Role Stressors as Predictors of Psychological Strain among Academic Officers of Ethiopian Higher Education Institutions

Kassim Kimo Kebelo and T.V.Ananda Rao
Andhra University, Visakhapatnam

The main objective of the present study was to explore the extent at which role stressors predict psychological strain of academic officers in Ethiopian higher education institutions. A total of 369 academic officers were randomly selected from Ethiopian higher education institutions for this study. The data was collected from subjects using Occupational Stress Inventory- Revised Edition. The analysis was also carried out using appropriate statistical techniques. The findings of the study indicated that over 37 percent of variations in psychological strains were accounted for by combined effects of role stressors. It was also found that role boundary, role overload, role insufficiency and role ambiguity were significant determinates of psychological strains. Finally, implications of findings of the study were also suggested.

Keywords: *Academic officers, role stressors, higher education, psychological strain*

Although there are considerable evidences of significant stress-related studies in teaching profession (Chaplain, 1995; Kyriacou, 2001; Manthei & Gilmore, 1996; Munt, 2004; Punch & Tuetteman, 1996), earlier study examining stress among staff in higher education institutions has been described as sparse (e.g., Daniels et al., 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, 1988). Some surveys have found that academic staff report an increase in workload cited in Bradlef and Eachus (1995) and are working longer hours (Early, 1994). According to Fisher (1994) they also experienced role stressors in response to job demands which require them to be a teacher, researcher, organizer, and administrator. Academic staffs have also perceived a significant increase in the administrative burden as a result of changes in higher education (Azeem, et al, 2008). Some earlier studies (i.e., Thompson & Dey, 1998) examining selected characteristics of faculty members have found that faculty members experienced anxiety due to research works, teaching loads, and time restraints associated with the job environment. More specifically, some studies (Cooper & Roden 1985 and Westman & Eden 1992) reported that job overload was a major contributor to high levels of strain, anxiety, depression and poor job performance. According to some studies (Mearns and Cain, 2003; McCracken, 2001; Ahmady et al., 2007), 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 underutilization.

However, many organizational problems can lead to role ambiguity, role conflict and role overload (Briggs, 2005). Role stress results when a worker's job and related duties are ill-defined or structured in a way that leads to problems for the employee. French et al. (1982) concluded that role overload, role ambiguity, role insufficiency and role boundary were among the most powerful predictors of psychological health. Recent research has also shown that where experience of role stressors is high, then job satisfaction is low; this may well be coupled with anxiety and depression, factors which may add to the onset of other stress-related conditions (Stranks, 2005).

A national survey of occupational stress and well-being within Australian Universities examined the level of occupational stress, staff groups experiencing the highest levels and factors that contribute to occupational stress by Australian university staff. The survey addressed that the first main effect of stress was psychological strain. About 50% of staff members were identified as being at risk of developing a psychological illness, such as anxiety or depression (Winefield, et al, 2002). Higher stress levels among academic staff than general staff were also reported by Winefield and Jarrett (2001) in their study of staff at the University of Adelaide.

Similarly, Gillespie et al. (2001) found that both academic and general staff reported a dramatic increase in stress and academic staff reported higher levels of stress than general 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.

However, to the best knowledge of this researcher, no studies available regarding role stressors related to academic officers who have been executing office duties (viz.; planning, organizing, staffing, directing, coordinating, reporting, and budgeting) in addition to teaching and research activities in higher education institutions. 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 in them. Hence, role stressors and their consequences seem evident among academic officers of higher education institutions albeit acute scarcity of studies.

Therefore, the objective of this study was to explore the extent at which role stressors (viz.; role overload, role ambiguity, role insufficiency and role boundary) predict psychological strain of academic officers of higher education institutions. Thus, the researcher devised the following research questions to attain this objective:

i) Is there a significant relationship between role stressors and psychological strain of academic officers of higher education institutions?

ii) Do occupational role stressors have combined significant predictability on psychological strain of academic officers of higher education institutions?

iii) Which role stressors are significant predictors of psychological strain in academic officers of higher education institutions?

Method

Sample:

Subjects were randomly selected from eight public higher education institutions and from accredited eleven private higher education institutions for the study. List of academic officers and relevant information was obtained from the department of human resource development of each higher education institution under the study. Thus, from both type of institutions, a total of 369

academic officers were randomly selected for this study.

Instruments:

Occupational Stress Inventory- Revised (OSI-R) (Osipow, 1998) was used for this study. The OSI-R is a self-report inventory consisting of three questionnaires (Occupational Role Questionnaire, Personal strain Questionnaire and Personal Resources Questionnaire). Each of the three was also composed of five- point Likert scale items. However, as per the purpose of this study, only the first two questionnaires; viz., Role questionnaire and Personal strain were employed. Besides, from subscales of Role questionnaire, role overload, role insufficiency, role ambiguity and role boundary, and from personal strain questionnaire, psychological strains were used for this study. Besides, the Occupational Role Questionnaire (ORQ) measures the amount of stress induced by work roles. A high subscale score depicts greater levels of role stress. The psychological strain scale relates to the individual's reported inability to adjust psychologically and emotionally. Besides, reliability of OSI-R was also determined by internal consistency analyses. Alpha coefficient for internal consistency of

each scale is greater than 0.7 which is acceptable according to George and Mallery (2003).

Adapting the instrument

To adapt OSI-R to Ethiopian context, ten research scholars were judged OSI-R on scales "agree", "undecided", and "disagree" for its practical applicability, simplicity and cultural relevance for Ethiopian subjects. The results of the assessors were analyzed per item. Finally, by incorporating the results of all analyses and comments from professionals, some items were modified and used for data collection from subjects.

Results

According to Tabachnick and Fidell (2001), in an inspection of relationships between independent variables revealed that any of bivariate correlation did not exceed 0.7. 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) as shown in Table 1 below.

Table1. Inter corelations among role stressors and psychological strain (N= 369).

	M	SD	1	2	3	4
Role overload	3.29	.50				
Role insufficiency	2.95	.46	.22**			
Role ambiguity	2.76	.59	.26**	.39**		
Role boundary	3.29	.51	.44**	.10	-.01	
psychological strain	2.99	.60	.51**	.26**	.22**	.53**

**p< 0.01 *p<0.05.

The results indicated that there were significant positive relationship between role overload and psychological strain (r=.51, p< .01), role insufficiency and psychological stain (r=.26, p<.01), role ambiguity & psychological stain (r=.22, p<.01) and role boundary and psychological stain (r=.53, p<.01). Cohen (1988) suggests the following guidelines for

interpretations of correlation coefficients: r=.10 to .29, is weak; r=.30 to .49, is moderate; r =.50 to 1.0, is strong. According to Chen, there were weak relationships between role stressors (i.e., role insufficiency and role ambiguity) and psychological stain where as strong relationships were observed between role stressors, viz., role overload and role boundary and psychological stain.

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, the tolerance value for each independent variable ranges from 0.461 to 0.955, which is not less than 0.10. This is also supported by the VIF value, which also ranges from 1.047 to 2.171, 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 and 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. The overall model explained 37.7 percent of variance in psychological strain which was statistically significant (F $(4,364) = 55.155$, $p < .01$; $R=.614$). As shown in Table 3, an inspection of individual predictors revealed that role boundary with psychological strain (Beta = .38, p < .01), role overload with psychological strain (Beta = .25, p < .01), role insufficiency with psychological strain (Beta = .118, p < .05) and role ambiguity (Beta = .097, p < .05) were significant predictors of psychological strain. Every predictor was positively correlated with psychological strain, suggesting that higher scores individual role stressor, i.e., role overload, role ambiguity, role insufficiency and role boundary, was associated with higher levels of psychological strain.

Table 2. Coefficients of role stressors on psychological strain

Predictors	B	Std. Error	Beta	t	Sig.	Zero-order	Tolerance	VIF
(Constant)	-.215	.231		-.933	.352			
Role overload	.303	.063	.250	4.834	.000	.506	.640	1.564
Role insufficiency	.154	.063	.118	2.460	.014	.258	.748	1.336
Role ambiguity	.100	.050	.097	1.983	.048	.219	.711	1.407
Role boundary	.449	.059	.380	7.603	.000	.525	.686	1.457

To know the relative contribution of each role stressor in predicting psychological strain, stepwise regression analysis was conducted. Table 4, shows that role boundary explains 27.6% of the variance in psychological strain and this contribution is statistically significant (F $(1,367) = 139.698$, p<0.01). Adding role overload to the model increases this further by 7% ($F(1,366) = 39.308$, p<.01). In the same way, adding role insufficiency the model improves this further by 2.5 % ($F(1,365) =14.326$, p<.01). And, the addition of role ambiguity to the model only improves by 0.7 %($F(1,364)=3.932$, p<.05).

Table 3. Contribution of each role stressor in predicting psychological strain

Model	R	R Square	Adjusted R Square	Std. Error	R Square Change	F Change	df1	df2	Sig.F Change
1	.525(a)	.276	.274	.51422	.276	139.698	1	367	.00
2	.588(b)	.346	.342	.48931	.070	39.308	1	366	.00
3	.609(c)	.371	.365	.48064	.025	14.326	1	365	.00
4	.614(d)	.377	.371	.47872	.007	3.932	1	364	.05

a Predictors: (Constant), Role boundary- Mean; b Predictors: (Constant), Role boundary- Mean, Ro overload- Mean; c Predictors: (Constant), Role boundary- Mean, Ro overload- Mean, Role Insufficiency-Mean; d Predictors: (Constant), Role boundary- Mean, Ro overload- Mean, Role Insufficiency-Mean, Role Ambiguity-Mean

Discussion

The results of the study pointed out that 37.7 percent of variations in psychological strain were accounted for by 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, role insufficiency and role ambiguity 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 (27.6%), role overload (7%), role insufficiency (2.5%) and role ambiguity (0.7%) were significant potential predictors from high to low significant contributions, respectively.

The analysis of results suggests 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. 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. These situations are believed to create higher anxiety levels among these academic officers which lead to elevated psychological problems. Related research findings were also consistent with the present findings (Tosi et al. 2000 in Steyn & Kamper, 2006); Rout & Rout, 2002; Eugene, 1999).

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. 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. Supporting to the present findings, McBride (1990) noted that the competing demands of multiple roles could lead to role overload and subsequent psychological strain. As it was revealed that heavy workload lowers one's psychological well-being resulting in job stress (Greenhaus et al., 1987).

Likewise, 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. 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 (Johnson, 2000; Kelner, 2001). Finally, role ambiguity was not the case in this study. Hence, conflicts with priorities and expectations, and problems of structure their job and manage their time were not determined to predict psychological strain.

Conclusions and recommendations

The findings of the study indicated that over 37 percent of variations in psychological strains of academic officers of Ethiopian higher education institutions were accounted for combined effects of role stressors (i.e., role boundary, role overload, role insufficiency and role ambiguity). Besides, it

was also found that role boundary, role overload, role insufficiency and role ambiguity were found significant stressors from high to low, respectively in predicting psychological strains of academic officers of Ethiopian higher education institutions. From these findings, it is recommended that recruiting officers for the posts has to be through competition so as to select those who have the competence and the willingness to work from a pool of applicants. After selection, it is also recommended 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 duties with exposure to real work situation, on the job training (refresher courses, experience sharing and the like) may be offered for them from time to time. Future studies are recommended to investigate moderating effects of background variables and coping resources employed by academic officers.

References

Ahmady, S., Changiz, T., Masiello, Italo & Brommels, M. (2007). Organizational role stress among medical school faculty members in Iran: dealing with role conflict. *BMC Medical Education*, *7,* 14

Azeem, S. M., & Nazir, N. A. (2008). A Study of Job Burnout among University Teachers. *Psychology and Developing Societies, 20,* 51–64

Bradlef, J. & Eachus, P. (1995). Occupational Stress within a U.K. Higher Education Institution. *International Journal of Stress Management*, *2,* 3

Briggs, S. (2005). Changing roles and competencies of academics**.** *Active Learning in Higher Education.* *6,* 256–268.

Chaplain, R. (1995). Stress and job satisfaction: A study of English primary school teachers. *Educational Psychology, 15*, 473-489.

Coetzee, S. E., & Rothmann, S. (2005). Occupational stress in a higher education institution in South Africa. *South African Journal of Industrial Psychology*, *31*, 47-54.

Cooper, C. & Roden, J. (1985) 'Mental health and satisfaction among tax officers', *Social Science and Medicine, 21*, 747–751.

Daniels, K. & Guppy, A. (1994). An exploratory study of stress in a British University. *Higher Education Quarterly, 48*, 135-144

Early, P. (1994). *Lecturers' Workload and Factors Affecting Stress Levels: A Research Report from the NFER.* Berkshire:National Foundation for Educational Research (NFER).

Eugene, J.W. (1999). The Impact of Work Resources on Job Stress among Correctional Treatment Staff. *Journal of Addictions and Offender Counseling*, *20,* 26-34.

Fisher, S. (1994). *Stress in academic life: The mental assembly line.* Buckingham: Society for Research into Higher Education and Open University Press.

French, J. R. P., Caplan, R. D., & Harrison, R. V. (1982). *The mechanisms of job stress and strain.* London: Wiley.

George, D., & Mallery, P. (2003). *SPSS for Windows step by step: A simple guide and reference. 11.0 update* (4th ed.). Boston: Allyn & Bacon.

Greenhaus, J.H., Bedeian, A.G., and Mossholder, K.W. (1987). Work Experiences, Job Performance, and Feelings of Personal and Family Well-Being. *Journal of Vocational Behavior*, *31,* 200-215.

Gillespie, N. A., Walsh, M., Winefield, A. H., Dua, J., & Stough, C. (2001). Occupational stress in universities: Staff perceptions of the causes, consequences and moderators of stress. *Work & Stress*, *15*, 53-72.

Goldberg, D. E & Williams, E (1988). *A user's guide to the General Health Questionnaire: GHQ.* Windsor: Nelson.

Johnson, M. (2000) New Roles for Educators. Available at: http://www.mff.org/ edtech/ article.taf?_function=detail&Content_uid1= 290&#62 [accessed 20 November 2003].

Kelner, S. (2001) 'A Few Thoughts on Executive Competency Convergence', *Centre for Quality Management Journal, 10,* 67–72.

Kyriacou,C.(2001).Teacher stress: Directions for future research.*Educational Research,53,* 27-35.

Manthei, R. and Gilmore, A. (1996). Teacher Stress in Intermediate Schools. *Educational Research*, *38*, 3-19.

McCracken, C. G. (2001). The relationship between stress levels and job satisfaction among community college faculty in east Tennessee. Unpublished doctoral dissertation, East Tennessee State University, Johnson City, TN.

Mearns J.; & Cain, J. E. (2003). Relationships between teachers' occupational stress and their burnout and distress: Roles of coping and negative mood regulation expectancies. *Anxiety, Stress and Coping*, *16,* 71-82.

Munt, V. (2004). The Awful Truth: A Microhistory of Teacher Stress at Westwood High. *British Journal of Sociology of Education, 25,* 578-591.

Osipow, S. H. (1998). *Occupational Stress Inventory Manual* (professional version). Odessa, FL: Psychological Assessment Resources.

Pallant, J.(2005). *SPSS survival manual: A step by step guide to data analysis using SPSS for Windows (Version 12).* Allen & Unwin

Punch, K. F.; & Tuetteman, E. (1996). Reducing teacher stress: Prevalence, sources and symptoms, *British Journal of Educational Psychology, 68,* 269-279.

Rout U. R. and J. K. Rout. (2002) *Stress management for primary health professionals*.

New York: Kluwer Academic/Plenum Publishers.

Stranks, J. (2005). *Stress at Work Management and Prevention.* London. Elsevier Butterworth-Heinemann.

Tabachnick, B. G., & Fidell, L. S. (2001). *Using multivariate statistics* (4th edn). New York: HarperCollins

Thompson, C. J., & Dey, E. L. (1998). Pushed to the margins: Sources of stress for African American college and university faculty. *Journal of Higher Education*, *69*, 324-345.

Steyn, G. M. & Kamper, G. D. (2006). Understanding occupational stress among educators: an overview. *Africa Education Review, 3,* 113-133

Westman, M. & Eden, D. (1992) 'Excessive role demand and subsequent performance', *Journal of Organizational Behavior, 13,* 519–529.

Winefield, A. H., Gillespie, N., Stough, C., Dua, J., & Hapuararchchi, J. (2002). *Occupational stress in Australian Universities: A national survey*. Melbourne: National Tertiary Education Union.

Winefield, A.H. & Jarrett, R.J. (2001) Occupational stress in university staff. *International Journal of Stress Management*, *8,* 285–298.

Kassim Kimo Kebelo, Andhra University, Visakhapatnam

T.V. Ananda Rao, PhD, Andhra University, Visakhapatnam