

Principal Leadership Style and Teacher Stress among a Sample of Secondary School Teachers in Barbados

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This paper which represented part of a larger principal leadership study examined the relationship between principal leadership style (which was operationalized in terms of the principal functions as follows: planning, decision making, communicating, organizing and coordinating, delegating, evaluating, and social and professional support. The dependent variable was teacher stress. A cohort of ninety (90) teachers and eleven (11) principals were selected from eleven (11) secondary schools in Barbados, using purposive sampling. The study found significant negative correlations between the dependent variable of teacher stress and principal leadership style. Additionally, the study found that younger and inexperienced teachers reported higher levels of stress than their older and more experienced counterparts on several of the variables. There was also a significant difference in the stress scores reported by newer secondary school teachers and older secondary school teachers. The present research findings suggest that there is a need to develop differentiated stress management systems to address the different levels of stress that are being experienced by older and newer secondary school teachers. Based on the negative correlation between principal leadership style and teacher stress, it is recommended that principals re-examine how they lead their schools and seek wherever possible to identify what aspects of their leadership could be contributing to teacher stress and institute corrective measures in the areas where such action is warranted.

Key words: *principal leadership style; teacher stress; teacher perceptions; experienced teachers*

Introduction

The educational environment has become increasingly more complex. Principals are now being held to higher standards of accountability as taxpayers in various constituencies demand to be informed of the way in which their educational tax dollars are being spent. There is also the concomitant increase in the instances of deviant behaviour, the number of cases of litigation brought by parents, on behalf of their children whom they perceive to have been defrauded of some basic right, and the increased levels of teacher absenteeism and unpunctuality. To say that schools have now become increasingly stressful environments, for teachers and principals alike, would be an understatement. According to the 28th annual Metlife Survey of the American Teacher, released in March 2012, 51 % of teachers report teaching under great stress several days a week and increase of 15 percentage points over the 36 % of teachers that reported that level in 1985. Teachers, it appears are attributing more and more significance to the leadership styles of principals. Further, researchers like Nosheena (2010) have confirmed that there is a relationship between principal leadership style and teacher occupational stress i.e. teachers had

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more stress when principals adopted autocratic leadership styles and less stress when principals adopted democratic leadership styles. Other researchers have examined teachers stress with reference to transformational leadership styles and found that transformational leadership style moderates the level of stress and satisfaction experienced by teachers (Moore, 2012). This paper; however, defines principal leadership in terms of task roles and what he/she does on a day to day basis, with specific reference to planning, delegating, supporting, coordinating, among other duties. The question that is being asked therefore, and is worthy of interrogation, is whether or not there is indeed a relationship between principal leadership and teacher stress as suggested in the literature, or are there other factors beyond principal leadership that are culpable. This paper is intended to bring another angle to the debate and provide an empirical basis for engaging the discourse on the relationship between principal leadership and teacher stress in Barbados.

Theoretical Framework

Symbolic Interactionism

The sociological theory of symbolic interactionism as articulated by Blumer (1969) has been chosen for this study. This theory suggests that individuals act according to the interpretations of the meanings of their world. Or put another way, the social interaction of human beings is predicated on their perceptions of the world and the meanings that they ascribe to the actions and behaviours of others. This theory is particularly useful for this paper, since it aims to understand the relationship between teachers and principals, human beings whose roles unfold in an arena of constant interaction and perceptual understandings and misunderstandings as well. Taken further, the theory notes that people behave based on what they believe and not what is necessarily objective truth. In the context of school leadership, and principal leadership specifically, the actions of the principal as he seeks to lead and the actions the teachers as they follow, are open to constant interpretation, misinterpretation and perceptual distortion. In a sense teachers and principals are constantly managing perceptions as they negotiate their myriad responsibilities within the school context.

On the whole, symbolic interactionism examines perceptions and meanings that people construct in their social settings. In concert with the perspective of Blumer (1969) and Mead (1934), this study was designed to investigate the meanings teachers and principals constructed from their interaction with each other in the context of the teaching, learning and administrative environment. The purpose was to get an idea of the level of congruence or disparity that existed between teachers' perceptions of the principals' leadership style and the principals' own perceptions of their leadership style and the impact these perceptions had on teacher stress.

Objectives

This survey research design study examined the nature of the relationship between principal leadership and teacher stress. The research questions are as follows:

- 1 Is there a relationship between principals' leadership style and teacher stress?
- 2 a Is there a relationship between principals' leadership style and teacher stress by gender?
- b Is there a relationship between principals' leadership style and teacher stress by school roll?

- c Is there a relationship between principals' leadership style and teacher stress by teaching experience?
- 3 Is there a statistically significant difference in the level of stress reported by male and female teachers?
- 4 Is there a statistically significant difference in the level of stress reported by newer secondary school teachers and older secondary school teachers?
- 5 What are the combined and relative effects of evaluating, support, planning, decision making, communicating, organizing, and delegating on teacher stress?

Relevant Literature

Teacher Stress

Kyriacou (1998) defined teacher stress as a response syndrome of negative effects such as anger or depression, usually accompanied by potentially pathogenic physiological changes, such as increased heart rate. This stress results from aspects of the teacher's job and is mediated by the perception that the demands made upon the teacher constitute a threat to his self-esteem or well-being and by coping mechanisms activated to reduce the perceived threat, (Kyriacou, 1998). On the other hand, Robbins (2000) suggested that stress has positive and negative components. For this researcher, stress can be divided into three categories, physiological, psychological, and behavioural. Low to moderate levels of stress can improve the quality of work, while if the level of stress is too high or too low, it could lower worker morale and adversely impact job performance (Robbins, 2000). Significantly, according to the literature, the response syndrome identified by Kyriacou (1998) is not uncommon, and it appears to be universal across cultures (Harney, 2008).

Principal Leadership and Teacher Stress

Blasé (1986) suggests that the relationship between a principal's leadership style and the level of teacher stress and satisfaction indicates that teachers' performances are influenced by their perceptions of principals' behaviour. Similarly, Jackson, Schwab, and Schuler (1986) assert that teacher stress and burnout are found to be significantly related to principals' lack of participatory management, lack of sensitivity to school and teacher-related problems, and lack of support for teachers. In accord with the foregoing view are Calabrese (1987) and Blasé and Kirby (1992) who point out that the principal plays key roles in teacher burnout and stress, both as a major source of support and the main source of stress. Their research indicates that teachers often cite stress as a reason for leaving the teaching profession, and part of that stress is caused by negative relationships with their building principals.

Kyriacou (1987) lists relationships with colleagues, conditions of work, pupil misconduct, salary, and status and role conflict as major sources of stress but cautions that other factors have been found to be significant as well.

The results from Pullis (1992) who sampled 244 teachers to determine how occupational stress affected their lives are worthy of note. The major sources of occupational stress identified by these teachers in order of importance were: inadequate discipline policies of the school, attitudes and behaviour of administrators, evaluations by administrators, attitudes and behaviour of other teachers, work overload, poor career opportunities, low status of the teaching profession, and lack of recognition for good teaching, loud, noisy students, and dealing with parents.

What is also noteworthy is that when asked what schools might do to help relieve teacher stress, the most frequently mentioned strategies in order of importance were: allowing time for teachers

to collaborate, providing more workshops/in-service and advanced courses, providing more verbal praise/reinforcement/respect for the job, providing more support, providing more paraprofessional/ support staff/clerical assistance, providing more educational opportunities to learn about students with behavioural disorders, building better communication and decision-making involvement with administrators. What is also significant in the foregoing is that the role of the principal is being highlighted, if not directly, certainly in an indirect way.

Krause (1993) cited in Carter (1994), in a study of 42 special education teachers from Virginia, who decided not to return for their teaching positions for the 1991-92 school year indicated that stress was one of the leading factors in their decision to leave the profession. Other leading factors which contributed to the early exodus of teachers from the profession, as listed by the teachers, were stress-related as well, including lack of resources, lack of time, excessive meetings, large class sizes, lack of assistance, lack of support, and hostile parents.

Research by Richardson (1997) who investigated the sources of stress in elementary school teachers in the Caribbean pointed to significant differences in teacher stress as it related to the measures of Organisational Management and Supervisory Support. The study surveyed a sample of 645 teachers, 310 males and 335 females from 8 Caribbean territories. Analysis of the differences in means using the Scheffe method of multiple comparisons showed that in the case of organisational management, teachers in St. Vincent ($M = 2.78$) and Barbados ($M = 2.64$) experience higher levels of stress than teachers in Montserrat ($M = 2.01$) and Dominica ($M = 2.01$). With respect to Supervisor Support, teachers from Antigua ($M = 2.53$), Barbados ($M = 2.41$), St Vincent ($M = 2.38$) and St. Kitts ($M = 2.26$) experienced higher levels of stress than teachers from Dominica ($M = 1.69$), (Richardson, 1997). The findings pointed to implications for principal leadership and according to Richardson (1997) indicated a need for principals and elementary school teachers to be exposed to organised stress management programmes, and overall training in the area of educational management and school supervision.

According to Harris (1999) stress experienced by teachers can be traced to administrators. In a study conducted related to the relationship between principals' leadership styles and teacher stress, the findings indicated that in the school with the lowest teacher stress, the principal communicated a clear vision for the school and had a close, personal relationship with the staff.

Leadership style also emerged as a significant organisational factor. Harris (1999) assessed teacher stress and leadership style in three American primary schools, using the Wilson Stress Profile for teachers. The principal in each school was classified differently, and teachers had significantly lower stress in schools where the principal was classified as high in both task and relationship focus- this style being associated with both strategic vision and a close personal relationship with staff. The findings further showed that at the school with the lowest teacher stress, the principal communicated a clear vision for the school and had a personal relationship with the staff.

While Black (2003) indicated that principals who offered their strong social support provided a buffer that helps reduce teacher's job related tension. The International Stress Management Association, based in Waltham Cross, England, reports similar conclusions in its publication, Stress News. Studies in the United States, England, Germany, and Canada indicate that principals are a key factor in heightening or lowering teacher stress. Principals who offer their staff strong social support provide a buffer that helps reduce teacher's job related tension, Black (2003).

More recent research by Yusof (2011) which investigated principal leadership and

teachers' stress level in Malaysian primary schools, found that there was a significant relationship between the style of the headmaster's leadership (structural dimension) and the teacher's stress level ($r = 0.433$ and $p = 0.000$). The relationship was at a high level which meant the higher the style of the headmaster's leadership (structural dimension), the higher the teacher's stress level (Yusof, 2011).

Demographic Variables and Teacher Stress

Gonzalez (1997) found that teachers in urban secondary schools found that students' lack of discipline and motivation were a primary source of teacher stress and a significant predictor of burnout. In a comparable study of urban middle school teachers, three conditions of work were identified as significant predictors of stress: higher levels of emotional exhaustion, depersonalised school climate and lower levels of perceived accomplishment. These results were true for both male and female teachers, Konert (1997).

Abel and Sewell (1999) in comparing stress on rural and urban teachers found that rural teachers perceived too much parental contact as a source of stress, while urban teachers regarded the lack of parental involvement as stressful. The major difference between the groups was that rural teachers felt greater stress from time demands and the conditions of work, while urban teachers attributed greater stress to student discipline and behaviour problems. Haberman (2002) contends that the Abel and Sewell (1999) study is important because it supports previous literature on teacher stress in rural versus urban schools. The study concludes that urban teachers have greater stress and that there is a clear relationship between teachers' stress and burnout as a result of having difficult classes, problem students, poor class climate, poor working conditions, shortage of resources, lack of recognition and inordinate demands on teachers' time, leading to burnout (Abel & Sewell, 1999).

Lewis (1999) whose research indicates that overall maintaining discipline emerged as a major stressor, with those affected being teachers who placed particular emphasis on pupil empowerment.

Gender has also been implicated in the stress debate. In general, female teachers have reported higher levels of stress than their male counterparts (Brewer & McMahan, 2004); while Duyilemi (1992) found that the age of the teacher was negatively correlated to with the level of occupational stress. Later research by Hanif, Tariq and Nadeem (2011) underscored the influence of biographical variables on teacher stress. Step-wise multiple regression analysis was performed to see which personal and job related variables predicted levels of stress and job performance among teachers. The results revealed that school system, gender, job experience, number of family members, and the number of students were the five most significant predictors (Hanif et al., 2011).

From the discourse thus far it is reasonable to suggest that there is a need for further research in the area of principal leadership and teacher stress. It is for this reason therefore that this study has been commissioned.

Methodology

Sample and Procedure

The sample used in the study was drawn from a population of twenty-three (23) secondary schools in Barbados, located in rural, urban, and sub-urban areas. The schools are divided into two categories, newer secondary and older secondary. The former, are usually recipients of students whose academic ability range from lower to middle and usually have larger student

populations. The latter, are recipients of students from the upper and top academic streams and usually have smaller student populations. To ensure that the sample was representative the researcher employed the purposive sampling methodology. The final sample included schools from the rural, urban and suburban areas as well as schools with low, medium and high levels of student academic ability (as determined by the Barbados Secondary Common Entrance Exam). From the schools selected the researcher used a random sample methodology to select a representative sample of junior and senior teachers from each school. This final cohort included one hundred (100) teachers and eleven (11) principals.

Instrumentation

A questionnaire which measured the independent variable, principal leadership style, and the dependent variable, teacher stress, was administered. The principal leadership style variable was measured using seven sub-scales as follows: planning (18 items), decision making (24 items), communicating (19 items), organising and coordinating (20 items), delegating (12 items), evaluating (14 items), and social and professional support (15 items). These sub-scales were taken from a questionnaire produced by Jones (1988) in a study entitled “Principal Leadership Style its Expression on Teacher Satisfaction”. The average item score for the leadership style sub-scales was found to be highly reliable ($\alpha = .94$) (Marshall, 2014).

The teacher stress variable was measured using questionnaire items from a study done by Tuck (1999), which was developed from one used in earlier studies done by Laughlin (1984), Manthei & Soloman (1988), and Manthei et al (1996). This variable was measured using eight (8) items with a five-point Likert scale (scored from 1 = no stress to 5 = extreme stress). Respondents were asked to assess stress as it relates to things like disruptive behaviour, salary not keeping up with cost of living, substituting for absent teachers and attitudes and behaviour of chief administrators. The questionnaire was distributed to a sample of twenty teachers and two principals in the target population of the study. These persons were asked to comment on the clarity and appropriateness of the items, and to highlight any evidence of ambiguity. At the end of the exercise, some minor changes were made. The revised questionnaire was found to be highly reliable. The Cronbach's alpha was satisfactory ($\alpha = 0.91$), for the principal leadership scales. The Cronbach's alpha was satisfactory ($\alpha = 0.94$) for the teacher stress scale.

Procedure

Over a two-week period the questionnaires were administered to a group consisting of eleven (11) principals and one hundred (100) teachers from public secondary schools in Barbados. Respondents were given one week to complete the questionnaires. There was a 100% completion rate for the principals' questionnaires and a 90% completion rate for the teachers' questionnaires.

Data Analysis

Research questions 1, 2a, 2b, and 2c were analysed using Pearson's Product Moment Correlation, research questions 3 and 4 were analysed using the Independent Samples 't' test, and research question 5 was analysed using ANOVA and regression analysis.

Results and Discussion

Research Question 1: Is there a significant relationship between principal leadership style and teacher stress?

The Pearson's Product Moment Correlation was conducted to answer this question. The results indicated that teacher stress was significantly negatively correlated with planning ($r = -.363$, $p < 0.01$), decision making ($r = -.289$, $p < 0.01$), communicating ($r = -.387$, $p < 0.01$), organising ($r = -.401$, $p < 0.01$), support ($r = -.137$, $p < 0.01$), evaluating ($r = -.353$, $p < 0.01$) and delegating ($r = -.279$, $p < 0.01$). See Table 1 below. A negative correlation indicates that the variables mean scores are moving in the opposite direction. In the context of this research this means that the higher the teachers' stress scores the lower the principals' leadership scores and the lower the teachers' stress scores, the higher the principals' leadership scores. Such findings underscore the point that while teaching and indeed any other profession, has its share of attendant stress, principal leadership can be a mediating influence on the level of stress experienced by teachers. These findings are consistent with findings of researchers such as (Jackson, Schwab & Schuler; Harris, 1999; Yusof, 2011) who also found a relationship between principal leadership and teacher stress.

The implication therefore is that principals must be encouraged to pay more attention how they perform their roles as leaders, cognizant of the fact that how they lead can influence the level of stress experienced by teachers. Further, if one accepts that stress is a factor associated with teaching, then it would be critical that systems of stress management should be included in the in-service training programs for teachers and principals.

Table 1

Correlation matrix for the interrelationship of principal leadership style and teacher stress (N=90)

1 Planning	1	2	3	4	5	6	7	8
2 Decision Making	.869**							
3 Communicating	.834**	.910**						
4 Organising	.859**	.877**	.893**					
5 Support	.389**	.484**	.444**	.526**				
6 Evaluating	.616**	.643**	.617**	.669**	.419**			
7 Delegating	.428**	.405**	.426**	.462**	.205**	.608**		
8 Stress	-.363**	-.289**	-.387**	-.401**	-.137**	-.353**	-.279**	

Note. ** Correlation is significant at the 0.01 level (2-tailed)

Research Question 2a: Is there a significant relationship between principal leadership style and teacher stress by gender?

The Pearson's Product Moment Correlation was conducted and the results indicated that for the female teachers stress was more strongly correlated with planning ($r = -.385$, $p < 0.01$), decision making ($r = -.263$, $p < 0.01$), communication ($r = -.393$, $p < 0.01$), evaluating ($r = -.425$, $p < 0.01$) and delegating ($r = -.366$, $p < 0.01$). While for the male teachers stress was more strongly correlated with organising ($r = -.410$, $p < 0.01$). This suggested that female teachers were more affected than male teachers by these aspects of the perceived principal leadership style. (Refer to Table 2 below).

The findings as it relates to perceived principal leadership style and stress, with reference

to gender seem to confirm that men and women are differently affected by principal leadership. For the female teachers the variables that received higher correlation scores were planning, communicating, evaluating and delegating. While for the male teachers the variable were organising. Notably, the variables on which the female teachers scored differently were in the transformational area or the aspect of leadership that calls for interaction, so one can see why communication problems would be especially stressful for female teachers who tend to place higher value on relationships. For the male teachers the variable on which the scores were different was in the transactional area. A reasonable argument could be that men tend to be concerned with getting the job done and a critical part of that is effective organisation, therefore once again one can see why leadership that does not promote good organisation would be a source of stress for men.

These findings suggest that leadership creates different levels of stress for male and female teachers. A point argued by Jarvis (1999) and supported by Dussalt, Deaudelin, Royer and Loïselle (1999). These findings are also instructive for intervention strategies necessary for dealing with stress in the teaching environment. If the evidence indicates that there are differentiated levels of stress along the lines of gender then the intervention stress reliever programmes should be similarly differentiated.

Table 2

Correlation matrix for the interrelationship of principal leadership style and teacher stress by gender (N=90)

	1	2	3	4	5	6	7	8
1 Planning	1	.855**	.862**	.886**	.472**	.490**	.188	-.344*
2 Decision Making	.883**	1	.939**	.901**	.617**	.566**	.246	-.324
3 Communicating	.809**	.888**	1	.953**	.673**	.531**	.273	-.385*
4 Organising	.839**	.861**	.846**	1	.678**	.611**	.342*	-.410*
6 Evaluating	.740**	.715**	.698**	.726**	.273*	1	.517**	-.289
7 Delegating	.602**	.507**	.531**	.556**	.105	.708**	1	-.205
8 Stress	-.385**	-.263**	-.393**	-.397**	-.013	-.425**	-.366**	1

Note.** Correlation is significant at the 0.01 level (2-tailed).

(Male Teachers N=34, Female Teachers N=56) Males above the diagonal, Females below the diagonal

Research Question 2b: Is there a significant relationship between principal leadership style and teacher stress by school roll?

The Pearson's Product Moment Correlation was conducted and the results indicated that the under 1000 group showed higher correlations than the over 1000 group on the following variables: delegating ($r=.364$, $p<0.05$), evaluating ($r=.450$, $p<0.01$), organising ($r=.484$, $p<0.01$), communicating ($r=.455$, $p<0.01$) and planning ($r=.397$, $p<0.01$). See Table 3 overleaf.

This finding was interesting, one would have expected that a larger school roll would have translated into greater levels of stress for the teachers, but the reverse occurred. What this indicates therefore is that the way in which the principals lead their schools can be even more significant for teachers, in determining their levels of stress, than the number of students on the school roll. This suggestion finds support in the findings of Darmody and Smyth (2011) in a study of job satisfaction and occupational stress among primary school teachers and principals in Ireland. According to the findings of that study, teacher stress was not directly associated with

school location, size and class size. The implicit argument can be made therefore that even if the school roll is large, effective principal leadership can mediate the levels of stress experienced by teachers.

Table 3

Correlation matrix for the interrelationship of principal leadership style and teacher stress by school roll (N=90)

	1	2	3	4	5	6	7	8
1 Planning	1	.864**	.835**	.870**	.414**	.645**	.526**	-.345*
2 Decision Making	.887**	1	.932**	.894**	.543**	.697**	.535**	-.300
3 Communicating	.836**	.885**	1	.874**	.418**	.652**	.489**	-.324*
4 Organising	.848**	.862**	.913**	1	.547**	.673**	.503**	-.324*
6 Evaluating	.578**	.600**	.584**	.663**	.452**	1	.729**	-.257
7 Delegating	.299*	.297	.365*	.414**	.229	.482**	1	-.240
8 Stress	-.397**	-.285**	-.455**	-.484**	-.121	-.450**	-.364*	1

Note. ** Correlation is significant at the 0.01 level (2-tailed).

(School Roll Over 1000 N=43, School Roll under 1000 N= 47)

School Roll over 1000 above the diagonal, School Roll under 1000 below the diagonal

Research Question 2c: Is there a significant relationship between principal leadership style and teacher stress by teaching experience?

The Pearson's Product Moment Correlation was conducted and the results indicated that the 1-19 cohort reported higher correlations between perceived principal leadership and stress than the 20-39 cohort, with reference to planning ($r = -.376$, $p < 0.01$), communicating ($r = -.459$, $p < 0.01$) organising ($r = -.485$, $p < 0.01$) and delegating ($r = -.398$, $p < 0.01$). See Table 4 overleaf.

In terms of stress it is not surprising that younger and inexperienced teachers report higher levels of stress. It can be argued that the older and more experienced a person becomes he/she is able to develop coping strategies and in general be better able to navigate the school environment. Of course there is also the possibility that as one gets older and more experienced one may also become less tolerant of student behaviours and for that reason may experience greater stress. In terms of other research, the results are in accord with the findings of McCormick (1990) who reported that older and more experienced teachers tended to experience less stress than their younger and less experienced counterparts.

On the contrary, there is also research which suggests that the reverse is also true. Research by Darmody and Smyth (2011) found that teachers aged in their forties had higher stress levels than other younger age groups. At the same time occupational stress was evident at all stages of the teaching career but stress levels were somewhat lower for those teachers with 2 to 5 years experience.

Even though the research evidence appears contradictory, what one can concede is that teaching experience as a variable merits further investigation as it may have implications for what Kyriacou (2001) termed direct or palliative stress coping intervention strategies.

Table 4

Correlation matrix for the interrelationship of principal leadership style and teacher stress by teaching experience (N=90)

	1	2	3	4	5	6	7	8
1 Planning	1	.874**	.837**	.835**	.246	.667**	.415*	-.340*
2 Decision Making	.869**	1	.933**	.861**	.372*	.604**	.291	-.218
3 Communicating	.833**	.903**	1	.863**	.291	.606**	.328*	-.253
4 Organising	.874**	.892**	.909**	1	.354*	.555**	.314	-.247
6 Evaluating	.597**	.660**	.631**	.734**	.546**	1	.604**	-.446**
7 Delegating	.442**	.470**	.501**	.570**	.362**	.615**	1	-.094
8 Stress	-.376**	-.325*	-.459**	-.485*	-.181	-.315**	-.398**	1

Note.** Correlation is significant at the 0.01 level (2-tailed).

(Experienced Teachers: 1-19 Years N=53, Experienced Teachers: 20-39 Years N=37)

Teachers with 20-39 years experience above the diagonal, Teachers with 1-19 years experience below the diagonal

Research Question 3: Is there a statistically significant difference in the level of stress reported by male and female teachers?

The Student 't' test was used to determine if there was a significant difference in the stress scores of male and female teachers. The results indicated that there was no statistically significant difference in the level of stress reported by male and female secondary school teachers. Male teacher (M = 2.57, SD = .949) and female teachers (M = 2.66, SD = .795), $t(88) = .603$, $p = n.s.$ See Table 5 below. This finding is not surprising since the correlations that were conducted to analyse the relationship between principal leadership style and teacher stress with specific reference to gender indicated that male and female teachers reported higher and lower negative correlations depending on the variable that was tapped. So this confirms that while there are differences they are not statistically significant; however, this does not mean that principals and potential principals should ignore the fact that they must treat to the issue of stress management, using an approach that is cognisant of how different leadership variables impact on the level of stress experienced by male and female teachers. The findings are also consistent with those of Darmody and Smyth (2011) who also found that gender was not a significant factor in teacher job stress.

Table 5

T Test for male and female teachers N (90)

Variable	Stress	N	Mean	S.D.	t	df	2-tailed (SIG.)
Stress	Male Teachers	34	2.573	.949			
	Female Teachers	56	2.669	.795			
					-.516	88	.603

Research Question 4: Is there a statistically significant difference in the level of stress reported by newer secondary school teachers and older secondary school teachers?

The Student 't' test was used to determine if there was a significant difference in the scores of newer secondary school and older secondary school teachers. The results indicated that there was a statistically significant difference in the level of stress reported by newer secondary

teachers and older secondary school teachers. Newer secondary school teachers ($M = 26.42$, $SD = 6.30$) reported significantly lower means than older secondary school teachers ($M = 29.54$, $SD = 5.96$), $t(88) = -2.311$, $p < .05$, (see Table 6 below).

This finding is again a bit enigmatic. In the Barbadian school system older secondary schools are able to attract better quality students based on the Barbados Secondary School Entrance Examination or Eleven-plus exam as it is commonly known, while their counterparts in the newer secondary schools receive students of lesser academic ability based on the examination scores. One would be inclined to think therefore, that at the 'newer secondary' schools there would a greater level of teacher stress based on the type of student and the attendant problems that could accompany students of lesser academic ability. The fact that the findings indicated the reverse could suggest that the principals at those schools were more adept at reducing the impact of school related stress factors such as disruptive behaviour, substitution for absent teachers, inadequate discipline policies, lack of involvement in decision making, and lack of recognition by the principal among other things. According to Holloman (1998) school related research supports the idea that if some of the aforementioned in-school issues can be adequately addressed some teacher stress can be alleviated. The converse argument can be applied to the principals at the 'older secondary' schools.

Another angle that needs to be considered, however is that fact that the 'older secondary schools' receive a better quality student and therefore teachers would not have experienced the same type of student related issues, in terms of disruptive and impolite behaviour and the like. The implication therefore is that other factors in the scale which measured teacher stress, such as disenchantment with school administration, lack of recognition by the principal for contributions in teaching and other responsibilities, lack of involvement in decision making, and attitudes and behaviours of chief administrators may be having a greater impact on the level of stress experienced by the teachers.

Table 6

T Test for newer secondary school teachers and older secondary school teachers N (90)

Variable	Stress	N	Mean	S.D.	t	df	2tailed (sig.)
Stress	Newer Secondary	57	26.42	6.30			
	Older Secondary	33	29.54	5.96			
					-2.311	88	.023

Research Question 5: What are the combined and relative effects of evaluating, support, planning, decision making, communicating, organising, and delegating on teacher stress?

This question was answered using multiple regression analysis. The multiple R value ($r=0.46$) indicated that there was a positive but low relationship between the combination of all the leadership sub-variables and teacher stress. However, in the ANOVA table ($F = 3.160$, $p = 0.005$) indicated that the combined contribution of the leadership variables to teacher stress was significant. The regression model also indicated that the leadership variables in combination accounted for 21.2 % ($R^2 = 0.212$, $P < 0.05$) of the total variance in the stress experienced by teachers, see Table 7a overleaf.

This finding suggests that there are other variables outside the scope of the study which are contributing to the level of stress experienced by teachers. It would be appropriate therefore

to consider looking at other workplace factors that could be contributing to the level of stress being experienced by teachers, a point which was underscored in the research by Konert (1997).

Table 7 a

Combined Effects of Principal Leadership Sub-Variables on Teacher Stress

Model	SS	df	MS	f	Sig.
Regression	13.742	7	1.963	3.160	0.005*
Residual	50.939	82	.621		
Total	64.681	89			

Note. Multiple R = 0.461 Multiple R Square = 0.212 Adjusted R Square= 0.145. *= p<0.05

In Table 7b the relative effects of the variables on teacher stress are captured. The findings indicated that the individual contributions of the variables were not significant, only decision making was approaching the level of significance. However it must be observed that collectively the variables were significant $p = 0.000$.

Table 7 b

Relative Contributions of the Predictor Variables to the Prediction of Teacher Stress

Model	Unstandardized Coefficients		Standardized Coefficient Beta	T	Sig.
	B	Std. Error			
(Constant)	4.787	.888		5.388	.000
Planning	-.263	.238	-.228	-1.106	.272
Decision making	.408	.218	.400	1.874	.065
Delegating	.026	.313	.024	.084	.933
Communicating	-.281	.324	-.237	-.869	.387
Organising	-.366	.336	-.303	-1.087	.280
Support	.011	.198	.006	.053	.958
evaluating	-.075	.187	-.061	-.404	.687

Scholarly significance of the study

The findings of this study are instructive on two levels. On one level, they confirm that there is a relationship between teachers' perceptions of principal leadership style and the level of stress experienced by teachers. On another level, the findings indicate that principal leadership and teacher stress are multi- faceted. As such they need to be carefully dissected to tease out relevant interventions strategies to promote effective principal leadership and reduce the levels of stress experienced by teachers. The literature points to the need for mentoring programs which would help novice teachers negotiate the teaching environment. Similarly, the study underscores the need to carve out programmes that would address the specific needs of teachers who are working in 'older secondary' and 'newer secondary' school environments, which tend to mirror the urban and rural school environments respectively as identified by Abel and Sewell (1999).

Additional studies may want to consider looking at the novice teachers and investigating in more details the specific aspects of school leadership that impact adversely on their experience

as educators. Another area of further research is the area of teacher stress. A future study could investigate the in-school and out-of school factors that impact on the levels of stress experienced by teachers. Such a study would provide important data for use by existing and aspiring school leaders.

References

- Abel, M. H. & Sewell, J. (1999). Stress and burnout in rural and urban secondary school teachers, *The Journal of Educational Research*, 92, 5, 287-293.
- Black, S. (2003). Stressed out in the classroom. *American School Board Journal*, 36-38.
- Blasé, J. (1986). A qualitative analysis of sources of teacher stress: consequences for performance. *American Educational Research Journal*, 23(1), 13-40.
- Blasé, J. & Kirby, P.C. (1992). The power of praise: A strategy for effective principals, *NASSP Bulletin*, 76 (548) 69-77, December.
- Brewer, E., & McMahan, J. (2004). Job stress and burnout among industrial and technical teacher educators. *Journal of Vocational Education Research*, 28(2), 120-132.
- Calebrese, R. L. (1987). The principal: An agent for reducing teacher stress. *NASSP Bulletin*, 71 (503), 66-71.
- Carter, S. (1994). Organising systems to support competent social behavior in children and youth: Teacher Stress and burnout. Retrieved October 03, 2001 from the University of Oregon Western Regional Resource Centre [http:// interact.uoregon.edu/wite/burnout.html](http://interact.uoregon.edu/wite/burnout.html)
- Darmody, M, & Smyth , E. (2011). Job satisfaction and occupational stress among primary school teachers and school principals in Ireland. Growing Up In Ireland Study. A report compiled by the ESRI on behalf of the Teaching Council.
- Dussalt, M., Deaudelin, C., Royer, N., & Loisele, J. (1999). Professional isolation and occupational stress in teachers. *Psychological Reports*, 84, 943-946.
- Dunn, L. (1986) *Perception of leadership style and group cohesion influence on job satisfaction*. Unpublished thesis U.W.I. Mona Jamaica.
- Duylemi, B. (1992). Source and social correlates of occupational stress among Nigerian primary school teachers. Retrieved 3/30/2015, from <http://www.nijef.com/march1992>
- Eldred, J. A. (2010). *The relationship between perceived leadership styles of school principals and teacher job satisfaction at selected elementary schools*. Scholars Archives. Oregon State University. Retrieved February 15, 2012 from <http://rhdl.handle.net/1957/23146>
- Gold, A., Evans, J., Earley, P., Haplin, D., & Collarbone, P. (2003). Principled principals? Values-driven leadership: Evidence from ten case studies of outstanding leaders. *Educational Management & Administration*, 31(2), 127-138.
- Griffith, J. (2000). Principal leadership of parent involvement. *Journal of Educational Administration*, 39(2), 162-186.
- Hanif, R., Tariq, I., & Nadeem, M. (2011). Personal and job related predictors of teacher stress and job performance among school teachers. *Journal of Commerce and Social Sciences*, 5(2), 319-329.
- Harney, E. (2008). *Stress Management for teachers*, New York, NY: Continuum International Publishing Group.
- Harris, A. (1999). The relationship between principal leadership styles and teacher stress in low socio-economic urban elementary schools. *Dissertation Abstracts International*, 58, 2863.
- Harris, A., Day, C. & Hadfield, M. (2003). Teachers' perspectives on effective school leadership.

- Teachers and Teaching: Theory into Practice*, 19, (1).
- Henderson, D.L. & Henderson, T. W. (1996). *Texas teachers, moonlighting and moral*: 1980-1986. Huntsville, Texas. (ERIC Document Reproduction Service No. ED 398 179.
- Hersey, P. Blanchard, K. H. & Johnson, D. E. (1996). *Management of organizational behavior: utilizing human resources* (7th ed.) New Jersey: Prentice Hall.
- Holloman, H. L. (1998). Factors related to burnout in first-year teachers in South Carolina. Doctoral dissertation, University of South Carolina, Columbia.
- Imper, M., Neidt, W. A., & Reyes, P. (1990). Factors contributing to teacher satisfaction with participative decision making. *Journal of Research and Development in Education*, 23(4), 216-225.
- Jackson, S., Schwab, R. & Schuler, R. (1986). Toward an understanding of the burnout phenomenon. *Journal of applied psychology*, 71, 639-640.
- James-Thomas, A. (1998) *Relationship among selected teacher factors and St. Vincent teachers levels of job satisfaction*. Unpublished Thesis UWI Mona, Jamaica.
- Jarvis, M. (2002). Teacher stress: A critical review of recent findings and suggestions for future research. Retrieved August 11, 2005, from <http://www.isma.org.uk/stressnw/teachstress1.htm>.
- John, M. C. & Taylor, J. W. (1999, April). Leadership style, school climate, and the institutional commitment of teachers. *International Forum*, 2(1), 25-57.
- Johnston, J. (1986) Gender differences in teachers' preferences for primary school leadership. *Educational Management and Administration*, 14, 219-226.
- Jones, B. A. (1988). *Principals' leadership style: its expression on teachers' job satisfaction*. (Unpublished Doctoral Dissertation) University of the West Indies, Cave Hill.
- Kyriacou, C. (1998). Teacher stress: Past and present. In J. Dunham & V. Varma (Eds.), *Stress in teachers, past, present and future* (pp. 1-13). London, England: Wiley.
- Kyriacou, C. & Sutcliffe, J. (1979). Teacher stress and satisfaction. *Educational Research*, 2189-96.
- Kyriacou, C. (2001) Teacher stress: directions for future research, *Educational Review*, 53(1), 27-35.
- Laughlin, A. (1984). Teacher stress in an Australian setting. The role of biographical mediators, *Educational Studies*, 10(1), 7-22.
- Latham, N. & Vogt, W. (2007). Do professional development schools reduce teacher attrition? *Journal of Teacher Education*, 58, (2), 153-167.
- Leithwood, K. A. & Riehl C. (2003). What do we already know about successful school leadership? A.E.R.A. *Paper Task Force on Developing Research in Educational Leadership*.
- Lewis, R. (1999). Teachers coping with the stress of classroom discipline, *Social Psychology of Education*, 3, 155-171.
- Lunenberg, F.C. & Orstein, A. (2004) *Educational administration: Concepts and practices* (4th ed.) California: Thompson Wadsworth.
- McCormick, J. (1996). Occupational stress of teachers: biological differences in a large school system. *Journal of Educational Administration*, 35(1), 19-38.
- Maehr, M. L. & Braskamp, L. A. (1986). *The motivation factor: a theory of personal investment*. Lexington: Heath and Company.
- Manthei, R. & Gilmore, A. (1996). Teacher stress in intermediate schools. *Educational Research*, 38, 1, 3-19.

- Manthei, R. & Solomon, R. (1988). Teacher stress and negative outcomes in Canterbury state schools. *New Zealand Journal of Educational Studies*, 23(2), 145-163.
- Markow, D., & Pieters, A. (2012). Metlife survey of the American teacher: Teachers, parents, and the economy Retrieved 3/29/15 from www.metlife.com
- Ministry of Education, Youth Affairs & Culture (2000). *A guide to teacher appraisal in primary and secondary schools in Barbados*.
- Moore, N. (2012). The relationship between high school teacher perceived principal leadership practices and teacher morale levels. Dissertation. Retrieved from digitalcommons.liberty.edu/cgi/viewcontent.cgi?article=1560&context=doctoral
- Newstrom, J. W. & Davis, K. (2002) *Organizational behavior: Human behavior at work* (11th ed.). McGraw-Hill.
- Nosheena, T. (2010). The relationship between principal leadership style and teacher occupational stress. *Journal of Research and Reflections in Education* (JRRE) 5(2), 107-115.
- Pashiardis, P. (1998) Moving towards a quality climate at University of Cyprus. *International Journal of Education Management* 12, 1, 14-22.
- Perie, M. & Baker, D. (1997). *Job satisfaction among America's teachers: Effects of workplace conditions, background characteristics, and teacher compensation*. National Centre for Education Statistics, U.S. Department of Education. Office of Research and Improvement, NCES 97.
- Persico, M. (2001). *Exploring the relationship between the perceived leadership style of secondary principals and the professional development practices of their teachers*. Retrieved February 10, 2005. International Leadership Association. Web site:
- Pullis, M. (1992). An analysis of the occupational stress of teachers, sources, effects and strategies for coping. *Behavioural Disorders*, 17(1), 191-201.
- Richardson, A., G. (1997). Stress in Teaching: A study of Elementary School Teachers in the Caribbean. Paper presented at the Annual Meeting of the American Educational Research Association (Chicago, IL, March 24-28, 1997).
- Robbins, S. (2000). *Organizational behaviour*. Selangor: Prentice Hall, 8th edition, translated by Abdul Razak Ibrahim & Aini Sulaiman.
- Shoemaker, J. & Fraser, H. (1981, November). What principals can do: Some implications from studies of effective schooling. *Phi Delta Kappan*, 178-82
- Simmonds, A. (1994) *Teachers' perceived leadership behaviour of principals 'and teachers' performance in a sample of all age schools in rural and urban Jamaica*. Unpublished thesis. University of the West Indies.
- Supersad, C. (1993) *Participative decision making and its relationship to commitment, efficacy, and morale among secondary school teachers*. Unpublished dissertation.
- Weiten, W. (2009) *Psychology: Themes and variation: Briefer version* (8th ed.) Cengage Learning Inc.
- Wilson, B. A. (1980). *Administrative and resource factors which affect teacher satisfaction and performance*. (Unpublished thesis) University of the West Indies.
- Yusof, N. M. (2011). School principals leadership and teachers' stress level in Malaysian primary schools. *International Journal for Educational Studies*, 4(1), 63-82.