

*Original Research Article***An investigation of the effects of organisational communication on work outcomes within agriculture research institutes in Nigeria**

Oluwatoyin Aduke **Oso**¹, Okanlade Adesokan **Lawal-Adebowale**¹, Remi Rebecca **Aduradola**², James Kehinde **Adigun**¹

¹*Department of Agricultural Extension and Rural Development, College of Agricultural Management and Rural Development, Federal University of Agriculture, Abeokuta, P.M.B 2240, Nigeria*

²*Department of General Studies, College of Agricultural Management and Rural Development, Federal University of Agriculture, Abeokuta, P.M.B 2240, Nigeria*

Correspondence to:

O. A. Oso, Department of Agricultural Extension and Rural Development, College of Agricultural Management and Rural Development, Federal University of Agriculture, Abeokuta, P.M.B 2240, Nigeria.

E-mail: mrsoaoso@gmail.com, phone: +2348169476319

Abstract

The study investigated the effects of organisational communication on work outcomes (job satisfaction, affective commitment and quit-intentions) of agriculture research personnel from six research institutes in Nigeria. Further, the mediational role of job satisfaction was determined among the constructs. Simple random sampling technique was used to elicit information from 209 researchers of the selected research institutes. Data were collected through a well-structured questionnaire and analysed using hierarchical regression and Sobel tests. Results obtained from hierarchical regression analyses indicated that organisational communication was related to job satisfaction ($b = 0.18$, $P < 0.01$), affective commitment ($b_1 = 0.20$, $P < 0.01$) and quit-intentions ($b_1 = -0.18$, $P < 0.01$). Sobel test indicated that job satisfaction partially mediated the organisational communication-affective commitment relationship ($Z = 5.42$, $P < 0.05$). Similarly, job satisfaction was a partial mediator of the organisational communication – quit-intention relationship ($Z = 4.13$, $P < 0.05$). This is an indication that increased organisational communication fosters personnel's satisfaction with job, improves affective commitment and reduces intents of quitting the organisation. Evidence of partial mediation revealed that job satisfaction may not be the only mediator of the predictor-criteria linkages.

Keywords: affective commitment, job satisfaction, organisational communication and quit-intention.

INTRODUCTION

Organisations are social units that congregate for production, formed by individuals who have different views and knowledge to reach a common goal. From a wider perspective, organisations do not exist only to provide intra-organisational cooperation and common sense for production (Hassan, 2011), they are also trying to establish relationships with the external world and adapt dynamic, competitive and uncertain conditions by strategising the information they gained from their environment to information processing centre of the organisation. They can also be described as systems which is affected by their environment, have a structure that has both formal and informal elements (Armstrong, 2009). In this context, communication is a vital point in organisations and so, no organisation can exist without it. If there is no communication, employees cannot know what their co-workers are doing; management cannot receive information

inputs, while supervisors and team leaders cannot give instructions (Newstrom, 2011). Moreso, co-ordination of work becomes impossible, and the organisation will collapse for lack of it. An organisation that cannot create effective communication would stagger like a ship without a steer. As such, effective communication helps organisations to strengthen the employees in reaching organisational goals (Hindi et al., 2004).

Communication at organisational level helps to transfer organisational objectives and goals to employees and intra-organisational groups. In the same way, it enhances the sharing of organisational values and beliefs among employees; and the exchange of knowledge and opinions within the organisation (Demirel, 2009).

Organisational communication is defined as “transmitting news about the work from organisation to employees and through employees” (Phattanacheewapul and Ussahawanitchakit, 2008;

Chen et al., 2005). Recent studies about communication within the organisation show that communication has positive correlation with many organisational outputs like organisational commitment, performance, organisational citizenship behaviours, and job satisfaction. In contrast communication failure may cause functionless results like stress, job dissatisfaction, low trust, decrease in organisational commitment, severance intention, and absence (Malmelin, 2007) and this can affect organisation's efficiency negatively (Zhang and Agarwal, 2009).

The agricultural sector is essential for the economic development and poverty alleviation drive of any nation. This is because it does not only feed the entire population of the country but also provide raw materials to the agro-allied industries (Gravlee, 2009). Nwanze (2010) asserted that there is a growing recognition of small-holder farmers and rural communities as crucial elements in the solution to the challenge posed by food insecurity and poverty in Nigeria. Farmers should therefore be helped to produce quality food in sufficient quantity which can only be achieved by the development of new technologies and innovations via agriculture research institutes.

If any meaningful success is to be recorded in research institutes, the personnel, who are major stakeholders, should be motivated for optimum performance. With greater expectations from the workforce, the organisation has an important role to play in ensuring the commitment of its staff. Positive work outcomes result when the organisation is able to provide employees with not just jobs but up to date information pertaining to their jobs, opportunities to perform challenging tasks, to meet and interact with people, to learn new skills and to develop as an individual (Robbins et al., 2008).

The hypothesis of this study is that there would be significant relationships between work outcomes (affective commitment and quit-intentions) of agriculture researchers and predictors (age, sex, tenure, rank, education and organisational communication) in focal institutes. Further, job satisfaction is expected to mediate the predictors-outcome relationships. The objective of this study is to examine the effect of organisational communication on researchers' affective commitment, job satisfaction, intents to quit the employing organisation.

MATERIALS AND METHODS

Oyo State is noted for crop cultivation and this initiated the location of most of the crop-based research institutes within the zone. Agriculture is the main source of livelihood of the people in the area and thus, the state play host to most of the National Agricultural

Research Institutes (NARIs) in the country. The NARIs sampled in this study include:

1. Institute of Agricultural Research and Training (IAR & T), Nigeria.
2. International Institute of Tropical Agriculture (IITA), Nigeria.
3. Cocoa Research Institute of Nigeria (CRIN) Nigeria.
4. National Institute of Horticultural Research (NIHORT), Nigeria.
5. Forestry Research Institute of Nigeria (FRIN), Nigeria.
6. National Stored Product Research Institute (NISPRI), Nigeria.

Fifty researchers were randomly selected from each of the six purposively selected research institutes in Oyo State, South-West Nigeria giving a total of 300 respondents. Valid responses were obtained from 209 respondents (i.e. 69.6% responses). Hence, 209 researchers formed the sample size of the study. Structured questionnaires were employed to elicit information from the respondents.

(1). Personal Variables: Five biographic variables were considered in this study. These included age and tenure measured in years, sex assessed as male = 1 and female = 2, rank measured as senior officer = 1, mid-level officer = 2 and junior officer = 3 and educational level measured as B.Sc = 1, M.Sc = 2, Ph.D = 3.

(2). Organisational communication: Measured using the ten organisational communication statements developed by Vandenberg et al. (1999). The five points on the scale were weighted according to the adequacy of information of 'highly adequate = 5' to 'highly inadequate = 1'.

(3). Job satisfaction: Respondents' overall satisfaction with job was measured using the scale adapted by Brayfield and Rothe (1951). The degree of satisfaction was derived from each of the six job satisfaction statements on a five-point Likert type scale. The five points on the scale were weighted according to the level of satisfaction of 'very much satisfied = 5' to 'very dissatisfied = 1'.

(4). Affective commitment: Assessed by asking the respondents to indicate their degree of commitment to the organisation from each of the six organisational commitment statements on a five-point Likert type scale (Meyer and Allen, 1997).

(5). Quit-intentions: The scale developed by Poon (2003) was adopted to measure quit-intention. The three item statements on a five-point Likert-type scale of 'strongly agree = 5', to 'strongly disagree = 1' was used.

Models used in the study

The raw scores obtained were keyed into the Statistical Package of Social Sciences (SPSS) Version 17 and

analysed using the Hierarchical Multiple Regression Analysis. The model for the study is given as:

$$Y_i = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \dots + \beta_k X_{ki}$$

Where,

Y is the dependent or criterion variable and (X₁, X₂ ... X_k) are the predictor variables.

Further, the β values are called regression weights and are computed in a way that minimises the sum of squared deviations:

$$\sum_{i=1}^k (Y_i - Y'_i)^2$$

In this model there were K predictor variables rather than two and K+1 regression weights which were estimated, one for each of the K predictor variable and one for the constant (b₀) term (Stockburger, 2003).

A group of variables were controlled. Firstly, multiple regression analysis was performed with the controlled variables serving as independent variables. A second multiple regression was done with a new set of independent variables together with the first step independent variables. This allowed estimates of the contributions of the independent variables to be computed. The process was continued until all the independent variables had been entered into the regression model.

Moreover, the Sobel test equation used in this study was drawn from MacKinnon et al. (1995).

$$Z\text{-value} = a*b/\text{SQRT}(b^2*s_a^2 + a^2 + a^2*s_b^2)$$

Where,

a = raw (unstandardised) regression coefficient for the association between the independent variable (IV) and the mediator.

s_a = standard error of a.

b = raw coefficient for the association between the mediator and the dependent variable (DV) when the IV is also a predictor of the DV.

s_b = standard error of b.

Data analysis

In order to further determine to what extent and in what direction organisational communication can predict job satisfaction and other work outcomes, multiple regression was run. The hierarchical regression procedure was employed for the mediational analyses that were done in this study (Tabachnick and Fidell, 1989). To test for the mediating role of job satisfaction, the four-step procedure outlined by Preacher and Leonardelli (2001) was employed as follows:

1. The predictor should be significantly related to the mediator.
2. There should be a significant relationship between the predictor and criterion in the absence of the mediator.
3. The mediator should also have a significant relationship with the criterion.
4. The magnitude of the relationship between predictor and criterion should become non-significant or reduced upon the inclusion of the mediator to the model to provide evidence of full or partial mediation.

RESULTS

Table 1 presents the descriptive statistics and inter-correlations among study variables. As suggested by the findings, the correlation coefficients between the components of work outcomes and organisational communication ranged between 0.17 and 0.68. They are in the expected directions. The results of the hierarchical regression are given in Tables 2 and 3 below.

Table 2 presents the result of the hierarchical regression of affective commitment on organisational communication. Personal variables of respondents were entered in Step I and educational level (b₁ = 1.35, P < 0.05) was the only personal characteristic that is significantly related to affective commitment.

Table 1. Correlations among study variables (n = 209)

Variables	1	2	3	4	5	6	7	8	9
1. Age	-								
2. Sex	-0.30**	-							
3. Tenure	0.68**	-0.17*	-						
4. Rank	-0.42**	0.22**	0.45**	-					
5. Educational Level	0.45**	0.13	0.36**	0.49**	-				
6. Quit-intentions	0.12	-0.12	0.05	0.01	0.08	-			
7. Organisational commitment	0.20**	0.11	0.18*	0.06	0.22**	0.56**	-		
8. Organisational communication	0.14*	-0.06	0.11	0.01	0.24**	0.50**	0.44**	-	
9. Job Satisfaction	0.13	-0.06	0.14	0.02	0.17*	0.48**	0.54**	0.50**	-
Mean	35.57	1.39	6.12	1.46	1.81	3.36	4.08	3.71	4.24
SD	6.18	0.49	3.98	0.64	0.63	0.94	0.67	0.80	0.61

* P < 0.05; ** P < 0.01.

Table 2. Hierarchical regression of affective commitment on organisational communication and job satisfaction as a mediator (n = 209)

Variables	Job satisfaction		Org. commitment			
	Beta	SES	Beta ₁	SES ₁	Beta ₂	SES ₂
Step I: Biographics						
(Constant)	17.27	1.99	19.57	2.55	7.65	2.52
1. Age	0.06	0.05	0.03	0.06	0.01	0.05
2. Sex	-0.17	0.45	-0.60	0.58	-0.44	0.49
3. Tenure	-0.05	0.07	0.01	0.09	0.12	0.08
4. Rank	0.44	0.40	0.82	0.52	0.32	0.44
5. Education	0.82*	0.40	1.35*	0.51	0.53	0.44
ΔR ²	(0.04)		(0.07*)			
Step II: Predictor						
6. Organisational Information	0.18**	0.02	0.20**	0.03	0.09*	0.03
ΔR ²	(0.22**)					
Step III: Mediator						
7. Job satisfaction					0.55**	0.08
ΔR ²	-		0.13			
R	0.51		0.59			
R ²	0.26		0.39			
Adj R ²	0.23		0.33			
F	11.89**		15.85**			
SES	2.66		3.26			
DF	6,202		7,201			

* P < 0.05, ** P < 0.01.

b = unstandardised coefficient; SES = Standard Error of Estimate; R = Multiple correlation; R² = Coefficient of determination; ΔR² = Change in R²; Adj R² = Adjusted R².

Table 3. Hierarchical regression of quit-intentions on organisational communication and job satisfaction as a mediator (n = 209)

Variables	Job satisfaction		Quit-intentions			
	Beta	SES	Beta ₁	SES ₁	Beta ₂	SES ₂
Step I: Biographics						
(Constant)	17.27**	1.99	7.64**	1.85	-0.28	1.81
1. Age	0.06	0.05	0.05	0.04	0.02	0.03
2. Sex	-0.17	0.45	-0.56	0.42	-0.42	0.35
3. Tenure	-0.05	0.07	0.01	0.06	-0.01	0.05
4. Rank	0.44	0.40	0.48	0.37	0.03	0.32
5. Education	0.82*	0.40	0.35	0.37	-0.34	0.32
ΔR ²	(0.04)		(0.03)			
Step II: Predictor						
6. Organisational communication	0.18**	0.02	-0.18**	0.02	-0.12**	0.02
ΔR ²	(0.22**)		(0.22**)			
Step III: Mediator						
7. Job satisfaction					-0.28**	0.06
ΔR ²	-		(0.06)			
R	0.51		0.57			
R ²	0.26		0.32			
Adj R ²	0.23		0.30			
F	11.89**		20.69**			
SES	2.66		2.35			
DF	6,202		7,201			

* P < 0.05, ** P < 0.01.

b = unstandardised coefficient; SES = Standard Error of Estimate; R = Multiple correlation; R² = Coefficient of determination; ΔR² = Change in R²; Adj R² = Adjusted R².

Similarly, only educational level was significantly related to job satisfaction ($b = 0.82, P < 0.05$). On Step II, organisational communication was entered, it was significantly related to job satisfaction ($b = 0.19, P < 0.01$) and organisational commitment ($b_1 = 0.20, P < 0.01$). Further on Step III, job satisfaction was significantly related to organisational commitment ($b_2 = 0.55, P < 0.01$). An evidence of partial mediation was found when job satisfaction was included in the model and the fourth mediation requirement was met but there still existed a significant relationship with organisational commitment ($b_2 = 0.09, P < 0.05$). This is an evidence of partial mediation. The Sobel test was conducted to ascertain this and the result revealed that the mediation effect of job satisfaction on the relationship was significant ($Z = 5.42, P < 0.05$).

From Table 3, Step I, educational level had a significant relationship with job satisfaction ($b = 0.82, P < 0.05$) but it is not significantly related to researchers quit-intentions. Further, organisational communication was entered in the model on Step II and there was a significant relationship with job satisfaction ($b = 0.18, P < 0.01$). Moreover, organisational communication had significant inverse relationship with quit-intentions ($b_1 = -0.18, P < 0.01$).

When job satisfaction was added to the model in Step III, it was inversely related to quit-intentions ($b_2 = -0.28, P < 0.01$). An evidence of partial mediation was also found when job satisfaction was included in the model and the fourth mediation requirement was met and there still existed a significant relationship with quit-intentions ($b_2 = -0.12, P < 0.12$). The result of the Sobel test showed that the partial mediation effect of job satisfaction was significant ($Z = 4.13, P < 0.05$).

DISCUSSION

The significant relationship found between education and job satisfaction is an indication that the higher the education acquired by research personnel, the more they tend to be satisfied with job.

Aside the significant relationship found between educational level and job satisfaction, the result of this study agrees with the findings of Banmeke and Ajayi (2005). They found insignificant relationships between respondents' (age, sex, tenure and educational level) and job satisfaction which was also obtained from this study. The implication of this result is that the level of education attained by researchers is a determinant of their satisfaction with job and so, higher academic status may be required in organisations for ensuring personnel job satisfaction.

This result is also in support of the economic and social science studies on subjective utility from work indicating that higher levels of education are unambiguously associated with higher levels of satisfaction (Ross and Van Willigen, 1997). Further,

a significant positive relationship recorded between education and organisational commitment indicated that researchers with higher educational qualifications are more committed to the organisation than those with lower degrees. Further, the positive significant relationship found between employee satisfaction and commitment implies that higher employee satisfaction will enhance greater commitment to the organisation. This assumption is based on the logic that if employees are more satisfied with their jobs, they will be more likely to develop the necessary attachment to the organisation. Such attachment to the organisation will spill over to the job and relate to higher commitment (Cetin, 2006).

The findings of this research indicate that job satisfaction contributes significantly to researchers' commitment to the employing organisation. Previous research confirmed the positive relationship between organisational commitment and job satisfaction (Abdullahi et al., 2011). It is typically assumed that job satisfaction will lead to increased organisational commitment (Chiu-Yueh, 2000). Aydoglu and Asikgil (2011) in their study also found job satisfaction to be significantly and positively related to organisational commitment. With increased job satisfaction, commitment of the personnel increases contributing to an increase in the organisation's success (Tosun, 2009).

Further, the positive significant relationship found between organisational communication, job satisfaction and organisational commitment, respectively, could be interpreted that the information made available to researchers had greater impact on their satisfaction with job and also increased their commitment to the organisation. This is in agreement with prior studies that revealed personnel's likelihood to be satisfied with job as their roles and job expectations are clearer (Addae and Parboteeah, 2006). The positive relationship between increased organisational communication and organisational commitment agrees also with a previous study which indicated that organisational communication provide the recipient with the knowledge that could lead to their ability to cope and thus adjust to work expectations for better performance (Ganzach et al., 2002). This study result thereby supports the information integrated theory which posited that all information has the potential to affect one's attitude. Thus the information received from the organisation had positive effect on researchers' attitude for greater commitment.

However, job satisfaction was inversely related to quit-intentions in this research. This finding agrees with that of Yurumezoglu and Kocaman (2015) who found an inverse relationship between job satisfaction and the intention to quit existing employment among nurses in Turkey. The implication of the finding is that though, researchers were satisfied with job, but their

likeliness to quit the organisation is not reduced. This could mean that with any employment opportunity elsewhere and better work conditions, researchers may leave their workplace despite their satisfaction with job.

CONCLUSION

From the result of the study, it can be concluded that organisational communication is a significant predictor of organisational commitment and quit-intentions of research personnel in focal research institutes. Job satisfaction was found to be a partial mediator of the relationship between organisational communication and organisational commitment. It was also found to be a partial mediator of the relationship between organisational communication and quit-intentions of employees in the study area. When research personnel are satisfied with their jobs, they are more committed to the organisation and will be less willing to leave. Increased organisational communication fosters personnel's satisfaction with job, improves affective commitment and reduces intents of quitting the organisation. Evidence of partial mediation revealed that job satisfaction may not be the only mediator of the predictor-criteria linkages.

REFERENCES

- Addae H. M., Parboteeah K. P. (2006): Organisational information, organisational commitment and intentions to quit: A study of Trinidad and Tobago. *International Journal of Cross Cultural Management* 6: 343–345.
- Abdullahi R. B., Musa M., Zahari H., Khalid K. (2011): The study of employee' satisfaction and its effect towards loyalty in hotel industry in Klang Valley, Malaysia. *International Journal of Business and Social Science* 2: 147–155.
- Armstrong M. (2009): *Handbook of human resource management practice*. England: Kogan Page Limited.
- Aydoglu S., Asikgil B. (2011): An empirical study of the relationship among job satisfaction, organisational commitment and turn-over intentions. *International Review of Management and Marketing* 1: 43–53.
- Banmeke T. O. A., Ajayi, M. T. (2005): Job satisfaction of extension workers in Edo State Agricultural Development Programme (EDADP), Nigeria. *International Journal of Agricultural and Rural Development* 6: 202–207.
- Brayfield A. H., Rothe H. F. (1951): An index of job satisfaction. *Journal of Applied Psychology* 35: 307–311.
- Chen J. C., Silverthone C., Hung J. Y. (2005): Organisational communication, job stress, organisational commitment, and job performance of accounting professionals in Taiwan and America. *Leaderships and Organisational Development Journal* 27: 242–249.
- Chiu-Yueh T. (2000): A study on the relationship among organisational commitment, job satisfaction and organisational citizenship behaviour of Nursing personnel. Master's Thesis, Department of Human Resources Management. <http://etd.lib.nsus.edu.tw/EDTdb/ETD-search/view> etd. URN = etd - 0725101-002148. Retrieved 15/7/2006.
- Cetin M. (2006): The relationship between job satisfaction and occupational commitment of academics. *Journal of American Academy of Business* 8: 78–88.
- Demirel Y. (2009): Organisational commitment and counter-productive behaviours – conceptual approach. *Journal of Social Sciences* 8: 115–132.
- Ganzach Y., Pazy A., Ohayun A., Brainin E. (2002): Social exchange and organisational-communication: Decision making training for job choice as an alternative to the realistic job preview. *Personnel Psychology* 3: 613–638.
- Gravlee M. (2009): The importance of Agriculture. <http://ezinearticles.com/?The-Importance-of-Agriculture&id=1971475>. Retrieved 22/2/2012.
- Hassan G. (2011): The role of organisational communication on employees' perception of justice: A sample of Public Institution from Turkey. *European Journal of Social Sciences* 21: 107–124.
- Hindi N. M., Miller D. S., Catt S. E. (2004): Communication and mis-communication in corporate America: Evidence from Fortune 200 Firms. *Journal of Organisational Culture, Communications and Conflict* 8: 13–26.
- Malmelin N. (2007): Communication Capital. *Corporate communication: An International Journal* 12: 298–310.
- MacKinnon D. P., Warsi G., Dwyer I. H. (1995): A simulation study of mediated effect measures. *Multivariate Behavioural Research* 30: 40–62.
- Meyer J. P., Allen N. J. (1997): *Commitment in the workplace: Theory, research and application*. Thousand Oaks, CA: Sage Publisher.
- Newstrom J. W. (2011): *Organisational behaviour: Human behaviour at work*. International Edition. New York, London: Mc Graw-Hill.
- Nwaze K. F. (2010): Agriculture drives developing countries' economies. UN News Centre. <http://www.un.org/apps/news/story.asp> Retrieved 21/6/2012.
- Phattanacheewapul A., Ussahawanitchakit P. (2008): Organisational justice versus organisational support: The driven-factors of employee satisfaction and employee commitment on job performance. *Journal of Academy of Business and Economics* 8: 114–123.
- Poon J. M. (2003): Situational antecedents and outcomes of organisational politics perceptions. *Journal of Managerial Psychology* 18: 138–155.

- Preacher K. J., Leonardelli G. J. (2001): Calculation for the sobel test: An interactive calculation tool for mediation tests (Computer software). <http://www.unc.edu/~preacher/sobel.htm>. Retrieved 27/6/2005.
- Robbins S. P., Judge T. A., Bruce M., Waters-Marsh T. (2008): *Organisational behaviour*. Australia: Pearson Education Press.
- Ross F., Van Willingen M. (1997): Education and the subjective quality of life. *Journal of Health and Social Behaviour* 38: 275–297.
- Stockburger D. W. (2003): *Introductory statistics: Concepts, models and applications*. <http://www.psychstat.missouristate.edu/IntroBook3/sbk.htm>. Retrieved 25/6/2018.
- Tabachnick B. G., Fidell L. S. (1989): *Using multi-variate statistics*. Second edition.
- Tosun C. (2009): The productivity impact of public workers in Istanbul. *National Productivity Monthly Journal* 21: 20–23.
- Vandenberg R. J., Richardson H. A., Eastman L. (1999): The impact of high involvement work processes on organisational effectiveness: A second-order latent variable approach. *Group and Organisational Management* 24: 300–339.
- Yurumezoglu H. A., Kocaman G. (2015): Predictors of nurses' intentions to leave the organisation and the profession in Turkey. *Journal of Nursing Management* 24: 235–243.
- Zhang H., Agarwal N. C. (2009): The mediating roles of organisational justice on the relationships between HR practices and workplace outcomes: An investigation in China. *The International Journal of Human Resource Management* 20: 676–693.

Received: August 21, 2019

Accepted after revisions: October 30, 202