

Inter-Professional Communication and Organizational Citizenship Behaviour of Tertiary Health Institution in South-South Nigeria

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ABSTRACT

This study examined the relationship between inter-professional communication and organizational citizenship behaviour of tertiary health institutions in south-south Nigeria. The study applied survey research design. A total of four hundred and sixty-four (454) doctors and nurses in five teaching hospitals in South-South Nigeria, constituted the population of the study. The hypotheses formulated for the study were tested using Structural Equation Modelling (SEM). The outcome of the analyses revealed a significant positive association between inter-professional communication and organizational citizenship behaviour measured with (altruism, conscientiousness and courtesy). It was concluded that inter-professional communication drives organizational citizenship behaviour of tertiary health institutions in South-south Nigeria. Therefore, it was recommended that health institutions should: prioritize communication training for healthcare professionals; implement regular communication and feedback mechanisms to enhance conscientiousness among healthcare professionals.

Keywords: Communication, OCB, Altruism, Courtesy, Conscientiousness.

Introduction

The healthcare industry in Nigeria is currently challenged by outbound medical tourism, deteriorating medical infrastructure, low government budget allocation and poor compensation for public healthcare workers, all of which have prompted a large number of skilled medical practitioners to relocate overseas in search of better employment opportunities. Those who remain offer the bare minimum in service due to poor treatment and funding inadequacies that have led to a general dissatisfaction with the system (Ibeh, 2022). It therefore becomes almost impossible to see healthcare workers exhibit citizenship behaviours at their places of work.

Tertiary health care institutions are an important component of the healthcare system of any country. Their role in enhancing specific and overall health parameters of community is immense ranging from complex specialized clinical care to supervision, training, development of guidelines and quality assurance (Bali et al., 2021). They are built with a vision to foster advanced medical education and research (Bali et al., 2021). In general, organizational citizenship behaviours are not included in the employee's mission

definitions. In this respect, there are no criminal sanctions if these behaviours are not carried out. There is also no reward in the event of these behaviours (Podsakoff et al., 2009). It is stated that many factors have been effective in demonstrating the organizational citizenship behaviour of employees. In the context of tertiary health institutions, the more people who demonstrate organizational citizenship behaviour, the more benefit the institution will have. A number of employees exhibiting this behaviour will start to feel as if they are in the scope of other employees (Bommer et al., 2003). Apart from the ability of employees to act as organizational citizenship due to their own characteristics, they can also demonstrate organizational citizenship in the context of their organization's behaviours and organizational support (Karaalioğlu, 2019). In this regard, the employee may be inclined to demonstrate organizational citizenship behaviour to institutions that give confidence and support to them. The social support behaviours of the institution can be effective for employees in addressing organizational citizenship behaviour (Nguyen & Nguyen, 2017). Organ (1988) identified five dimensions of organizational citizenship behaviour: conscientiousness, sportsmanship, civic virtue, courtesy, and altruism. These five dimensions cover such organizational behaviours as helping co-workers, following company rules, not complaining, and actively participating in organizational affairs. In this study however, altruism, conscientiousness and courtesy served as the measures of organizational citizenship behaviour.

Several factors have been identified as predictors of organizational citizenship behaviour - job satisfaction and commitment, employee engagement and human resource development climate (HRDC) (Ahmed et al., 2012), but the interest in this study is the role of inter-professional communication on organizational citizenship behaviour. In the management of a serious mental patient, for example, services from different professionals like a psychiatrist, case managers, pharmacists, nurses, physicians, and sometimes occupational therapists work together as a team to achieve the desired result (Anna & Woolley, 2016). As the delivery of healthcare becomes more interconnected, the communication of physicians, nurses, pharmacists, social workers, and other disciplines becomes increasingly important. The World Health Organization (WHO) has linked inter-professional collaboration with better outcomes in infectious disease, non-communicable diseases, family health, humanitarian efforts, and responses to epidemics (Green & Johnson, 2015).

Poor communication amongst team professionals can result in inefficient inter-professional collaboration which might lead to low patients' outcomes. A survey study conducted by Collette et al. (2017) to assess the state of collaboration between 355 nurses and 80 physicians at a non-academic acute care hospital indicated that effective communication is an important determinant for success in collaborative practice amongst healthcare practitioners. Extant studies on the predictors of organizational citizenship behaviour abound, e.g. perceived organizational support (Obiora & Jaja, 2015); organizational justice (Evawere, Eketu & Needorn, 2018); human resource diversity management practices (Omoankhanlen, 2021); impression management (Omoankhanlen & Issa, 2021); psychological contract fulfillment (Omoankhanlen & Yakubu, 2021); and social intelligence (Oshi, Akaibe & Chikwe, 2021). However, there appears to be no empirical study that have examined the relationship between inter-professional communication and organizational citizenship behaviour, especially of tertiary health institutions in South-South region of Nigeria, hence this study fills the

identified contextual and methodological gap by determining the relationship between inter-professional communication and organizational citizenship behaviour of tertiary health institutions in South-South Nigeria, using structural equation modelling.

Statement of the Problem

Despite abundant evidence for the positive effects of inter-professional communication, studies have shown that the uptake of inter-professional collaboration in organizations remains weak and it is also inadequately practiced in healthcare teams, especially in Africa (Bardet et al., 2015; Kates et al., 2011; Kebe et al., 2020; Mitchell et al., 2011). A study done in two Kenyan sub-county hospitals to examine the role of clinical leadership revealed that most clinical heads, nurses in charge, and other mid-level managers have an intimidating leadership style that affects the practice of inter-professional collaboration (Nzinga et al., 2018). Inadequate inter-professional collaboration has been associated with medication errors, patient safety problems, team conflict and patient mortality (Bender et al., 2013; Weinberg et al., 2009). Thus, there is a great need for research identifying variables such as communication in association with inter-professional collaboration, particularly in tertiary health institutions in Nigeria.

In daily clinics practices, poor doctors-nurses communication is generally common (Wang et al., 2018) and evidence from available interactions have shown that medical errors in health care are attributed to poor communication (Tiway et al., 2019). A study in 2008 by Bartlett et al. (2008) concluded that communication problems with patients lead to increased preventable adverse effects which were mostly drug-related. It has been estimated that 27% of medical malpractice is the result of the communication failures. Better communication can reduce medical errors and patient injury (Tiway et al., 2019). Poor communication can result in various negative outcomes, such as decreased adherence to treatment, patients dissatisfaction and inefficient use of resources (Vermeir et al., 2015). This poor communication is considered a barrier to inter-professional collaboration and organizational citizenship behaviour.

Scholars have argued that apart from the ability of employees to act as organizational citizens due to their own characteristics, they can also demonstrate organizational citizenship in the context of their organization's behaviours and organizational climate (Karaalioğlu, 2019). In this regard, the employee may be inclined to demonstrate organizational citizenship behaviour to institutions in a climate that give confidence and support to them. The climate of the institution can be effective for employees in addressing organizational citizenship behaviour (Nguyen & Nguyen, 2017). On this premise, it could be argued that medical workers poor show of citizenship behaviour in tertiary health institutions in a fall out of the aforementioned anomalies bedeviling the sector. It is against this backdrop that this study seeks to determine if inter-professional communication amongst medical workers can help improve organizational citizenship behaviour.

Objectives of the Study

1. Determine the relationship between communication and altruism in tertiary health institutions in South-south Nigeria.

2. Ascertain the relationship between communication and conscientiousness in tertiary health institutions in South-south Nigeria.
3. Examine the relationship between communication and courtesy in tertiary health institutions in South-south Nigeria.

Research Hypotheses

As a guide to the rest of the study, the following null hypotheses are framed:

H₀₁: There is no significant relationship between communication and altruism.

H₀₂: There is no significant relationship between communication and conscientiousness.

H₀₃: There is no significant relationship between communication and courtesy.

Theoretical Framework: Human Relation Theory

Human relations theory is part of the family of organizational theory. Organizational theory is defined as the study of the structure, performance, functioning of an organization as well as the behaviour of individuals and groups within it (Eydman, 2018). Numerous studies in organizational theory have developed working group and team efficiency frameworks. Human relations theory contributes to this study because it puts into consideration individuals and groups' ways of doing things and what influences their behaviours. Human relations theory states that every staff and their behaviours should be taken into consideration while designing an organizational structure (Cooley, 2020). The theory emphasizes social interactions, participative management, and decision-making. It encourages learning and adopting soft business skills like interpersonal communications, team management, leadership, project management that are important for inter-professional collaboration (Cooley, 2020). The theory also involves resolving conflict creatively to help develop new ideas and build stronger working relationships. Human relations theory is very critical for inter-professional collaboration because inter-professional collaboration encompasses key aspects like team function, inter-professional communication, collaborative leadership as well as proper conflict resolution (Bridges et al., 2011). Effective communication and effective inter-professional health care teams are more likely to promote effective inter-professional collaboration. In this study, we drew on human relations theory to postulate that the role of leadership and management, communication, availability of resources and healthcare workers training and development in inter-professional collaboration are important independent factors that are likely to influence inter-professional collaboration amongst doctors and nurses in the outpatient care.

Concept of Inter-Professional Communication

Communication

Poor communication amongst team professionals can result in inefficient inter-professional collaboration which might lead to low patients' outcomes. To improve communication between physicians and nurses and build a team culture, strong leadership is essential. In order to deliver comprehensive, efficient, and patient-centred care, effective communication amongst health professionals is also required (Elligson, 2002; Ushiro & Nakayama, 2010). Team leaders must guarantee that all team members are involved in decision-making (Verhaegh, Seller-Boersma, Simons, Steenbruggen, Geerlings, de Rooij & Buurman, 2017 citing Hale & McNab, 2015). Improving nurses' and physicians' comprehension of their respective techniques and perspectives on nurse–physician communication and collaboration could lead to a better mutual understanding and more effective teamwork. The majority of current literature has focused on the level of collaboration rather than the variables that determine communication and collaboration, and even less on the physicians' or nurses' contribution to communication in the nurse–physician dyad (Matziou, Vlahioti, Perdikaris, Matziou, Megapanou & Petsios, 2014 citing Baker, Egan-Lee, Martimianakis, & Reeves, 2011; Hughes & Fitzpatrick, 2010; Manojlovich & DeCicco, 2007; Onishi, Komi, & Kanda, 2013; Puntillo & McAdam, 2006; Ushiro & Nakayama, 2010; Vaismoradi, Salsali, Esmailpour, & Cheraghi, 2011). According to the literature, inter-professional respect is necessary for a successful collaboration.

According to Kreps (2016), collaboration in health care settings requires open and effective communication as it requires professionals to assume complementary roles and work cooperatively with each other, together, share the responsibility to solve problems and make decisions. Several citations have found that poor communication is a major cause of poor inter-professional collaboration among healthcare workers. Medical errors can occur when there is a lack of communication. These mistakes have the potential to result in serious damage or patient death. Medical errors, particularly those resulting from a failure to communicate, are a widespread concern in today's health-care settings (O'Daniel & Rosenstein, 2008).

Effective communication, on the other hand, can result in positive outcomes including improving the flow of information, improved safety, effective involvement, and collaborative working (Vermeir et al., 2015). Effective communication and information flow are essential to patient care. An inter-professional team that considers the significance of communication is more likely to have positive and better collaborative results. In addition to improving inter-professional collaboration, communication between health care professionals increases team member's awareness of different types of knowledge and skills (Kreps, 2016). Healthcare professionals must therefore engage and communicate with other professionals to ensure that the patient receives quality care. Due to past power ties and interpersonal interactions, empirical and research data imply that unresolved tensions influence cooperation dynamics and collaboration. As a result, exposing these hidden discourses can help to strengthen inter-professional collaboration (Hart, 2011).

Concept of Organizational Citizenship Behaviour

Organizational citizenship behaviour (OCB) is behaviour of workers that goes further than their formal job necessity and that is not paid for or pleased by the organization. It consists of the behaviour that supports others, voluntarily doing extra jobs, obeying rules, and the office procedure (Nugroho, et al., 2020). Employees that engage in OCB do it not for pay since it is not formally recognized. They do it out of their own volition and need to ensure the accomplishment of their organization. Hence, for an organization to succeed, it needs some workers that are dedicated to go afar formally recognized and appreciated effort. Some researchers speculate that organizations cannot stay alive or prosper without employees exhibiting extra role behaviours as the survival of any organization is deeply influenced by it (Christiansen & Chandan, 2017; Organ, 2018). Organizations in their effort to remain in the market must ensure that employees display or exhibit positive behaviours or disposition that will position the organization for competitive advantage (Ojebola et al., 2020).

Organ (1988) defines OCB as individual behaviour that is discretionary, not directly or unequivocally recognized by the formal reward system, plus that in the collective promotes the effectual functioning of the organization. With OCB, the emphasis is on the discretionary attitudes and behaviours of workers that are beyond the call of obligation (Podsakoff et al., 2014). OCBs are the behaviours that are voluntary to employees which are not part of employees' prescribed functions (Oladipupo, 2016). Thus, the behaviour is rather a matter of personal choice, such that its omission is not generally understood as punishable nor rewarding (Ojebola et al., 2020). They are discretionary, beyond-role behaviours and gestures that are not explicitly recognized by the formal reward system but are considered important in promoting organizational effectiveness (Organ, 2018). It is informal; that is, it is not recognized by the formal structures of a firm, and hence, not rewarding, it is desirable for the firm to progress and make headway in the ever competitive business environment. Farooqui (2012) states that it is an informal kind of behaviour that is desirable by the organization. It promotes the goals of the organization by adding to its social along with psychological environment (Organ, 1997; Rotundo & Sackett, 2002). It serves to promote the general well-being of the organization (Kandeepan, 2016). It contributes to the effective functioning of a firm (Nadim et al., 2016). The consequences of OCB are found in the positive effects it has on the company's overall performance. Sridhar and Thiruvankadam (2014) aver that OCB is significant because it support the social, organizational and psychological components to accomplish both individual and organizational performance. It fosters cooperation among co-workers, work groups, firm's effectiveness, efficiency and overall performance of the organization (Akturan & Çekmecelioglu, 2016; Acaray & Akturan, 2015). It generally includes pro-social behaviours, including punctuality, helping others and innovating and volunteering (Organ, 1988).

Measures of Organizational Citizenship Behaviour

Altruism

Altruism is a construct by Organ (1988) viewed as a helping behaviour that involves voluntary assistance to others with work related task. For instance a capable employee who decides to put a new employee through in work rules and procedure. Khalid and Ali (2005) and Jahangir, Akbar and Haq (2004) define altruism as voluntary behaviour that includes helping others concerning an organizational assignment or a challenge. Podsakoff et al., (2000) viewed altruism as helping behaviours that employees engage in order to assist others in the organization, as well as those behaviours aimed at preventing conflict. In other words, it includes the behaviour that is directly and intentionally aimed at helping a specific person in face-to-face situations (Smith, Organ, & Near, 1983).

Altruistic behaviour is shaped or influenced by the environment or needing individual effort (Kim & Seock, 2019; Preston, 2022). Generally speaking, individuals' differences in behaviour are more likely to be caused by intra-individual factors such as motivation rather than by the environment when they are faced with the same difficult situation or challenging event (Cho et al., 2022). In particular, among the factors at the individual level, cognition and emotion can have an impact on an individual's altruistic behaviour. Belief in a just world (BJW) as a cognition factor can reflect an individual's attitude towards the environment and, thus, may increase his altruistic behaviour (Cui, 2016; Zhang et al., 2021). What is more, to induce altruistic behaviour requires the individual having the ability to empathize. If the individual does not have the ability to empathize, it is difficult for altruistic behaviour to occur (Feng et al., 2021). Therefore, paying attention to the effect of intra-individual factors on individuals' altruistic behaviours may be helpful to promote the development of their prosocial behaviours.

Conscientiousness

Conscientiousness which denotes going and doing things above minimum requirement suitable in organizational norm which is similar to behaviours labeled as general compliance by Smith et al. (1983). Conscientiousness expresses certain role behaviours exhibited by an employee which exceed minimum requirement (Chiun et al, 2009). In other words, it is a sincere devotion to the organization, as well as respect for the rules of the organization beyond the organization's expectations (Organ, 1988). An employee who seeks to know if work is going on smoothly while on leave is termed as a conscientious worker (Podsakoff et al., 2000). It can also be said to be the concern of an employee towards the rules and regulations of the organization for the genuine benefit of the organization.

Conscientiousness is about how people control, regulate, and direct their impulses (Toegel & Barsoux, 2012). Relatably, conscientiousness is about describing task-directed and goal-directed behaviours (John & Srivastava, 1999). Goldberg (1993) postulates that conscientiousness includes traits such as organisation, thoroughness and reliability which are traits favoured in the working world. Individuals with conscientiousness have positive and negative impacts at work. They were shown to suffer lower levels of burnout, enjoy better work life balance, and demonstrate a higher tolerance for stress (Wilmot & Ones, 2019). High levels of conscientiousness individuals tend to

display self-discipline, act dutifully and strive for achievement (John & Srivastava, 1999). Additionally, they have high commitment and are willing to spend extra effort and energy on their job (Carles & Bernath, 2007). Due to their high attentiveness at work, they have the tendency of being stubborn, lacking flexibility and reliability (Toegel & Barsoux, 2012).

Courtesy

Courtesy refers to the gestures that help others to prevent interpersonal problems from occurring, such as giving prior notice of the work schedule to someone who is in need, consulting others before taking any actions that would affect them (Organ, 1990). Courtesy or gestures are demonstrated in the interest of preventing creations of problems for co-workers (Organ, 1997). For e.g. leaving the copier or printer in good condition for other workers' use is an example of courtesy at work (Organ, Podsakoff & MacKenzie, 2006). A courteous employee prevents managers from falling into the pattern of crisis management by making a sincere effort to avoid creating problems for co-workers (Podsakoff and MacKenzie, 1997).

Courtesy includes behaviours, which focus on the prevention of problems and taking the necessary step so as to lessen the effects of the problem in the future. In other words, courtesy means a member encourages other workers when they are demoralized and feel discouraged about their professional development. Early research efforts have found that employees who exhibit courtesy would reduce intergroup conflict and thereby diminishes the time spent on conflict management activities (Podsakoff et al., 2000). Courtesy includes actions demonstrating special attention to establishing relationships characterized by kindness and co-operation, for example trying to avoid arguments and being willing to keep other people's best interests at heart (Ozturk, 2010). Courtesy refers to continuous interaction among organization members, who work for shared purposes of the organization, and collective, positive behaviours such as communicating with the other members the work accomplished, and decisions made. Creating an environment in which all parties affected by decisions could contribute to the decision-making process will open channels for required communication which is vital (Bingöl, 2003).

Courtesy has to do with positive relationship during co-operational processes in an organization which helps in reducing and preventing work-related issues that involve individual problems through positive attitude. This is as Podsakoff et al. (2000) stated that assessing and doing what is best for an employee can help in strengthening courtesy behaviour among the organizational staff. Courtesy could be said to be the gesture that help others in preventing interpersonal problems from occurring, such as giving prior notice of the work schedule to someone who is in need, consulting others before taking any actions that could disrupt others (Organ, 1990).

Empirical Review

Ukwuije and Basse (2019) examined the relationship between collaboration strategy and organizational citizenship behavior in Oil and Gas Companies in Rivers State. The study adopted a cross sectional survey design. Primary data was collected using self-administered structured questionnaire. The population for the study was 245 employees of 7 selected Oil and Gas Companies in Rivers State. The sample size of 152 was determined using the Taro Yamane sample size determination formula. The reliability was achieved using the Cronbach Alpha Coefficient with all items being above the 0.70

acceptance benchmark set by Nunnally (1970). After data cleaning, data for 124 respondents were suitable to be used for data analysis. The Spearman Rank Order Correlation Coefficient was used for testing the hypotheses. The study finding revealed that there is a significant relationship between collaboration strategy and organizational citizenship behaviour in Oil and Gas Companies in Rivers State. The study further revealed collaboration strategy had significant relationship with all the measures of organizational citizenship behaviour-conscientiousness, courtesy and civic virtue. The study thus recommended that top managers of oil and gas industry must try as much as possible to collaborate with employees in order to achieve harmony at work place.

Ibiyeomie's (2021) study surveys leadership trust and organisational citizenship behaviour (OCB) of public universities in River's state, Nigeria. The population comprises 4022 non-academic staff of the three-public university in Rivers State and the sample size is 351. A simple random sampling technique was used, and the data was analysed with Pearson product-moment correlation coefficient statistical tools. The findings revealed that integrity, competence, and dependability correlates to organisational citizenship behaviour. Fostering integrity, dependability, and competence is recommended to enhance altruism and loyal boosterism.

Hayfron et al. (2023) address the importance of human resource development (HRD) and its resultant climate in an organization. Specifically, the study examines the cause-effect relationship between HRD climate and organisational citizenship behaviour (OCB), as well as the role of organisational trust in this relationship. The study is underpinned by the social exchange theory. The study adopted the quantitative research approach and the cross-sectional survey design in data collection. Two hundred seventy-four employees were sampled from the food manufacturing sector, out of which 219 responded. Data was entered using SPSS v.23 and analysed with Pearson's Product correlation, hierarchical regression analysis and independent t-test. The mediation effect was analysed using Process Macro v 3.5 for SPSS. Results indicate that HRD climate has a positive effect on OCB, hence, a predictor. Also, HRD climate was observed to be a predictor of organisational trust and that organisational trust mediates the cause and effect relationship between HRD climate and OCB. This study recommends that management continues to invest in the development of employees as it goes a long way to ensure the survival and growth of the organisation.

Devi et al. (2021) noted that communication play a vital role at all levels of organization. It affects employee commitment level, citizenship behaviour and job satisfaction levels of employees. Thus, the purpose of the study was to understand and assess how organizational communication effects organizational citizenship behaviour and Job satisfaction levels. Data was collected from 85 software employees working at different levels by using close ended questionnaire. It was concluded that organizational communication has direct and positive relationship with employee Job satisfaction among software employees. The analysis further proven that organizational citizenship behaviour as a mediator further weakens the relationship between organizational communication and job satisfaction. Although much previous research is existed in association of organizational communication, Organizational citizenship behaviour and job satisfaction, but this is of first known attempt to assess mediating effect of OCB in relation with other variables.

Methodology

This study applied a cross-sectional survey research design. The target population for this study is the entire public tertiary health institutions in South-South Nigeria. But the accessible population comprised of nurses and doctors of five teaching hospitals in five states in South-South Nigeria. Thus, medical personnel from teaching hospitals are in better position to offer objective responses on issues of inter-professional collaboration as it affects organizational citizenship behaviour. Information obtained from the various hospitals revealed that there are a total of four hundred and sixty-four (454) doctors and nurses in the teaching hospitals studied. The sample size for this study was determined using the Krejcie and Morgan Sample Size Determination Table, which is estimated to be 208 as the sample size from the population size of 454. The data used for this study was basically obtained from respondents with the use of a structured questionnaire. The data were analyzed using different statistical methods and regression analysis as undertaking using Structural Equation Modelling.

Results and Discussions

Measurement Model

We used the reflective indicator, and reflective measurement model approach. Items on the survey which were predicted to measure a specific construct were grouped and measurement model analyses were carried out with the Amos Version 22.0.0 program. The predictor variable is inter-professional communication, while the criterion variable is organizational citizenship behaviour. In all, three construct measures were developed from the survey (1) Communication, (2) Altruism, and (3) Conscientiousness. The Measurement Model is a two-step process. Step one involves the examination of the goodness of fit indices after the indicators have been loaded into the latent factor/construct. The second step involves the interpretation of the parameter estimates if the goodness of fit indices meet the criteria suggestions provided in Hu and Bentler (1999), which states that acceptable model fit is defined by the following criteria: RMSEA (≤ 0.6), SRMR (≤ 0.8), CFI (≥ 0.95), TLI (≥ 0.95), GFI (≥ 0.90), and AGFI (≥ 0.90).

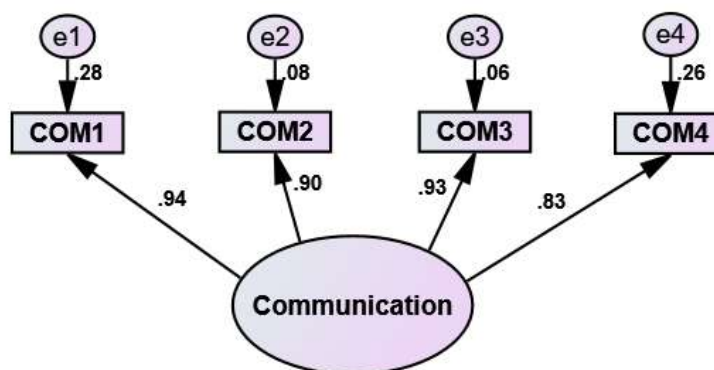


Figure 1: First Order Measurement Model of Communication

Table 1: First Order Measurement Model Analysis of Communication

Model	Chi-Square(df), Significance	NFI	TLI	CFI	RMSEA	Variable	Factor Loading Estimate	Error VAR
Communication	(5df) =36.26, P<0.002	1.05	1.03	1.00	0.08	COM1	0.943	0.28
						COM2	0.903	0.08
						COM3	0.934	0.06
						COM4	0.832	0.26

Source: Amos Version 22.0.0 output on research data, 2023.

The indicators COM1, COM2, COM3, and COM4 had factor loadings of 0.943, 0.903, 0.934 and 0.832 respectively and error variances of 0.28, 0.08, 0.06, and 0.26 respectively. The average variance extracted (AVE) from the construct is 0.817. Thus, $AVE = 0.817 \geq 0.5$. Estimated standardized parameters were statistically significant. These parameters are consistent with the position that these are reliable indicators of the construct of communication. The results of the goodness of fit indices indicated acceptable fit to the data for one-factor model (chi-square (5df)=36.26, $p < 0.002$, RMSEA=0.08, CFI=1.00, NFI=1.05, TLI=1.03). Table 4.20 summarized the goodness of fit indices, the factor loading estimates and the error variances. Factor loading estimates revealed that all four indicators were related to latent factor communication and were statistically significant. According to Brown (2006), completely standardized factor loadings of 0.3 (or 0.4) and above are commonly used to operationally define a “salient” factor loading.

First Order Measurement Models for Organizational Citizenship Behaviour

The organizational citizenship behaviour factor has three sub-scales. The two sub-scales are: (1) altruism, and (2) conscientiousness. The altruism sub-scale likert-response measured excellent value, conformance to specifications, and meeting or exceeding customers' expectations.

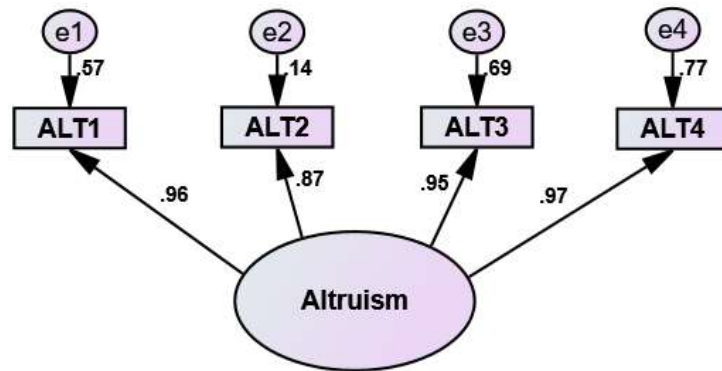


Figure 2: First Order Measurement Model of Altruism

Table 2: First Order Measurement Model Analysis of Altruism

Model	Chi-Square(df), Significance	NFI	TLI	CFI	RMSEA	Variable	Factor Loading Estimates	Error VAR
Altruism	(2df)=66, P<0.000	1.02	0.99	1.01	0.11	ALT1	0.964	0.57
						ALT2	0.872	0.14
						ALT3	0.954	0.69
						ALT4	0.973	0.77

Source: Amos Version 22.0.0 output on research data, 2023

The indicators ALT1-ALT4 had factor loadings of 0.964, 0.872, 0.954 and 0.973 respectively and error variances of 0.57, 0.14, 0.69 and 0.77 respectively. The average variance extracted (AVE) from the construct is 0.887. Thus, $AVE=0.887 \geq 0.5$. All freely estimated standardized parameters were statistically significant. The results of the goodness of fit indices indicated overidentified fit to the data for one-factor model (chi-square (2df)=66, $p<0.000$, CFI=1.01, NFI=1.02, TLI=0.99, RMSEA=0.11). Table 4.24 summarized the goodness of fit indices, the factor loading estimates and the error variances. Factor loading estimates revealed that the four indicators were strongly related to latent factor altruism and were statistically significant. These parameters are consistent with the position that these are reliable indicators of the construct of altruism.

The second sub-scale of organizational citizenship behaviour is conscientiousness. The sub-scale had four items. The four items were combined to ensure conscientiousness which entails providing the right product at the right quantity, at the right time, in the right place, from the right source, with the right service, and at the right price.

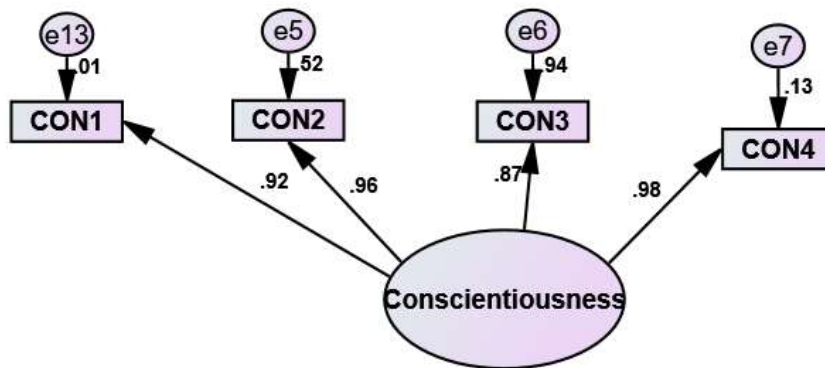


Figure 3: First Order Measurement Model of Conscientiousness

Table 3: First Order Measurement Model Analysis of Conscientiousness

Model	Chi-Square(df), Significance	NFI	TLI	CFI	RMSEA	Variable	Factor Loading Estimates	Error VAR
Conscientiousness	(2df) =19, P<0.005	0.97	0.99	0.98	0.16	CON1	0.922	0.01
						CON2	0.962	0.52
						CON3	0.874	0.94
						CON4	0.982	0.13

Source: Amos Version 22.0.0 output on research data, 2023

The indicators CON1-CON4 had factor loadings of 0.922, 0.962, 0.874 and 0.982 respectively and error variances of 0.01, 0.52, 0.94 and 0.13 respectively. The average variance extracted (AVE) from the construct is 0.876. Thus, $AVE=0.876 \geq 0.5$. These parameters are consistent with the position that these are reliable indicators of the construct of conscientiousness. The figure 4.10 above, depicts the complete specification of the one factor model. The measurement model contained no double-loading and all measurement error was presumed to be uncorrelated. The model was overidentified with two degree of freedom (2df). Each of the goodness of fit indices suggested that one factor model fit the data, (chi-square (2df) =19, $p<0.005$, CFI=0.98, NFI=0.97, TLI=0.99, RMSEA=0.16).

Factor loading estimates revealed that the four indicators were strongly related to latent factor conscientiousness and were statistically significant. According to Brown (2006), completely standardized factor loadings of 0.3 (or 0.4) and above are commonly used to operationally define a “salient” factor loading.

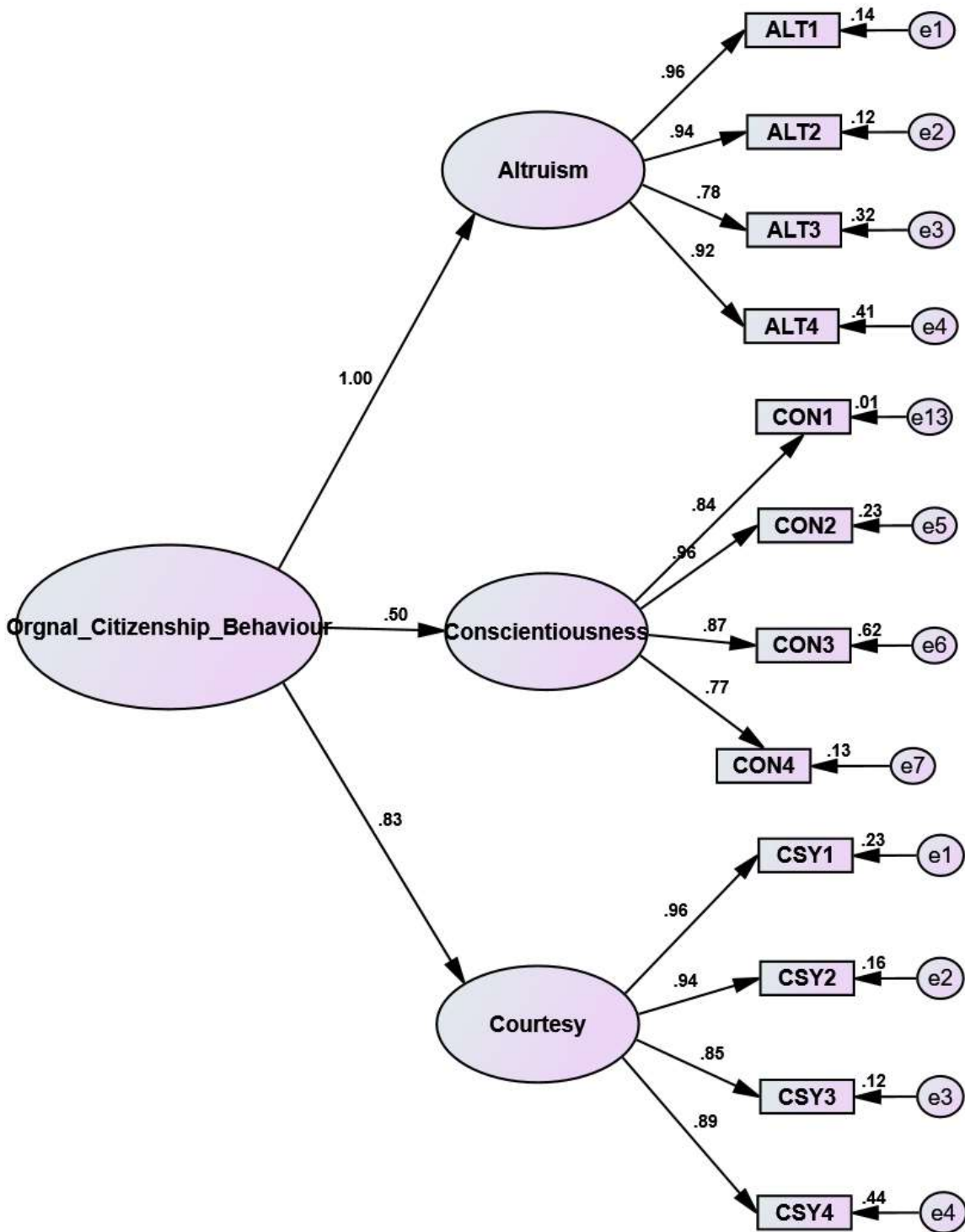


Figure 4: Second Order Measurement Model of Organizational Citizenship Behaviour

Table 4: Second Order Measurement Model Analysis of Organizational citizenship behaviour

Model	Chi-Square(df), Significance	NFI	TLI	CFI	RMSEA	Variable	Factor Loading Estimates	Error VAR
Organizational citizenship behaviour	(19df) =503, P<0.000	0.99	0.97	0.95	0.49	Altruism	1.00	0.00
						Conscientiousness	0.50	0.00
						Courtesy	0.83	0.23

Source: Amos Version 22.0.0 output on research data, 2023

The second-order measurement model was overidentified with nineteen degree of freedom (19df). Guided by suggestions provided in Hu and Bentler (1999), acceptable model fit was defined by the following criteria: RMSEA (≤ 0.6), CFI (≥ 0.95), TLI (≥ 0.95), and NFI ≥ 0.95 . Multiple indices were used because they provide different information about model fit (i.e. absolute fit, parsimony correction and comparative fit). These indices provide a more reliable and conservative evaluation of solution; when used together. According to Brown (2006), completely standardized factor loadings of 0.3 (or 0.4) and above are commonly used to operationally define a “salient” factor loading.

Each of the goodness of fit indices of second order measurement model of organizational citizenship behaviour, suggested mild fit to the data (chi-square (19df) = 503, RMSEA=0.49, CFI=0.95, NFI=0.99, and TLI = 0.97). However, the p value, $p < 0.000$ indicated acceptable fit, as the model was over-identified with nineteen degree of freedom. Inspection of the modification indices showed that adding a covariance between the error terms for altruism, conscientiousness and courtesy improved the fit. Factor loading estimates revealed that the three sub-constructs were strongly related to latent factor organizational citizenship behaviour and were statistically significant. According to Brown (2006), completely standardized factor loadings of 0.3 (or 0.4) and above are commonly used to operationally define a “salient” factor loading. The sub-scales: altruism, conscientiousness and courtesy, had factor loadings of 1.00, 0.504 and 0.832, respectively and error variances of 0.00, 0.00 and 0.23, respectively. The average variance extracted (AVE) from the construct is 0.647. Thus, $AVE=0.647 \geq 0.5$. These parameters are consistent with the position that these are reliable sub-scales of the latent construct of organizational citizenship behaviour.

Structural Models

We used the resursive structural model approach to predict the dependent variable. Parameters of structural equation modelling when means are not analyzed, include (1)

direct effects on endogenous variables from other variables, either exogenous or endogenous; and (2) the variances and covariances of exogenous variables. This means that the model has a covariance structure only, not also a mean structure. This model, adopted the multiple-indicator measurement approach, using the reflective indicators, reflective measurement model and recursive structural model.

Directionality: The specification of the model directionalities presumed a causal effect or effect priority, using the following conditions noted by Pearl (2000, 2009): (1) Temporal precedence. The presumed cause (e.g. X) must occur before the presumed effect (e.g. Y). (2) Association. There is an observed covariation; this is, variation in the presumed cause must be related to that in the presumed effect. (3) Isolation. There are no other plausible explanations (e.g. extraneous variables) of the covariation between the presumed cause and the presumed effect. (4) Correct effect priority. The direction of the causal relation is correctly specified. That is, X indeed causes Y ($X \rightarrow Y$) instead of the reverse ($Y \rightarrow X$). (5) Known distribution form. The forms when dealing with probabilistic causality instead of deterministic causality, the forms of the distributions of the parameters are specified.

Model Complexity: This concerns the total number of parameters that can be estimated. This total is limited by the number of observations available for the analysis. The number of observations which is the literal number of entries in the sample covariance matrix in lower diagonal form, is calculated with the simple rule: if P is the number of observed variables, then the number of observations equals $(P(P+1))/2$, when means are not analyzed. The difference between the number of observations and the number of its freely estimated parameters, is the model degrees of freedom. If the degree of freedom is <0 , then the model is underidentified. If the degree of freedom is $=0$, then the model is just-identified. If the degree of freedom is >0 , then the model is over-identified.

(1) A just-identified structural model is identified and has the same number of free as observations ($df=0$). (2) An over identified structural model is identified and has fewer free parameters than observations ($df>0$). (3) An underidentified structural equation model is one for which it is not possible to uniquely estimate all of its parameters, with more free parameters than observations ($df<0$). The structuralization was performed based on Baron and Kenny (1986) four stage hypothesis about mediation effect. However, the mediation analyses were beyond Baron and Kenny (1986). First, we assessed the direct relationship between the exogenous constructs and endogenous construct ($X \rightarrow Y$).

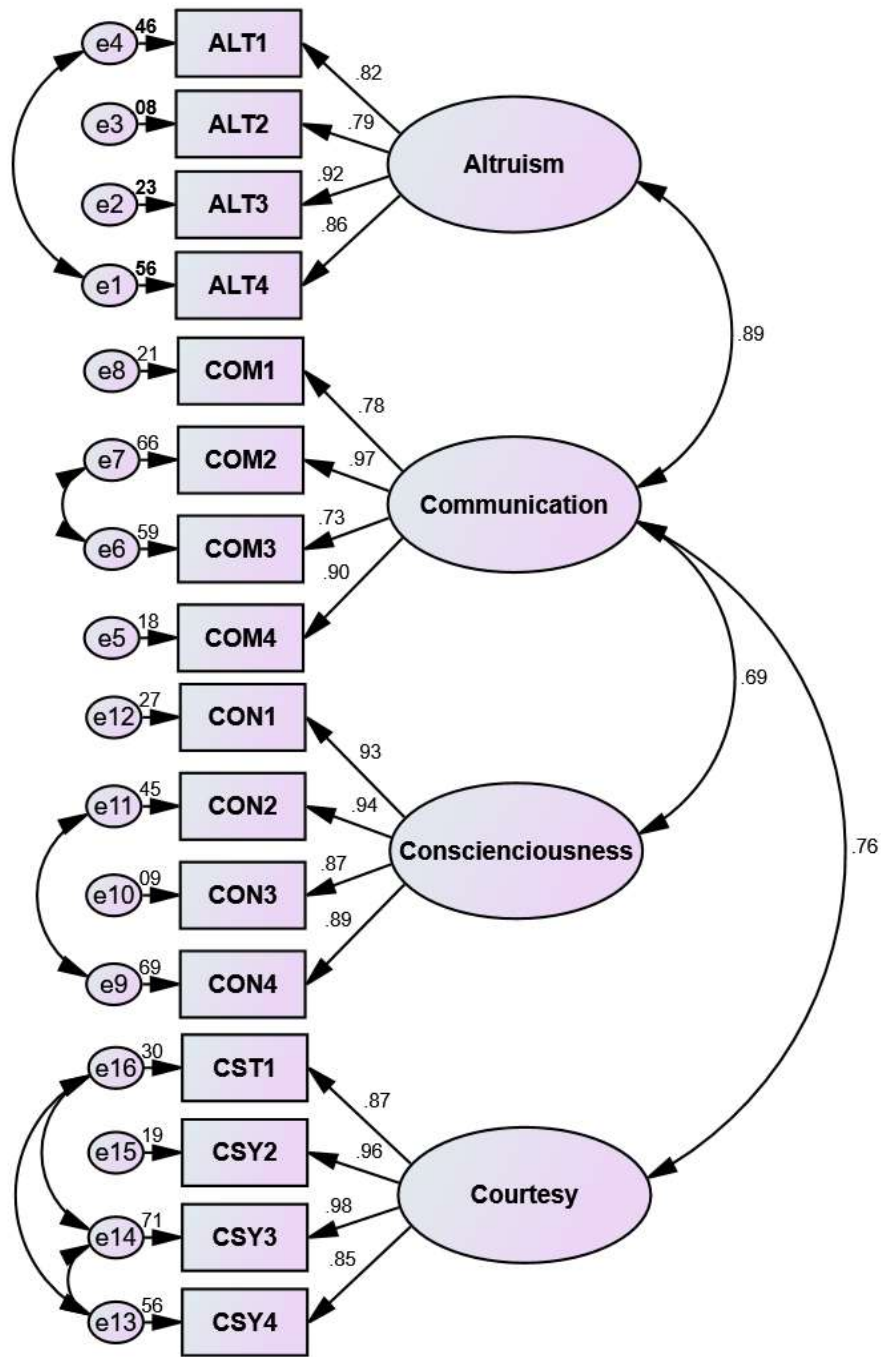


Figure 4.14: Structural Model of Hypotheses 1, 2 and 3

Test of Hypotheses

Result of Standardized and Unstandardized Regression Estimate of the Model.

S/N	Hypotheses	Relationship	Std. Beta	Actual Beta	S.E	C.R	P	Remark
1	COM →ALT (Hypothesis 1)	Communication and Altruism	0.832	0.373	0.35	3.14	0.002	Not Supported
2	COM →CON (Hypothesis 2)	Communication and Conscientiousness	0.756	7.091	0.20	3.07	0.001	Not Supported
3	COM →CSY (Hypothesis 3)	Communication and Courtesy	0.634	2.947	0.41	3.09	0.000	Not Supported

Source: Amos Version 22.0.0 output on research data, 2023

4.1.9: Interpretation of Results (Inferential Analysis)

This section gives attention to the interpretation of the results concerning the inferential data analysis. Nine hypotheses were analysed in three clusters, while the hypothesis concerning the effect of the moderating variable on the two constructs (the tenth hypothesis) was analysed separately. The analysis was based on significance criteria of $\beta > 0.3$ (Brown, 2015); $C.R. > 0.7$ (Hair et al., 2014) and $p < 0.05$. Results on each cluster of the hypothesis, including the moderating effect of Organizational climate, are summarized in table formats. These tables will serve as reference points for the interpretation of the results.

Communication and Organizational Citizenship Behaviour

Presented in table 4.31 below is the result for the tests for the hypotheses of the study. The first set of hypotheses (hypotheses 1-3) assessed the extent to which communication impacts on the measures of organizational citizenship behaviour. They are listed as follows:

- H₀₁:** There is no significant relationship between communication and altruism of tertiary health institutions in South-south Nigeria.
- H₀₂:** There is no significant relationship between communication and conscientiousness of tertiary health institutions in South-south Nigeria.
- H₀₃:** There is no significant relationship between communication and courtesy of tertiary health institutions in South-south Nigeria.

Table 4:31: Summary of Result on the Tests of Hypotheses H₀₁, H₀₂, and H₀₃

S/N	Hypotheses	Relationship	Std. Beta	Actual Beta	S.E	C.R	P	Remark
1	COM →ALT (Hypothesis 1)	Communication and Altruism	0.832	0.373	0.35	3.14	0.002	Not Supported
2	COM →CON (Hypothesis 2)	Communication and Conscientiousness	0.756	7.091	0.20	3.07	0.001	Not Supported
3	COM →CSY (Hypothesis 3)	Communication and Courtesy	0.634	2.947	0.41	3.09	0.000	Not Supported

The first hypothesis (H₀₁), states that there is no significant relationship between communication and altruism. However, table 4.31 indicates that communication has a positive and significant relationship with altruism of hospitals in South-south Nigeria. ($\beta=0.832$, $r=0.373$, $p<0.005$). Thus, H₀₁ was not supported. The evidence presents communication as a strong predictor of altruism of tertiary health institutions in South-south of Nigeria. Statistically, it shows that when communication goes up by 1 standard deviation, altruism goes up by 0.832 standard deviation. In other words, when communication goes up by 1, altruism goes up by 83.2%. The regression weight for communication in the prediction of altruism is significantly different from zero at the 0.005 level (two-tailed).

The second hypothesis (H₀₂), states that there is no significant relationship between communication and conscientiousness. However, table 4.31 also suggests that communication has a positive and significant relationship with conscientiousness of hospitals in South-south of Nigeria ($\beta=0.756$, $r=7.091$, $p<0.005$). Thus, H₀₂ was not supported. This means that the presence of communication, in tertiary health institutions in South-south of Nigeria, will lead to conscientiousness. Statistically, it shows that when communication goes up by 1 standard deviation, conscientiousness goes up by 0.756 standard deviation. In other words, when communication goes up by 1, conscientiousness goes up by 75.6%. The regression weight for communication in the prediction of conscientiousness is significantly different from zero at the 0.005 level (two-tailed).

The third hypothesis (H₀₃), states that there is no significant relationship between communication and courtesy. However, table 4.31 also suggests that communication has a positive and significant relationship with courtesy of hospitals in South-south of Nigeria ($\beta=0.634$, $r=2.947$, $p<0.005$). Thus, H₀₃ was not supported. This means that the presence of communication, in tertiary health institutions in South-south of Nigeria, will lead to courtesy. Statistically, it shows that when communication goes up by 1 standard deviation, courtesy goes up by 0.634 standard deviation. In other words, when communication goes up by 1, courtesy goes up by 63.4%. The regression weight for

communication in the prediction of courtesy is significantly different from zero at the 0.005 level (two-tailed).

These outcomes present communication as a significant predictor of organizational citizenship behaviour of tertiary health institutions in South-south Nigeria. Thus all three null hypothetical statements of no significant relationships between communication and the measures of organizational citizenship behaviour are not substantiated, based on the lack of statistical evidence to show otherwise.

Discussion of Findings

The outcomes of the study reveals that there is a significant positive correlation between inter-professional collaboration and organizational citizenship behaviour, and that organizational climate moderates the relationship between the both variables.

Inter-Professional Communication and Organizational Citizenship Behaviour

The outcome of the analysis revealed a significant positive association between communication and organizational citizenship behaviour. This is in alignment with extant studies. For instance,

According to Shweta and Srirang (2010), the factors that influence OCB include: individual disposition and individual motivation, group cohesiveness, satisfaction, member attitude (organizational commitment), and interpersonal communication. Based on previous studies, Anam (2017) noted that there are several factors that can affect OCB, including factors of interpersonal communication, organizational commitment, and job satisfaction. Nofia et al. (2019) noted that communication activities are factors that influence organizational citizenship behaviour. They noted that this type of communication is considered the most effective in an effort to change the attitudes, opinions or behaviour of a person. In interpersonal communication there is not only one-way communication, but also reciprocal or two-way communication occurs. The members are expected to create quality interpersonal communication so that the relationship is more effective, because through effective and quality interpersonal communication can strengthen members' positive attitudes of organizational citizenship behaviour (Nofia et al., 2019). Based on the research by Anam (2017), interpersonal communication has a positive and significant effect on Organizational Citizenship Behaviour (OCB). The increasing practice of communication in an organization will increase organizational citizenship behaviour in a better direction. Interpersonal communication is very potential to carry out instrumental functions as a tool to influence or persuade other people.

In a meta-analytical review of attitudinal and dispositional predictors of citizenship behaviour, Organ and Ryan (1995) concluded that job attitudes such as job satisfaction, perceived fairness, organizational commitment, and leader supportiveness are robust predictors of citizenship behaviour. Fisher (2003) argue that citizenship behaviour is an aspect of job performance, therefore, since organizational communication has been found to influence job performance (Goris, 2007; Koys, 2001), it then means organizational communication has an influence on citizenship behaviour. The study of citizenship behaviour is hinged on social exchange theory which argues that people reciprocate the advantages they receive from their organization (Kandlousi et al., 2010). It is therefore worthy to conclude that employees who are satisfied with the communication process in

their organization will try to reciprocate by engaging in citizenship behaviour (Bolino, 1999).

Conclusions

Consequent upon the findings from the results and discussions, with reference to the aim and objectives of the study, we conclude that inter-professional collaboration drives organizational citizenship behaviour of tertiary health institutions in South-south Nigeria. We therefore conclude that inter-professional communication may significantly enhance altruism, conscientiousness and courtesy of tertiary health institutions in South-south Nigeria,

5.4 Recommendations

The findings of the study revealed that the measures communication has significant positive relationship with the organizational citizenship behaviour of tertiary health institutions in South-south Nigeria. Thus, in line with this, the following recommendations are made:

- i. Health institutions should prioritize communication training for healthcare professionals. This can be achieved by developing and implementing communication training programmes that focus on enhancing communication skills, such as active listening, empathy, and effective feedback.
- ii. Health institutions should implement regular communication and feedback mechanisms to enhance conscientiousness among healthcare professionals. This can be achieved by establishing a regular system of communication and feedback among healthcare professionals, where they can provide feedback on their colleagues' performance and receive feedback on their own performance.
- iii. Health institutions should develop and implement a courtesy campaign in their institutions. The campaign can include training programs and workshops that focus on enhancing courteous and respectful communication among healthcare professionals.

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