The Stress Process Among School Superintendents*

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1 Introduction

The school superintendency has evolved significantly since its inception almost two centuries ago and the contexts in which these educational leaders work are continually impacted by various social, political, and economic factors that exert pressures on their leadership skills and, consequently, affect them personally and professionally (Norton, 2005).

Accompanying the growing complexity of the superintendency is a situation in which a large number of current superintendents are or will be leaving their positions. Cooper, Fusarelli, and Carella (2000) found almost half of the superintendents sampled indicated that they *probably* or *definitely* would not take another job as a superintendent. In addition, Glass, Bjork, and Brunner (2000) reported that nearly 80 percent of the superintendents across the nation are at or near the age of retirement. In 2007, Glass and Franceschini found that almost 55% of current superintendents from across the nation would not be working within the next five years. Studies in both Alabama and New York found similar results (Salter, 2000; NYSCOSS, 2004).

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The responsibilities and problems inherent in the position of superintendent of schools are wide in scope and variety. Oftentimes, superintendents must lead in an environment in which they are isolated, where the responsibilities are numerous, and where they have limited number of allies and supports. Because of this environment, a growing body of research (e.g., Cooper, et al., 2000; Fuller, 2003; Glass, 2000; Glass & Franceschini, 2007) has shown that school superintendents encounter considerable stress in their work that is directly related to the roles and responsibilities of their position. One study (Glass & Franceschini, 2007) reported that nearly 60 percent of superintendents across the country experienced levels of stress that were either *considerable* or *very great* in a 2006 survey, up from 44 percent twenty-five years earlier.

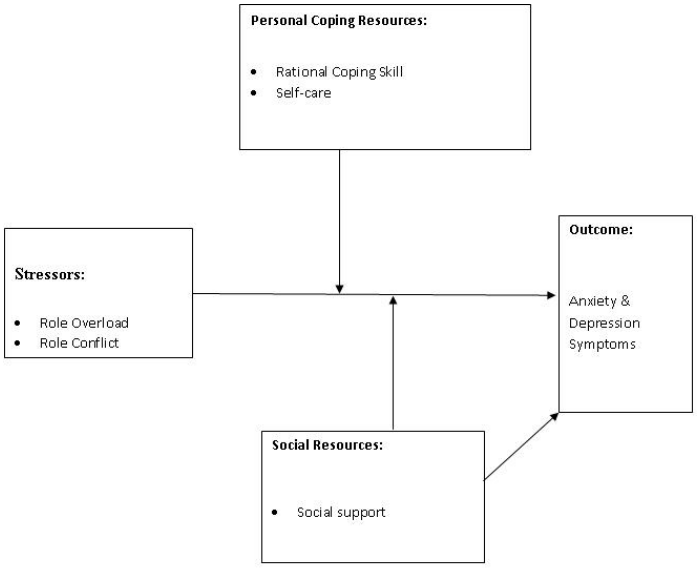
Subsequently, the amount of stress that leaders face is increasing and can become, "a disabling condition affecting behavior, judgment, and performance" (Glass & Franceschini, 2007, p.47). Smith (2001) has suggested that school superintendents experience both stress and strain similar to that experienced by corporate executives. Findings from other studies (Koch, Gmelch, Tung, & Swent, 1982; Wiggins, 1988) have shown that sources of stress for school superintendents are multidimensional and include time pressures, a lack of communication and performance feedback, and conflicting demands of various constituencies. In addition, superintendents in large school districts and those who are younger and have fewer years of experience report higher levels of stress (Glass, 2000; Schmidt, Kosmoski, & Pollack, 1998). Researchers (Holt, 1982; Osipow, 1998; Osipow & Spokane, 1983; Pearlin, 1983, 1985) have identified several aspects of work environments and occupational roles as potential sources of stress. These include role ambiguity, role overload, and the responsibility one has for the welfare or performance of others. Stress is increased also when the conflicts arise from inconsistent and conflicting expectations and interpersonal relations associated with the position.

Researchers (e.g., Brimm, 1983; Glass, 1992; Glass & Franceschini, 2007; Gmelch, 1995) have demonstrated that school superintendents experience considerable work- or role-related stress that can have deleterious effects on personal well-being and job effectiveness. Eastman and Mirochnik (1991) found that superintendents in Maine experiencing high levels of stress over a long time period encountered significant emotional and physical symptoms of distress or strain. This study identifies role strain, or the felt difficulty that people experience as a result of the challenges and conflicts in their roles over time (Goode, 1960; Osipow, 1998; Pearlin, 1983), as a measure of negative effects that high levels of stress have on well-being.

People who cope successfully with the demands of their work and personal lives tend to possess and utilize cognitive dispositions that promote effective problem solving, engage in activities that help to reduce stress, and/or pursue social relationships that provide support. All of these qualities and skills may moderate the potentially damaging effects of chronic stress, and a lack of such resources may amplify these effects (Allen & van de Vliert, 1984; Dolbier, Smith, & Steinhardt, 2007; Moos & Billings, 1982; Osipow, 1998). A fair amount of research (e.g., Dolbier et al., 2007; Patterson & Kelleher, 2005) has identified resilience as a quality of individuals who cope effectively with stress.

This present study was designed to examine the stress process among school superintendents. In particular, it employs a moderation model of the stress process that examines the relation of various sources of stress emanating from the role of school superintendent as well as the effects of personal coping resources and social support on strain. In addition, by investigating interaction effects, we examine whether any of the coping and social support variables moderate the relation of stressors to strain (i.e., perceptions of symptoms of depression and anxiety). These relations are depicted in Figure 1.

1.1 Figure 1. Diagram of the Stress Process



2 Method

2.1 Participants

The Occupational Stress Inventory-Revised (Osipow, 1998) was sent electronically in 2008 to 300 superintendents in the following Mid-Atlantic states: Delaware, Maryland, Pennsylvania, New Jersey, and Virginia. A total of 117 usable surveys were returned (39%). The final sample consisted of 40 women (34%) and 77 men, with 90% self-identifying as Caucasian and 85% as married. The majority of respondents (65%) indicated they were between 50 and 59 years of age. Thirty-six percent of respondents reported having been in their present position for less than three years, 37% between three and six years, 16% between six and ten years, and 11% more than ten years.

2.2 Materials and Procedures

The OSI-R consists of six subscales (10 items each) that assess different sources of stress in various occupational roles (ORQ subscales), four subscales that examine different types of personal strain, or perceived difficulty that can result from stress, and four subscales that assess various resources which adults can utilize to cope with stress. For the present study, factor and reliability analyses were conducted to identify scales that represent valid measures of the constructs examined. Sources of stress are represented by 27 items

from the ORQ subscales (alpha=.95) and 14 items (alpha=.96) from the personal strain were combined to form a single criterion measure of psychological symptoms of depression and anxiety. Three coping resource variables emerged from factor analyses that included personal care, or engaging in personal activities that reduce chronic stress (17 items, alpha = .85), social support, or the extent to which the respondent feels support from others (10 items, alpha = .94), and rational/cognitive coping, or the extent to which a person makes use of cognitive skills to solve work-related problems and evaluate consequences of courses of action taken (9 items, alpha = .84).

2.3 Analyses

Multiple regression analyses were used to test the hypothesized model of the effects of occupational role stress on superintendent well-being (i.e., psychological symptoms) and the moderating effects of personal and social coping resources. Because the respondents' gender and age were significantly related to the criterion variable, they were entered into the regression in the first step as covariates. In the second step, the occupational sources of role stress variable were forced into the equation, followed by an initial stepwise entry of the three coping resource variables. Social support, which did not enter the equation at this step, was then forced into the equation in order to properly test for interaction effects. The four interaction terms (each of the 3 coping variables and respondent sex by stress sources) were then submitted to the regression analysis in stepwise fashion.

3 Results

Results, shown in Table 1, provide support for the hypothesized model. First, the covariates, respondent sex and age together accounted for 12% of the variation in symptoms, F (2, 114) =7.64, p=.001. In the next step, sources of role strain accounted for an additional 54% of the variation in symptoms, F (1, 113) =175.09, p<.001. With respect to moderators of the stress process, personal care accounted for an additional 6%, F (1, 112) =24.60, p<.001, and rational/cognitive coping an additional 1% of the variation, F (1, 111) =4.28, p=.041. Social support did not contribute significantly to the prediction of symptoms. In the final step, only the stressor-by-cognitive-coping interaction term explained an additional significant amount of variation in symptoms. Together these factors accounted for 73 % of the variation in psychological symptoms.

Hierarchical Multiple Regression Analysis of the Relation of Occupational Stressors, Personal Coping Resources, and Social Support on Psychological Symptoms (N=117)

Predictor Variable	*Beta (last step)*	*R2* change	*F* (change)
Covariates:			
Respondent Age	-.18***		
Respondent Sex	.09+	.12	7.64***
Predictors:			
Occupational Stressors	.56***	.54	175.09***
Personal Care Resource	-.23***	.06	24.60***
Rational Coping Resource	-16*	.01	4.28*
Social Support	.03	<.01	0.16
Interaction Terms:			
Stressors x Cognitive Coping	-.11	.01	5.19*

Table 1: + $p\leq$ .10 ; *$p\leq$ .05; **$p\leq$ .01; ***$p\leq$ .001

Procedures outlined by Aiken and West (1991) were used to probe the pattern of the interaction. Specifically, the simple slope of the regression line was evaluated at three levels of perceived rational/cognitive coping: high (one *SD* above the mean), the mean, and low (one *SD* below the mean). It was determined that the most positive relationship between stressors and symptoms occurred when rational coping was low, indicating that strain increased more quickly in the face of higher stressors for those superintendents who possessed lower levels of the resource of rational/cognitive coping competence. Possessing higher levels of rational/cognitive coping competence served as a buffer against higher strain in the face of growing work stress.

4 Implications and Discussion

Accordingly, the researchers conclude that superintendents are quite vulnerable to the effects of the stressors they face in their occupational role including role overload and the high level of fiscal and public responsibility the position carries (Koch et al., 1982). In this study, sources of stress explained a very high 54% of the variance in self-perceptions of symptoms of anxiety and depression, a finding that suggests the importance of having administrative structures in place that helps keep sources of stress at a reasonable level in order to minimize adverse effects of the job and maximize the superintendent's potential effectiveness.

Current and aspiring superintendents should have a knowledge and understanding of impact that stress can have on their effectiveness as a school district leader. Specifically, they need to know how to identify the potentially damaging sources of stress, and develop and employ effective coping mechanisms that increase their potential for success.

The researchers also conclude that superintendents who indicated that they take steps to care of themselves (e.g., take time to relax and engage in satisfying personal activities) and use effective problem solving approaches to challenges to a greater extent were able to experience lower levels of psychological symptoms. In addition, younger superintendents seem to be at greater risk for developing psychological symptoms, a finding that is consistent with previous research (Schmidt et al., 1998) that used blood pressure as an outcome variable.

The one significant interaction effect found in the present study indicates that being an effective problem solver moderates to a small but significant degree the potentially damaging effects of occupational stress and serves as a positive independent contributor to well-being. The approach to coping captured in the rational/cognitive coping variable exemplifies a problem-focused as well as an appraisal-focused coping approach that can have the effect of calming emotional reactions to stress while it enables the individual to deal effectively with difficult situations (Moos & Billings, 1982; Skinner, Edge, Altman, & Sherwood, 2003). This finding suggests superintendents be given the opportunity to engage in professional development opportunities that enable them to improve their rational problem-solving skills, especially for less experienced superintendents.

Part of being an effective leader lies in taking steps to reduce the potential for serious problems to arise, as prevention can pay greater dividends than can intervention. Establishing administrative structures that are efficient and hiring administrative and support personnel who work well together and have the skills to support central office functions, as well as establishing an effective team approach, are qualities of an effective leader that can reduce the potential for work-related conflict and overload. In addressing such challenges among high-level managers, Veach, Rahe, Tolles, and Newhall (2003) showed that a workshop in a retreat format that incorporates education about stress management principles and processes, together with experiential exercises, helped managers significantly. The authors pointed to the importance of helping executives develop new stress management skills that include learning new ways to envision their job responsibilities and a more team-focused approach. In addition, an ecological approach to the problem of stress that educate and sensitizes school boards, politicians, and community leaders about the need to support superintendents and provide them with the skills to do so should also be considered.

5 References

Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions.* Newbury Park, CA: Sage.

Allen, V. L., & van de Vliert, E. (1984). A role theoretical perspective on transitional processes. In V. L. Allen, & E. van de Vliert (Eds.), *Role transitions: Explorations and explanations* (pp. 3-18). New York: Plenum.

Brimm, J. L. (1983). What stresses school administrators? *Theory into Practice, 22*, 64-69.

Cooper, B., Fusarelli, L., & Carella, V. (2000). *Career crisis in the superintendency?* Arlington, VA: American Association of School Administrators.

Dolbier, C. L., Smith, S. E., & Steinhardt, M. A. (2007). Relationships of protective factors to stress and symptoms of illness. *American Journal of Health Behavior, 31*, 423-433.

Eastman, M., & Mirochnik, D. (1991). *Stressed for success: A study of stress and the superintendency.* Orono, ME: Penquis Superintendents' Association Research Cooperative, Occasional Paper Series, No. 14, 52.

Glass, T. (1992). *The study of the American school superintendency: America's education leaders in a time of reform.* Arlington, VA: American Association of School Administrators.

Glass, T., Bjork, L., & Brunner, C. (2000). *The study of the American school* superintendency 2000: A look at the superintendent of education in the new *millennium.* Arlington, VA: American Association of School Administrators.

Glass, T., & Franceschini, L. (2007). *The state of the American superintendency: A mid-decade study.* Lanham, MD: Rowman & Littlefield Education.

Gmelch, W. G. (1995). Administrator stress and coping effectiveness: Implications for administrator evaluation and development. *Journal of Personnel Evaluation in Education, 9*, 275-285.

Goode, W. J. (1960). A theory of role strain. *American Sociological Review, 25*, 483-496.

Holt, R. R. (1982). Occupational Stress. In L. Goldberger & S. Breznitz (Eds.), *Handbook of stress: Theoretical and clinical aspects* (pp. 419-444). New York: Free Press.

Koch, J. L., Gmelch, W., Tung, R., & Swent, B. (1982). Job stress among school administrators: Factorial dimensions and differential effects. *Journal of Applied Psychology, 67,* 493-499.

Moos, R. H., & Billings, A. G. (1982). Conceptualizing and measuring coping resources and processes. In L. Goldberger & S. Breznitz (Eds.), Handbook *of stress: Theoretical and clinical aspects* (pp. 212-230). New York: Free Press.

Norton, M. (2005). *Executive leadership for effective administration.* Boston, MA: Allyn and Bacon.

New York State Council of School Superintendents. (2004). *Snapshot V.* Albany, NY.

Osipow, S. H. (1998). *Occupational Stress Inventory, revised edition (OSI-R). Professional manual.* Lutz, FL: Psychological Assessment Resources.

Osipow, S. H., & Spokane, A. R. (1983). *Manual for measures of occupational stress, strain, and coping (Form E-2).* Columbus, OH: Marathon Consulting & Press.

Patterson, J., & Kelleher, P. (2005). *Resilient school leaders.*Arlington, VA: American Association of School Administrators.

Pearlin, L. I. (1983). Role strains and personal stress. In H. B. Kaplan (Ed.), *Psychosocial stress* (pp. 3-32). New York: Academic Press.

Pearlin, L. I. (1985). Life strains and psychological distress among adults. In A. Monat & R. S. Lazarus (Eds.), *Stress and coping: An anthology* (2nd ed., pp. 192-207). New York: Columbia University Press.

Salter, S. (2000). *Empty chairs: Alabama's Leadership Shortage.* Retrieved October 27, 2006 from: http://www.theaasb.org/asb.crm?DocID=375[2]

Schmidt, L. J., Kosmoski, G. J., & Pollack, D. R. (1998). *Novice administrators: Psychological and physiological effects.* ERIC Document No. ED 427 386.

Skinner, E. A., Edge, K., Altman, J., & Sherwood, H. (2003). Searching for the structure of coping: A review and critique of category systems for classifying ways of coping. *Psychological Bulletin, 129*, 216-269.

[2]http://www.theaasb.org/asb.crm?DocID=375

Smith, T. (2001). *The role of the superintendent: Occupational stress and coping mechanisms as perceived by superintendents in the Education Service Center, Region 13, Texas.* Unpublished doctoral dissertation, Texas A& M University, College Station.

Veach, T. L., Rahe, R. H., Tolles, R. L. & Newhall, L. M. (2003). Effectiveness of an intensive stress intervention workshop for senior managers. *Stress and health, 19*, 257-264.

Wiggins, T. (1988). Stress and administrative role in educational organizations. *Journal of Educational Research, 82*, 120-125.