Occupational Role Stressors as Predictors of Psychological Strain among Academic Officers of Higher Educational Institutions

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The main objective of the study was to assess the extent to which role stressors predict psychological strain of academic officers of higher educational institutions in Oromia regional state of Ethiopia. For this purpose, a total of 251 academic officers were selected using multistage sampling techniques from higher educational institutions in the state. The data were collected from participants using Occupational Stress Inventory-Revised (Osipow, 1998). The analyses were carried out using appropriate statistical techniques such as Pearson Product Moment correlation and linear regression analysis. The findings of the study indicated that over 35.2 percent of variations in psychological strain of academic officers of higher educational institutions were accounted for combined effects of role stressors (i.e., role boundary, role overload, role insufficiency, and role ambiguity). The findings of the study also indicated that role boundary, role overload, and role insufficiency were found to be significant determinates of psychological strain. On the basis of findings of the study implications and suggestions are also forwarded.

Keywords: academic officers, role stressors, higher education, psychological strain

Although there are considerable evidences of significant stress-related studies in teaching profession (Kyriacou, 2001; Munt, 2004), earlier studies assessing stress among academic staff in higher educational institutions have been described as scanty (e.g., Daniels & Guppy, 1994). Nevertheless, there were some earlier evidences to suggest that occupational stress among academic staff in higher education may be a cause for concern (i.e., Goldberg & Williams,

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1988). According to Fisher (1994), academic staff members experienced role stressors in response to job demands which required them to be a teacher, researcher, organizer, and administrator. A significant increase in the administrative burden was also observed among members of academic staff as a result of changes in higher education (Azeem & Nazir, 2008).

Earlier studies (Thompson & Dey, 1998) examining selected characteristics of faculty members have found that they experienced anxiety due to multiple responsibilities and time restraints associated with the job environment. More specifically, some studies (Westman & Eden, 1992) reported that job overload was a major contributor to high levels of strain, anxiety, depression and poor job performance. Many studies have shown (Ahmady, Changiz, Masiello, & Brommels, 2007; Mearns & Cain, 2003) the most role-related stressors and forms of conflict among faculty members include too many tasks and everyday work load; conflicting demands from colleagues and superiors; incompatible demands from their different personal and organizational roles; inadequate resources for appropriate performance; insufficient competency to meet the demands of their role; inadequate autonomy to make decision on different tasks; and a feeling of under utilization.

When role related duties are structured in a way that leads to problems for the employee, role stress may take place that could lead to role ambiguity, role conflict, and role overload (Briggs, 2005). French, Caplan, and Harrison (1982) concluded that role overload, role ambiguity, role insufficiency, and role boundary were among the most powerful predictors of psychological health. Studies have also shown that when experience of role stressors is high, then job satisfaction is low; this may well be coupled with anxiety and depression (Stranks, 2005). Study by Winefield, Gillespie, Stough, Dua, and Hapuararchchi (2002) revealed that about 50% of staff members were identified as being at risk of developing a psychological illness, such as anxiety or depression. Higher stress levels among academic staff than general staff were also reported by Winefield and Jarrett (2001) in their study of academic staff at the University of Adelaide.

Similarly, Gillespie, Walsh, Winefield, Dua, and Stough (2001) found that academic staff reported higher levels of stress than administrative staff. Two-thirds of the respondents reported that stress impacted on them psychologically; viz., experiencing feelings of anxiety, depression, burnout, anger, irritability, and helplessness. Furthermore, Coetzee and Rothmann (2005) also found high levels of psychological stress in university staff members. In this regard,

challenging positions tend to generate stress as they are expected to respond to demands that generate even more stress. In general, most of what have been known about stress among higher education employees are based on studies conducted in the United States, Great Britain, Australia, Canada, New Zealand, and other developed countries (see e.g., Gillespie et al., 2001; Tytherleigh, Webb, Cooper, & Ricketts, 2005). In fact, very limited studies on stress in higher education have been done in Africa and in developing countries in general (Fako, 2010; Ofoegbu & Nwadiani, 2006).

More specifically, such studies did not seem to cover any stress related to academic staffs that have been in charge of office duties in higher educational institutions. In fact, alike other managers in any organization, academic officers in higher education institutions are also expected to perform managerial functions/administrative tasks. It seems apparent that such managerial duties along with teaching, research activities and other roles may induce role stressors among academic officers which may cause psychological strains. Hence, role stressors and their consequences seem evident among academic officers of higher educational institutions albeit acute scarcity of studies. Therefore, the objectives of the study were to examine relationship of each role stressors including role overload, role ambiguity, role insufficiency, and role boundary with psychological strain; assess overall predictability of role stressors on psychological strain and identify predictors of psychological strain. Thus, the researcher devised the following research predictions to attain these objectives:

1) There is a positive relationship between role stressors (role overload, role ambiguity, role insufficiency, and role boundary) and psychological strain of academic officers of higher educational institutions.

2) There is a combined high predictability of role stressors on psychological strain of academic officers of higher educational institutions.

3) Among other role stressors, role overload and role boundary are potential predictors of psychological strain in academic officers of higher educational institutions.

Method

Sample

The target population of the study was academic officers of higher educational institutions in Oromia Regional State of Ethiopia.

The academic officers are academic staff with office duties (i.e., holding positions at department, faculty in college/school and university levels) in addition to teaching and research activities in their respective departments. These included heads, deans, vice deans, registrars, research and publication officers, student deans, guidance and counselling officers, and other officers who have been in charge of office responsibilities in higher educational institutions.

Participants were selected using multistage sampling techniques from five public higher educational institutions (Adama, Wollega, Jimma, Haramaya, and Madda Wolabu universities) and from accredited seven private higher educational institutions (Kuyera Adventist college, Rift Valley, Africa Beza, Royal, Admas, and Central University Colleges and Unity University, Adama Branch) for the study. List of academic officers and relevant information was obtained from the department of human resource development of each higher educational institution under the study. Finally, a total of 251 academic officers were selected for this study using simple random sampling technique. With regard to sample distribution, age of participants ranged from 21 to 60 years ($M = 33.53$; $SD = 9.20$). Similarly, their work experiences in higher educational institutions also ranged from 1 to 35 years ($M = 10.73$; $SD = 8.85$). Moreover, sample constituted 94% ($n = 236$) men and only 6% ($n = 15$) were women. Participants' educational status along with their work positions in higher educational institutions is also presented in Table 1.

Table1

Descriptive Statistics of Participants (N = 251)

Educational Status	Educational Status		
	Department	Colleges/Faculty	University
	n(%)	*n*(%)	*n*(%)
Graduate	68 (27)	12(5)	29(12)
Post-graduate	62(25)	33(13)	28(11)
Ph.D.	4(2)	6(2)	9(3)

Instruments

Occupational Stress Inventory-Revised (OSI-R). This is a battery composed of three questionnaires which measure occupational stress, psychological strain, and coping resources (Osipow, 1998). Occupational stress is measured by six subscales i.e., Role Overload, Role Insufficiency, Role Ambiguity, Role Boundary, Responsibility,

and Physical Environment. Each subscale contains 10 items and overall 60 items are present in the scale. Of these, the first four subscales namely, Role Overload, Role Insufficiency, Role Ambiguity, and Role Boundary were used to collect data on role stressors in this study. Each of the subscales composed of 5-point Likert (1 = *rarely or never true*; 2 = *occasionally true*; 3 = *often true*; 4 = *usually true*; 5 = *true most of the time*). A high subscale score depicts greater level of role stressor.

Psychological Strain Questionnaire.   It is part of OSI-R and consists of 10 items composed of 5-point Likert scale (1 = *rarely or never true*; 2 = *occasionally true*; 3 = *often true*; 4 = *usually true*; 5 = *true most of the time*). A high subscale score portrays greater level of psychological strain. Furthermore, in order to substantiate the data collected through OSI-R, a structured interview was also conducted with randomly selected academic officers.

Table 2

Alpha Coefficients for Internal Consistency of Scales

Scales	Reported values	Present study
Role Overload	.78	.86
Role Insufficiency	.85	.77
Role Ambiguity	.79	.75
Role Boundary	.72	.82
Psychological Strain	.86	.86

Table 2 shows that alpha coefficient for internal consistency of each subscale in this study is greater than .70 which is acceptable according to George and Mallery (2003). Besides, reported alpha coefficient (Osipow, 1998) for each subscale is closely related to alpha coefficient obtained in this study.

Procedure

After participants of the study had been identified using the aforementioned sampling techniques, selected participants from each higher educational institution under study were individually approached by the researcher. The purpose of the study was verbally communicated to participants and informed consent was acquired. Moreover, respondents were requested to fill the questionnaire that would take approximately 30 minutes. Besides, the participants were

also given a cover letter along with questionnaire explaining the purpose of the study, an assurance of anonymity, confidentiality, and instructions for answering the questionnaire.

Results

Descriptive statistics such as means and standard deviations were employed to describe general characteristics of data. Pearson product-moment coefficient of correlation also used to describe the strength and direction of the linear relationship between variables. Linear regression analyses was used to determine overall predictive power of role stressors in predicting psychological strain of academic officers. Further, step-wise regression analysis was also used to identify relative contributions of each role stressor.

Relationship between Role Stressors and Psychological Strain

According to Tabachnick and Fidell (2001), in an inspection of relationships between independent variables revealed that any of bivariate correlation did not exceed .70. They suggested that if it exceeds, one has to consider omitting one of the variables from the scores of the two highly correlated variables from regression analysis. Hence, a correlation analysis was conducted to examine a relationship between independent variables (role stressors) and dependent variable (psychological strain).

Table 3

Inter-correlations among Role Stressors and Psychological Strain

	M	*SD*	1	2	3	4	5
1 Role Overload	3.24	.50	-				
2 Role Insufficiency	2.94	.48	.22**	-			
3 Role Ambiguity	2.73	.58	.26**	.49**	-		
4 Role Boundary	3.19	.48	.51**	.09	.01	-	
5 Psychological Strain	2.89	.59	.49**	.30**	.19**	.50**	-

**$p < .01$.

As shown in Table 3, the results indicate that there are significant positive relationship of psychological strain with role overload, role insufficiency, role ambiguity, and role boundary. Cohen (1988)

suggests the criteria for interpretations of correlation coefficients i.e., $r = .10$ to $.29$ is weak; $r = .30$ to $.49$ is moderate; and $r = .50$ to 1.0 is strong correlation. There are weak relationships of role insufficiency and role ambiguity with psychological strain, whereas, strong relationships of role overload and role boundary are observed with psychological strain.

Contribution of Role Stressors in Predicting Psychological Strain

Before running multiple regression analysis to address the question, inspection of variables was made in line with assumptions of multiple regression analysis. For instance, the study examined residual plots and then verified whether assumptions of regression were satisfied. The suitability of the regression analysis was also examined for multi-collinearity by checking the VIF (variable inflation factor) and Tolerance. Hence, as can be seen in Table 4, the tolerance value for each independent variable ranges from .669 to .747, which is not less than .10. This is also supported by the Variable Inflation Factor value, which also ranges from 1.338 to 1.495, which is well below the cut-off of 10 (Pallant, 2005). Thus, variables in the study did not violate the assumptions for multiple regression analysis (Tabachnick & Fidell, 2001). Hence, multiple regression analysis was conducted to examine the variation accounted by role stressors (role overload, role ambiguity, role insufficiency, and role boundary) in psychological strain.

Table 4

Coefficients of Role Stressors on Psychological Strain

Predictors	B	SE	β	t	p	r	Tolerance	VIF
(Constant)	-.148	.277		.53	.593			
Role Overload	.315	.073	.271	4.31	.000	.489	.669	1.49
Role Insufficiency	.200	.072	.164	2.75	.006	.297	.747	1.34
Role Ambiguity	.032	.061	.032	.52	.598	.186	.711	1.41
Role Boundary	.420	.074	.342	5.65	.000	.496	.719	1.39

Note. VIF = Variable Inflation Factor

As shown in Table 4, an inspection of individual predictors revealed that role boundary, role overload, and role insufficiency are significant positive predictors of psychological strain. However, role

ambiguity has not reached at significant level. The overall model explained 35.2% of variance in psychological strain which was statistically significant with $F(4, 246) = 33.452, p < .01$.

Moreover, to determine the relative contribution of each role stressor in predicting psychological strain, stepwise regression analysis was conducted.

Table 5

Contribution of Role Stressors in Predicting Psychological Strain

Model	R	R^2	Adjusted R^2	SE	Change in Statistics				
					ΔR^2	ΔF	$df1$	$df2$	P
1	.496	.246	.243	.51079	.246	81.232	1	249	.000
2	.567	.321	.316	.48559	.075	27.519	1	248	.000
3	.593	.352	.344	.47560	.030	11.532	1	247	.001

Note. 1 = Predictors: (Constant), Role boundary- Mean; 2 = Predictors: (Constant), Role boundary- Mean, Role overload- Mean; 3 = Predictors: (Constant), Role boundary- Mean, Role overload- Mean, Role Insufficiency-Mean.

Table 5 shows that role boundary explains 24.6% of the variance in psychological strain and this contribution is statistically significant. Adding role overload to the model increases variance further by 7.5%. In the same way, adding role insufficiency the model improves further by 3%.

Discussion

The results of the study pointed out that 35.2% of variations in psychological strain were accounted for role stressors (i.e., role overload, role ambiguity, role insufficiency, and role boundary). An assessment of beta weights also confirmed that role boundary, role overload, and role insufficiency were significant predictors of psychological strain. Each role stressor was positively correlated with psychological strain, suggesting that higher scores in each role stressor, i.e., role overload, role ambiguity, role insufficiency, and role boundary was associated with higher scores of psychological strain and vice versa. Results from stepwise regression analysis also depicted that role boundary, role overload, and role insufficiency were significant potential predictors.

Role Boundary

The analyses of results from correlation and stepwise regression suggest that role boundary contributes more on psychological strain of

academic officers. This implies that conflicting role demands, loyalties, and having difficulty in identifying clear lines of authority and struggle with receiving tasks from more than one person. For instance, respondents with regard to role boundary recounted the difficulties of trying to balance teaching, administration and research in the face of increasing demands for excellence in all three areas. The majority of respondents reflected the view that they had insufficient training and lacked the necessary support to undertake scholarly work. They had much heavier demands and were anxious to publish research results and to undertake high quality research, but because of the increased administration load, there was less time to do it. In spite of ridiculously heavy workloads, they have been roundly criticized for not doing well on research. Concerns were also voiced by many respondents relating to their inability to devote enough time to teach and carry research work; consequently it results in loss of professional reputation. Some of respondents noted that they have been taking on additional responsibilities without having any exemption from teaching hours.

Most of respondents felt that they have been suffering from conflicting role demands, loyalties, and having difficulty in identifying clear lines of authority and struggle with receiving tasks from more than one bosses. This may be due to the existence of intra-role conflict (incompatible demands at work) which arises from multiple demands on the job whereby two supervisors might make incompatible request (Spector, 2008). Moreover, basing on the personal information it was observed that academic officers have increasingly been forced to assume numerous different roles at work, often with conflicting priorities which placed serious constraint upon their effectiveness in all directions. This may indicate the existence of role stress in these participants.

Further analysis of the results denoted that academic officers appeared to be experiencing confusion between what their institutions expect them to do and what they think is proper, being suspicious about the work they do and their supervisors' conflicting ideas about what they should be doing are factors related to role boundary among academic officers. Such situations are believed to create higher anxiety levels among these academic officers which lead to elevated psychological problems. Related research findings are also consistent with the present findings (Eugene, 1999; Rout & Rout, 2002).

Role Overload

Regarding role overload as second potential predictor of psychological strains of academic officers, the results of analysis

pointed out that role demands perceived by academic officers exceeded their personal and workplace resources, and their perceived ability to accomplish the expected workload among academic officers. Working under tight time deadlines, doing too many different tasks in too little time, lack of resources to get their job done and increasing job responsibilities might be the reasons for experiencing more role overload. The interview held with some of the respondents also revealed that some of them believed that they were constantly at the end of their tether because they believed their workload was unbearable. For some of them, it was not possible to do everything in the time available. Managing students' cases, preparing for class, advising students on project work, thinking about research, contact with community and dealing with staff matters were routine tasks of the days. Registration and examination schedules were the two horrible schedules in the academic calendar for academic officers. Interestingly, it was remarked by other respondents that no job was ever completely finished since they had been always flutter between tasks, doing the most urgent managerial cases. Most of them were upset with unlimited, unplanned, and long meetings without remarkable conclusions which could be labeled as 'wastage of their time.' Most of the respondents expressed the feeling that they were members of many committees in the university with some additional responsibilities in the committees as well. By default, academic officers were expected to work eight hours every day and 40 hours per week; nevertheless, they have been working far beyond 40 hours. It was apparent that, as working hours increased, levels of psychological well-being decreased. Supporting to the present findings, heavy workload lowers one's psychological well-being resulting in job stress (Greenhaus, Bedeian, & Mossholder, 1987). It was also noted that the competing demands of multiple roles could lead to role overload and subsequent psychological strain.

Role Insufficiency

Role insufficiency was another major source of psychological strain among academic officers in higher education institutions. This is to mean that there is a poor fit between academic officers' capacity and the job being performed. This includes feeling of being unqualified for the position, performing tasks that are over their experiences, and being bored with their job may be the sources of role insufficiency among academic officers. According to respondents, there was no trend of offering training or staff development to cope with changing roles and demands for officers in their institutions.

Moreover, some of the respondents were strongly disappointed by the fact that they lacked recognition for their efforts and felt undervalued by their institution. They often highlighted the difficulty in handling stressed and de-motivated staff when they too felt stressed and de-motivated themselves. In support of this, some researchers pointed out that role insufficiency occurs when there is a mismatch between knowledge and skills, and one's work role. It may also stem from an organization's failure to fully utilize the skills, abilities, and knowledge of its workers (Kelner, 2001).

Role Ambiguity

Role ambiguity was found a nonsignificant predictor of psychological strain. However, as per views of respondents interviewed, they experienced role ambiguity due to uncertainty about office duties (scope and responsibilities, roles), authority, allocation of time, and relationships with others; lack of clarity of existing rules, regulations, and policies. Studies revealed that employees who felt their responsibilities were ambiguous, vague, or unclear were more likely to experience occupational stress than those who felt that their responsibilities were clear and unambiguous (Fako, 2010). Sometimes, supervisors may also fail to provide clear guidelines and directions for their subordinates, leading to ambiguity about what the employee is supposed to do (Spector, 2008). Thus, its effect may lead the employees to low performance and low job satisfaction, high anxiety, tension and motivation to leave the company (Rice, 1999). Winter and Sarros (2002) have found that the work environment is motivating when roles are clear, job tasks are challenging, and supervisors exhibit a supportive leadership style.

Conclusions and Implications

The findings of the study indicated that over 35.2 percent of variations in psychological strain of academic officers of higher educational institutions in Oromia regional state of Ethiopia were accounted for combined effects of role stressors (i.e., role boundary, role overload, and role insufficiency). Besides, it was also found that role boundary, role overload, and role insufficiency were significant stressors in predicting psychological strains of these academic officers of higher education institutions. With regard to implications of this study, the findings of the study are expected to benefit stakeholders in

higher educational institutions (e.g., teachers, mangers, experts, supervisors, researchers, policy makers) to understand role stressors and their corresponding effects on academic staff who have been holding office duties in addition to teaching and research activities. The findings of this study are expected to contribute to the existing body of knowledge and also help to narrow down the gap of information with respect to occupational stress in higher educational institutions in particular.

Limitations and Suggestions

The study did not treat role stressors as per demographic characteristics (e.g., age, experience, gender, qualification, and the like) of participants. Another potential weakness is that the sample of the present study is based on only academic officers of higher educational institutions. Therefore, incorporating views of other staff members would also enhance understanding of role stressors in higher educational institutions. Moreover, inclusion of respondents from other regional states of Ethiopia would be assistive in enhancing the generalizability of the results.

From the findings, it is suggested that recruiting officers for the posts has to be done through competition so as to select those who have the competence and the willingness to work as an officer. After selection, it is also suggested that induction program should be arranged for those to expose them to office rules and regulations, chains of command, responsibilities and accountabilities of the office. To avoid their doubts, incompetence, and confusion while performing their office duties; on the job training should be offered on continuous basis. Future studies are suggested to explore interventions aimed at enhancing job satisfaction and reducing role stress within institutions which may enhance individual and organizational productivity.

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