

Coping With Administrative Constraints by Quebec School Principals

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Abstract

The rapid pace of ongoing change in the Quebec education system has had an important impact on the complexity of the job and the workload of school principals. The present study examined the coping strategies used by school principals when facing administrative constraints. The Administrative Stress Index ASI ($N = 238$) was used to identify and link the main stressors to the stressful encounters found on video for six principals out of the sample who accepted to be filmed during a working day. Coping strategies were identified in five sequences that met the necessary criteria for the explanatory qualitative analysis. The results show that the main sources of stress come from administrative constraints, and that the principals are not passive but rather try to cope by addressing the constraints they are faced with and by seeking information or support. Principals also have to cope with their emotions and show a lot of self-control. Overall, these findings point to the need for a better understanding of the relationship between stress and coping.

Résumé

Les multiples changements orchestrés dans le système d'éducation au Québec ont eu un impact important sur la complexité et la charge de travail des directions d'école. Cette recherche s'intéresse aux ajustements devant les contraintes administratives des directions d'école au Québec. L'Administrative Stress Index ($N=238$) a permis d'identifier les principaux stressseurs afin de les lier à des situations observées chez six directions de cet échantillon qui ont accepté d'être filmé durant une journée

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de travail. Cinq séquences vidéo ont répondu aux critères d'analyse qualitative et ont permis d'identifier les stratégies d'ajustements. Les résultats montrent que les principales sources de stress proviennent des contraintes administratives et que les directions ne sont pas passives et tentent de s'ajuster en confrontant le problème, en cherchant de l'information ou du soutien. Les directions doivent aussi gérer leurs propres émotions et font preuve de beaucoup de contrôle de soi. La discussion suggère des pistes afin de mieux comprendre la relation entre le stress et les stratégies d'ajustements.

Keywords

stress, coping, school principals

School principals play a crucial role in school success (Leithwood & Jantzi, 2008). They create positive school cultures and learning environments (Bulach, Boothe, & Pickett, 2006). But the public school principalship has evolved considerably in recent years (Kresyman, 2010), and the principals are reporting escalating pressure as well as serious concerns regarding their health (Boyland, 2011).

This is also the case in Quebec where the rapid pace of ongoing change in the education system has impacted significantly on school principals and vice-principals. There has been a change in management structures, a new curriculum, and new legislations. During the same period, there has been a feminization of the profession and the principals are younger and thus have less experience when confronting all these changes (Gouvernement du Québec, 2006). All of these factors have had an impact on the complexity of the job and the workload of the principals (Brassard et al., 2001; Corriveau, 2004). In a historic retrospective of the Quebec educational system since 1979, Brassard (2007) shows the impact of the educational legislation and of the changes in management structures, and he also mentions that the rapid pace and complexity increase the psychological tensions that principals have to deal with on a daily basis.

However, the phenomenon of stress in school principals, which has been widely studied throughout the world, has been shown no such interest in the Province of Quebec. Brunet, Goupil, and Archambault (1986) have shown the impact of stress on school climate, and Fortin (1989) showed that the more Machiavellian the principals were, the more they were stressed by their tasks and by their administrative responsibilities. In a study on the effects of the new legislation in the educational system, only one question addressed the work-related stress of principals. Out of the 544 principals who responded, 429 (81.9%) mentioned that the stress had increased or very much increased since the educational reform (Brassard et al., 2001; Corriveau, 2004). With regards to the constraints and the workload principals have to deal with every

week—seven meetings (18 hours), 67 emails, 16 documents of 25 pages that require 59 signatures (FQDE, 2009)—the results of Fortin (2006) on a sample of 365 principals in the province of Quebec showing that 7 out of 10 principals think about leaving the profession are therefore not surprising.

Gravelle (2009) has shown that it is when the principals are unable to cope anymore with the constraints and the workload that they are at risk of burnout, and Garon et al. (Garon, Théorêt, Hrimech, & Carpentier, 2006) have shown that some principals have better coping strategies than others. However, no study has identified the coping strategies used by principals when facing specific real-life work-related stressors. The general purpose of the present study is to identify the main sources of stress and explore the coping strategies used by principals when facing such stressors in the workplace.

School Principal Stress

Since the 1960s, a considerable amount of research has been done on the stress of school principals, and between 1966 and 1988 more than 1,300 articles were published on the subject (Gmelch, 1988). In addition to the relationship found between administrative stressors and burnout (Gmelch & Gates, 1998), differences have been found showing that women are more stressed than men with administrative responsibilities (Chandler, 2001; Liming, 1998) and that high schools represent a more stressful environment than elementary schools (Gmelch & Swent, 1984).

In a study on a sample of 1,156 school administrators (Gmelch & Swent, 1984; Torelli & Gmelch, 1993), five main sources of stress are identified: administrative constraints, administrative responsibilities, role expectations, interpersonal relations, and intrapersonal conflicts. Results of this study show that the principals are more perturbed by stressors related to administrative constraints than are vice-principals.

Many studies have identified administrative constraints as the most important stressors. Shumate (1999) found on a sample of 221 high school principals in the state of Washington that the main stressors come from the administrative constraints (work overload and meetings), time management, and the rules and policies. Similar results were found on a sample of 194 high school principals in South Carolina (Flynn, 2000), on a sample of 293 principals in New Zealand (Cubitt & Burt, 2002), and on a sample of 50 principals in Malaysia (Abdul Muthalib, 2003). More recently, Welmers (2006) found on a sample of 300 principals in North Carolina that the main sources of stress come not only from the administrative constraints but also from the new rules and policies attributable to the structures imposed from the educational reform.

Overall, the results found in these studies show that the main sources of stress for principals come from administrative constraints and that differences can be found according to gender, administrative position, or type of school. However, from another point of view, other studies have focused on how principals are able to cope with such high constraints.

Principals Coping With Stress

Roesch (1979) developed a questionnaire to assess the main coping strategies of school principals and found that the main strategy was to spend more hours at work. Her findings were replicated by Gmelch and Torelli (1994), Shumate (1999), and Abdul Muthalib (2003). In his study, Roberson (1986) reports that the best way to cope with stress is exercise for 30% of the principals, better time management for 13%, and for the rest, to delegate tasks and to have a positive attitude. Liming (1998) shows that exercise and rest were generally evoked as well as social support but only out of the school environment with family and friends.

Taking a deeper look at the results of different studies on the coping strategies used by principals shows the magnitude of ways principals deal with stress. However, despite the diversity of strategies, it is possible to differentiate three main categories: (a) life habits (healthy eating, regular exercise, sleep), which increase hardiness (Kobasa, 1979); (b) life habits (relaxation techniques, meditation, yoga), which help evacuate stress related tensions (Everly & Lating, 2002); and (c) problem-focused coping or emotion-focused coping (Lazarus & Folkman, 1984) in real time during the stressful encounter. The distinctions we bring about have also been partially observed by Liming, who studied the coping strategies of 24 school principals in Colorado: "Coping strategies tend to be of two varieties: coping strategies utilized prior to stressful situations and those utilized after the stress has had an effect" (Liming, 1998, p.36).

Keeping this distinction in mind, it is noteworthy to mention that few studies, if any, have shown the coping strategies of school principals in real life during a stressful work-related encounter. For example, only two of the 14 most important coping strategies used by school principals in Halling's study (2003) were related to an action toward a stressor in real-life school context (the use of humor and taking a pause). The 12 other strategies evoked by the principals rather relate to means used to increase hardiness or to evacuate stress-related tensions (i.e., spending time with family, watching television, prayer, silence, meditation, reading, exercise, time with friends, travel, leisure activities, hobbies).

The need to better understand the coping strategies used by principals when facing stress in real-life school settings is thus obvious and the transactional theory of stress (Lazarus, 1966; Lazarus & Folkman, 1984) was used to pursue the general goal of this study. According to the transactional model of stress, a situation can be considered as a source of stress only if it is appraised as harmful or as a threat by the individual, after which the person goes through a series of coping strategies to deal with the stressful encounter (Figure 1). Two main coping options for dealing with a stressful encounter have been extensively studied: problem-focused coping and emotion-focused coping. From this theoretical perspective, it is noteworthy to mention that the results of Gmelch and Chan (1995) lend support to the transactional model by showing a positive link between the perceived stress of school principals and their perceived coping effectiveness.

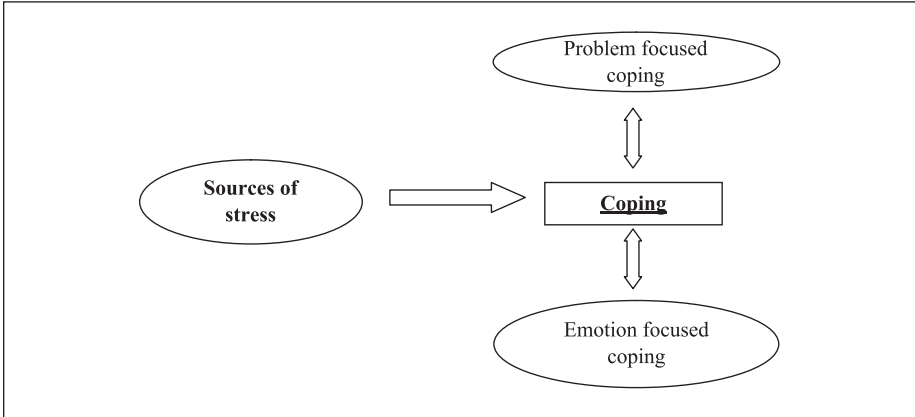


Figure 1. Coping model of stress inspired by Lazarus and Folkman (1984)

Research Questions

With regards to the purpose of this study, we examined the following research questions:

Research Question 1: What are the main sources of stress of school principals in Quebec?

Research Question 2: Do the sources of stress vary according to the type of school (elementary vs. high school), the administrative position (principal vs. vice-principal), gender, age, or experience?

Research Question 3: How do the principals cope with the most important sources of stress in the workplace, emotion-focused or problem-focused?

Method

A mixed method was used in this study. The first phase consisted in measuring the sources of stress by questionnaire to answer to the first two research questions. The second phase consisted in observation, video recording and stimulated recall at the workplace of the school principals to answer to the third research question.

Sample Population

First-phase sources of stress. Questionnaires were sent to principals and vice-principals in the Province of Quebec via associations and school boards making it possible to analyze 238 questionnaires: 144 elementary school principals (60%), 27 high school principals (11%), 42 high school vice-principals (18%), and 25 elementary school

vice-principals (11%). The sample consisted of 147 women and 83 men. The age of the majority was between 36 and 45 years (96 principals, 41%) and between 46 and 55 years (90 principals, 39%). The rest were less than 35 years (28 principals 12%) and more than 55 years (18 principals 8%). Their total work experience as principal ranged from 1 to 48 years, with a median of 11. The average experience for vice-principals was 7.7 years and was 12.3 years for principals.

Second-phase coping process. Six principals out of the 238 who responded to the questionnaire were observed and filmed during work. Initially, 10 principals referred to us for having good coping skills by experts in the field and professors at the University of Montreal were approached. However, in the end only six accepted to be observed and filmed during a whole day's work. These six included three high school principals, two high school vice-principals, and one elementary school principal. The sample consisted of four men and two women who had at least 10 years of experience as principal, vice-principal, or both.

Instruments

First-phase sources of stress. The Administrative Stress Index (ASI; Torelli & Gmelch, 1993) was used to identify the main sources of stress. This instrument is the most widely used questionnaire to measure the stress of school principals. The reliability and the validity of the instrument have thus been confirmed in many studies (Cubitt & Burt, 2002; Flynn, 2000; Shumate, 1999; Welmers, 2006). In addition to the five categories measuring the main stressors of school principals (administrative constraints, administrative responsibilities, role expectations, interpersonal relations, and intrapersonal conflicts), a sixth category relating to reform constraints was added according to the work of Welmers out of North Carolina where school principals are in a comparable situation to the one facing principals in Quebec. The modified version of the ASI was translated to French, and each item was reviewed for content agreement and clarity by three professors in educational administration at the University of Montreal. The participants were required to rate the 41 items of the modified French version using a 5-point Likert-type scale that ranges from *never bothers me* to *very frequently bothers me*. The questionnaire was then revised to its present format using a factorial analysis to replicate the correlations between the items of the six subscales. Internal consistency was found acceptable with coefficient alphas varying among the categories of administrative constraints ($\alpha = .75$), administrative responsibilities ($\alpha = .67$), role expectations ($\alpha = .74$), interpersonal relationships ($\alpha = .70$), intrapersonal conflicts ($\alpha = .71$), and reform constraints ($\alpha = .71$).

Second-phase coping process. In accordance with many authors (Coyne & Gottlieb, 1996; Lazarus, 1999, 2000; Somerfield, 1997; Somerfield & McCrae, 2000; Webber & Laux, 1990), a qualitative exploration approach was used to better understand the coping process: "Coping research needs to adopt measurement methods that reflect the techniques of clinicians. The emphasis is for coping methods to become more ecologically sensitive, person-centered, daily processing and narrative in application" (Dewe

& Trenberth, 2004, p. 143). This is why each one of the six principals was filmed during a whole days' work, and while the research worker observed and took notes, a camera was placed in the office of the principal. In certain situations, with permission, the principal was filmed during meetings. In the end, 18 hours and 45 minutes of video were analyzed. Stimulated recall by video confrontation was also used to enrich the analysis of the coping processes involved. The method consisted in presenting each principal, within a week following the incidents, his or her own stressful encounters during a 1 hour semistructured interview.

Data Processing

First-phase sources of stress. The data collected by the questionnaire were analyzed using the statistical software program SPSS. Descriptive statistics, multivariate analysis of variance, one-way analysis, subsequent paired tests (Student's *t* test), and correlations were made.

The purpose of identifying the most important sources of stress was also to link objective stressors to real-life observable stressful encounters. Therefore, with the results of the statistical analysis in hand, showing the main specific work-related stressors, the procedure was to go through the whole video material and select specific situations according to three criteria: (a) the specific items of the ASI; (b) the behavior of the principal showing on video a difficulty, a discomfort, an exasperation, an emotional reaction, in other words a stressful encounter; and (c) between 6 and 10 situations per participant. In the end, 47 sequences lasting approximately a minute each were identified and each principal was presented with his or her own videos for stimulated recall. The video confrontations were also filmed for analysis purposes.

Second-phase coping process. Each situation was analyzed by coding the coping strategies with reference to the eight dimensions of the Ways of Coping Checklist (Lazarus & Folkman, 1984). Problem-focused coping included three dimensions (information seeking, seeking social support, confrontation) and emotion-focused coping included five (self-blame, wishful thinking, avoidance, self-control, minimization). Two researchers used the same grid with the eight dimensions to code each sequence twice, once by observing the video and once by going through the verbatim. The analysis of the grounded codes was compared between video and verbatim before being compared between the two researchers for content agreement and clarity. This procedure was repeated to analyze the video and the verbatim of both the situation in real-life setting and the comments that came from stimulated recall.

Results

Considering the mixed method used in this study and the three research questions, the statistical results showing the main sources of stress of school principals will be presented first. The results showing the coping process and thus giving the answer to the third research question will then be presented.

Table 1. Means, Standard Deviation, Student’s *t* Test and ANOVA Results on Frequency of Stressors Reported by the School Principals According to the Type of School, Administrative Position, and Gender

	Administrative constraints	Administrative responsibility	Role expectations	Interpersonal relationships	Intrapersonal conflict	Reform constraint
Mean (SD)	3.11*** (0.68)	2.45 (0.61)	2.49 (0.68)	2.58 (0.60)	2.58 (0.64)	2.57 (0.67)
Administrative position						
Vice-principal	2.96 (0.68)	2.34 (0.58)	2.54 (0.71)	2.51 (0.65)	2.61 (0.60)	2.49 (0.64)
Principal	3.19* (0.67)	2.50 (0.61)	2.47 (0.67)	2.61 (0.58)	2.57 (0.66)	2.60 (0.68)
Type of school						
Elementary	3.16 (0.69)	2.52** (0.60)	2.47 (0.66)	2.59 (0.58)	2.58 (0.66)	2.57 (0.66)
High school	3.01 (0.66)	2.28 (0.58)	2.53 (0.72)	2.54 (0.66)	2.59 (0.60)	2.58 (0.71)
Gender						
Female	3.14 (0.68)	2.53** (0.59)	2.57* (0.68)	2.62 (0.61)	2.64 (0.65)	2.63 (0.68)
Male	3.06 (0.68)	2.29 (0.60)	2.37 (0.66)	2.49 (0.59)	2.48 (0.63)	2.47 (0.66)

Note: *N* = 238. ANOVA = analysis of variance. The scores are based on a 5-point scale ranging from 1 = *never bothers me* to 5 = *very frequently bothers me*. All values indicate mean and standard deviations, with standard deviations provided within parentheses.

p* < .05. *p* < .01. ****p* < .001.

Quantitative Data on the Sources of Stress

As expected, the main category of stressors comes from administrative constraints (Table 1). According to a multivariate analysis of variance (Pillai trace test), the frequency of perceived stress varies with the type of stressor, $F(4, 232) = 59.1, p < .001$, and the subsequent paired tests (Student’s *t* test), showing the mean of each category of stressors, confirms the significant difference between administrative constraints and the other sources of stress, $t(237) = 10.17$ to $14.84, p < .001$. Thus, the principals report that they are more perturbed by the administrative constraints than by any other source of stress.

Taking a deeper look at the results, a difference is also found between principals and vice-principals; more stress related to administrative constraints is perceived at the principals’ position, $F(1, 236) = 5.41, p = .021$. The principals perceive more stress related to administrative responsibilities at the elementary level, $F(1, 236) = 8.20, p = .005$. Also of interest is the gender difference showing that female principals are more stressed than their male counterparts by the administrative responsibilities, $F(1, 228) = 8.49, p = .004$, and by the role expectations, $F(1, 228) = 4.62, p = .033$. Finally, the results show that the perceived stress by principals does not vary according to age or experience.

Considering the difference found between the administration positions showing that principals suffer more from administrative constraints than vice-principals, and because of the limited space we have in writing this article, we decided to focus mainly on the principals with regards to the rest of the data and the analysis of the coping

Table 2. Means, Standard Deviation, and Student's *t*-Test Results on Frequency Scores on Administrative Constraints Items According to Principals

Administrative constraints	Mean (SD)
Feeling that I have too heavy a workload, one that I cannot possibly finish during the normal workday.	3.75* (1.04)
Feeling that meetings take up too much time.	3.48 (1.04)
Trying to complete reports and other paperwork on time.	3.42 (1.03)
Having my work frequently interrupted by staff members who want to talk.	3.10 (1.19)
Complying with state, federal, and organizational rules and policies.	3.09 (1.09)
Being interrupted by frequent phone calls	3.00 (1.01)
Writing memos, letters, and other communications	2.48 (1.04)

Note: $n = 171$.

* $p < .001$.

process. To better understand the specific types of administrative constraints experienced by school principals and to provide some insight into the intensity, Table 2 shows the mean scores. According to a multivariate analysis of variance, the frequency of perceived stress varies within the different items, $F(6, 163) = 37.4, p < .001$, and the subsequent Student's *t* test, showing the mean of the specific stressors, shows a significant difference between workload and the other stressors, $t(168) = 2.72$ to $13.87, p < .001$.

With reference to descriptive statistics, it should be noted that the workload has a major impact on nearly two thirds of the principals who are frequently/very frequently disturbed by this factor (63%). Principals are also frequently/very frequently disturbed by the constraints of attending meetings (46%) and by the obligation of completing reports and paperwork (45%). It thus seems that the main characteristic that emerges from the assessment of the individual stressors concerns the relationship principals have with time. Principals suffer from not having enough time for paperwork and spending too much time in meetings. To a lesser degree, principals are also bothered by being interrupted by staff members (38% are frequently/very frequently disturbed by this) and by phone calls (29% are frequently/very frequently disturbed by this). It was these specific stressors that were used to identify particular stressful encounters found on video.

Qualitative Data on the Coping Process

With regard to the third research question, the objective was to explore the coping strategies used by experienced principals when facing the most important sources of stress identified by the larger sample and thus representative of the profession. Table 3 presents the results of the coping strategies used in the five video sequences that were

Table 3. Analysis of the Coping Strategies Used by Principals When Facing the Most Important Stressors

Administrative constraints	Name of the sequence	Emotion-focused coping	Problem-focused coping
Feeling that I have too heavy a workload, one that I cannot possibly finish during the normal workday.	“Not panicking but a bit worried”	Self-control	Confrontation, information seeking
Feeling that meetings take up too much time.	“Meeting this morning? Why is it not in my agenda?”	Expression: Self-control	Information seeking, confrontation
Trying to complete reports and other paperwork on time	“Our urgency today is . . .”	Self-control	Confrontation
Complying with state, federal, and organizational rules and policies.	“We’re going ahead with the curriculum”	Self-control	Confrontation, information seeking
Complying with state, federal, and organizational rules and policies.	“It’s not working. I do not have a quorum”	Expression: Self-control and self-blame	Information seeking

linked to administrative constraints. The sequences show the coping strategies used when facing the workload, the meetings, the paperwork, and the rules they have to comply to.

A brief description of every situation will be given for better comprehension. However, to grasp thoroughly the coping process, the last situation will be presented in greater detail.

In the first situation it is very early on a Friday morning and the principal is trying to accomplish as much work as he can before everyone presents themselves at school. The principal copes by addressing the problem and seeking information through the different notes and post-its he left within each document. He regularly takes his glasses off, glances at the clock, sighs, and then looks at the different piles in front of him, takes a second or two, makes a decision, and addresses another file, “I was not panicking but a bit worried.”

In the second situation, the principal is perturbed by an unexpected meeting and uses problem-focused coping by seeking information and addressing the situation and emotion-focused coping while containing his feelings “It disturbed me . . . I hadn’t planned it . . . I had planned something else.”

In the third situation, the principal is going through paperwork with her secretary and is preoccupied by one file in particular. The principal is focused on the problem, but the analysis also reveals a lot of self-control with what seems a very important and

urgent task, "Oh My God. . . . The union representative had asked for a meeting. . . . There was a lot at stake."

In the fourth situation, the principal is in a meeting with members of the teachers' council and is confronted by two teachers arguing against the implementation of a new course of the curriculum reform. The principal is obviously upset and shows her disapproval (mimic of stupefaction), and although she addresses the problem, emotion-focused coping is prominent.

In the last situation, the principal is unable to respect the quorum for the next school council's meeting, and he has to make a choice between the necessary amount of parents or of teachers. Thrice during the day, the principal must deal with this problem. At 7 hr 50 min, when his secretary brings up the problem, the principal sighs and puts both hands on his head. Rapidly taking a hold of himself he proposes something else, "Let's try on Thursday." At 8 hr 20 min, the secretary mentions that two teachers will be missing on Thursday and that she already got complaints. The principal deeply sighs while saying with a bit of sarcasm, "It's going well." He then takes a pause for a second and mentions that he has no other choice. Obviously upset, he mechanically moves his papers on his desk for a period of 15 s while he whines silently about the situation. At 13 hr 50 min, during a meeting with his five vice-principals, the principal mentions that he does not have the quorum for the next school council's meeting. One of the vice-principals then confronts the principal about a major decision that must be taken during that meeting suggesting to postpone everything. But the principal does not have the choice and must go on with the decision made, "I will call the president (a parent on the school council). We must go ahead, we can't delay." In this situation, despite problem-focused coping, the principal must cope emotionally with the problem, "I admit the exact emotion would be S. it's not going well. It's exasperation," and the principal blames himself for being in such a position, "G.D. it, I should have left it on the same day" . . . "I was blaming myself, I should have."

Overall, the results show that the principals are not passive and try to confront the problems they are faced with by seeking information or support. The results also show that the principals must cope emotionally and that they are very efficient at controlling their emotions.

Discussion

Without surprise, administrative constraints are identified as the main sources of stress by school principals and vice-principals in Quebec. With regard to the means of each category of stressor, it is noteworthy to mention that the results found in terms of intensity of stress are comparable to existing norms outside Quebec where the administrative constraints are also identified as the top factor (Flynn, 2000; Shumate, 1999; Welmers, 2006).

The difference seen between principals of elementary school, who suffer more from the administrative responsibilities than high school principals, could be explained

by the fact that in a majority of elementary schools, which has rarely more than 550 students, the principal manages the school alone. However, in high schools, which usually have more students, principals benefit from a greater number of administrators to share the workload.

With regard to the differences found between genders, an explanation could be that women have other responsibilities in their personal lives (home chores, children . . .) and that this causes an overload of responsibilities and of role expectations. Liming (1998) and Chandler (2001) have also shown that women are more disturbed than men with the administrative responsibilities. With reference to role conflict some authors even suggest that a feminine type of management would be preferable for an elementary school. For example, Gmeich and Torelli (1994) state “feminine style of leadership, one that is more nurturing and supportive rather than masculine style more directive and hierarchical.” Nonetheless, the results found in the present study must be considered in light of the recent changes in Quebec. In 1989, 27% of the administrative positions in the educational system were occupied by women. In 2004, they were 55% (Gouvernement du Québec, 2006).

Results show that principals suffer more from the administrative constraints than vice-principals. Considering that the workload represents the most important stressor, it is not surprising that constraints such as time wasted in meetings, paperwork, and being interrupted by staff members as well as by phone calls are more disturbing for principals who are first in the hierarchical line and have more responsibilities. These results are in accordance with the work of Royal (2008) showing the specific characteristics in the role played by vice-principals.

Interestingly, the principals are more perturbed by their administrative constraints than by the administrative responsibilities, which are the least important sources of stress. Principals expect and intend to accomplish their responsibilities, but they must comply to the constraints of the job and are constantly hindered by interruptions, urgent paperwork, and meetings they cannot dismiss or avoid. Peterson (2004) has shown this link by demonstrating that school principals abandon some responsibilities because of the workload and the constraints and consequently their stress is significantly more important. It is thus not so much what they *must* do, (that is to say, their regular responsibilities) as what they *cannot manage* to do, which weighs on the psychic health of school principals. Such results could be considered with regards to the work of Gmelch and Chan (1995) showing that “administrators who perceive themselves as coping effectively with the demands are not very stressed. Conversely, those administrators who perceive a great deal of stress do not perceive themselves as coping effectively” (p. 282).

The results found are thus in accordance with many studies (Brassard, 2007; Brassard et al., 2001; Corriveau, 2004) showing the consequences of the multiple changes over the years in the Quebec educational system, which increased the complexity of the job and the workload. However, surprisingly, in contrast with other studies (Bly, 2002; Halling, 2003) there is no evidence that age or experience has an

impact on the stress of school principals. This should be investigated in future research given the trend toward younger principals with less experience.

With reference to the results of Gmelch and Gates (1998), administrative constraints must be considered as a potential risk for the burnout of school principals: "In general, emotional exhaustion stands as the central construct since it is most responsive to the variables of job intensity (time, stress, competition, and conflict) and negatively associated with job satisfaction and effective coping" (p. 154).

Such a point of view explains the way in which principals are able to cope with such sources of stress. The analysis of the qualitative data confirms the conceptual model in a real-life setting (Lazarus, 2000). However, the results showing that the principals use problem-focused coping as well as emotion-focused coping must be considered in the context of a modest but valuable exploratory study on coping in the workplace when facing important administrative constraints.

It should be noted that principals are not passive and try to deal with the constraints they are faced with by seeking information, support, or by confronting the problem directly. These strategies have also been reported in other studies (Abdul Muthalib, 2003; Liming, 1998; Shumate, 1999).

However, despite the problem-focused strategies, the principals also cope with their own emotions at which they are very efficient, at least from what can be seen of their outward image. From this perspective, it is noteworthy to mention that without stimulated recall, we would not have had access to the cognitive efforts made by the principals when trying to cope with the psychological distress caused by the stressors.

As regards to emotion-focused coping strategies, it was thus possible to find out that the principals do not distance themselves from the situation and that it is not possible for them either to be optimistic, to avoid the problem, or to minimize it. However, by so doing they are unable to protect themselves from the emotional tensions that arise from the situation. In her study on the causes of burnout of school principals in Quebec, Gravelle (2009) has shown the risk that can bring about such difficulties. We must however take account of these results in the fact that experienced principals were observed. These results are in line with Bailey's (2007) research in which 84% of the principals believe in the importance of understanding and managing their own emotions because of their impact on school efficiency. Nonetheless, regardless of what seems to be efficient emotional regulation, the results of this study show that the coping strategies used by principals do not necessarily lead to the desired outcomes and that the emotions are frequently hard to deal with because of the unforeseen emergencies principals are regularly faced with (Corriveau, 2004; FQDE, 2009). This could be explained by the fact that the expression of negative emotions is not well accepted in the workplace (Lhullier, 2006), especially for principals who must maintain an outward image of being in control of the situation at all times. This was also found by Nokelainen, Ruohotie, and Tirri (2007), showing that "school principals were able to keep disruptive emotions and impulses under control" (p. 7). Emotional competence

seems therefore a necessary skill that principals must possess to cope with the stress that comes with the profession (Schultz, 2007).

Conclusion

This study shows that the main sources of stress of school principals in Québec come from the administrative constraints. However, the principals are not passive and as they try to cope by addressing the constraints, by seeking information or support, they must also cope with their own emotions for which they show a lot of self-control.

This study was one of the first, if not the first, to use a mixed method to explore the coping strategies used by school principals in real-life work settings. Despite the findings on the sources of stress and the evidence of considering a qualitative approach to better understand the coping process, it is however necessary to consider the limits inherent in the choices of this type of method. The qualitative findings come from a restricted number of subjects and must only be considered as assumptions with regard to all the school principals of Quebec.

In spite of its limitations, we hope that, from a heuristic point of view, this study will encourage (a) a more clinical approach to the study of stress, and (b) further studies on the relationship between stress, coping, and the health of school principals. It is recommended that future research should emphasize the role of emotional competence in the study of stress at work by drawing attention to the above issues.

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