

Relationships between Role Stressors and Nurses Organizational Citizenship Behavior: The Mediating Impact of Affective Commitment

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ABSTRACT

This study aims to investigate the relationships between role stressors (role conflict and role ambiguity) and organizational citizenship behavior (OCB) and affective commitment among rural nurses. It also explores how affective commitment mediates the relationship between role stressors and OCB. Survey research method was used in this study, and data was collected using a questionnaire. Based on random sampling, 301 nurses were chosen from rural health units located in Kotor district, Algharbia governorate, Egypt. To analyze the data descriptive statistics and Hierarchical Multiple Regression Analysis, along with Baron & Kenny's (1986) four-step procedures was also used. The results show role stressors have a negative influence on nurses' OCB and affective commitment. Role stressors explained 13.8% of the variation in OCB, while it explained 25.3% of the variation in affective commitment among rural nurses. Moreover, affective commitment mediated the impact of role stressors on OCB. Conclusions, role stressors have a negative influence on nurses' OCB and affective commitment. Therefore, Managers of nursing services should consider role stressors and their negative influence on nurses' outcomes in order to improve their performance.

Key words: OCB, Role Conflict, Role Ambiguity, Affective Commitment, Rural Health Unit.

INTRODUCTION

In the recent decades, a major concern of all organizations is to motivate employees to cooperate for organizational effectiveness. Therefore, organizations want employees, who will do those things that are not in any job description. Bolin and Turnkey (2005) pointed out that today "the ideal worker is an employee, who not only demonstrates high levels of task performance, but also engages in high levels of contextual performance or OCB.

Research has shown that organizational effectiveness is enhanced when individual workers volunteer and go beyond their role requirements to perform activities that benefit the organization or colleagues (Podsakoff, Ahearne, & MacKenzie, 1997). Such actions, known as Organizational Citizenship Behaviors (OCB) are exemplified by actions such as helping co-workers or performing extra-job activities (Organ, 1988; 1994). According to Podsakoff, MacKenzie, Paine, and Bachrach (2000), understanding the concept of organizational citizenship behavior and its related factors can help human resources managers in organizations to assess what kind of environment they should provide to their employees, and also what motivates and satisfies them.

On the other hand, stress at workplace has attained growing concern for researchers and practitioners. Empirical Research has shown that individuals, who report high levels of stressors,

report less OCB (Spector & Fox, 2002). Stressors, particularly ambiguity and conflict, are likely to be viewed as hindrance for employees' ability to attain personal and professional success at work (LePine, Podsako and LePine, 2005) and Ambreen (2011) affirm that most research on job stress has focused on determinants rather than on outcomes (e.g., organizational citizenship behavior). Concurrently, few empirical studies examine the relationship between occupational stress and organizational citizenship behavior (OCB). In the last decade, the lack of research associated with stress and OCB is surprising.

Organizational commitment was found to be a very important organizational variable defining the success of an organization in many ways. Triandis et al (2004) and Chaitanya & Tripathi (2004) showed strong association between the subscales of Organizational Commitment and Organizational Citizenship Behavior. Mathieu and Zajac (1990) have argued that organizational commitment helps protect the individual from negative outcomes experienced at work, such as, stress, either for those individuals, who are committed to the organization have connected more closely with individuals at work, or because they find the meaningful and interesting. Occupational stress exists in all professions. But nursing appears particularly stressful. Al-Hawajreh (2011) indicates that nursing is generally perceived as a stressor.

demanding profession. Indeed as reported by Tyson and Pongruengphant (2004), nurses working in public hospitals generally experience more stress than those in private hospitals.

The review of the literature indicates that most research of OCB has focused on employees in private sector, while public sector has received little attention. Also, little OCB research has been done in the Egyptian rural context. Some scholars (e.g., Li, 2013; Rasheed, Jehanzeb, and Rasheed, 2013) have noted that most OCB research comes from the United States and Most of the studies have been conducted in North America, but the dimension of OCB has acknowledged relatively incomplete attention in other frameworks. Podsakoff et al. (2000) have argued that research on OCB dimension in other cultural context is important because cultural background may affect the kinds of citizenship behavior, which are observed in an organization.

Empirical study reported that nurses in public hospitals are working under high job stress and Citizenship behavior is more important in hospitals because patients, who need special care in positive display of behaviors by nurses with patients, have an important role in strengthening their morale and betterment. So these Questions exist: Is there a relationship between nurses' perception of role stressors and their OCB in Egyptian rural health units (RHU)? And whether affective commitment mediates the relationship between role stressors and OCB? Therefore, the general objective of this research is to examine the relationship between role stressors, affective commitment and organizational citizenship behavior (OCB), among nurses in rural health units in kotor district, Egypt.

Theoretical Background and Hypotheses

OCB: Concept, Dimensions and Importance

The organizational citizenship behavior concept was first observed in the works of Bateman & Organ (1983) and Smith, Organ & Near (1983), who established the term 'Organizational Citizenship Behavior'. Organ (1988) provided an expanded review of OCB and defined it as: "Individual behavior that is discretionary, not directly or explicitly recognized by the formal reward system and that in the aggregate promotes the effective functioning of the organization". In the viewpoint of some scholars, Organizational citizenship behavior has been defined as a multi-dimensional concept that includes all positive organizationally relevant behaviors of organizational members including traditions in role behaviors, organizationally pertinent extra-role behaviors, and political behaviors, such as, full and responsible organizational participation (Van Dyne, Graham, and Dienesch, 1994). Ahmed, Rasheed, and Jehanzeb (2012) indicated that OCB can be described as an extra role and behaviors, such as,

teamwork with employees, approachi workplace earlier and leaving late, helpin employees, using organizational possessior care and disseminating positivity in organizat

Despite a growing interest in citi behavior, review of the literature in this area lack of consensus about various dimensions construct. Podsakoff et al. (2000) pointed to literature indicated almost 30 potentially d forms of citizenship behavior, which hav identified. In a review of the research, Organ identified five distinct dimensions of OCB: A (helping specific others); civic virtue (keep with important matters within the organi conscientiousness (compliance with courtesy (consulting others before taking and sportsmanship (not complaining about matters). However, Organ (1997) further cl the OCB dimensions into three parts: l courtesy and conscientiousness. A different ' the dimensionality of OCB came from Williz Anderson (1991), who divided OCB into tw (1) behaviors directed at specific individual organization, such as courtesy and altruism (and (2) behaviors concerned with benefit organization as a whole, such as, conscientic sportsmanship and civic virtue (OCBO). (2010) indicated that certain researchers ch examine citizenship as a whole. There distinction between subscales of OCB.

OCB is important for organizations. Po et al. (2000) found seven ways, in whic might have an impact on workgrou organizational performance: improves ma productivity; enhances coworkers' prod frees resources for more productive pt reduces the need to devote scarce resou purely maintain functions; improves coordin among workgroups to attract and retain t people; stabilizes organizational performan facilitates adaptation to environmental chang

There are major groups of antecedents (that have been emphasized in studies of d researchers. Jahangir, Akbar and Haq introduced seven categories of antecedents (which were to some extent the same as p studies, as follows: Job satisfactori organizational commitment; Role perc Leadership behaviors and LMX; I perceptions; Individual depositions; Moti theories; and Employee age. Meanwhile, Li indicated that although the different forms determinants of OCB vary a little; their ante are traditionally classified into three according to the literature. These three gro situational factors, dispositional characterist personal attitudes. Among the numerous ante of OCB, only two variables were investigate study namely role stressors and a

commitment. Although there are other antecedents of OCB, they will not be included in this study due to the fact that they are out of the scope of it.

OCB and Role Stressors

According to classical theory, every position in a structured organization should have a specified set of tasks or position responsibilities, and role ambiguity that reflects the degree of employees' uncertainty regarding appropriate actions in performing job functions (Miles, 1976). Due to uncertain role expectation, employees hesitate to make decisions and will have to meet the expectations by the trial and error process, role conflict and role ambiguities, which were the two major components of job-related role stresses (Rizzo, Rizzo, House, & Lirtzman, 1970). Idris (2011) indicated that role stressor can be defined as the pressure experienced by an individual as a result of organizational and job-specific factors in the form of demands and constraints that have been placed on them.

Researchers agree that role stressors are made up of three separate but related constructs: role overload, role ambiguity and role conflict (Peiro et al., 2001). Rizzo et al. (1970) define role conflict as the incompatibility of requirements and expectations from the role, where compatibility is judged based on a set of conditions that impact role performance, while role ambiguity occurs when individuals lack a clear definition of their role expectations and the requirements/ methods to complete their job tasks. According to Spector (1997), "role conflict exists when people experience incompatible demands about their functions and responsibilities" and role ambiguity is the degree of certainty the employee has about what his or her functions and responsibilities are". Burke (1988 in Lu et al., 2003) grouped job stressors into the following six categories: physical environment, role stressors, organizational structure and job characteristics, relationships with others, career development, and work-family conflict.

Several reasons have been posited as to why role stressors relate to OCB. Social exchange theory has been utilized to explain how various factors including stressors affect behaviors at workplace. Social exchange theory posits that people will reciprocate the 'good' done to them. In contrast, when people feel that the rules of social exchange between the employee and the organization are not held, they react to restore the balance between their inputs and the outcomes they receive. Therefore, when an organization does not engage in proper social exchange (i.e., violations of psychological contract), individuals will feel less responsible to engage in productive behaviors to help the organization and its members (low OCB) and may respond by engaging in destructive behaviors (Rodopman, 2006). Also, role theory suggests that

people generally seek to behave in ways consistent with the way their roles are defined. Organizational stress may produce negative effects on OCBs as OCBs are extra-role behaviors. Moreover, organizational stress may create constraints of resources (time, energy, etc.) which might lead to an employee not focusing on all aspects of extra-role behaviors. Employees might not involve in OCBs to save their time, energy, and other important commitments, which may be different from their in-role behavior (Jain and cooper, 2012).

A few studies have examined the relationship between occupational stress and OCB by presenting different findings. Role conflict and role ambiguity have been found to be negatively related to OCB. On the other hand, role clarity and role feedback are positively related (Podsakoff et al., 2000 and Ibrahim (1998) compared the antecedents of OCB in the United States, Egypt, and Saudi Arabia. Their results indicated that work-related stressors predicted OCB in all samples. Bolino and Meindl (2005) reported a positive relationship between perceived stressful work and OCB. Paillé et al. (2005) found no relationship between stressful work and OCB. Zamir and Ambreen (2011) found a negative correlation between occupational stress and OCB. Jain and cooper (2012) study found organizational stress had significant negative impact on OCB. Rasheed et al. (2013) study found a positive relationship between the Role perception (the perception of clarity) and OCB.

Affective Commitment and OCB

The interest of commitment comes from the idea that employee, who experiences organizational commitment engages in beneficial behaviors to organization, such as citizenship activities. The impact of organizational commitment on individual performance and organizational effectiveness has received attention from researchers (Allen and Meyer, 1991; Beck and Wilson, 2000). Allen and Meyer defined organizational commitment, as a psychological link between the employee and the organization that makes it less likely for the employee to want to leave voluntarily. Allen and Meyer (2002) defined organizational commitment as personnel's attachment to or identification with the organization. Meyer and Allen (1991) expressed three components of organizational commitment: Affective commitment, continuance commitment and normative commitment. Affective commitment refers to a strong belief and acceptance of the organization's goals and values; continuance commitment refers to the willingness to invest considerable effort on behalf of an organization; normative commitment refers to a strong desire to maintain membership in an organization.

Affective commitment is considered an effective measure of organizational commitment.

since it indirectly influences the other two dimensions of organizational commitment (Boles et al., 2007) and is more consistent with the conceptual and operational definition of attitudes (Iverson and Buttigieg, 1999). Research also provides evidence that, there is high correlation between affective and normative commitment (Meyer et al., 2002). Therefore, this study has focused on this aspect of commitment in Allen and Meyer's three-dimensional commitment model.

Social exchange theory is suggested to explain the nature of the relationship between organizational commitment and OCB. Employees evaluate the quality of the social exchange and respond accordingly. Employees, who experience positive exchanges with the organization, job or the work group, reciprocate with higher levels of commitment, both affective and normative, and this moves them to contribute to the organization in other ways, such as, better performance (Cohen, 2003). Meyer and Allen (1997) suggested that employees with strong commitment are more likely to engage in OCB than those with weak commitment. The meta-analysis of Ricketta (2008) that investigated whether job attitudes (i.e., job satisfaction and affective organizational commitment) cause performance found that affective organizational commitment has a weak but significant effect on performance (OCB). Kwantes (2003) examining the relationship between three component model of Allen and Meyer (1990) and OCB within samples from India and USA, found that affective commitment significantly predicted OCBs. Becker and Kernan (2003) also provided support for the positive effect of affective commitment on certain dimensions of OCB. Wasti (2002) supported that affective commitment is significantly and positively related to OCB. Van Scotter (2000) also found significant relationship between OCB and affective commitment. Rasheed et al. (2013) study found positive relationship between job satisfaction and organizational commitment and OCB.

Role Stressors and Affective Commitment

The relationship between role stressors and affective commitment has been examined by many researchers. Wasti (2005), Karsh, Booske, and Sainfort (2005), and Piko (2006) found that role ambiguity, role conflict, and organizational climate were antecedents to all dimensions of organizational commitment. When role ambiguity and role conflict were present, all dimensions of organizational commitment were lower. Gormley and Kennerly (2010) found that role ambiguity and role conflict influenced all dimensions of organizational commitment negatively. Yousef (2002) found in his study in the United Arab Emirates role ambiguity directly and negatively influences both affective and normative commitments. Relationship was present

between role ambiguity and role conflict, affective and continuance organizational commitment. Zakari (2011) found the faculty faced role ambiguity and role conflict. In addition, Role ambiguity among faculty negatively correlated to continuance and normative commitment, while role conflict correlated to affective commitment dimensions. In addition, Al-Hadi (2011) found that organizational commitment negatively correlated to occupational stress. Study of Asadi, and Hamidi (2009) indicated a negative significant relationship between job satisfaction and organizational commitment, while affective commitment and normative commitment, but role conflict was not a significant relationship between job satisfaction and continuance commitment.

However, since both role ambiguity and role conflict are known to affect employee organizational commitment, whereas affective commitment related to OCB, it is likely that at least a positive relationship between ambiguity, conflict and OCB is mediated by affective commitment.

Based on the discussion of literature, the following hypotheses were formulated and presented in alternative format:

- H1: Role stressors (role conflict and role ambiguity) have negative and significant impact on affective commitment.
- H2: Role conflict has negative and significant impact on organizational citizenship behavior.
- H3: Role ambiguity has negative and significant impact on organizational citizenship behavior.
- H4: Affective commitment has positive and significant impact on organizational citizenship behavior.
- H5a: Relationship between role conflict and OCB is mediated by affective commitment.
- H5b: Relationship between role ambiguity and OCB is mediated by affective commitment.

Research Methods

A quantitative research design was adopted to collect data and test hypotheses. A survey method was used to conduct this study.

Population and Procedures

The targeted population for this study was 301 nurses in the rural health units under the jurisdiction of the Egyptian Ministry of Health, Specified Kotor district, Algharba governorate. According to the statistics of Health and Population Department, Qutour district (2014), the number of nurses working in rural health units in 30 villages' districts is 369 nurses. Three Hundred and six questionnaires were distributed. Out of the 301 questionnaires distributed, 301 were returned, giving a response rate of 81.6 percent.

MEASURES

On the basis of previous research, demographic variables (e.g., gender, level of educational experience) as control variables were measured

single items and controlled for. Two role stressors were included in this study. Individuals were presented with a five-point Likert scale of agreement or disagreement with each item. First, Role conflict was measured by an 8 items scale ($\alpha=.72$) developed by Rizzo et al. (1970). Respondents indicated how true each item was of their work situation. Second, Role ambiguity was assessed by a six-item scale also developed by Rizzo et al. (1970). Affective commitment was measured by a 6 item from Meyer and Allen (1991) scale. Organizational citizenship behavior was assessed using 18-items scale originally developed by organ (1988) with a 5-point Likert type scale ranging from 1 (strongly disagree) to 5 (strongly agree).

To examine the content validity of the questionnaire, it was given to a group of experts in public administration, rural sociology, research methodology and statistics. To measure its reliability, Chronbach Alpha was used for the research variables. As can be seen from Table 1 the Cronbach's Alpha for each of the variables was higher than the conventional standard value (0.70), therefore it reflects sufficient internal consistency reliability coefficients for all the research variables that are greater than 0.70 (Nunnally, 1978).

Data Analysis

The data was analyzed using SPSS 20.0. The research hypotheses 1, 2, 3 and 4 were tested using a Hierarchical Multiple Regression Analysis. Previous studies have found that age, Job experience, and Educational level are significantly related to affective commitment and organizational citizenship behavior (Al-Aamiri, 2002; Miao & Kim, 2010). Therefore, the researcher controlled for these variables in the analysis to ensure that their effects were taken into consideration. R^2 , ΔR^2 and standardized regression coefficients β were examined at each step. To test mediation in Hypothesis 4, the three-equation approach recommended by Baron and Kenny (1986) was used.

Before the implementation of linear regression analysis, it should ensure the availability of certain conditions. Normality and homoscedasticity are usually assumed with a sufficiently large sample size like our case here (301 cases). Linearity, however, was checked by investigating the correlation coefficients between variables as indicators reflecting the nature of their linear relationship and showed fairly linear relationships. Results from the co-linearity diagnostics showed that there was no bivariate correlation above 0.75 between independent variables, suggesting that there are no serious cases of Multi-co linearity. Thus, this means that all the assumptions of multiple regression analysis seen to have been fulfilled.

RESULTS

Results of Descriptive Statistical Analysis

Table 1 shows the Means, standard deviation, internal consistency reliabilities (Cronbach's α) and the correlations of the study variables. As can be seen, the levels of all variables were moderate to high according to sample means of the variables. Means scores were all above the mid-point of the 5-point scale, except for role Ambiguity, and standard deviations were distributed within the interval 0 –1. A closer look at the table shows that the respondents perceived a moderate level of role conflict ($M = 3.06$, $SD = .68$) somewhat relatively low level of role ambiguity ($M = 1.81$, $SD = .66$) in their workplaces. The respondents reported a higher level affective commitment ($M = 3.75$, $SD = .75$). Furthermore, the respondents reported a high level of organizational citizenship behavior ($M = 4.07$, $SD = .39$).

Correlations

The correlation matrix, shown in Table 2, was analyzed for evidence of intercorrelations and multicollinearity among variables. Table 2 shows that there were many significant correlations among the variables in this study. The role stressors were positively related among themselves, (role conflict and role ambiguity, $r = .67$, $p < .01$). However, this correlation was significant in nature, indicating that these two role stressors are distinct constructs. Both role conflict and role ambiguity were negatively related to organizational citizenship behavior ($r = -.169$; $r = -.361$, $p < .01$), respectively. Both role conflict and role ambiguity were negatively related to affective commitment ($r = -.302$; $r = -.354$, $p < .01$) respectively. As seen in the table, affective commitment was positively related to OCB ($r = .67$, $p < .01$). These correlations indicate that the more a respondent reports affective commitment, the better organizational citizenship behavior.

Hypotheses Testing

Hypothesis 1 proposed that "Role stressors (role conflict and role ambiguity) have a negative significant impact on affective commitment." Hierarchical regression analysis was conducted in two steps. In the first step affective commitment was regressed on the control variables.

As shown in Table 2, the R^2 for the regression of affective commitment on the control variables was .063, explaining 6.3% of the variance in affective commitment and the effect of job experience was significant ($F = 6.62$, $P < .01$). In step 2, after controlling for these variables, the role stressors (role conflict and role ambiguity) in combination were significant predictors of affective commitment, having a negative impact on affective commitment ($F = 27.18$, $P < 0.001$). Role stressors explained an additional (25.5%) of variance in affective commitment ($\Delta R^2 = 0.255$) and all beta coefficients were significant; thus hypothesis 1 was supported.

Table 1: Mean standard deviation, Cronbach's Alpha and Correlation analysis between variables

variables	No. Items	M	SD	1	2	3	4	5	6	7
1- OCB	18	4.07	.39	(.858)						
2- Role conflict	8	3.06	.68	.169**	(.809)					
3- Role Ambiguity	5	1.86	.66	.361**	.331**	(.810)				
4-Affective commitment	5	3.78	.75	.671**	.302**	.354**	(.851)			
5- Age	-	34.6	5.19	.274**	.277**	-.137*	.204**	-		
6- Job experience	-	14.3	4.40	.195**	.279**	-.129*	.245**	.768**	-	
7-Educational level	-	12.7	3.65	-.131*	-.056	.127*	-.088	-.091	.190**	-

Figures in parentheses reflect the coefficient of Cronbach's Alpha

Notes:*P<0.05;**P<0.01

Table 2: Results of Hierarchical Regression Analysis for Effect of Role Stressors dimensions Affective Commitment after Controlling for Control Variables

variables	β	R ²	Adj. R ²	F	ΔR^2	F for ΔR^2
Step 1		0.063	0.053	6.62***	0.063	6.62**
Age	.046					
Job experience	.201*					
Educational level	-.046					
Step 2		0.315	0.304	27.18***	0.253	54.4***
Age	.074					
Job experience	.256**					
Educational level	-.015					
Role conflict	-.405***					
Role ambiguity	-.321**					

Notes:*P<0.05;**P<0.01;***P<0.001

The results of hierarchical regression analysis to examine the hypotheses about the antecedents of OCB are presented in Table 3. The control variables (age, job experience, and education level) were entered in the first step. The independent variables of role conflict were entered in the second step, role ambiguity was entered in the third step, and finally the affective commitment was entered in the fourth step. Hypotheses 2–4 predicted that the role conflict and role ambiguity would negatively impact on OCB, and that the affective commitment would positively impact on OCB.

In the first step OCB was regressed on the control variables. As shown in Table 3, the control variables explained only 8.9 % of the variance in OCB and the effects of age and Educational level were significant ($F= 9.64$, $P < 0.001$, $R^2= .089$). As the results of the second step in Table 3 show, nurses' role conflict was imposed negative on their OCB ($\beta= -.231$, $p < .001$); thus Hypothesis 2 was supported. The results of the third step indicated that role ambiguity imposed negative impact on OCB ($\beta = -.377$, $p < .001$); accordingly. Hypothesis 3 was supported. The fourth step shown in Table 3 indicates that nurses' affective commitment

imposed positive impact on their OCB ($\beta = .400$, $p < .001$); therefore, hypothesis 4 was supported. The standardized regression coefficients β in the step also showed that affective commitment was the strongest predictor for OCB. The result suggested that the model as a whole accounted for a significant amount of the variance associated with OCB, $R^2 = .430$, $F= 36.99$, $p < .001$. In addition, 13 % of the remaining variance in OCB was explained by role conflict after controlling the variance accounted for by the controlled variables; 13 % of the remaining variance in OCB was explained by role ambiguity after controlling the variance accounted for by both the controlled variables and role conflict; and 15.5 % of the remaining variance in OCB was explained by affective commitment after controlling the variance accounted for by the controlled variables, role conflict, and role ambiguity.

In order to test the mediation for affective commitment in the relationship between role stressors (role conflict and role ambiguity) and organizational citizenship behavior (H5a) and the researcher followed Baron and Kenny's four-step procedures. Baron and Kenny (1986)

Table 3: Results of Hierarchical Regression Analysis Predicting the Effects of Role Stress dimensions and Affective Commitment on OCB after Controlling for Control Variables

variables	Step 1	Step 2	Step 3	Step 4
Age	.32***	.356***	.314***	0.279***
Job experience	-.073	-.037	-.047	-0.169*
Educational level	-.116*	-.118*	-.076	-0.069
Role conflict		-.231***	-.226***	-0.033
Role ambiguity			-.377***	-0.224***
Affective commitment				0.476***
R ²	0.089	.137	.275	.430
Adj. R ²	0.080	.126	.263	.419
F	9.64***	11.78***	22.38***	36.99***
ΔR^2	-	.049	.138	.155
F for ΔR^2	9.64***	16.67***	56.02***	80.05***

Notes: *P<0.05; **P<0.01; ***P<0.001.

stated that there are three conditions to test mediation. First, the independent variable role stressors (role conflict and role ambiguity) must affect the mediator (affective commitment) H1 in this study; second, the independent variable must affect the dependent variable (organizational citizenship behavior) H2 and H3 in this study; and third, the mediator must affect the dependent variable, H4 in this study. All these preconditions were satisfied as proven in tables 2 and 3. Regarding complete and partial Mediation, Baron and Kenny (1986) suggested that perfect or full mediation occurs when the independent variable (role conflict and role ambiguity) became insignificant and had no effect over the dependent variable (organizational citizenship behaviors) after the mediator (affective commitment) was included in the model. However, when the effect of independent variable on dependent variable with the inclusion of moderator variable is reduced in magnitude, but remains significant, there is evidence for partial mediation, and makes sense that partial mediation is perhaps more realistic than complete mediation in social sciences research because of many causes of behavior.

To test the mediation model for H5a, as can be seen in table 3, In the step 4, according to the standardized coefficients, affective commitment significantly contributed to the prediction of OCB, whereas the effect of role conflict on OCB is reduced and became no significant ($\beta = -.033$ in step 4 is less than $\beta = -.226$ in step 3). In line with Baron and Kenny (1986) suggestion, the results indicated that affective commitment perfectly mediates the relationship between role conflict and organizational citizenship behavior. Therefore, H5a was supported.

To test the mediation model for H5b, as can be seen in table 3, In the step 4, according to the standardized coefficients, affective commitment significantly contributed to the prediction of OCB, whereas the effect of role ambiguity on OCB is reduced but significant ($\beta = -.224$ in step 4 is less

than $\beta = -.377$ in step 3). In line with Baron and Kenny (1986) suggestion, the results indicated that affective commitment was not a full mediator in this model. In order to find out whether a significant decrease in the prediction ability of role ambiguity a Sobel test was needed. The Sobel test, <http://quantpsy.org/sobel/sobel.htm>, was used to do the calculation. The calculation needed the not standardized regression coefficient of the association between role ambiguity and affective commitment, the standard error of the relationship between the independent variable and affective commitment, non-standardized regression coefficient for the association between affective commitment and OCB, and the standard error of the relationship between affective commitment and OCB. The values are $-.389$, $.059$, $.237$ respectively. The result of the Sobel test ($t = 2.37$, $p < .001$) revealed that affective commitment partially mediated the relationship between role ambiguity and OCB.

DISCUSSION AND CONCLUSIONS

The purpose of current study was to fill the preceding gap in the literature by introducing the first empirical investigation of the relationship among role stress (role conflict and role ambiguity) and organizational citizenship behavior in an Egyptian rural health units to get a better understanding of its application and utilization in a non-western culture. The Pearson correlation and hierarchical regression analysis provides unique insight into the result of research findings have important conclusions and implications.

One of the major findings of this study is that a positive and significant relationship exists between affective commitment and OCB among rural health units in Egypt. This result supports previous studies that emphasize the importance of affective commitment as one of the factors influencing OCB (e.g., Meyer and Allen, 1997; Kwantes, 2003).

2002). These results suggest that those nurses, who are hold relatively more commitment to their organization, are more willing to engage in OCB activities. This positive relationship between affective commitment and OCB would benefit in management because they should make every effort to improve nurses' commitment for their organizations to enhance their OCB. These findings advocate Beukhof, de Jong & Nijhof (1998) declaring that success rate of organizations is also determined by how organizations stimulate commitment upon the organization itself. By stimulating organizational commitment effectively, employees' psychological bond to the organization becomes stronger and incurs strong encouragement to indicate positive OCB behavior. On the other hand, these findings rebut Van Dyne & Ang (1998) theory declaring that the relationship of organizational commitment to OCB is not significant. In addition, Shore & Wayne (1993) theory declares that organizational commitment relationship to OCB is negative. These findings show that organizational commitment positively relates to OCB. The phenomenon shows that amelioration of organizational commitment variable will be able to bring positive effect on OCB variable.

In addition, the findings of this study show that role conflict and role ambiguity as source of stress are statistically significant predictors of commitment among nurses in rural health units in Egypt, suggesting that those who have higher levels of role ambiguity and role conflict are more likely to be less committed to the organization. This explanation depends on the cause-and-effect relationship, which arguably, makes sense in terms of managing human resources in organizations. This would have negative consequences for both employees and organizations. These results consistent with Yousef (2002) findings also suggest that role stressors are negatively associated with organizational commitment among employees in various organizations in the United Arab Emirates.

As hypothesized, the findings provided support for hypotheses, which indicated that there were significant mediation of affective commitment on relationship between role stressors (role ambiguity and role conflict) and organization citizenship behavior. These findings suggest that those nurses who perceive high levels of role ambiguity and role conflict are less commitment with the Organization and consequently are less willing to engagement in the OCB activities.

The major finding of this research is that role ambiguity and role conflict as sources of stress negatively influence OCB directly and indirectly via affective commitment. Low perceptions of role ambiguity and role conflict would most likely result in low role stress and that in turn will have positive

consequences for both employees and organi Therefore, Managers of nursing services consider role stressors and its negative influ nurses' OCB in order to improve their perfct and subsequently the healthcare system.

Limitations and Suggestions for Future Re

The present study is not without limi Firstly, the data were collected from a district of Egypt, which might redu generalization factor. Secondly, the investigated the effects of role stressors name ambiguity and role conflict as sources of str in turn excluded other role stressors, such overload, role stagnation, and role erosio investigation. Future researchers should , longitudinal study with some other variab normative commitment, job satisfactio employee's turnover intentions. The study also be replicated on other districts and rura units in rural areas in Egypt for enhanc generalization factor. Comparison between and other staff would be of interest. Fir comparison between nurses of public and sector would also be worthwhile.

1-Yield/vines

~~Data in Table (1) clearly show that s clusters of Early sweet grapevines with GA₃-40 ppm or Sitofex at 2.5 to 10 ppm was signi effective in improving the yield relative to th treatment. The promotion on the yiel accompanied with increasing concentrations plant growth regulator. Using GA₃ at 10 to significantly preferable than using Sitofex a 10 ppm in improving the yield. A slig insignificant promotion on the yield was at to increasing concentrations of GA₃ from 2 ppm and Sitofex from 5 to 10 ppm. The mi yield was produced on the vines that receiv spray of GA₃ at 40 ppm but the best treatme economical point of view was the applice GA₃ at 20 ppm (since no measurable prome the yield was recorded between 20 and 40 GA₃). Under such promised treatment, yiel reached 13.6 and 14.0 kg during both respectively. The control vines produced 9.1 kg during 2013 and 2014 seasons, respectiv percentage of increase on the yield application of GA₃ at 20 ppm over the treatment reached 49.5 and 45.8 % durin seasons, respectively. The beneficial effects on the yield might be attributed to their action on increasing cluster weight. The pr effects of GA₃ on the yield was supported results of Dimovska *et al.*, (2011) and Abu and Salameh (2012) on different grapevine e — The results regarding the beneficial efi Sitofex on enhancing the yield are in harmo those obtained by Juan *et al.* (2009); Abdel *et al.*, (2010) and Al-Obeed (2011).~~

2-Harvesting date:

It is clear from the data in Table (1) that all GA₃ and Sitofex treatments had significantly delayed on the harvesting date of Early Sweet grapevines rather than the control treatment. The degree of delayness on harvesting date was correlated to the increase of the concentrations of both GA₃ and Sitofex. Using GA₃ significantly delayed harvesting date comparing with using Sitofex. Increasing concentrations of GA₃ from 20 to 40 ppm and Sitofex from 5 to 10 ppm failed to show significant delay on harvesting date. A considerable advancement on harvesting date was observed on untreated vines the great delay on harvesting date was observed on the vines that received GA₃ at 40 ppm during both seasons. GA₃ and Sitofex were shown by many authors to retard the release of ethylene and the disappearance of pigments such as chlorophylls and carotenoids and onset of maturity start. Also they were responsible for prolonging pre-maturity stages Nickell (1985). These results regarding the delaying effect of GA₃ and Sitofex on harvesting date were in harmony with those obtained by Wassel *et al.*, (2007), Kassem *et al.* (2011), Abu Zahra and Salameh (2012) and Refaat *et al.* (2012):

3-Cluster weight and dimensions:

It is evident from the data in Table (1) that treating clusters with GA₃ at 10 to 40 ppm or Sitofex at 2.5 to 10 ppm was significantly accompanied with enhancing weight, length and width of cluster relative to the control treatment.

The promotion was significantly associated with increasing concentrations of GA₃ and Sitofex. Using GA₃ was significantly favourable than using Sitofex in this respect. The maximum values were recorded on the vines that received one spray of GA₃ at 40 ppm. Meaningless promotion was detected with increasing concentrations of GA₃ from 20 to 40 ppm and Sitofex from 5 to 10 ppm. The untreated vines produced the minimum values during both seasons. The positive action of GA₃ on cluster weight and dimensions might be attributed to its essential role on stimulating cell division and enlargement of cells, the water absorption and the biosynthesis of proteins which will lead to increase berry weight. Dimovska *et al.*, (2011); Abu Zahra and Salameh, (2012) and Dimovska *et al.*, (2014).

The previous essential role of CPPU on cluster weight was attributed to its higher content of cytokinin when applied to plants (Nickell, 1985).

4- Shot berries %:

Data in Table (2) obviously reveal that percentage of shot berries in the clusters of Early Sweet grapevines was significantly controlled with spraying GA₃ at 10 to 40 ppm or Sitofex at 2.5 to 10 ppm relative to the check treatment. Using GA₃ was preferable than using Sitofex in reducing the

percentages of shot berries. There was a reduction on the percentage of shot berries increasing concentrations of GA₃ and Sitofex was a slight reduction on such unfavourable phenomenon with increasing concentrations from 20 to 40 ppm and Sitofex from 5 to 10 ppm. The minimum values of shot berries (7.3 and 7.5%) during both seasons, respectively) were recorded on the clusters harvested from vines treated with GA₃ at 40 ppm. The maximum values of shot berries (12.0 & 12.5 %) during both seasons were recorded on the untreated vines during both seasons. The reducing effect of GA₃ on shot berries might be attributed to its important role on enhancing cell division and the biosynthesis of proteins (Nickell, 1985). These results were supported by the results of Wassel *et al.* (2007) and Abu Zahra and Dimovska (2012).

5- Fruit quality:

Data in Tables (2, 3 & 4) clearly show that spraying clusters with GA₃ at 10 to 40 ppm and Sitofex at 2.5 to 10 ppm significantly accompanied with enhancing weight, long and equatorial diameters of berry, total acidity%, protein and percentages of P, K and Mg and TSS, reducing sugars %, T.S.S. / acid and carotenoids relative to the check treatment. The effect either increase or decrease was associated with increasing concentrations of each auxin. GA₃ significantly changed these parameters while using Sitofex. A slight effect was recorded on fruit quality parameters with increasing concentrations of GA₃ from 20 to 40 ppm and Sitofex from 5 to 10 ppm. From economical point of view, the results with regard to fruit quality were obtained due to treating clusters with GA₃ at 20 ppm. Untreated vines produced unfavourable effect on fruit quality. These results were true during both seasons. The effect of GA₃ on increasing weight and dimensions might be attributed to its effect in promoting cell division and enlargement of cells, water uptake and the biosynthesis of proteins (Nickell, 1985). These results were in agreement with those obtained by Williams and Ayars (1985) and Dimovska *et al.*, (2014).

The higher content of Sitofex from early season was reflected on enhancing cell division and elongation of berries (Nickell, 1985). These results were in agreement with those obtained by Zahra (2013) and Retamales *et al.* (2015).

CONCLUSION

Treating Early Sweet grapevines once with GA₃ at average berries reached 6mm with GA₃ at 10 ppm was responsible for promoting yield and fruit quality.

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الملخص العربي

تأثير بين ضغوط الدور وسلوكيات المواطنة التنظيمية للمرضات بالوحدات الصحية بمركز قطور:
التأثير الوسيط للالتزام العاطفي

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~~برش حامض الجبريليك والسيتوفكس في تحسين المحصول وجودة حبات العنب الايرلي سويت في منطقة~~

~~المنيا=مصر~~

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ت هذه الدراسة إلى التعرف على العلاقة بين ضغوط الدور (صراع الدور وغموض الدور)، وسلوكيات المواطنة (OCB) للمرضات العاملات في الوحدات الصحية بقري مركز قطور بمحافظة الغربية، و ما إذا كان الالتزام العاطفي يتوسط العلاقة بين كل من ضغوط الدور وسلوكيات المواطنة التنظيمية للممرضات الريفيات . الدراسة على استخدام منهج المسح الاجتماعي، وتم جمع البيانات باستخدام استبانة تم اختبارها والتأكد من ثباتها من عينة عشوائية من الممرضات العاملات في قري مركز قطور بلغ قوامها (301) ممرضة. وتم تحليل باستخدام اساليب الإحصاء الوصفي، واسلوب تحليل الانحدار المتعدد الهرمي، بالإضافة الى طريقة Baron & Kenny ذات الأربع خطوات. وأظهرت النتائج أن ضغوط الدور لها تأثير سلبي على كل من سلوكيات المواطنة : والالتزام التنظيمي العاطفي. كما أشارت النتائج أن ضغوط الدور (صراع الدور وغموض الدور) يفسر 13.8% ن في سلوكيات المواطنة التنظيمية، في حين ضغوط الدور تفسر 25.3% من التباين في الالتزام التنظيمي . وعلاوة على ذلك، يتوسط الالتزام العاطفي العلاقة بين ضغوط الدور وسلوكيات المواطنة التنظيمية.

الدالة: سلوكيات المواطنة التنظيمية، ضغوط الدور، نزاع الدور، غموض الدور، الالتزام التنظيمي العاطفي، لوحدات الصحية الريفية.

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