the direct effect and the indirect effect between the three EE dimensions (X₁: Vigor, X₂: Dedication, X₃: Absorption) and the five OCB dimensions (Altruism, Sportsmanship, Civic Virtue, Courtesy and Conscientiousness) in the structured model (Hemakumara, Khatibi, and Johar, 2019).

Table 7. Total, Direct and Indirect Effects between the Main Variables in the Structured Model

	Total Effects			Direct Effects			Indirect Effects		
	X ₁	X ₂	X ₃	X ₁	X ₂	X ₃	X ₁	X ₂	X ₃
Altruism	.215	.146	.247	.215	.146	.247	.000	.000	.000
Sportsmanship	.022	.245	.214	.022	.245	.214	.000	.000	.000
Civic virtue	.077	.199	.213	.077	.199	.213	.000	.000	.000
Courtesy	-.419	.046	.002	-.419	.046	.002	.000	.000	.000
Conscientiousness	.165	.042	.312	.165	.042	.312	.000	.000	.000

The researchers tested the proposed model by using structural equation modelling, which tests the model path coefficients by taking into account the measurement errors and the indirect relations. The results from the robustness checks in both Table 6 and Table 7 showed that the overall consistency of the proposed model is high. As a result, the decision to accept Hypothesis 1 is correct.

4. Discussion and Conclusion

Both EE and OCB are similar in that they are individual behaviours that are required within the workplace and are considered important for the development and maintenance of the employee-organizational relationship. The main distinction between the two concepts is that EE is considered as an antecedent that will cause and lead to OCB. EE represents an energized workforce that focuses on expression of the employee's self while performing his/her role activities. EE reflects the psychological wellbeing of the employee (Aselage and Eisenberger, 2003). OCB, on the

other hand, represents the level of immersion in work the employees feel that they forget anything else and they truly become citizens of the organization, i.e., that they have duties towards it as well as their rights.

The results indicate that we accept Hypothesis 1: Employee Engagement has a significant impact on Organizational Citizenship Behaviour for faculty members at Ain Shams University. The contribution of the study is that it is conducted in an Arab/Middle Eastern country. The study also examines the effect of EE on OCB in the academic arena (an Egyptian public university), while most of the previous studies examining the effect of EE on OCB were conducted on for-profit corporations.

4.1 Future Research

Comparative studies should be conducted between public universities and private universities in Egypt. This study should be replicated in a private university in Egypt to see if the results are similar. More studies should be conducted on EE and its relationship with other individual factors such as emotional intelligence (Aselage and Eisenberger, 2003). Future researchers should conduct the same research while taking into consideration the effect of both peers assessment and supervisor's ratings, in addition to the self- assessment questionnaire that was used in this study.

4.2 Limitations

The field of study is limited only to one Egyptian public university. Female faculty members dominate the sample (67.3%). This could skew the responses to the questionnaires. 83.1% of the respondents were 40 years or younger (42.8% between 30 and 40 years old and 40.3% were 30 years old or younger). The sample being dominated by early stage and mid-stage faculty members could possibly bias the results.

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