"I understand that I gotta do what they tell me to do. Everyday I have no control". Perceived Job Control in the Canadian Forces and its Influence on Health and Performance

by

Tanis Farish
BSc., Queens University, 1998
MEd., University of Victoria, 2002

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University of Victoria

SUPERVISORY COMMITTEE

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ABSTRACT

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Members of the Canadian Forces (CF) have a distinctive work environment, where status within the hierarchy is clearly displayed on uniform dress and lower ranks are to dutifully obey the commands from above. The aim of this study was to explore the salient issues related to control for regular force non-commissioned CF members. Perceived job control has been associated with individual health and productivity; however, until now has not been explored in the military context. Surveys, semi-structured interviews, and a focus group were utilized to capture key factors influencing CF members' ($N = 29$) sense of job control. Inferential statistics and thematic analysis were utilized for the organization and interpretation of the data. The results from this mixed method design found important workplace factors to influence the perception of job control, which stem from three interrelated areas: workplace characteristics, co-worker cohesion, and individual characteristics. The findings indicate the role of the supervisor is an important aspect of job control due to the hierarchical structure of the military. The members utilized individual coping strategies as a means to manage their working environment such as acceptance of their situation and adopting compromising

behaviours, some of which are deeply embedded in the military culture. Co-worker cohesion was also found to be beneficial for CF members particularly during operational deployments, although the extent and type of cohesion remains unclear. Exploring job control from the perspective of CF members was important to elucidate the relationship between job control and health. Interestingly, the findings did not support a relationship between job control and job performance; this may be due the limited perception of performance in low control work settings. These findings argue for the implementation of policies and practice to improve health and performance in the workplace and must focus on several aspects of work design to include opportunities for employee support in and beyond the workplace, effective leadership practices, and the facilitation of appropriate coping skills for sustainable performance in the military work environment. These findings may have implications for similar work settings such as: law enforcement, emergency responders, factory workers, and some government agencies.

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CHAPTER 1

INTRODUCTION

The workplace has an enormous impact on individual well-being and the nature of the workplace can give insight into individual health outcomes. The connection between health and one's environment is reflected in the definition of health promotion in the Ottawa Charter (1986) which states,

> Health Promotion is the process of enabling people to increase control over, and to improve, their health. To reach a state of complete physical, mental and social well-being, an individual or group must be able to identify and to realize aspirations, to satisfy needs, and to change or cope with the environment (p. 2).

Integral to this definition is that a supportive environment and opportunities for making healthy choices enables control. Exploring the construct of control from a health promotion perspective links the individual with their environment to create conditions and surroundings conducive to health. Ecological theory presents health as a product of the relationship between the individual and the systems they exist in, such as the workplace (Poland, Green, & Rootman, 2000), whose environments can facilitate or impede behaviour that occurs within it. The literature is replete with studies investigating workplace control in terms of job characteristics (Ganster, 1989; Karasek, 1996; Kuhn, 2007; Marmot et al., 2006; Oldham & Hackman, 1975; Way & Macneil, 2006), psychosocial aspects of the workplace (Karasek, 1979; Karasek, 1989; Siegrist, 1996; Tsutsumi & Kawakami, 2004; Tsutsumi, Kayaba, Hirokawa, & Ishikawa, 2006), and personal control beliefs such as: self-efficacy, locus of control and coping (Lazarus & Folkman, 1984; Folkman, Lazarus, Gruen, & DeLongis, 1986; Seligman, 1998; Sirois, Davis, & Morgan, 2006).

For Schaubroeck and Merritt (1997), a lack of job control is the cause of poor individual coping with job stress and resultant health disorders. Job control is the degree to which people have some control over their own work or have input into the functioning of their workplaces (Beehr & Glazer, 2005). The concept of control is related to job characteristics such as: autonomy, skill utilization, demands, work design, physical space, and social support that affect the extent of control in the workplace.

Perceived control has been defined as, "the expectation of having the power to participate in making decisions in order to obtain desirable consequences and a sense of personal competence in a given situation" (Rodin, 1990, p. 4 as cited in Skinner, 1996). Skinner (1996) states that perceived control is critical in that the amount of control an individual feels they have will influence their behaviour and emotions, independent of the actual control conditions that may have contributed to those perceptions. Individual differences in perceived control have been related to a variety of positive attributes such as healthy living, achievement, optimism, motivation, learning and self-esteem (Karasek, 1989; Lazarus, 1981; Morgeson & Campion, 2005; Seligman, 1998).

The construct of control is important for policy makers, managers and employees as research has shown that when individuals feel they have little control and lack autonomy on the job it affects both physiological and psychological health (Bond & Bunce, 2003; Ganster, 1989; Marmot, Bosma, Hemingway, Brunner, & Stansfeld, 1997; Raphael, 2004; Skinner, 1996; Theorell, Westerlund, Alfredsson, & Oxenstierna, 2005; Terry & Jimmieson, 1999; Wilkinson & Marmot, 2003). Keeping in mind that some occupations do not provide the flexibility for workers to choose how to execute the required job responsibilities, what tasks are to be performed, when they can take breaks

or how much social support they have in their workplace, it is acknowledged that merely increasing employees' job control may not be reasonable in all situations. A military career is one such occupation where job control has distinct and real implications for immediate life or death consequences.

Furthermore, perceptions of control differ among individuals within the same work situation (Spector & Fox, 2002; Troup & Dewe, 2002). Therefore it is important to examine how individuals experience control and his or her strategies to enhance control as an avenue to better understand control in the workplace. How individuals deal with the need for or sustain control is often measured by identifying coping strategies and appraisals of control (Bond & Bunce, 2000; Folkman & Moskowitz, 2004; Folkman, Lazarus, Gruen, & DeLongis, 1986; Hahn, 2000; Ippolito et al., 2005; Theorell, Westerlund, Alfredsson, & Oxenstierna, 2005; Welch & West, 1995).

Defining control as the ability to influence what is happening or what will happen, employees' beliefs about control is important to explore in the context of the Military work environment. The workplace context of the Canadian Forces (CF) provides a unique opportunity to explore control, and previous research exploring quality of life (QOL) for non-commissioned CF Naval Trainees found little latitude was afforded professionally and personally in how their job is carried out, and how these junior non-commissioned Navy personnel spend their 'leisure' time on the base (Wharf Higgins & Farish, 2006). Not surprisingly, those Naval trainees who reported a greater sense of control were more satisfied with their QOL. In addition, trainees acknowledged that they expected a military career to be founded on hierarchical management, yet profoundly articulated a need for a sense of control, particularly regarding their physical

surroundings and where they spend their time. The results of the study lead to several

recommendations for enhancing QOL among trainees. With the increasing demands on

CF members to join in the global peacekeeping duties and spend more time away from

home, quality of life (QOL) is of particular concern in retaining military personnel.

Informed by the findings from the QOL study, the focus of the research turned towards

members with longer tenure: How does the low control environment in the military affect

regular force sea environment junior non commissioned members (NCMs for the purpose

of this study) once established in their military profession?

CF members and the Military Environment

It is important to understand workplace issues among CF members, as recruitment

and retention have been identified as significant to DND (Duxbury & Higgins, 2002;

Tasseron, 2001). For the military to operate successfully, it must attain a high degree of

reliability of behaviour, since the type of work in the CF can be dangerous (i.e.

engagement in international and domestic operations). Members depend and trust that

each individual will follow through on what is expected of them and what they were

trained to do. This high degree of conformity and precise training is critical in life and

death situations. Hence, discipline in the military is a fundamental aspect that must be

respected in order to manoeuvre effectively. The rules are defined and administered to

ensure consistency at every level (Department of National Defence, 2004).

Service in the CF is governed by the following ethical principles: serve Canada

before self; obey and support lawful authority; and respect the dignity of all persons

(Department of National Defence, 2002). In such a context, military members must

accept their responsibilities despite a decreased sense of autonomy and self-expression.

As discussed later in the paper, these latter characteristics have been shown in non-military environments to affect health-related quality of life, such as cardiovascular disease, absenteeism, muscular injury, anxiety and depression (Tsutsumi & Kawakami, 2004; Warren, Hoonakker, Carayon, & Brand, 2004; van Vegchel, de Jonge, Bosma, & Schaufeli, 2005).

For Weber (1978) bureaucracy involves specialization, division of duties and assigning each worker within the organization is assigned a role based on their training. The bureaucratic member is not elected but rather appointed by their superior, and as with the CF, most bureaucratic offices involve the expectation of life-long tenure. Bureaucracy maximizes job security by providing pensions, incremental salaries and procedures for promotion, which would ensure the devoted performance of the employees to their duties. Weber felt that bureaucracy was the most efficient due to the focus on precision, speed, expert control, continuity, discretion, and maximal output. These characteristics are what make a bureaucracy work for the military as well as the excessive writing and recording. Due to CF members often changing positions within the system (they are seldom in one position for longer than two years), keeping records and files are essential to reference and compare past decisions to ensure consistency. Records and structure make the organization concrete when the members are moving up the chain of command. At any time someone could move into a new position, they would be able to maintain order due to the trail of paperwork. Further, a bureaucratic structure is suitable to the military due its strong culture and set traditions. Roles, customs and practices have become accepted into the ritual of life. Precedence becomes the benchmark for how and why decisions are made.

Arguments against bureaucracy propose that it can produce blind spots to alternative ways of thinking, squashing innovation and decreasing individual control with increasing demands (Elwell, 2004). Today's focus on human management and leadership supports the basic needs of human beings and attempts to maintain "worker wellness." It appears that the discipline in the CF is often more intense than is technically necessary. The CF maintains a margin of safety so they are prepared for war, and this can lead to rigid situations that are difficult to change even when this type of behaviour is no longer appropriate. The organization can become rule bound making it difficult to be flexible in a variety of new situations that come with a changing world ("red tape"). The CF maintains its strict structure in a more unstructured society. In a bureaucratic model, the rules are slow to change and bureaucrats can become more absorbed with maintaining the status quo and thus lose sight of the best working environment for CF members today. These predictions of bureaucratic ways are not new, Argyris (1957) noted that if classical principles of formal organization are maintained, employees work in an environment in which: they have minimal control over their working lives, they are expected to be subordinate, passive and dependent, they work with a short-term perspective and people are treated more as infants than competent human beings.

Inherent in hierarchical organizations is the obvious ranking of employees within the workplace. Individuals with low status in their work environment have been found to have higher incidence of ill health (Singh-Manoux, Adler, & Marmot, 2003). Status may be particularly germane for CF members as rank permeates every aspect of the organization and is clearly displayed on uniform dress. Little organizational research

examines the experience of job control for military members. We do know that the top

two reasons for young people leaving the forces is due to conditions of service and career

dissatisfaction (Tasseron, 2001). In the U.S., the primary stressors identified by young

soldiers include underutilization of their skills and training, performing tedious tasks and

lack of communication from the chain of command (Dolan, Crouch, West, & Castro,

2001). Moreover, the stressors identified by the soldiers did not reflect those identified by

their leaders. Therefore, there is a need to sample workers directly for their perceptions of

stressors in the workplace. Ensuring quality of life has also been identified as critical to

motivating military personnel to achieve mission objectives (Pigeau & McCann, 2002).

Commenting on the tension between command and control, Pigeau and McCann ask,

"How do militaries assign resources and encourage freedom of action while at the same

time ensuring the safe and coordinated use of these resources?" (p. 57).

　　　　As a formal bureaucratic organization, the CF has seen very few structural

modifications and has remained basically unchanged over time (DND, 2004). Officers

and non-commissioned members of the CF are to exercise command prudently and to

maintain "good order and discipline." The chain of command is an instrument that joins

a superior officer authorized to give a lawful command to another member of the CF.

This military structure is a steep hierarchy and divided into many specialized

departments. The CF consists of three elements - Army, Navy, and Air force. The

bureaucratic structure depends on the employees to be "methodical, prudent and

disciplined" (DND, 2004) this is due to the need for strict subordination - precision,

impersonal relations and lack of ambiguity. It is an environment dedicated to the potential

for conflict and indeed war in which the individual and/or other can die. Much of the

work at the junior levels is redundant and must be done correctly to ensure completion of the mission and individual and group survival. Specific to the Navy and for purposes of this study, the work environment consists of working aboard CF ships where they perform their sea trade in both local and international waters. Extensive travel is expected as part of the Naval environment. Naval forces members conduct surveillance operations to protect the sovereignty of our coasts, and defend Canadian waters against illegal fishing and ecological damage. The Navy also supports international initiatives for peace and humanitarian assistance. The Navy is a unique work environment differing from the other military elements – Army and Air Force, and civilian workplaces.

Statement of the Problem

With the primary purpose of the Canadian military to fight when required and to protect human rights and values, it is important to maintain the health, well-being and capabilities of all CF members. But what are the consequences of this highly controlled work environment?

Routine and control provide the certainty and stability required to be mentally, physically and emotionally ready for the stressful and challenging situations endemic to military life. However, rigid control mechanisms may compromise opportunities to develop the adaptability necessary for effective decision-making and stress management (Pigeau & McCann, 2002; Van Creveld, 1985; 1989). Likewise, living day-to-day within an environment of extreme discipline, rigidity, and stress demands a certain level of resilience and flexibility. The question remains as to how it may be possible to optimize command and control without compromising loyalty, career satisfaction and well-being. Commenting on control in the military, Pigeau and McCann state, "Unbridled expression

of command creativity can quickly lead to organizational chaos. Conversely, over-control can quickly lead to personnel de-motivation. Finding the correct balance is one of the premiere challenges facing modern military organizations" (p. 57).

Little is known about the salient issues related to control for Regular Force non-commissioned CF members. How do these CF members feel about their lack of control? Because their status within the hierarchy is clearly displayed on uniform dress and low ranks are to dutifully obey the commands from above, the workplace environment is decidedly different from most others.

The professional military ethos is based on four precepts: duty, integrity, discipline and honour (Capstick, 2003). These aspects define the importance of CF members being selfless and self-disciplined. Can one be selfless and yet feel they have some control and autonomy in their working lives? What aspects of control are important to CF members? It is important to understand military workplace issues from the perspective of CF members if the military is to act on its priority of addressing issues significant to recruitment and retention (Duxbury & Higgins, 2002; Tasseron, 2001).

In addition, Jans (2002) describes the 'early-career commitment crises,' where newcomers to the military often experience a let-down after their initial training. The new recruits settle into the 'real-job', which appears to be very different from what they signed up for. This early career disappointment can be critical in retaining young personnel and maintaining their loyalty. In particular, CF members enter their career expecting to endure strenuous training in their professional development program; however, in return they expect the CF to provide them with the skills, knowledge and supportive environment to enable them to realize and maintain their optimal potential.

These exceptional work aspects of the CF provide little actual job control and are just a few of the reasons why it is important to explore the perception of control and the influence on job performance and mental health. In civilian work environments, large majorities of workers place a high value on enjoying some autonomy on the job, and having the ability to exercise and develop their skills and capacities (Raphael, 2004). This appears to be true of the military as well. Results from a Canadian military reputation survey found that 35% of young respondents felt strongly that the CF is not a good career choice due to the authoritarian environment and lack of job flexibility (Tesseron, 2001).

Purpose of the Study

To enhance positive career experiences of non-commissioned CF members and address concerns of the Canadian Forces regarding retention, loyalty, and long-term health and well-being (Capstick, 2003; Duxbury & Higgins, 2002; Jans, 2002; Tasseron, 2001), research investigating control and autonomy in a military setting is warranted. Over the course of a CF member's career they progress through a rank structure (Appendix A). Worn on their uniform this rank is clearly evident to their colleagues and supervisors. In a command and control structure, low ranking members must strictly follow directives and are frequently reminded of the little freedom they are afforded in the work environment. In civilian workplaces these characteristics have been shown to contribute to ill-health, reduced productivity and job dissatisfaction (Kuhn, 2006; Marmot et al., 2006; Way & MacNeil, 2006). At this time little is known about what control issues in the workplace negatively affect the health and performance of CF members.

Therefore, the purposes of this study were:

1. To identify the workplace factors that influence regular force (full-time) non-commissioned CF members' sense of job control.

2. To explore, understand and describe the experiences and perceptions of job control for non-commissioned CF naval members, and their perceptions of how low control affects their perceived health and job performance.

Research Questions

1. Which aspects of the job do CF members identify as influencing their sense of job control?

2. How do CF members' perceive low control situations to affect their perceptions of health and job performance?

Hypotheses

Hypothesis 1: Higher levels of job control will positively influence health.

Hypothesis 2: Higher levels of job control will positively influence job performance.

Hypothesis 3: Individual characteristics, such as; locus of control, control enhancing strategies and coping strategies, will influence the relationships between health and job performance.

Propositions

Proposition 1: CF members will have specific experiences of lack of job control.

Proposition 2: CF members will identify specific areas of their job that influence their perception of control in the workplace and how they feel this affects their health and job performance.

Delimitations

1. The study will be delimited to the quantitative data collected through the Unit Morale Profile survey. The Unit Morale Profile survey has been distributed to military units across Canada by qualified researchers and the survey has established validity and reliability.

2. The study will be delimited by the qualitative data collected from regular force sea environment junior non-commissioned members (NCMs for the purposes of this study) who volunteer to participate in the interviews and focus group. The regular force sea environment junior non-commissioned members currently work at CFB Esquimalt.

Limitations

1. The results of the study will have limited generalization to other populations outside of the regular force, non-commissioned military population.

2. The presence of a civilian female interviewer may affect the responses of the participants.

3. The trustworthiness of the qualitative data is largely dependent on the interviewing and analytical skills of the interviewer.

4. The specific experiences of job control described by the CF members may not capture all of the characteristics both at the individual and job levels that moderate job control.

5. The specific experiences discussed by the CF members may not be indicative of how the participant deals with all workplace situations that offer little or low control.

6. Cross-sectional design using correlational analyses reveals relationships among variables but does not imply that the relationships are causal.

Assumptions

1. Conducting semi-structured interviews is a valid method for obtaining accurate information regarding issues involving job control from the participants.

2. Participants have answered the surveys and will answer the interview questions in an honest manner that accurately reflects their perceptions.

Operational Definitions

1. Regular Force non-commissioned CF member – refers to any participant that is currently enlisted in the CF, is employed full-time as a CF military person and is not a commissioned officer within the military.

2. Job Control – refers to the degree to which people have some control over their own work. Thus, the definition of job control refers to the amount of freedom and independence an individual has in terms of carrying out his or her work assignment.

3. Mental Health – refers to an individual's state of mental well-being measuring both anxiety and depression levels.

4. Job Performance – refers to how individuals perceive their level of effort, productivity and attaining work objectives.

5. Organizational Support – refers to how the individual feels about how their organization values their contribution and over-all well being.

Representation and Reflexivity

The issue of representation and reflexivity is significant to this study, and should be noted at this point. As discussed by Sparkes (2002), "Researchers need to reflect on the political dimensions of fieldwork, the webs of power that circulate in the research process, and how these shape the manner in which knowledge is constructed" (p.17). Asking the questions of who gets studied, what gets written into and what is left out of the text is important in how the researcher constructed her knowledge; trying to understand how she fit into the research process - as a civilian Caucasian female who previously worked as a civilian in a military environment delivering health promotion programs, and now in a research role amongst a sample of predominantly male military members. Acknowledging the researcher's presence in the research and being asked by others how she, as the researcher, influenced the study was helpful. Given that the participants are at or near the bottom of the rank structure with negligible influential voice when it comes to implementing change, the researcher was aware that participants might be wary of her intentions and see her in a position of power: the research was being conducted with the support of the Fleet Commander and included obtaining personal information related to their career. Furthermore, junior ranks can be apprehensive

regarding inquiries about personal work, and worry that their responses would not be used to influence future promotions. One way to address this was to have the researcher fully explain her reasons for the research and the steps she took to ensure confidentiality and anonymity.

A related concern was to ensure that the CF members voices were accurately represented and not merely the researcher's interpretation. How can the researcher be satisfied that the findings emerged from the totality of the data and not dependent on a few of the "stand out" quotes? The researcher addressed this concern by involving the participants in several stages of the research: (1) returning the interview transcripts to the participants to ensure accurate transcribing of the interviews, (2) conducting a focus group to expand upon and validate the survey findings as well as an opportunity to confirm categories-quote fit, and (3) randomly choosing participants review the categories and quotes one final time to ensure accurate representation of the qualitative data, and that the quotes fit the category title.

Summary

Evidence in the literature suggests that organizational support, job satisfaction, perception of control, and coping strategies affect employee performance and health in situations where employees have limited control. The proposed job control model (figure 1.) derived from the literature and adapted from Hackman and Oldman (1975) provided an understanding of both the direct and indirect affects on individual outcomes within the job (i.e., health and job performance). Explored within this study the model discriminates between workplace factors, social support and individual characteristics, yet it suggests that the categories act together to influence the outcome measures. Applying this model

to a military navy context contributes to existing knowledge regarding the consequences of job control and, provides understanding around what is most relevant in enhancing Naval CF employees' sense of workplace control.

Figure 1. Job Control Model

Dependent Variables	Moderating Variables	Outcomes
Job Characterisitics	Individual Characteristics	
-Organizational support	- Locus of Control	- Mental health
- Social support	- Coping strategies	- Job performance
- Workplace structure	- Control enhancing	
- Job control	strategies	
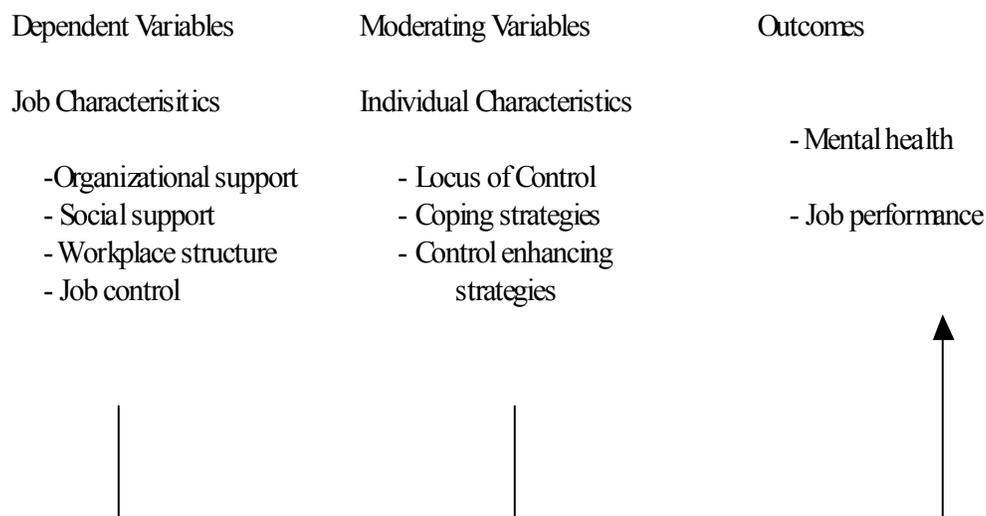
Because the unique aspects of the military work environment include stressful, ambiguous, and unpredictable situations amidst times of slow and sedentary work periods, the CF depends on high-quality job performance and healthy sailors to ensure operational readiness. Thus, it is important to understand the contributing factors that negatively influence regular force sea environment junior non-commissioned members since military occupations are, for the most part, designed for life long tenure, and perceptions of low control are linked with increased mortality and morbidity. To address these issues, this study utilized mixed method design gathering self report surveys, personal interviews and focus group data from twenty-nine CF members. The results

from this study may guide effective doctrine, enhance retention, decrease attrition, and enhance the long-term health of CF members.

The dissertation is organized as follows. A review of the literature related to job control including: workplace control, individual characteristics relating to control, workplace health promotion, and research design and methods are presented in Chapter two. A discussion of the methodology and research design follows in Chapter three. The results from the survey, interviews and focus group are detailed in Chapter four. The results are contextualized in terms of the literature in Chapter five. The dissertation concludes in Chapter six with a reflection of the research process, strengths and limitations, recommendations for future research, contributions to theory and practice and finishes with a summary of the dissertation.

CHAPTER 2

LITERATURE REVIEW

Workplace Control

The purpose of this chapter is to review the evidence and knowledge base

regarding the concept of control in the workplace. The chapter begins by discussing job

control, models of understanding the dimensions of job control and both seminal and

recent studies investigating this issue in a variety of work environments. A section

pertaining to individual characteristics is presented which explains the concepts and

evidence related to how control is perceived based on the individual. A third section on

workplace health promotion provides an overview of the factors to consider in addressing

health in the workplace and knowledge to implement workplace health strategies. The

chapter concludes with a discussion of research design and methods utilized in workplace

studies, including methods most suitable for the Canadian military work environment.

Job Control

There is an abundance of research exploring the importance of job control and

employee well-being as important for productivity and performance within the workplace

(Boswell, Olsen-Buchanan, & LePine, 2004; deJong, Bosma, Peter, & Siegrist, 2000;

Ganster, Hochwalder, & Brucefors, 2005; Karasek, 1989; Leppanen, Hopsu, & Klemola,

2005; Raphael, 2004; Tsutsumi et al, 2006; Wilkinson & Marmot, 1998). Addressing the

reality that 'people' are important assets within organizations and employee well-being is

a priority, organizational research has investigated a variety of factors that link

employees' perceptions of their workplace with levels of turnover, absenteeism, errors,

morale and counter productive behaviours (Michie & West, 2004; Spector, 1988). More

specifically, the area of job control and autonomy has been identified as important to

employee well-being, performance, and job satisfaction (Ganster, Fox, & Dwyer, 2001;

Michie & West, 2004; Sekine et al., 2006). Definitions of job control vary somewhat, but

consistently reflect one's freedom to exert some influence over one's environment or how

to carry out tasks (Ganster, 1989; Hackman & Oldham, 1975; Karasek 1979). Hackman

and Oldham's theory of job design, the Job Characteristics Model, includes attributes

such as task identity (the extent to which the task represents a whole piece of work), task

significance, autonomy, skill variety and feedback on tasks performed. Increasing levels

of these attributes produces 'job enrichment' and influences job satisfaction, motivation,

and work effectiveness. The assumption with this model is that if employees are

motivated and more satisfied then they will perform better. Enriched jobs have been

linked with higher self-efficacy of employees (Parker, Axtell, & Turner, 2001).

Despite the slight differences in definitions it has been confirmed that job control

is linked to positive work related and individual health outcomes (Wilkinson & Marmot,

1998; Spector & Jex, 1991; Mitchie & West, 2004; Sekine et al. 2006; Ganster, Fox &

Dwyer, 2001). What is more interesting is that it has been argued that the perception of

job control alone has an influence on stress levels, even if the individual does not use his

or her control (Dwyer & Fox, 2004).

Adopting the autonomy subscale of Hackman and Oldham's (1975) Job

Diagnostic Survey, Ippolito et al. (2005) measured control of military soldiers' pre and

post deployment. Job autonomy was used to operationalize job control in the military

context for several reasons, (1) autonomy was recognized as a critical component of job

control (Ganster, 1989; Hackman & Oldham, 1975; Karasek, 1979), and (2) it has been

correlated with important work-related and health outcomes (Parker, Axtell, & Turner,

2001; Parker, Turner, & Williams, 2006; Wilkinson & Marmot, 1998). The scale

contained three items referring to one's autonomy (i.e., To what extent does your job

permit you to decide on your own how to go about doing the work?). Each soldier had to

rate their agreement or disagreement on a 5 point scale ranging from 1 (*strongly*

disagree) to 5 (*strongly agree*). This study found that job control moderated the

relationship between demands and psychological health during deployment when soldiers

used active coping skills. However, researchers cautioned using such a job control scale

may not be possible to actually increase the amount of job control, especially in a highly

structured military setting, rather only the individual's perceptions of it (Ippolito et al.,

2005). In addition, Troup and Dewe (2002, p.351) suggested that control measures need

to include more than the work characteristics and processes but also the feelings and

emotions embedded in the concept of control. In some occupations such as military

operations, emergency services and technical trades, workers have very little flexibility

around how a task is executed. Troup and Dewe argued the use of a multidimensional

measure, which includes task control, predictability, self-control, and general control,

rather than a uni-dimensional measure as beneficial in workplace circumstances with

standardized operating procedures. Moreover, self-control becomes important in

instances where the only control individuals have, in any encounter, is over their own

emotions. This form of control is important because it identifies an aspect of control that

does not focus on external control mechanisms, such as job characteristics and work

processes, especially in those hierarchical work situations where little external control

exists. Indeed some researchers (e.g., Ippolito et al., 2005; Troup & Dewe, 2002) suggest

that more clarification is needed to identify the best measure of job control and what aspects of job control are most important to the employees themselves.

The most significant large-scale study to suggest a significant role for job control in explaining health effects, the "Whitehall Study," was conducted by Marmot, Bosma, Hemingway, Brunner, and Stansfeld (1997). Following over 7,000 civil servants in the UK working in jobs classified in the lowest of the three grade levels (office support staff and clerical workers) Marmot et al. found a higher incidence of heart disease in the lower employment grade of government employees. This became known as the phenomenon referred to as the social gradient, which depicts a "ladder" of health inequalities where each grade level is worse off than the one immediately above it. Marmot and colleagues then examined the variables that may contribute to heart disease, such as the traditional risk factors of body weight, low levels of activity, social support and perceptions of control. The study found that much of the inverse social gradient could be explained from the employees' perceptions of control. However, when measuring such long term outcomes as heart disease, conditions which are also influenced by hereditary and lifestyle choices, it is difficult to conclude that the workplace independently leads to ill-health (Ganster, Fox, & Dwyer, 2001).

In a sample of customer service workers ($N = 412$) in the U.K., Bond and Bunce (2003) utilized a two-wave panel design to examine the ability of acceptance and control to explain mental health, job satisfaction, and performance in the work domain. They found that beneficial effects (increased mental health and objective measures of performance) of having more job control were enhanced when people had higher levels of acceptance. Acceptance was defined as a willingness to experience thoughts, feelings

and sensations without having to control these thoughts or let them determine his or her

actions (Bond & Bunce, 2001). For example, when an individual is feeling frustrated

about a workplace situation, this frustration is acknowledged but does not need to be

controlled and consume the individual's thoughts. The energy and focus is then not on

controlling their frustration but in addressing the situation at hand and the individual's

needs. For this study, Bond and Bunce measured job control using Ganster's (1989) Job

control scale. It is a self-report 22-item scale to assess a range of areas over which people

can have control at work: variety of tasks performed, the order of task performance,

pacing, scheduling of rest breaks, procedures and policies in the workplace and

arrangement of the physical environment. Each item (e.g., "How much control do you

have personally over the quality of your work?") is rated on a 5-point Likert scale

ranging from 1 (*very little*) to 7 (*very much*). Higher scores indicate greater levels of

control. Psychometric properties of this scale appear good and reveal a single factor of

control (Ganster, 1989; Dwyer & Ganster, 1991). In this particular study the alpha

coefficients for the job control scale were .88 and .90 for the pre and post measures. The

findings from this study indicated that higher job control predicted better mental health,

job satisfaction and performance (Bond & Bunce, 2001).

In an earlier study, perception of control in the workplace was measured using a

modified version of the job control scale (Fox, Dwyer, & Ganster, 1993). Using the 22-

item control perceptions scale, the researchers modified it slightly to better reflect the

nursing occupation and found its reliability was .80. The aim of the scale was to measure

control beliefs by asking identical questions as in the original job control scale and

adding a few questions that pertained to the specific occupation of nursing (e.g.,

controlling exposure to health threats and responding to physicians' demands). The study found control to be an important factor in explaining physical well-being among nurses and the researchers suggested that employees' perceptions of control can be enhanced by job design interventions specific to the occupation. This particular study also found adverse health effects of demanding jobs with low controllability: elevated blood pressure and cortisol levels remained high after individuals left work potentially creating long term health risks.

Control over work demands has been shown to protect mental health and lower risk of heart disease (Karasek, 1990; Schnall et al., 2000). The most well used model that has consistently found a relationship with ill-health and workplace factors is the demand-control model (Karasek, 1979).

Demand-Control Model

Karasek's job-strain model hypothesizes that a workplace configuration with high job demands and/or low decision latitude can lead to poor psychological and/or physiological well-being (Karasek, 1979; Vaananen, Toppinen-Tanner, Kalimo, Mutanen, Vahtera, & Peiro, 2003; Noblet, 2003). According to Karasek (1996), it is the combination of the psychological demands of work and the structural characteristics, in addition to decision making autonomy and the use of one's skills that contributes to job strain.

The job strain model emerged from research on job conditions in the early 1970's when it was unclear how organizational structure impacted or affected both health and behaviour. Karasek (1979) related his job control measure to Hackman and Oldham's (1975) concept of job autonomy or the degree to which there is freedom and discretion in

the way a job is carried out. Many researchers started to show relationships between the use of skills and high levels of autonomy, which produced an active research agenda leading to studies exploring the associations with job strain and heart disease (Karasek, 1990; Schnall et al., 2000). Karasek also found that the possibility to use and develop skills were closely related to authority over decisions and have been added to the model to constitute decision latitude. For Karasek, high job demands with high levels of decision latitude lead to good stress or an active job situation. The active job increases employee motivation and learning opportunities. Conversely, low levels of psychological demands with low levels of decision latitude result in a passive job situation. An active job over time is associated with the development of mastery, reducing the feelings of strain.

Job strain has been used extensively to explore the interactions of high demands and low decision latitude over time and their combined influence on risk of cardiovascular disease. Karasek and Theorell (1990) argued that a worker's possibility to use control over his/her working situation may also influence their orientation to many other life experiences leading to a variety of positive health outcomes, not merely heart health. The high psychological demands and low decision latitude (job variety, control over work and skill utilization) predicts a higher risk for psychological strain and ill health (Hemingway et al., 1997; Karasek, 1990; Schnall et al, 2000). This model also proposes that job control buffers the effect of job demands on worker's well-being (Karasek, 1979). The job strain model has been criticized as being overly simplistic thus leading to inconsistent findings (Rodriguez, Bravo, Peiro, & Schaufeli, 2001; Ganster, Fox, & Dwyer, 2001). The criticism has led some researchers to combine the job strain

model with additional factors such as individual coping strategies. Job control has been demonstrated to moderate the relationship between demands and psychological health when active coping was used (Ippolito et al., 2005). Social support has also been included as an extension of the demand-control model where social support provides individuals with increased possibilities to the perceptions of improved workplace control (Theorell & Karasek, 1996). This notion of social support added substantially to the original demand-control model and was labelled iso-strain. For Noblet (2003), job control and social support are closely linked to the well-being of employees and creative interventions to enhance wellbeing may include supervisory support and accessibility, regular feedback sessions, and work meetings/discussions.

Another important aspect to consider when employee well-being is addressed is the autonomy and the design of the workplace. Not only do the social aspects of work affect health but also its design has drawn many researchers to explore how work structures affect employee wellness.

Work Design and Autonomy

The work design framework (Morgeson & Campion, 2003) reviews the major work design perspectives that have been investigated in the industrial organizational psychology literature. In particular with respect to job control it outlines the characteristics of work that lead to psychological and behavioural outcomes, which help to understand how job characteristics are related to individual reactions to work. Job autonomy is one of the critical aspects of job characteristics (Hackman & Oldman, 1975; Karasek, 1979) involving the amount of freedom and independence an individual has in terms of carrying out his or her work assignment, and an important part of Hackman and

Oldham's (1975) Job Diagnostic Survey (JDS). The instrument catalogues jobs in terms of skill variety, task identity, task significance, autonomy, and feedback from the job. Specific to control and autonomy the survey measures the extent of independence, freedom, personal judgement and permission for employees to decide on their own how to go about doing their work.

The JDS was expanded through the work of Sims, Szilagyi, and Keller (1976 as cited in Morgeson & Campion, 2003) to become the Job Characteristics Inventory (JCI). In its second iteration, six factors to describe aspects of the workplace were included – variety, autonomy, feedback, dealing with others, task identity, and friendship. As well, a simpler 5-point Likert scale and more items per scale, made the JCI superior with a more internally consistent psychometric scale (Morgeson & Campion, 2005). Specifically, the questions to measure autonomy were:

1. How much are you left on your own to do your own work?

2. To what extent are you able to act independently of your supervisors in performing your job function?

3. To what extent are you able to do your job independently of others?

4. The opportunity for independent thought and actions

5. The freedom to do pretty much what I want on my job.

6. The control I have over the pace of my work.

Autonomy has also been described in terms of timing control (the opportunity to determine the scheduling of work) and method control (the choice of how to carry out tasks) as important aspects of autonomy and responsibility (Wall, Jackson, & Mullarkey, 1995). Parker, Axtell and Turner (2006) measured these areas of job autonomy (timing

and method control) on 282 wire makers in the U.K. and found that they were important determinants of proactive work outcomes when working in teams, including personal initiative and voice. However, other researchers (Troup & Dewe, 2001) found that having control over 'work tasks' was less important to workers in the public sector than other aspects of control such as self-control and predictability.

Fox, Spector and Miles (2001) when examining counterproductive behaviours across a variety of workplaces, used a work autonomy scale called the Factual Autonomy Scale (FAS). It provides nine items to gauge permission and authority over one's work (i.e., six items ask "Do you have to ask permission to…" and end with an aspect of scheduling such as "take a break" or "change the hours you work". The remaining three items ask, "Does someone tell you…" and then end with "what", "when", or "how" the person was to work). This scale demonstrated a high level of reliability (alpha .81) and it correlated significantly with supervisory ratings of performance. This study found that the job stressors recognized by the sample were consistent with the theoretical job stress framework in which organizational constraints, interpersonal conflict, and perceived injustice were the most salient work stressors. In addition, it was found that justice, autonomy, and employees' feelings need to be considered and included in the design of jobs and human resource systems. Not recognizing these issues may lead to the kinds of behaviours that harm organizations and their employees (Fox, Spector, & Miles, 2001).

Wall and Jackson (1995 as cited in Morgeson and Campion, 2005) offer a knowledge-based explanation for the effects of work design on affective and behavioural outcomes,

Changes in work design may improve organizational outcomes because increases

in such things as autonomy not only tap into the existing knowledge of the

workforce but also allow further learning on the job. In essence, there are

logistical advantages associated with greater job control (p. 440).

It seems that greater job control promotes workers' understanding of the work

system and this enhances learning leading to better problem-solving capacities. Parker

(1998) found that enhanced autonomy increased employee ownership for problems and

the development of a wide range of skills and knowledge important for the job, and he

termed this role breadth self-efficacy: the extent to which individuals feel confident that

they are able to carry out broader and more proactive roles. This happens due to increased

control over one's work environment and acts as a motivator to master new tasks, leading

further to an increased personal self-efficacy.

The Canadian Forces recognizes the importance of autonomy in the workplace

and measures it through an instrument called the 'Unit Morale Profile Survey'. This

survey is available to Commanding Officers of non-operational units to give them a

"snapshot" of the organizational climate – to assess the unit's effectiveness and identify

strengths and areas that could use improvement. Within this survey job autonomy is

assessed through eight items regarding a CF member's level of autonomy, for example:

"I feel like I can make a lot of inputs to deciding how my job gets done," "When I am at

work, I have to do what I am told," and "I feel like I can pretty much be myself at work."

The participant is asked to rate their answer on a scale from 1 (Completely Disagree) – 5

(Completely Agree). Autonomy is one of three parts (Competence and relatedness) of the

Job characteristics portion of the survey and has been statistically validated (Bonferroni p

< .0167). Currently, there have been 1400 surveys completed. Yet, it has not been analyzed beyond the findings for each individual unit. At this time the survey has been administered to primarily the army and air force elements and its existence suggests an interest on the part of the CF in examining job autonomy among its members.

Physical Space and Control

The physical aspects of work design and the use of workspace has been shown to affect performance on the job. Specifically, workspace design has been shown to affect group cohesiveness and job satisfaction (Lee & Brand, 2005). In a study on office workspace, Lee and Brand studied five different organizations (auto supplier, services administration, telecommunications and marketing firms) for a total of 228 cases all with similar office environments. The data collection was complex and entailed a multi-step process in developing a reliable questionnaire regarding work design and physical space. It was concluded that disregarding other aspects of the workplace was not beneficial to examining control.

A multidimensional control measure that includes aspects of the work such as tasks, scheduling, decision-making and mobility in addition to the physical environment (Lee & Brand, 2005; Ganster, 1989; Troup & Dewe, 2002) brings greater understanding of control in the workplace. The findings from Lee and Brand also indicated that providing control to issues over which employees had little concern resulted in wasted time and energy devoted to the research process. In order to maximize the uptake of research findings and its implications for meaningful policy, issues relevant to employees must be addressed. This provides support for the use of multidimensional and participatory methods in order to understand control from the employees' perspective.

Control over one's physical environment means individuals can act to change or reverse situations which are disliked (Fisher, 1990, p. 53). With environmental control it is necessary to distinguish between objective levels of control and subjective levels of control. The former is quantifiably measured by observable duties on the job; the latter is more abstract in terms of perceived personal influence over certain aspects of the job and is often measured using self-report questionnaires to capture feelings and emotions related to one's perceived control (Troup & Dewe, 2001). Increasing autonomy over the environmental aspects of the job are important and one of the most common work factors that have been associated with ill-health are work demands, such as long hours, workload, and time pressure, all which contribute to lack of control over work (Karasek, 1990; Williams et al., 1998; Schnall, Delkic, Landsbergis, & Baker, 2000). According to findings in workspace research, (Lee & Brand, 2005) the perception of control over physical workspace had a significant positive influence on job satisfaction. To measure control over the physical workspace, Lee and Brand asked six control questions using a 7 point Likert scale (1, yes all the time – 7, no not at all) and its reliability had a Cronbach alpha of .71. The questions included:

1. I determine the organization/appearance of my work area.

2. I can personalize my workspace.

3. I feel my work life is under my personal control.

4. I can adjust, re-arrange and re-organized my furniture as needed.

5. The variety of work environments needed for my job is available to me.

6. I can hold small, impromptu meetings in my office or work area as needed.

Despite the limitations of measuring just one aspect of the workplace the study provided empirical support for the importance of workspace on job satisfaction and group cohesiveness. In the military there is virtually no control when it comes to physical space during operational duties. Specific to the Navy duties are often carried out in confined spaces within the ship that does not allow for changes to workspace.

The following section of the paper will now shift to individual characteristics influencing one's perception of control. These individual characteristics include locus of control, control enhancing strategies and coping strategies.

Individual Characteristics Relating to Control

Self-efficacy

Perceived self-efficacy is the belief in one's competence to tackle difficult or novel tasks and to cope with adversity in specific demanding situations (Wallston, 2001). Self-efficacy makes a difference in how people think, feel and act (Bandura, 1977) and it measures the individual's evaluation of his or her personal ability to exercise control. It has been found that people with high self-efficacy choose to perform more challenging tasks, set higher goals and persist longer. Conversely, if one doubts their ability to respond to a demanding situation they focus their attention on feelings of incompetence leading to distress and failure to deal with the situation.

When choosing a goal, individuals with high self-efficacy select greater challenges and when setbacks occur, they recover more quickly (Bandura, 1977). Self-efficacy is the belief surrounding one's competence in dealing with situations and their control over his or her behaviour.

Examining self-efficacy as it relates to the individual's personal confidence and beliefs about their capacity to perform follows that a higher self-efficacy leads to desired outcomes (Marks, Allegrante, & Lorig, 2005). Self-efficacy has been known as a moderator of the stressor-strain relationship in the workplace and consists of cognitive evaluations people make of their abilities to perform a specific task (Wallston, 2001). People with a high sense of self-efficacy persist at coping efforts and often succeed in reducing their own stress (Beehr & Glazer, 2005).

Bandura (1977) found that self-efficacy was strengthened through direct experience and more specifically through mastery of those experiences. He also found that self-efficacy predicts the extent and initiation of coping behaviours more so than past performance. In a study conducted with the elderly (Welch & West, 1995) it was found that one's experiences or interpretations of their experiences can serve to raise or lower efficacy: when experiences of mastery were decreased their feelings of personal control also decreased. Self-efficacy produces positive outcomes such as reduced task anxiety, improved performance, increased motivation and increased effort (Bandura, 1977; Welch & West, 1995). It has also been found in studies in the workplace that a high level of self-efficacy combined with control alleviated the stress consequences of demanding jobs. However, when self-efficacy was high and there was little control in the workplace it was particularly harmful since it was found that in such situations individuals tended to blame themselves for their inability to cope with the demands (Schaubroeck & Merritt, 1997). Extending the findings from Schaubroeck and Merritt's study, highly efficacious individuals are expected to be generally better able to effectively and successfully use and generate resources in their working environment to deal with demanding tasks. For

example, Bandura (1977) found that individuals with high levels of self-efficacy are better able to solve threatening and difficult situations than low-efficacious persons.

Self-efficacy is an individual or dispositional aspect of personal control and can be measured using various scales. One scale that conceptualizes a generalized sense of self-efficacy is the General Perceived Self-Efficacy scale (Mittag & Schwarzer, 1993). This scale aims at a broad and stable sense of personal competence to deal efficiently with a variety of stressful situations. This 10-item scale has been used in numerous research projects where it yields internal consistencies between alpha .75 - .90. The General Perceived Self-Efficacy scale has proven valid in terms of both convergent and discriminate validity. For example it correlates positively with self-esteem and optimism and negatively with anxiety, depression and physical symptoms (Mittag & Schwarzer). This scale has also been modified to be more specific to the situation. For example in a study examining communication and self-efficacy beliefs among psychology students, the general perceived self-efficacy scale was altered to match the specific task under investigation (Jackson, 2002).

In another study, 154 cabin attendants participated in examining the role of self-efficacy and its moderating influence on the relationship between emotional job demands (i.e. emotionally charged interactions with passengers) and emotional dissonance. This study utilized a 7 item self-efficacy scale that was also adapted from Mittag and Schwarzer's (1993) general self-efficacy scale to capture the specific work situations of cabin attendants. Results from this study confirmed that emotionally charged interactions with passengers are related to emotional exhaustion and most importantly, self-efficacy

buffers the relationship between emotional job demands and emotional dissonance (the difference between felt and displayed emotions).

Self-efficacy becomes important in military settings in that that an individual with a high level of self-efficacy would have the personal resources to manage challenges and stressful environments well known to military operations. This emphasizes the individual's role in dealing with their situation, decreasing the reliance on external aspects such as the work environment or work process critical in military deployments where soldiers are in unknown territory and unpredictable situations.

Locus of Control

Locus of control emphasizes individual attributions related to where a person places control – within or external to him or herself. Locus of control (LOC) has been conceptualized as a control belief influencing behaviour across different situations, for example beliefs about control at work may vary from beliefs about control in personal relationships (Hahn, 2000). Locus of control is an individual variable that indicates the extent to which individuals believe that either their own voluntary actions (i.e. effort or problem solving) or outside factors (i.e. luck or fate) influence outcomes. It has been found that people tend to respond to situations according to their interpretation of what is going on and if they have any control over the situation. Individuals that perceive their situation as threatening have a more external locus of control, meaning their situation is beyond their control, anything they do won't matter and they play no part in the resolution of the problem (Lazarus & Folkman, 1987). Individuals with an internal locus of control believe their actions influence outcomes (Hahn, 2000). Research has shown that locus of control has the potential to bias, or distort people's self-reports on a variety

of variables from job control, well being, and coping behaviours. This is due to where an individual believes their control lies. For instance, if one has an external locus of control regarding their workplace their perception of lack of control will be overemphasized (Spector & Fox, 2002).

The theory on locus of control identifies the process of cognitive appraisal, which is a critical mediator of stressful person-environment relations and their outcomes (Lazarus & Folkman, 1987). According to the person-environment fit model, negative consequences result when there is an incompatibility between a person's beliefs about control and the actual freedom to take action are incongruent, in this situation psychological distress is a likely result (Hahn, 2000). An example of this is a study by Marin and White (1985 as cited in Hahn, 2000) which found that those with an internal locus of control experienced more negative consequences than those with an external locus of control when there was very little objective control afforded, – such as jobs requiring adherence to specific operating procedures. Even though increased perception of control has been linked with adaptation to adversity and feelings of control may offset helplessness and distress in low control environments, it may be best to have an external locus of control in these situations – accepting that one does not have control over all situations. Understanding the role of control in situations may depend on the meaning of control within in particular domains (Folkman, 1984). Furthermore, contrary to past beliefs regarding internal and external locus of control being separate entities, recent research claims that a person might simultaneously hold internal and external beliefs about control in a given phenomenon. For example, beliefs about one's health, where an individual may have an external locus of control about the cause of the health problem

(i.e., bad luck) but is unrelated to one's internal locus of control about the responsibility for the health outcome (i.e., I have control over my actions to get better) (Wallston, 2001). An internal locus of control coupled with a high degree of self-efficacy is a preferred combination in helping individuals cope with stressful situations (Wallston, 2001).

Related to locus of control is the concept of helplessness. Helplessness is an outcome of the perception of having little control within a situation. It is the 'giving up' reaction; the quitting response that follows the belief that there is nothing that anyone can do to improve a bad situation (Seligman, 1998; Wallston, 2001). Similar to external locus of control, helplessness means that one has no control and the outcome is due to chance or luck. Seligman (1998) felt that helplessness is a learned behaviour and that it is influenced by one's explanation of the situation – optimism vs. pessimism. How one feels about their resources to 'do' something to change the situation. People with learned helplessness are not inclined to learn or engage in new, potentially effective behaviours, and they exhibit higher than normal levels of anxiety and depression (Wallston, 2001).

Conversely, a construct closely related to internal locus of control is empowerment. Empowerment has been defined in terms of a number of attributes: (1) greater sense of meaning – a fit between the job and the values of the worker; (2) competence – the worker's belief that he or she possessed the skills and abilities to perform the job; (3) self-determination – the worker's feelings of having control over his or her work; and, (4) impact – the belief that the worker has a significant influence over strategic, administrative or operational outcomes at work (Spreitzer, 1997). These are characteristics or a mindset reflecting personal experiences or beliefs about employees'

roles in the organization. They see themselves as having freedom and discretion (autonomy), feeling connected to the organization (support), confident about their abilities (self-efficacy), and capable of having an impact on the system they are embedded in (decision making). Quinn and Spreitzer (1997) state that empowered people empower themselves, it is not that employees have 'lucked out' and are placed in a brilliant workplace or part of a special program design (p. 42), although job characteristics can increase the likelihood of having empowered employees. Often it is new approaches to old problems, taking risks, and a cognitive shift in one's job role that can develop the process of empowered individuals (Quinn & Spreitzer, 1997).

The following section connects the external environment with internal characteristics in managing control as individuals adopt strategies in order to deal or cope within various situations.

Control Enhancing Strategies, Coping and Personality

When faced with unfavourable conditions that threaten one's perceptions of control, people frequently employ specific strategies to diminish the threat (Skinner, 1996). These strategies typically fall under two dimensions: (1) primary-control strategies (proactive behaviours, such as exerting more effort, persisting, or changing one's approach in tackling the same problem); and, (2) secondary-control strategies, as Skinner (1996) explains strategies intended "to minimize or ameliorate losses" (p. 556) through a change in cognitive frame (accepting personal limitations, decreasing expectations, and re-evaluating goals and/or approach). These strategies are carried out to try and maintain personal control. The secondary-control strategies become important when a primary-

control strategy, such as exerting more effort is no longer reasonable or the situation is not controllable.

In this regard, secondary-control strategies can be viewed as the next step in the control process especially when there is little control afforded in the workplace. This strategy would compensate for the feelings of no control within certain workplace situations. These could include disengagement from goals, social comparisons, self-protective behaviours or shifting focus to the more controllable aspects of the situation. The secondary-control strategy opens up the problem-solving capacity within the situation through a cognitive shift in the approach to handling the problem. The appraisal of uncertain situations interferes with the development of coping strategies and increases the perception of threat (Folkman, 1984). The assumption is that how one appraises and deals with control may determine how they deal with adversity in the workplace (Troup & Dewe, 2002).

Effective coping has been linked with workplace performance and the use of coping can lead to adaptation of demanding and stressful situations (Folkman and Moskowitz, 2004). A study by Ippolito et al. (2005) found that active coping was linked with perceived control. In this study they examined the impact of job control on peace-keeping soldiers facing deployment stressors and how their coping strategies influenced the demand-job control interaction. Another study of intensive care nurses (De Rijk, Le Blanc, Schaufeli, & de Jonge, 1998) found that job control was only able to buffer job demands and emotional exhaustion when the nurses engaged in an active coping style. Active coping versus passive coping is when individuals do something in order to deal with the problem (problem oriented coping) such as: seek out advice, apply strategies to

deal with the problem or do things to prevent the problem from worsening. Passive coping is demonstrated when the individual avoids or escapes the problem or tries to think of something else to get their mind off the problem, and these forms of coping have been identified as disadvantageous when the situation cannot be ignored and must be dealt with. In situations affording employees very little control (nothing they do matters) it was found that passive coping was more appropriate (Theorell et al., 2005; Ippolito et al., 2005; Lazarus, 1984).

Often it is the individual's appraisal of the situation that determines their coping mechanism and their perceptions of control (Folkman, 1984; Folkman et al, 1986; Folkman, & Moskowitz, 2004), linking the person with their environment. The appraisal literature discusses two processes: primary and secondary appraisal, which utilizes passive or active coping. (Folkman & Lazarus, 1980; 1985; Troup & Dewe, 2002).

The appraisal approach adopts the perspective of the individual and their focus on the characteristics of the situation. Assessing coping strategies is one way that researchers use to gauge how people handle situations in which they have no control (Troup & Dewe, 2002). It has been found that when people are in uncontrollable situations they become increasingly passive in their coping efforts (Folkman, Lazarus, Gruen, & DeLongis, 1986). For example, when faced with a challenge, the individual goes through a process of a primary appraisal – what is at stake? Is this situation a threat or non-threat? And secondarily, do they have the resources to control the situation? People that feel they do not have the capacity to respond to the challenge or feel they have no control are most likely to turn to emotion focused coping responses such as "wishful thinking" (I wish that things would change or I wish I could change how I feel); "distancing" (I'll try to

forget the whole thing, I'll daydream about how things could be); "emphasizing the positive" (tell yourself to be grateful thing were not as bad as they could be); or "tension-reduction" (doing things to take your mind off of it - drinking, smoking, using drugs). If the challenge is perceived to be manageable or within the individual's control, attention will then be focused on addressing the problems using active coping or problem-focused coping, such as talking to people about the situation or thinking about strategies for dealing with the situation (de Rijk, Le Blanc, & Schaufeli, 1998; Ippolito et al., 2005).

The process of secondary appraisal (what can I do about this?) involves the individual's perception of their control in a situation and whether they can handle it. This definition supports the need to explore what the individual means by control and what this control is over (Folkman, 1984). It has been argued that current measures of control which use single item questions (i.e. autonomy only or general levels of control) are not designed to capture an individual's perceptions or meanings of the factors they consider to be important in order to gain a sense of control (Troup & Dewe, 2002).

In summary, we know that workers who perceive control in their workplace and are resilient to job stressors are characterized as having high self-efficacy, mastery of skills, active coping and internal locus of control (Bandura, 1977; Lazarus & Folkman, 1987; Schabroeck & Merritt, 1997; Ippolito et al., 2005; Troup & Dewe, 2001); qualities that require the perception of a controllable situation not always available in the military environment. How a task is framed or appraised captures the unique relationship that an individual has with their environment.

Assessing whether the individual has the resources to handle the situation is Folkman's (1984) description of secondary appraisal and captures the understanding of

how the individual deals with control. Do they have the resources to handle the situation and what do they want control over? These questions are rarely explored and are critical in understanding the need for control in operationally demanding situations. For instance, what control options are available to individuals where there are inherently few options to choose from? Is there a link between individual characteristics and perception of control in regard to how one appraises their situation? Do they remain 'stuck' on trying to control an uncontrollable situation? Or do they merely have very low tolerance for uncontrollable situations and revert to passive coping? Schaubroek and Merritt (1997) found that when people are confident in their abilities, having control mitigates the stress consequences of demanding jobs. Yet, a lack of control may be particularly harmful for people who feel they have control over everything (high internal locus of control) because uncontrollable situation may challenge their personal beliefs and affect self-esteem.

Furthermore, it has been documented that people with low confidence do not want control in stressful situations and are distressed by the responsibility in dealing with the demands (Schaubroek & Merritt, 1997). However, if people can make the shift from the primary control strategy of merely using the same approach repeatedly or exerting more effort and instead make a cognitive shift towards examining the aspects of their situation that they do have some control over. This shift is evident in studies that explore control beliefs and chronic health conditions. Sirios, Davis, and Morgan (2006) found that when respondents with severe tinnitus (ringing in the ears) focused on symptom-related control versus control over the disease they had higher psychological adjusting.

A shift in control appraisal can serve to enhance a person's ability to deal with uncontrollable situations. Understanding the role of control in adjustment to

uncontrollable situations may depend on the meaning of control within the situation. This is relevant when a negative appraisal of control has been shown to have debilitative consequences on well-being and performance (Folkman, 1984).

The job control model (Figure 1) provides an understanding of how the salient job characteristics and individual characteristics applied to the military context affect health and job performance. Applied to the military context the model discriminates between two conceptually different categories, namely job characteristics and individual characteristics, suggesting that these influence job performance and health. This model, informed by the literature and relevance to the CF work structure, guided the selection of variables measured in this study.

Workplace Health Promotion

Historically, health promotion practices have focused on the individual and helping them to change their health behaviours. These programs have sought the workplace as a venue for promoting healthier lifestyles (Noblet, 2003) often to the exclusion of the job, organization and management factors that profoundly affect employee health and well-being (Lowe, 2003). A recent shift in the field of epidemiology where understanding health has moved beyond an individual's risk profile to include the wider social and community contexts, has coincided with the 'settings-based' approach to health promotion. A settings-based approach recognizes an ecological, multi-level and whole systems perspective (Dooris, Poland, Kolbe, de Leeuw, McCall, & Wharf Higgins, 2007) where "health is created and lived by people within the settings of their everyday life; where they learn, work, play and love" (WHO, 1986, p.2). A 'setting' may be a physical place or a social context where multiple environmental, organizational and

personal factors come together to affect health (WHO, 1998). In health promotion, a settings-based approach is seen as a more effective way to improve people's health and health behaviour because the emphasis is on changing settings (e.g., workplace, schools) instead of solely on individuals (Whitelaw, Baxendale, Bryce, Machardy, Young, & Witney, 2001).

Effective workplace health promotion must take a comprehensive approach to dealing with job control, stress and performance by addressing both the work environment and the individual characteristics. Ideally, health promoting policies and interventions address the sources and the symptoms of unhealthy workplaces, including those arising from occupational status, job attributes, and the structure of the workplace considered to be key determinants of health (Raphael, 2004). Because workers' sense of their "place" in organizational hierarchy can greatly affect their overall health (Marmot, 2004), the key dimensions for enhancing quality of work life reflect issues of job security, physical conditions, work pace and stress, working time, opportunities for self-expression, individual development, participation at work, and work-life balance (Raphael, 2004), rather than smoking cessation and exercise prescription programs. For Noblet (2003), 'job control' and 'social support' are closely linked to the well-being of employees and creative interventions may include supervisory support and accessibility, regular feedback sessions, and work meetings/discussions. Having a say at what happens in the workplace may generate greater ownership over the employees' work, and addressing stressful situations can serve to help employees adapt to change and enhance their well-being.

Quality of Work Life contributes to workplace health and has been defined as a transformation of working patterns and environments that will create a better fit between

what people expect from their jobs (choice, involvement, change, pay, training and a work philosophy) and what they actually experience in their jobs (Cunningham & White, 1984). Quality of work life (QWL) measures include worker attitudes and perceptions of the organization, their job, the workplace, job satisfaction, level of employee motivation, commitment and morale (Peterson & Wilson, 1998). These attributes affect employee health, and organizational performance. Given that work is dominant in many peoples' lives, QWL is an important factor and influences quality of life in general. Quality of work life emphasizes how values and beliefs create a culture that forms policies and norms. The QWL issues attempt to link healthy work environments to improved health outcome for individual employees and improved business results.

Another aspect of the workplace to consider is the concept of socialization. Socialization, a process whereby individuals become part of a group that ultimately confines their behaviour and prepares them for the types of roles they are expected to play in their careers, affects health and well-being. Singh-Manoux and Marmot (2005) argue that health-related and psychosocial behaviours are a product of one's society and that an individual is connected to their place in society. This socialization leads individuals to develop a preference for what is familiar and helps to explain the long standing traditions that are held in the CF. Thus the importance of identifying the social risk factors, in addition to the individual's risk profile within the military, will help to increase wellness within the CF 'community". Similar to socialization is the notion of social capital – workplace support, sense of belonging and mutual trust. It has been argued that social capital may influence psychological and biological influences that promote people's health and improve quality of life (Putnam, 2000 as cited in Liukkonen,

Virtanen, Kivimaki, Pentti, & Vahtera, 2004). Social capital has been measured by membership of groups, trusting others and helpfulness of others which has been associated with good health (Veenstra, 2000 as cited in Liukkonen et al., 2004). As today's workplaces become more hectic it also becomes harder to balance work, family and friends, thus the importance of having social capital in the workplace. A lack of social support has been documented by CF members (CFHLIS, 2000; CFHLIS, 2004).

Individual characteristics of workers also account for some of the difference in employee health. Those from a lower socio-economic status exercise less frequently, have higher body mass indexes and are more likely to smoke (Warren, Hoonakker, Carayon, & Brand, 2004); habits which cannot be isolated from their workplace culture. Anspaugh, Hunter and Savage (1996) state two conditions needed to reap the benefits of health promotion programs: motivated participants ready to make positive changes, and continuous practice of the changes once initiated; both of which require the support of the workplace and its environment.

As part of their commitment to addressing health and well-being, the CF offers health promotion and health education facilities, programs and services to all of its members. Such opportunities include facilities for exercise and recreation in addition to behaviour change programs (e.g., smoking cessation, stress management, anger management, suicide intervention skills training, drug and alcohol awareness sessions, nutrition education courses, and basic relationship training), resembling many civilian workplace health promotion initiatives. These health promotion programs are designed and delivered through the Canadian Forces Personnel Support Agency (CFPSA) with trained staff members under the auspices of the Surgeon General for the CF.

The next section will focus on research design and methods utilized in workplace research. An overview of four research studies addressing workplace control and the methods used to measure control will be described.

Research Design and Methods

Research Design for Workplace Control

Most research on workplace control has been conducted using self-reported data collection methods and then analyzed using statistical procedures to calculate strength of association through correlation and/or regression. In this section on research design, the design of three seminal studies, all conducted to measure control in the workplace are discussed.

The longitudinal Whitehall II cohort study of 10,308 British civil servants characterized factors of the psychosocial work environment (high job demands, low decision latitude and effort reward imbalance) and examined their influence on coronary heart disease and diabetes, as well as the influences of change in work risk factors on health. Self-report questionnaires have been administered at all phases to collect information on demographics, work environment, health behaviours, social supports, and self-reported health. The psychosocial work environment was measured using Karasek and Theorell's (1990) Job Content Instrument, which analyzed the degree of control over work and opportunity for use of skills and amount of variety present in work (decision latitude) along with job demands and social support. Although it was hypothesized that job demands would only be related to poor health in those with low control over their work environment the results demonstrated that job demands and decision latitude were independently related to health. The workplace structure of the British Civil servants,

though not mimicking, comes close to resembling a military environments: employment grades are well established and recognized.

Beginning in 1985, person-specific data have been collected on civil servants, with measurements taken every two to three years. This longitudinal design allows work characteristics to be related to the development of subsequent illness after taking into account pre-existing ill health (Head, Martikainen, Kumari, Kuper, & Marmot, 2002). Over time, the results have demonstrated low decision latitude was associated with obesity, alcohol dependence, poor mental health, poor health functioning, increased sickness absence, and coronary heart disease. Linear regression was used to analyze the association between the continuous health functioning outcomes and work risk factors. In addition, the analyses were repeated to adjust for employment grade, and age. This was done through analysis of covariance, designed to assess group differences on the dependent variable (work risk factors) after the effects of one or more covariates (age and employment grade) were statistically removed. The covariates were chosen because of their known association with the dependent variable (Tabachnick & Fidell, 2001).

The second study conducted by Troup and Dewe (2002) explored the nature of control and its role in the appraisal of work stress. They felt that the measurement of the appraisal of control in work-related situations had not been well investigated. Arguing that, not only should perceived control be measured, but also the factors that an individual strives to have control over and the perceived control over those factors, the researchers asked, What do employees most want to have control over and why? Using a multidimensional scale examining task control, predictability, self-control, and general control and the process of coping with workplace stress, administered to 134 New

Zealand government employees, researchers utilized an incident-based approach to examine stress. Here participants were asked to describe a stressful situation in detail of what and who was involved and then rate the incident on a 10-point scale (1: not very stressful – 10: very stressful). They were then asked about certain aspects of the incident that would describe primary appraisal (what is at stake?), secondary appraisal (do I have the resources to deal with this?), situational emotions and coping behaviour.

The 35-item control scale was established through a content analysis of the meanings of what control meant to workers in the pilot phase of this study, in addition to correlations between the control measures and the other stress appraisals and coping variables. Respondents rated the 35 items on a 5-point scale, which asked how important was this item in giving them a sense of control over the situation, and then again rating the questions on how much control they actually perceived they had when dealing with the situation.   In addition to the control items respondents were asked to 'circle the category' that best described the extent to which they used each of the strategies to deal with their situation. This represented the problem-focused and emotional-focused coping distinction. The researchers felt that it is particularly important to measure control using a multidimensional scale, not only to measure levels of control over the work environment but also emotions and feelings that follow situations of control in the workplace. This was supported by the significant correlations between self-control and workplace stress (remaining relaxed, not allowing it to make you feel bad, maintain self-control, preparing for the worst), which was described as more important to the respondents than control over work tasks. The researchers argued that self control becomes especially important in situations where the only control individuals have is over their own emotions not over the

nature of their job. The use of correlations was used to measure the association between variables independent of sample size. A r value close to .00 represented no linear relationship or predictability, whereas a r value closer to +1.00 or −1.00 indicated perfect predictability (Tabachnick & Fidell, 2001).

Lastly, the third study conducted by Ippolito et al. (2005) expanded on the demand-control model by adding coping as an additional factor. U.S. soldiers ($N = 638$) were surveyed before and during a 6-month peacekeeping deployment. It was found that job control moderated the relationship between the demands and psychological health during deployment when soldiers used active coping (problem-solving coping). All measures were again self-report questionnaires and the data were analyzed using hierarchical moderated regression. Hierarchical (also known as Sequential) regression is where independent variables (IV) are given priorities by the researcher before their contributions to the prediction of the dependent variables (DV) are assessed. In this particular study the researchers first examined psychological health at pre-deployment and then examined the other factors such as demands, job control and coping. For example, at Time 1 psychological health was entered first in the series of regression equations as a covariate and followed by demands, job control and coping style were entered in the equations. Thirdly, all three possible interactions between the main effect variables were added.

A factor analysis was used to assess the relevant coping factors, which emerged during the 6-month peacekeeping deployment: (1) seeking social support and active cognitive and behavioural methods, (2) religious coping, (3) positive reappraisal and positive active coping, (4) avoidant coping or wishful thinking. The results of the

regression analyses showed that when soldiers made use of social support and active coping, job control buffered the relationship between demands and psychological health. Furthermore, when soldiers were experiencing high demands but perceived low job control they seem to be better off when they did not use an active coping style.

Community Based Research in Work Environments

The purpose of this section is to discuss community based research (CBR) design and its use of qualitative techniques for capturing the psychosocial work environment (e.g. interviews, focus groups, and use of diaries). CBR has important practical and/or political implications for the community and the methods are important in order to explore the workplace and make suggestions for improving the existing situation. Thus, it is important to choose a methodology that engages the employees in the research process from the beginning and to value their contribution in the development of knowledge about practice. CBR is more about design and methodology and is not solely driven by the methods. The emphasis is on collaboration, participation and social justice rather than positivist notions of objectivity and expert-driven agendas (Flicker, Savan, Kolenda, & Mildenberger, 2007). Therefore, the approach of collecting and analyzing data is to create new knowledge and understanding in order to make a contribution to the community (Hills & Mullet, 2000). Partnerships between communities and researchers can be difficult and challenging (Ansari, 2005); especially in hierarchical workplaces where the day-to-day decision-making involves very limited participation of all employees. Another challenge to successful CBR is the requirement of time, commitment and active engagement of the community (Bonham & Nathan, 2002). In the dynamic military environment this is particularly exigent due to the intense preparation and deployment

schedule of the sailors. However, CBR is an important tool in addressing complex

environmental and social problems and may be an effective approach for the

communities demanding to be involved in the research process (Flicker et al., 2007).

Researchers using CBR feel the community member holds wisdom, experience, and

knowledge about the culture of the community (Minkler & Wallerstein, 2003).

Cooperative inquiry is used in community-based research to understand the

world, making sense of life and developing new ways of looking at things (Hills &

Mullet, 2000). It is founded on the principle that good research can only occur when

research is done *with* people rather than *on* people. Cooperative inquiry is a systematic,

cyclical and transformative approach to understanding and taking action.

Ultimately as stated by Hills and Mullet (2000) "The utility of the [research]

outcome is judged based on the difference it makes to transforming the health and well-

being of the community" (p.11) or in this case the workplace. It is an approach to

building knowledge that seeks to change the conditions of people's lives (Ristock &

Pennel, 1996).

One of the most common methods used in CBR is the interview. The research

interview is based on daily life and is a professional conversation – an interaction to learn

about experiences, feelings, hopes and the world they live in (Kvale, 1996). The semi-

structured life world interview is one type that aims to obtain descriptions of the life

world with respect to interpreting the meaning of the described phenomena. Narratives

and conversations are today regarded as essential for obtaining knowledge of the social

world, including scientific knowledge (Kvale, 1996, p. 9). Being clear on the theoretical

issues of using the interview method as an alternative way of finding truth, meaning and

reality is one way of understanding situations through relations. Interviewing can focus on different aspects using either fixed questions or open-ended questions, asking general or situation specific questions and can uncover detailed information that cannot be found in surveys.

The focus group is also a useful tool especially in uncovering group phenomena (Theorell, 2000). One benefit of this method is that it examines group coping, or the way the employees handle difficult situations as a group rather than individuals (Theorell, 2000). Sampling for focus groups is done purposively (Patton, 1990) to capture in-depth, rich information about the lived experience and perspectives of everyday life. The researcher creates a non-judgemental environment that nurtures different perceptions and points of view, without pressuring the participants to vote, plan or reach a consensus. This provides a level of comfort among participants. Focus group interviewing is particularly suited for obtaining several perspectives regarding collective issues, and gaining insights into peoples' shared understandings of everyday life (Krueger, 1988). Focus groups are conducted using groups of six to ten people with the facilitator asking carefully planned questions and the group members influencing each other by responding to ideas and comments in the discussion. Focus groups are widely accepted in research and are particularly useful when the goal is to explain how people regard an experience, idea, or event (Krueger, 1988).

One study using action research examined the promotion of school community staff's well-being in Eastern Finland (Saaranen, Tossavainen, Turunen, & Vertio, 2002). This paper describes the school staff's and occupational nurse's evaluations of the occupational well-being of the school communities. Through focus groups and interviews

the aim was to understand what well-being meant to the staff and what was important for

staff health and wellbeing in school communities. The focus groups and interviews were

transcribed verbatim and analyzed using inductive content analysis. Statements with

similar content were used as units of analysis. The statements were simplified and

classified into categories, of which sub-categories were formed. The results of the study

found that the staff of the school community described well-being to consist of a positive

work community, motivating work and high quality of working conditions, adequate

professional skills and education and satisfying personal life. These findings indicate that

the focus for change will be on both community processes and individual based

processes.

Another method useful in studying complex situations is using a diary. A diary

could be a booklet that participants are asked to fill out at regular intervals several times a

day or week. The benefits are that it immediately catches the impressions and

observations that the subjects themselves make in a given moment or short period

(Theorell, 2000). One diary study examining the effects of locus of control on daily

exposure, coping and reactivity to interpersonal work stressors examined 86 participants

employed in low-level service jobs completed diaries for 14 days reporting on

interpersonal stress, coping and distress (Hahn, 2002). The use of diaries was chosen to

reduce the retrospective recall bias that may distort the accuracy of the participant's

reports and capture state like reactions to stress and coping. Focusing on the most

stressful event of the day each participant was asked to record an interpersonal conflict at

work. The findings showed a difference in reactivity and coping choices in internal and

externals. Internals felt more anger and health symptoms but less depression than

externals, which may be explained by the different coping strategies, utilized by those with internal and external locus of control (Hahn, 2002).

Difficulties arise when using participatory means and need to be considered when choosing methods and methodology. Most importantly is the subject's distortion of the workplace due to social pressure from co-workers or supervisors, denial of the work situation, and cognitive ability to analyze one's situation (Theorell, 2000). It is also worth considering issues from the researcher's perspective such as time and cost. Participatory research often takes longer to conduct, yet can provide rich details of one's work situation not attainable through surveys. However, it can be difficult to convince the employer of its importance and use of employee's valuable time.

Strengths and Limitations to Consider in Research Design

Research design is influenced by a number of considerations, an important one being the workplace environment and characteristics. For example, a sample that represents a single occupation has the advantage of eliminating most of the differences in socioeconomic status. Yet, the variation in using multiple occupations is an advantage in that there are a wide spectrum of demands and control in the various settings. The military setting is well suited to examining control since it is a single occupation layered with multiple demand and control settings within each rank level, but also masking possible confounding socioeconomic factors.

Research that relies on a self-reported survey questionnaire has been heavily criticized and is an ongoing concern with overestimation or underestimation of reporting (Roberts & Glick, 1981; Schwab & Cummings, 1976 as cited in Morgeson & Campion, 2005; Fox, Spector, & Miles, 2001). Similarly, recall bias becomes an issue in

organizational behaviour research in that participants remember selectively, for example with patients who suffered a myocardial infarction they only tend to remember the factors they believe to be important (Theorell & Karasek, 1996).

When exploring the method or methods to conduct research it is important to consider the limitation of using a single method, which can lead to problems with common method variance (Fiske, 1982). This can inflate observed relationships between various job dimensions and outcome measures. The underlying causal mechanisms for common method variance are consistency (the tendency of individuals to want to maintain consistency with prior responses) and priming (the influence a questionnaire can have in orienting an individual's attention to certain responses). One way to get around this is to use archival measures or mixed methods (Morgeson & Campion, 2005).

CHAPTER 3

METHODS

Research Design

This study followed mixed-method design to maximize the relevance and utility of findings that may guide both operational readiness and retention strategies for CF members. This type of research is well suited to the military environment, one that supports operational efficiency and rigorous procedures. Mixed-method designs are increasingly popular in the social sciences and are regarded as a legitimate, stand-alone research design (Cresswell, 2002; 2003) defined as,

> The collection and analysis of both quantitative and qualitative data in a single studying which the data are collected concurrently or sequentially, are given a priority, and involve the integration of the data at one or more stages in the process of research (Creswell, Plano Clark, Gutmann, & Hanson, 2003, p. 212).

A multi-method approach allows the researcher the advantage of several philosophical paradigms. In this study the researcher adopted a "pragmatic" philosophical perspective, which draws on the use of several diverse approaches and values both objective and subjective knowledge (Tashakkori & Teddlie, 2003). Reflecting that there is value in the different approaches to how knowledge is claimed and that it is the research problem that determines the paradigm not the research method, pragmatism is increasingly been accepted as the best philosophical basis of mixed methods research (Hanson, Creswell, Plano Clark, Petska, & Creswell, 2005; Tashakkori & Teddlie, 2003). Greene and Caracelli (2003) express that one of the benefits of using multiple methods within a single research study is that it capitalizes on the objective strengths of quantitative findings as well as the richness and depth of qualitative findings. The

combination of these two methods provides a means of approaching the research question

from different angles, increasing inferential leverage (Tarrow, 2004).

Specifically, a concurrent triangulation design was utilized, whereby the

quantitative data from the Unit Morale Profile and the qualitative data through semi-

structured interviewing were collected and analyzed at the same time (Hanson et al.,

2005). Utilizing a concurrent triangulation approach, this research design falls within a

post-positivist tradition with an emphasis on procedures that lead to structured analyses

for reliable results (Hanson et al., 2005; Denzin & Lincoln, 1994). In this type of mixed-

method design, each approach is used to build upon the same research questions. The

data were analyzed separately, and integration occurred at the interpretation stage. For

this study the quantitative and qualitative data were connected and analyzed as a means

of understanding how the data converged, confirmed, cross-validated, or corroborated the

findings. For example, the quantitative procedures in this study emphasized descriptive

analyses of survey data to investigate relationships between the variables: job control,

workplace characteristics and individual characteristics, as well as, social support. The

design also provided the opportunity to identify areas of concern from the surveys and

then expand on those areas with the qualitative findings as it related to the purpose of the

research. Because this study is concerned with securing 'thick' descriptions and

individual points of view from CF members, it drew on qualitative inquiry to capture

their perspectives and an understanding of experiences of job control (Denzin & Lincoln,

1994). Thus, immediately following the survey, participants took part in a semi-

structured interview. The detailed descriptions voiced in the interviews helped the

researcher to understand how the members feel about control in the workplace and if their

perception of control affected their sense of health and job performance. Furthermore, six members returned to participate in a focus group one month following the completion of the survey and interviews to confirm the researcher's preliminary analysis of the interview data, and elucidate the survey findings. These latter qualitative data gave further context to the quantitative findings and explained some of the results with detailed examples. Finally, as a means of member checking the analysis of the interview data, 10 randomly chosen participants from the original 29 were emailed the final categories and selected quotes. They were asked to assess if each category accurately reflected or captured the interview excerpts, and if not, to suggest an alternative name for the category. This same procedure of category-excerpt fit was also asked of a civilian non-researcher and he reported that all quotes satisfactorily fit the category name.

Indeed, the design proposed for this study is in keeping with the arguments of Hanson et al. (2005), Mertens (2003) and Punch (1998) who advise that analyzing both numeric patterns from quantitative data and in-depth details from qualitative data results in a more sophisticated understanding of the research problem. While the study did not adopt what Hanson et al. (2005) refer to as "an explicit advocacy lens" (pg. 229), such as feminist or critical theory, for the purpose of transforming or advocating for social change, the combined results of both the quantitative and qualitative methods offered a better understanding of what aspects of control are important to CF members and at what stage of their career, as well as what factors contribute to their perception of job control. The study also provided an understanding of the utility and relevance of job control measures not yet applied in a military work environment. Finally, the results of this study may have implications for future military workplaces to enhance both the success and

well-being of military members and contribute to addressing retention issues identified as critical to the future of the Canadian military.

The Research Participants and Setting

The research participants for both the quantitative and qualitative components of the study were recruited from the Pacific Naval Fleet at CFB Esquimalt and are regular force sea environment non-commissioned members of the CF. The participants were purposively selected due to their ability to answer the research questions (Patton, 1990). Recruiting participants within the military environment is a rigorous process due to the distinctive community environment and dynamic work schedule. The researcher's experience of recruiting participants mirrors others in the literature where "obtaining a sample was not simply a matter of recruiting people into the research but, rather, a complex social process of gaining access into the community itself" (Sixsmith, Boneham & Goldring, 2003, p. 579). Because the researcher previously worked as a civilian in a health promoting role on the naval base, key relationships were already established facilitating access to NCMs working in the Fleet. These time-consuming tasks of nurturing relationships, building trust and gaining access into the layered, cautious and guarded military workplace began years before this research project, and was helpful in understanding the nuances, challenges and logistics of military procedures. In particular, the researcher accepted that she must be available to the participants on their timeline and be prepared to act as opportunities presented themselves. From the beginning the researcher respected the guidance and direction of community input, context and the pace of the military culture.

The researcher invited the participants by a written letter sent out to the ships in the dockyard at CFB Esquimalt. The letter was also verbally read to all ship's personnel as a part of their daily routine orders and it was described that this study was supported by the Commander of the Maritime Pacific (MARPAC). Finally, the letter was emailed to every Commanding Officer and Coxswain working in the Dockyard to ensure they were informed of the study and its purpose should ship members ask permission to attend. The surveys and interviews were conducted on members' own time and it was left to the discretion of the sailor if and when they could voluntarily take part in the study.

To ensure dependability of the research it is important to consider the research environment (Bogdan & Biklen, 2003; Lincoln & Guba, 1985). In the military environment, there are measures to ensure there is a high level of security at the gates of the Dockyard, which requires either a valid DND identification or a military escort in order to access the Dockyard. It is also difficult to find neutral space, free from boundaries of ranks that the participants would feel comfortable to participate. Furthermore, the researcher nor any civilian is privy to the ships' sailing schedules, making it difficult to know what size of sample she would be able to draw from. Lastly, naval members are deployed for long periods of time with no assurance that when they return they will be posted to the same unit, making it very difficult to make contact with the same individual post-deployment. To account for these complex and onerous realities, the surveys and interviews were scheduled over a relatively short time period (four weeks) and took place in a comfortable environment for the participants - the Fleet Fitness Centre. The Fitness Centre is within walking distance from where the ships were docked and is easily accessible to all ranks. All but two of the respondents (93%) were

non-commissioned CF members in the lower rank levels of Able Seamen, Leading Seamen and Master Seaman. The researcher was initially unaware that two of the volunteer participants were at a higher rank level of Chief Second Class. Some of the respondents made contact using their personal email account and did not disclose their rank during initial communication. The researcher discovered that these participants were senior NCMs only after the interviews were booked and commenced. The decision was made at this point to complete the survey and interview as a respectful gesture. After reviewing the data from these higher-ranking individuals the researcher decided not to exclude these two interviews since their survey data did not appear to skew the results (did not present as outliers), and both described similar workplace factors regarding a lack of control as the other junior members.

At the junior rank levels the sailors have several years of work experience, yet remain in the bottom half of the hierarchical structure, theoretically affording them little job control. The junior ranking NCMs have a very different work environment and must carry out routine orders to ensure they meet the operational demands and carry out mission objectives in an efficient manner. The interviews addressed the aspects of their job that influenced their sense of control and if this view influenced their performance and health. Each interview was arranged between the participant and the researcher via personal email or telephone where they confirmed the date and time. The interviews where scheduled between 9 a.m. and 3 p.m. during the workday and lasted approximately one and a half hours in length. The participants indicated their interest in participating in a second focus group meeting by checking yes to the invitation at the bottom of their informed consent form.

One month following the completion of the interviews the researcher contacted all participants interested in the focus group and offered them several dates and times for the follow up focus group, in order to accommodate the greatest number of members. The focus group was held in a conference room in the main administration buildings in the Dockyard. The focus group lasted approximately two hours and was held mid-morning. Six members (five Leading Seamen and one Master Seamen) attended this session.

Ethics

Ethical procedures for the research required careful consideration in order to satisfy the academic ethical review and those unique to the Canadian military. Upon ethical approval through the University of Victoria ethical review board, the proposal was sent for review and approval at several levels in the Maritime Pacific (MARPAC) head quarters. Once the MARPAC Commander was satisfied with the written proposal several meetings were set up with both the Fleet Coxswain and the Fleet Commander to review the research procedures and ensure the research will cause minimal disruption to the workers and be carried out in such a way that it will respect the CF workplace's security protocol, maintain confidentiality and autonomy of the participants. Once approved, the researcher had access to the CF members and the office of the Fleet Commandant communicated the particular guidelines and regulations specific to the research study within MARPAC.

The consent forms for the interviews were read and signed by each participant before moving on to the survey and interview. The research participants were aware of and understood that they may withdraw from the research at anytime without questions,

and the participant may decide if he or she would like to withdraw their information up to that date.

To find out what aspects of control are important to CF naval members it was important to inform the participants why they were being selected, it was necessary to describe these reasons to them at the beginning of the interview; for example: "Naval members are in a good position of experiencing aspects of control in their workplace and what you observe may help to identify what is important for personnel to have or not have control over in order to sustain their health and succeed in their military career."

Especially important when collecting data about the workplace and the obvious power issues that might arise, is how the data are managed to ensure that confidentiality and anonymity are preserved. Avoiding all identifying information, analyzing the data off base, and locking all transcripts in a filing cabinet at the researcher's place of residence will ensure anonymity and of the participants, and the confidentiality of their data.

Quantitative Methods

The Unit Morale Profile was developed in 1995, after a series of disturbing experiences with Canadian Forces peacekeeping troops in Somalia and Bosnia. The Canadian Forces requested that a survey tool specifically measuring human dimensions for working units be developed (CFPN, 2003). The original aim of the survey was to provide the Commanding Officer of a unit with a snapshot of its operational readiness and effectiveness, to recognize strengths and identify areas that require attention. It is a 54-item survey (Likert scale from 1, completely disagree to 5, completely agree).

The Unit Morale Profile survey has been shown to be both valid and reliable (UMP, 2001). DND researchers assessed the scales within the UMP survey using

univariate ANOVAs to provide relevant information about their individual importance. Using multiple ANOVAs for uncorrelated dependent variables, a Bonferroni type adjustment was made for inflated Type 1 error. For the purposes of this study, items measuring the topics of job control, organizational support, job performance, health at work (anxiety and depression), and cohesion were extracted from the UMP and administered to research participants.

There was a range of 3-16 items grouped under the five topics that combined to create a composite measure of each. The Bonferroni alphas for each topic used in this research study are measured at: job control BF < 0.0083, organizational support BF < 0.025, job performance BF < 0.0167, health at work BF < 0.025, and cohesion BF < 0.0125 (UMP, 2001).

The researcher verbally asked and recorded responses related to these topics from the Unit Morale Profile to each participant, which took approximately one half hour in length. Immediately following the completion of the survey the interview was administered.

Quantitative Analyses

The quantitative data were inputted into SPSS 15.0 and cleaned, and descriptive statistics generated. Because numerous research findings in the job control literature demonstrate how control affects employee health and performance, it was important to identify the salient factors influencing the perception of control, and if job control was a critical factor affecting health and performance for CF naval members. "Significance level is defined as the probability of rejecting the null when it is true (a Type I error); power is defined as the probability of rejecting the null when it is false, and not doing so

is a Type II error" (Killeen, 2005, p. 345). Although the sample was underpowered ($N =$ 29) to detect medium effect sizes, correlations were performed with the type 1 error set at .05. This was to ensure that the null hypotheses would be rejected no more than 5% of the time when it was true. In order to minimize a type one error, .05 is widely accepted both as customary practice and with journal editors (Tabachnick & Fidell, 2001). The correlations were performed to explore the nature of any relationships among these variables that might warrant further study. Ideally, a larger sample size is desired in order to show a significant population effect size. Post hoc power analyses of the sample size required to detect a medium effect size was 134 participants where size was calculated as a function of the required power level (medium - .3), the pre-specified significance level (0.5), and the population effect size to be determined (.95) (Faul, Erdfelder, Lang, & Buchner, 2007)

The researcher ceased recruitment at 29 participants for two reasons; (1) gaining access to and recruiting working military members proved challenging and indeed few NCMs volunteered for the study; (2) among those that did volunteer, both quantitative data and qualitative data were collected within the same time period in order to add texture and meaning to the numerical scores generated for job control, organizational support, job performance, health and cohesion. This mixed method approach created a tight schedule during the short time participants were alongside.

Qualitative Methods

Semi-structured interviews have been used to investigate various organizational phenomena, offering rich content to understand perceptions from the bottom-up (Mallak et al., 2003). To provide understanding and context to the survey data, the interview

questions were designed to elicit a narrative response concerning CF members'

experiences at work, which involved their perception of workplace control and its

influence on their perception of health and job performance (Interview questions are

provided in Appendix C).

The researcher conducted 29 interviews with non-commissioned regular force

members of the MARPAC. Data saturation was achieved at 20 interviews; however,

interviews had already been scheduled and in some cases already completed, therefore all

interview data were used in the analysis. Selecting the number of participants for the

study was guided by Fisher and Oulton (1999) who note that, "The underlying rationale

is not to be able to make statistical generalizations but rather to ensure that the whole

content domain is covered" (p. 114).

Following transcription and analyses of the interview data, a focus group was

conducted with a smaller sub sample of research participants ($N = 6$) falling within the

recommended 10-20% of the original 29 participants to ensure representation (Radford,

2006). In the focus group, several phrases from the interviews were displayed on the

table, with category names listed on the front of several envelopes generated by the

researcher in the initial analysis. The participants randomly took the small pieces of paper

with the copied phrases from the interviews and then sorted them into the categories

(envelopes) provided. Participants were encouraged to discuss their sorting decisions, and

if they were not clear or undecided about which category was the best fit, to talk about it

aloud with the researcher and the other participants. This process continued until all the

phrases were sorted into categories. The researcher then read all of the phrases out loud

along with the category to ensure there was a consensus among all participants for appropriate phrase-category fit.

In order to maintain credibility of the interview data, both field notes and audio recording were used during the interview sessions. Credibility relates to whether the results of the research reflect the experience of the participants in a believable way (Lincoln & Guba, 1985). Another important criterion in evaluating qualitative research is the concept of validity. Retaining a reflective awareness of the researcher's preconceptions and retaining the possibility of being surprised by the findings addressed this issue. The criterion of integrity relates to the potential for many different interpretations of the findings and is dependant on the experiences, skills, assumptions and knowledge of the researcher. To address this, the researcher had separate meetings with her research supervisor and a member of the research committee to review the emerging themes and to establish their credibility, plausibility and resonance with CF members' experiences (Horsburgh, 2003). Secondly, the themes and categories were discussed with selected participants who had previously indicated on their informed consent a willingness to be involved in a focus group. This process provided a smaller sub sample of CF members with the opportunity to refine the themes, thus addressing the challenge 'of preserving participants' definitions of reality' (Daly, 1997, p. 350) through a process of participant validation.

Qualitative Analyses

This study utilized the qualitative semi-structured interview and focus group as a means of gathering thick description of non-commissioned CF members' sense of control in the workplace. To ensure accuracy of the data, each interview was transcribed within

24 hours after the completed interview to minimize lapses of interview recall. The interviews and focus group data were audio-recorded, transcribed verbatim and checked for accuracy prior to analysis.

Thematic analysis is one of many methods used to analyze how participants 'talk' about their experiences. It is a recursive method where the researcher has the flexibility of moving back and forth between the phases of analysis (Braun & Clarke, 2006). The researcher developed a coding system using Bodgen and Biklen's (2003) three steps for thematic analysis: (1) data were read and re-read in order to identify regularities and patterns, (2) recording the words and phrases that represented the topics and patterns (these were the coding categories), and (3) sorted the descriptive data under each category.

At the outset, the researcher followed the first step through the use of open coding by studying the transcripts repeatedly and before discussing the themes and possible meanings and interactions with the researcher's supervisor and committee members. The data were coded into ten broad categories guided by the study's theoretical framework of the job control model in an orientational approach to making sense of the data (Patton, 1990). This facilitated rigorous analysis of the qualitative data and ensured that all of the common phrases and concepts, which emerged across transcripts, were identified as themes (Bogdan & Biklen, 2003). This was an iterative process in which transcripts were coded and re-coded until no new themes emerged. Additionally, commonalities and differences amongst participants' views were noted so that confirming and dis-confirming data were categorized (Miles & Huberman, 1994). Subsequently, axial coding and clustering strategies collapsed the categories into four main themes.

Trustworthiness is a concern in qualitative research, and since inquiry is value bound and the researcher influences the process, it is impossible to be objective. Sparkes (2002) discusses this epistemological challenge that knowledge can never be understood and textualized from a fully objective sphere. He states,

> This is because the researcher is, in part, a product of the social context and processes being studied. Knowledge, therefore, is not only historically and contextually bound but is actually constructed through a process of reflexive mediation, where the world that is studied is created, in part, by the authors experience and the way the text is written (p.11).

To enhance trustworthiness of the data, the researcher's supervisor, a research committee member and a civilian non-researcher examined each category and subsequent quotes for suitable fit. Furthermore, the participants were invited to a peer debriefing focus group (Lincoln & Guba, 1985; Radford, 2006), where they reviewed the results of the interview analysis and participated in an exercise to discuss how the themes and categories resonated with their own work experiences. This process was helpful in identifying the researcher's biases and for interpreting the data through the participants' eyes. The research then became a collaborative inquiry between the researcher and the participants. In addition to authenticating the categories, the meeting provided an opportunity for the researcher to ask further questions to expand on the findings from the survey data, asking the respondents to provide examples from their naval working environment. To follow up from the focus group, the categories and accompanying excerpts were distributed randomly to ten participants to examine the categories and quotes for appropriate fit.

CHAPTER 4

RESULTS

This chapter will present the findings revealed from the surveys, interviews and focus group. The findings are offered in the temporal order of data collection, (1) survey data analyses, (2) themes and categories developed from analysis of the interviews, and (3) the focus group results that integrate both the qualitative and quantitative data. The interpretation of the data begins with a description of the survey results, a summary of the qualitative findings and leads to more sophisticated conceptualization of the findings as a prelude to the discussion.

Description of Participants

As shown in Table 1, the self-selected sample comprised 29 non-commissioned CF members who were predominantly male (86%). Participants ranged in age from 22 to 51 years, with a mean age of 33 years. Military rank levels spanned from Able Seamen through to Leading Seamen/ Corporal, Master Seamen/ Master Corporal and Chief Petty Officer Second Class (see appendix A for NCM rank structure). These ranks are within the non-commissioned members of the CF, all of whom are currently working in the Pacific Naval Fleet. The participants have served from 2.5 to 31 years of military duty, with the mean service of 10.8 years.

Table 1

Demographic Profile of CF members

N	29	100%
Male	25	86%
Female	4	14%
Avg. Age (years)	33	
Military Rank NCMs		
AB	2	7%
LS/ Cpl	17	59%
MS/ MCpl	8	27%
CPO2	2	7%
Avg. yrs in CF	10.8	

Survey results

Using SPSS 15.0, Pearson correlation analysis was conducted producing medium to large sized correlations and effects (see table 2 below). These results suggest that organizational support is a positive influence on CF members' perceived job control and unit cohesion. Self-reported health (reverse rating) was negatively correlated with job control, organizational support, and job performance. Although not statistically significant, it seems members' mental health declines with lower levels of job control and support to carry out their tasks. As well, the relationships of age and CF year were

negatively related to mental health, so that mental health appears to be worse among the younger and more recent recruits than those who have been in the CF for a longer period of time. Because the younger junior ranks are offered less control in the hierarchical structure, this finding supports evidence in the literature that low control work environments negatively affect mental health (Karasek, 1979; Siegrist, 1996; Tsutsumi & Kawakami, 2004; Tsutsumi, Kayaba, Hirokawa, & Ishikawa, 2006). However, this result contradicts those from the CF Health and Lifestyle Information Survey (CF HLIS) (2004) where health status (physical and mental) was lower among the older regular CF members. While these relationships failed to reach statistical significance, the patterns argue for practical significance and provide evidence for the need for further research in this area.

Alpha reliability coefficients were obtained for each scale in the survey to assess the level of internal consistency of the items (Table 3). Scales for job performance and health were found to be 'excellent,' organizational support was rated as 'good,' job control rated as 'questionable,' and cohesion was found to be unacceptable (Gliem & Gliem, 2003). However, as Helms, Henze, Sass and Mifsud (2006) note, low alpha scores do not necessarily mean that the scale be revised or discarded, as the homogeneity of the sample influences the variability in responses such that "low coefficients for the diagnosed sample would merely reflect that the scale was functioning as it should – accurately describing the condition of the researcher's sample" (p. 646). In this case, as will be discussed in the section with the qualitative data, the low coefficients for cohesion and job control reflect the sample of NCMs and their status in the occupational hierarchy and stage in life with stated differences in social preferences.

Table 2

Pearson Correlations: job control, lack of health, cohesion, and organizational support

Scale	Job Control	L of Health	Org Sup	Job Per	Cohes	Age	CF Yr.
			NCM participants (N=29)				
Job Control	--	-.275	.430*	.300	.220	.188	.250
Lack of Health		--	-.334	-.275	.153	-.359	-.257
Org. Support			--	.274	.424*	-.039	-.152
Job Performance				--	.269	-.171	- .042
Cohesion					--	-.131	-.191
Age						--	.877*
CF Yr.							--

*Correlation is significant at the 0.05 level (2-tailed)

Table 3

Reliability Coefficients for Survey Scales

Survey Scales	Cronbach's Alpha	N of Items
Organizational Support	.845	16
Job Performance	.956	3
Health	.956	10
Cohesion	.334	14
Job Control	.624	8

Table 4

Descriptive Statistics from UMP Survey

	Out of a possible	Mean	Normalized Mean / 100	Med	Min	Max	Std. Dev.
			NCMs (n = 29)				
Age	n/a	33.1		30	22	51	9.1
CF yr.	n/a	10.8		7	2	31	7.95
Control	/40	27.0	67.4	25	19	33	3.74
Org. Support	/80	50.5	63.0	51	40	67	6.30
Job perform	/15	12.9	86.0	13	11	15	1.21
Health	/50 (r)	24.0	47.9	21	13	40	8.81
Cohesion	/65	41.0	63.1	40	33	51	4.96

Note. (r) = reverse scoring

Table 5

Percentages from Survey Results

Survey Question	CD	D	A or D	A	CA
Job Control					
1. I feel like I can make a lot of inputs to deciding how my job gets done.	0	17%	24%	52%	7%
2. I feel pressured at work	21%	14%	41%	17%	7%
3. I am free to express my ideas and opinions on the job.	3%	24%	24%	31%	17%
When I am at work, I have to do what I am told.	0	14%	14%	31%	41%
I feel like I can pretty much be myself at work.	0	21%	21%	48%	7%
4. There is not much opportunity for me to decide for myself how to go about my work.	10%	28%	41%	10%	10%
5. I am allowed and encouraged to show initiative.	0	7%	0	41%	48%
6. I can do my work according to my own judgment.	0	28%	41%	21%	7%

Table 5 (continued).

Percentages from Survey Results

Survey Question	CD	D	A or D	A	CA
Organizational Support					
1. The CF/DND values my contribution	7%	7%	24%	14%	14%
2. If the CF/DND could hire someone to replace me at a lower salary, it would.	21%	17%	34%	17%	7%
3. The CF/DND does not appreciate any extra effort from me.	17%	38%	17%	24%	17%
4. The CF/DND strongly considers my goals and values.	3%	28%	34%	34%	0
5. The CF/DND would ignore any complaint from me.	24%	45%	17%	14%	0
6. The CF/DND disregards my best interests when it makes decisions that affect me.	3%	28%	34%	28%	7%
7. Help is available from with the CF/DND when I have a problem.	0	3%	3%	72%	21%

Table 5 (continued).

Percentages from Survey Results

Survey Question	CD	D	A or D	A	CA
Organizational Support					
8. The CF/DND really cares about my well being.	3%	17%	41%	34%	3%
9. Even if I did the best possible job, the CF/DND would fail to notice.	7%	41%	28%	14%	0
10. The CF/DND is willing to help when I need a special favour.	3%	0	45%	52%	0
11. The CF/DND cares about my general satisfaction at work.	3%	28%	38%	31%	0
12. If given the opportunity the CF/DND would take advantage of me.	10%	17%	34%	10%	17%
13. The CF/DND shows very little concern for me.	14%	45%	24%	17%	0
14. The CF/DND cares about my opinions.	3%	34%	28%	34%	0

Table 5 (continued).

Percentages from Survey Results

Survey Question	CD	D	A or D	A	CA
Organizational Support					
15. The CF/DND takes pride in my accomplishments at work.	0	24%	38%	34%	3%
16. The CF/DND tries to make my job as interesting as possible.	7%	48%	28%	17%	0
Job Performance					
1. I consider myself hardworking.	0	0	0	57%	41%
2. I consider myself productive.	0	0	0	66%	34%
3. I consider my unit effective in terms of attaining its objectives.	0	0	0	7%	24%
Mental Health at Work					
1. Did you feel tired-out for no good reason?	0	38%	31%	28%	3%
2. Did you feel nervous?	7%	38%	28%	24%	3%
3. Did you feel so nervous that nothing could calm you down?	38%	38%	10%	14%	3%
4. Did you feel helpless?	24%	31%	14%	31%	0
5. Did you feel restless or fidgety?	24%	38%	10%	28%	0

Table 5 (continued).

Percentages from Survey Results

Survey Question	CD	D	A or D	A	CA
Mental Health at Work					
6. Did you feel so restless that you could not sit still?	38%	34%	24%	3%	0
7. Did you feel depressed?	24%	34%	17%	14%	10%
8. Did you feel that everything was an effort?	3%	55%	10%	28%	0
9. Did you feel so sad that nothing could cheer you up?	41%	31%	10%	17%	0
10. Did you feel worthless?	38%	28%	21%	10%	3%
Cohesion					
1. I enjoy being part of the social activities of my section.	0	14%	21%	41%	24%
2. I'm happy with the amount of teamwork involvement I have within the section.	3%	3%	21%	62%	10%
3. I would miss the members of my section if I were to stop working with them.	0	7%	38%	48%	7%

Table 5 (continued).

Percentages from Survey Results

Survey Question	CD	D	A or D	A	CA
Cohesion					
4. I'm happy with my section's level of motivation to succeed.	0	3%	34%	48%	14%
5. My section does not give me enough opportunities to improve my personal performance.	10%	41%	28%	21%	0
6. In a social context, I enjoy other parties more than section parties.	3%	14%	41%	31%	10%
7. I do not like the work practices of my section.	10%	41%	21%	28%	0
8. We all take responsibility for any failure or poor performance by our section.	7%	24%	38%	28%	0
9. My section members rarely party together.	7%	10%	24%	41%	17%
10. My section members have conflicting aspirations for the section's performance.	3%	21%	34%	31%	3%

Table 5 (continued).

Percentages from Survey Results

Survey Question	CD	D	A or D	A	CA
Cohesion					
11. My section would like to spend time together even during time off and leave.	10%	38%	38%	7%	3%
12. Members of my section do not stick together outside of work.	0	24%	31%	31%	14%
13. My section members do not communicate freely about each member's responsibilities in the section.	14%	41%	34%	7%	3%

Note. CD = completely disagree; D = disagree; A or D = neither agree nor disagree; A = agree; CA = completely agree.

Descriptive statistics were produced from the surveys and illustrated the participants' ratings for job control, organizational support, mental health at work, and cohesion (Table 3). The findings worth noting are the job performance scores. For this scale the respondents were asked if they considered themselves productive and hardworking and if they felt their unit attains its objectives. All the respondents recorded agree/completely agree for all three job performance questions.

In addition, question number four in the job control scale asked, "When I am at work, I have to do what I am told." Seventy-two percent of the participants indicated that that they either agreed or completely agreed to this question (Table 4). In the organizational support scale the question that stood apart from the others was the question asking, "If given the opportunity the CF/DND would take advantage of me." There was equal number of participants who agreed with this question as those that disagreed. This raised the question regarding how CF members felt valued and the reasons for such a diverse range of scores. In the mental health scale approximately one-third of the respondents felt their mental health at work was negatively affected, specifically related to feeling tired for no good reason, feeling helpless, and feeling everything was an effort. These areas were addressed further in the focus group session.

Interview Results

A total of 12 categories within 5 main themes were identified from semi-structured interviews with the 29 participants. As expected, these main thematic areas correspond with the literature on job control, where the factors influencing perceived control stem from aspects within the work environment, individual characteristics and/or social support, and affected both perceived job performance and health. The 12 categories

emerged through the open coding and editing analysis strategies to capture the most prominent factors that affect non-commissioned naval members' sense of control in the workplace, and the consequent implications for their job performance and health.

With the exception of two of the categories, 'lack of control due to low rank' and 'importance of smoke breaks' all of the respondents described these areas as important to their sense of job control. The researcher felt it was important to include these latter two categories since all of the smokers and members at the lower rank of Able Seamen and Leading Seamen mentioned these personal strategies as significant in their perception of control at work.

Once the transcripts were categorized the researcher invited the participants to take part in a second group session. Here the participants reviewed the categories and participated in a discussion where together they went over the themes and categories. Participants confirmed that the analysis resonated with their experiences as a NCM in the military. This was done in order to remain true to the meaning extracted from the interviews and to avoid misinterpretation. Focus group data are presented following a discussion of the interview themes and categories.

Categories

Lack of sleep influences control. Participants described a lack of sleep due to their work schedule to present a constant challenge when it comes to control in the workplace. Particularly when working at sea, respondents described their workplace as busy and very demanding and the lack of sleep made it difficult to maintain control in the workplace. Naval members expect to be deployed, yet the working schedule at sea is such that sleep is often interrupted and/or they can not get enough sleep at any one time. The respondents

found it difficult to maintain personal health and sense of control due to the exhaustion of poor sleeping habits. Working at sea has the added challenge of the place where participants both work and rest, and with heavy work demands sleep deprivation was a factor mentioned by all respondents and this affected lifestyle behaviour in negative ways such as, consuming more coffee, doing less exercise, and having a lower tolerance to stress.

> You are stressed out and you go to bed and have to get up again. You wake up get your smoke have a coffee and go to work. Get another coffee maintain and then have another coffee, go to bed wake up, coffee. The schedule is crazy. [CF member #21, interview]

> At Sea I am always anxious there are always a thousand things going on and so much to do. I could just fall asleep like that standing up. At sea it is like, sleep or workout? Okay sleep. [CF member #16, interview]

> I drink a little more coffee and that is because of the sleep schedule and we are tired always tired. Even if you catch up on sleep you are still on the wrong side of the day. [CF member #15, interview]

> On ship you get six hours [sleep] if you are lucky and when you sail your sleep is so broken up and so little control and sleep is a huge issue with people piping and so much going on and often in my workday if I don't keep busy I will fall asleep.

I fall asleep immediately, navy brings on exhaustion and it takes the control away

from me. [CF member #8, interview]

Heavy Workload. Many of the respondents felt there was so much work to be

done that they were working longer hours or sacrificing their personal time in order to

complete their work. Some individuals felt there was a shortage of colleagues in their

workplace. In order to get the job done the respondents felt they had little choice but to

work longer hours.

The job still has to get done, and when I am finished here I am going to work on

my day off. This is a very common thing for us. [CF member #3, interview]

A lot of times I work through my lunch hours, I eat there I don't take time away

from the desk. During a busy time, like that I don't work out and I don't do other

things that I used to do. [CF member #20, interview]

I am inundated with a pile of work and at times I find it very stressful and I have

to keep everything in order and make lists to make sure I get everything done and

most times I work on one thing and then something else happens and so I have to

be very flexible. [CF member #20, interview]

Because I have all this work going on, most days I get up at 8 at night and work

until 8 in the morning and then get a couple hours sleep and wake up clean myself

and then get up at noon and go back to work for another 6-7 hours and then get an

hour nap and get back to work. There is just so much work to get done [CF member #3, interview]

Supervisory issues. Beyond the work schedule respondents felt confident that much of their control was in the hands of their supervisor and beyond in the chain of command. All participants commented on their supervisors; however, depending on their relationship with their supervisor it was described as a positive or negative factor affecting their sense of workplace control.

I have a meeting with the Base Personnel Selection Officer (BPSO) right now to re-muster. Go to another trade. This guy was my supervisor on the East coast and he harassed me, he was a fucking tyrant. I got him here and he still doesn't know fuck all. [CF member #5, interview]

The supervisor can make ya or break ya. It doesn't matter you can be great and if your supervisor doesn't like you. It all comes down to a piece of paper. They don't know me in Ottawa and if all of a sudden this guy hates me then what do you do, that is one thing you don't have control over, you can't do nothing about that. [CF member, #11, interview]

What I find is difficult is that you can have the best supervisor but you only have them for like a year maybe three, you are always changing and it is very hard. Like the last supervisor was terrible but the one I had before that was amazing and it was just like night and day it is tough because you have to prove yourself over again it doesn't matter what you've done in the past when you have someone new

I have even heard "I don't care what you've done in the past I am here now and you need to prove yourself." You could be at the top of your section and then you need to start again and if you bang heads with a person you know it makes a big difference. [CF member #6, interview]

I am lucky in that way, anything I need to do, I just talk to my boss and he is open minded and will work for his men, but compared to before I actually had to do all the work myself, figure it out for myself. [CF member #24, interview]

Somebody [supervisors] who comes to the workplace and is yelling, first you are trying to run away from him and sometimes you are not even doing the job you are supposed to be doing because you are just trying to run away from him. [CF member #19, interview]

But unfortunately there is nothing we can do about it. And it is just the complete control your bosses can exercise on you. [CF member #10, interview]

A good supervisor is an asset and in this environment; without a good supervisor you are nothing. [CF member #22, interview]

Lack of control due to low rank. All of the respondents at the rank of Able Seamen (AB) and Leading Seamen (LS) were aware that they were a junior body and that they had little choices about how they went about their work. Although they

acknowledged this was temporary, they also felt it strongly affected their sense of control

at this point in their career and affected their perception of health.

There is nothing we can do and it is the same really for any jr. rank in the military.
You don't have a say and you don't have anywhere to go. [CF member #17,
interview]

This is hard, I am a jr body and we never have any control. [CF member #28,
interview]

What hindered the situation was my low rank, no trust built up, no background
with the CF. [CF member #21, interview]

Being a junior body affects your health in a way, it totally does cause at the end of
the day I mean I made it through my day but I didn't create anything so in that
aspect there is take home stress I would have to say because you know what is
going to happen tomorrow. [CF member #28, interview]

Lack of control over postings. A unique aspect of the military life is the brevity of

job postings; the average length in any one job is two years. This posed a problem for

many of the respondents since there is a large unknown component to where they will be

working in the future – shore posting vs. being on a ship and West Coast vs. East Coast.

As well, they expect that co-workers within their unit will also be posted in and out

regularly. This situation of "not knowing" when or where they will be posted or who will

be posted in or out of their unit was described as beyond the sailor's control and affected

job performance in both positive and negative ways. Some examples include: the

changing of co-workers disrupts continuity, there is a lack of trust in new supervisors,

and there is the added stress of always having to prove oneself.

> The Executive Officer the second in command well this is my 5th one since I have
>
> been on board. The team disappears really quickly, you have to know that it is
>
> gonna. And it is tough, completely out of my control. [CF member #17,
>
> interview]

> Not knowing if I am going to be here, not knowing for my son. The hindrance is
>
> that really. [CF member #23, interview]

> Right now, it is the change of personnel. I mean you get a Stanley cup team let's
>
> say and then they get posted out right before you play. [CF member #11,
>
> interview]

Impact of rank structure on social relationships. Co-worker support was an

important factor influencing the respondent's sense of control at work. Support was

described as very important in low control situations. Support provided an avenue to

release stress by talking about their situation with co-workers who understand what it is

like as a CF member. It was also expressed that the rank structure inhibited the amount of

support they had access to due to the perceived competition among individuals in the

same rank, and an unwritten rule that ranks should not mix. Moreover, due to the physical

structure of the military bureaucracy lower ranks do not interact in their free time with the higher ranks (i.e. eat or take breaks), nurturing a culture in which ranks do not have relationships other than obeying or dictating orders.

I try to make friends at work but we are co-workers and we are both competing for the same you know promotion and all that. [CF member #9, interview]

The only support you are going to get is from your co-workers, you are not going to get support from command. I love the Navy but officers don't care about the men. They have proven that more times than not and it is us that take care of each other and that is the way it has to be. [CF member #3]

Oh I have people that I can turn to, people in the same trade as me and we will hang out after work and we will just laugh about how stupid some of the stuff is we do. [CF member #6, interview]

Our chief at our unit, he was sincere in saying that he would be there for me to talk to, but there is something there that I find kinda, well a little suspicious about talking to a senior rank. You know they say it is confidential but it goes in your notes so there is that resistance there were you don't trust. [CF member #1, interview]

Importance of having support from family and friends. Relying on friends and family to help members cope with stressful aspects of work life was described as most important in feeling supported. Many of the respondents felt their friends and families were very helpful when it came to coping with difficult situations that they had someone to talk to about work.

> What I found works for me is I pick my wife up from work and between the two of us it takes about an hour to get home, if I have frustrations then I vent about them in the car on the way home. [CF member #25, interview]

> Talking to somebody especially after [helps], I am frustrated right now because I don't really have anyone to talk to, like I have gone to the base and got some counseling and I am married but my marriage isn't any good. Both my parents are gone so I don't have those wise people in my life to support me there. [CF member #1, interview]

> I have lots of outside work buddies, I don't like to hang out with the guys I live with on the boat right so I do my own thing. [CF member #28, interview]

> I have my wife, I sometimes talk her ear off and she does the same to me. I come home from work and I vent and she does the same. She is a good listener, she gives some advice. She is very supportive. [CF member #27, interview]

Rarely have I gone to the military for emotional or physical support, I go home I am married. I've been together with my wife for twenty-three years, married for seventeen. Emotional support is at home. [CF member #19, interview]

Lifestyle habits. In addition to the job characteristics the respondents also described their behaviours and personal strategies that influenced their sense of control in the workplace. When workplace situations were described as very stressful and there was little that they could do to increase control over the situation, members developed and focused on personal behaviours in order to distract themselves from the fact that they have little job control. Many respondents described using unhealthy coping strategies (i.e. substance use and eating too much, engaging in video/gaming). Despite an acknowledgement that these practices were inappropriate for long-term health, they proved to be helpful during the times when stress arose.

It affects my lifestyle habits, like I smoke more and break my eating habits, and physical fitness. So I break my lifestyle and forget that the working out makes me feel good. [CF member #23, interview]

I probably smoke more, it helped me cope and I also drank a lot then, I felt it helped. [CF member #2, interview]

I distracted myself [at sea] with video games or movies and then when I got home and if I didn't want to do anything or something was going on with my wife or my son was doing badly in school or something, I would go and hide away and

play video games that was my escape I learned it on the ship. Even though I am

not stuck in a war zone I still cope that way. [CF member #15, interview]

Importance of smoke breaks. All respondents who smoked tobacco felt they had

an increased sense of control since it allowed them to have some control over their work

schedule. In addition, the sailors who smoked became a tight knit group - a support

system, increasing their sense of belonging and community within the ship's company.

Both the social and work schedule aspects were described when the participants spoke

about the benefits of smoking as a way to increase their sense of control.

It [smoking] gets you outside, like there were times when I wasn't smoking and

there would be days where I wouldn't see the upper decks you know, there were

days where I wouldn't see the sun. That would be the reason I go to the upper

decks except when the stars are out at night. It is that and it is a social thing. [CF

member #3, interview]

If you don't smoke you don't get a break. This place seems that if you smoke you

get a break and that is where the best gossip is. Smokers too, it doesn't matter

when you are out having a smoke you are just having a smoke, that's why. [CF

member #17, interview]

Breaks yeah that is the thing like I smoke when I sail cause I get a break. I get as

many breaks as I want if I smoke and the non-smokers they stay and work. The

things is too is it is quite a social thing, the smoking situation is like a little

neighbourhood kinda thing you know everyone goes for a smoke and there are

some people that you have great conversations with and you only see them when

you smoke. [CF member #6, interview]

Resigned acceptance. Another version of a personal strategy was that of resigned

acceptance. Many of the respondents described that they accepted the fact that they have

very little control in the workplace. However, reading the following quotes the reader

may get the sense that the participants were describing a peaceful acceptance whereas the

researcher found the tone to be one of reluctant resignation. Many of the participants

spoke about accepting their situation since there was noting they could do. To the

researcher, the participant's lack of control was not a peaceful resolution but rather a

feeling of helplessness. This sense of acceptance was a popular coping technique that the

respondents felt they had to adopt as a means to deal with their sense of low job control.

Acceptance is associated with an external locus of control, meaning that the member feels

control lies outside of their efforts and there is not much they can do to change their

situation. In this study all of the respondents felt at various times in their job they needed

to simply accept what was required of them as a NCM in the military.

I put in the effort that is really all you could do, there is no way to change the

situation. You try to influence with your input and your attitude and this is it. [CF

member #8, interview]

It doesn't bother me I understand that I gotta do what they tell me to do. Everyday I have no control. I don't think about that stuff because nothing I can do. [CF member #19, interview]

Everyone copes with it [low control] in their own way, in truth I just accept it and after awhile you just start following the routine of your job you do your two shifts and then go to bed. [CF member #10]

I just kinda go whatever, I just say tell me what to do. You can't control everything especially in certain situations. The higher ups will be the ones to tell you what you need to know and a lot of people the older people want to know, tell me what I am supposed to know. I am like chillax, wait to be told. [CF member #2, interview]

This is a funny question, there are so many things you have no control over and you just accept it. Life goes on. [CF member #12, interview]

Yeah, I just accept it, you can't really control anything that is out of your control you know it is kind of redundant but you can't, you take life one step at a time and from a different angle and you hope you are doing something for the greater good. [CF member #18, interview]

Everyday I have no control. I don't think about that stuff because nothing I can

do. I work for them they own me kinda thing now. [CF member #11, interview]

Health. The majority of the participants felt a lack of perceived control affected

their health, if only temporarily, as a reaction to their 'low control' situation. Feelings of

stress and anxiety were the primary responses to low control that respondents felt

impinged on their health. Aspects of members' physical health were subsequently

affected when they turned to personal coping strategies related to lifestyle habits.

I am often anxious for sure. Yeah I just get through the day so I can get home. I

have gained a lot of weight since I have been in the forces, I smoke more and I

drink a lot more all since I joined the forces. [CF member #28, interview]

[what about your health] Oh for sure the stress, your heart rate is going up and the

anxiety. And if I still wasn't on duty, a drink would have been nice (laughs). [CF

member #7, interview]

I have gained a lot of weight since I have been in the forces, I smoke more and I

drink a lot more, all since I joined the forces. They all go hand in hand hey. I

gained weight right after basic training. I just started gaining loads and loads of

weight. [what changed for you?] Just from eating a lot more, drinking a lot more.

I would say I smoke about a pack a day, heavy I guess. [CF member #28,

interview)

Regarding job performance, it was evident from the interviews that low job control negatively influenced job performance. There is little reference for performing in situations with respect to decision-making latitude and autonomy. The members felt capable of working hard and being productive, however, depending on their situation and perceived control the amount of effort invested varied.

Just doing what you're told. The members recounted experiences where in low control situations they merely performed adequately. Members felt they were high performing employees despite having low job control because they defined 'high job performance" as doing what they are told; following orders is equated with high performance.

It [low control] is definitely not good for my job performance, I mean I don't give up, I do what I am told I still try, what I am trained to do I understand my job, but that extra effort to shine above everyone else that is not there. And that is how you move up the ranks you shine above everyone else. I really couldn't care less. Everyone just leave me alone and go on their own way and I when I do what I want to do what and I enjoy, then I will shine I will put in that extra effort. [CF member #17, interview]

Job performance, in the long term yes [it is affected] because you think or you hope that you are appreciated and your work is noticed but then you know when you have somebody put you in a situation like this and you go "what am I doing this for". You lose a lot of motivation and your general attitude, mine, well it

drops. I am only going to do what I am told and you can get away with that in the military. [CF member #7, interview]

Bridging Quantitative and Qualitative Data: Focus Group Findings

Reviewing the descriptive statistics reveals some intriguing results (Table 4). Specific questions arose from the survey data for the researcher in order to clarify and address the findings, as well as confirm the interpretation from the thematic analysis. Six CF members who previously completed the survey and a semi-structured interview took part in the focus group, which lasted approximately two hours in length. The survey results were addressed first and each focus group participant was given a summary of the survey data. The researcher asked questions regarding the results from the surveys and the participants described what the findings meant to them, offering specific examples from their experiences.

Firstly, questions regarding the results from the job control scale were discussed. In the job control scale similar questions within the survey were rated by respondents (on average) very differently, seemingly contradicting each other. For example, in the Job Control scale question four asked, "When I am at work, I have to do what I am told", to which 72% of the respondents agreed. However, a majority indicated in question one, "I feel like I can make a lot of inputs to deciding how my job gets done;" they did indeed have a say into how they carry out their job. This was clarified in the focus group session where the researcher asked the participants what these findings meant to them and if they could provide examples. All the focus group respondents felt they lacked control in defining the required tasks to be accomplished, yet perceived themselves to have control deciding how to execute the job. One Master Seamen stated,

I can make a lot of input in deciding how the job gets done. But it has to get done.

Like when I assign a job to guys I don't tell them how to do it, I tell them what to

do and make sure the job gets done. If two people have to do the same job and

they do it totally different but the job gets done, do I care how they did it? No!

[CF member #27, focus group]

The respondents explained that it is expected that they do what they are told while being

afforded some latitude in how they go about completing the job. This autonomy was

perceived as a positive factor in feeling a greater sense of control.

Furthermore, to better understand how the respondents felt about having to follow

orders, the focus group discussion explored if they entered the military with such

expectations or acquiesced after observing and experiencing the workplace culture. All

six of the participants reportedly arrived to the military accepting of the limited job

control. New recruits unaware of the significance of obeying commands quickly learn

otherwise during basic training.

Oh yes, you know full well coming in and it is also very apparent from basic

training. You sign the dotted line and you have to do what the military tells you to

do. [CF member #23, focus group]

Findings from the survey questions related to organizational support were also

discussed. As mentioned above, one-third of the respondents felt the CF would take

advantage of them if given the opportunity; one-third neither agreed nor disagreed, while

the other third disagreed. What contributed to the participant's varied responses? This

was a difficult question for the participants to answer and for the most part they had no

comment. It was difficult for them to articulate how they felt valued. However, they

instinctively felt that the CF would take advantage of them: they represented only a small part of a larger national defence strategy; the confidential details of which they were not privy to.

> The military have their obligations and they have jobs that have to be completed and it has to get done one way or another and if that means sacrificing our personal time, they don't have a problem with that. But they would try to compensate you later. To get ready for a deployment there is a lot that needs to get done and they set a date and the Admiral says "you are sailing on that date". The CO can't go back and say "umm I can't sail on that day, the crew is not ready" NO, you can't do that and it means you sacrifice. [CF member #27, focus group]

There was also a discussion around how members did not feel valued and brought up specific situations regarding their discontent with promotions and personal evaluation reports (PER).

> The CF as a whole, you know if you can't do the job you get booted and they find someone who can do the job. But if you are saying they are going to use you until you get burnt out well I don't think that happens. You usually get compensated if time permits so you don't feel that. [CF member #28, focus group]

> But, it happened to me where, well when I had depression they just got a new person and they didn't give a fuck. The support was not there whatsoever. They cared only about the consequences to them. You become stereotyped as a person

who is going to lose it. The CF would rather have an able body instead of a liability. [CF member #24, focus group]

I have been in for five years and I am still an AB and I can't be promoted because I have a medical problem and I can't do my express test. I am losing all kinds of stuff, a year of back pay, 2 PERs and I am in a slump right now. [CF member #28, focus group]

Well I don't feel valued. I have been passed over for promotion. I am almost 20 years in and I am only a master, there are times I feel I got royally screwed when it came time to be promoted. The PER system is a farce and almost everyone I talk to thinks that, it is a giant popularity contest, the more popular you are the more you will go up in rank. There are a lot up there [higher ranks] and you think how did they get up there. I just despise the PER system, I could go on and on. [CF member #27, focus group]

Regarding mental health at work, one-third of the survey respondents indicated that this was an issue for them. The participants in the focus group stated that their mental health was related to how much control they felt they had at work. They discussed the most influential impact on mental health was their relationship between the individual and their supervisor.

I would say it [mental health] is directly related to your chain of command, your supervisor, your Div O [divisional officer]. If they are not there [for you] they can break you. You will feel these awful feelings everyday you go into work.

Whereas if you have the support and the support of your chain of command then there is no stopping how far you can go. [CF member #14, focus group]

From a Leading Seaman's perspective, if we hate our boss we are stuck. Hating people you work with makes two years a long time. There are things you can do but at this rank we have way less of a say. [CF member #24, focus group]

When examining the survey data about the importance of unit cohesion to sense of control at work, there was an equal number of respondents that reported high levels of unit cohesion, as those that indicated they did not spend time with their shipmates. However, during the focus group, participants explained that cohesion is most important while at sea, since they felt relationships were exaggerated onboard ship and there is no escape from the workplace. When asked, "Is unit cohesion important in feeling a sense of control at work?" the respondents felt it is helpful at sea and within their own rank level. Yet, they stressed the importance of remaining distant from others with whom they were not friendly, as a strategy to maintain cohesion.

During your daily routine I say totally [cohesion is important]. It is exaggerated at sea too. If you don't get along with someone at sea you know it. Everything comes to a big head and it is awful. I have gone through that before and it is awful. While you are at work it matters. [CF member #14, focus group]

When you are on a land position it is your daily grind and you go home but when you are at Sea you never leave, it doesn't stop. The guys are sleeping right next to

you and there is no escaping anything, no personal space. [CF member #23, focus group]

Cohesion is important but not with your section, more like friends from other sections that are the same rank as you. The ranks are stressed, you are encouraged to stay with your own rank at work. On ship different ranks are not your friends. After hours it is different but there has to be a line between the jr. NCMs and the senior NCMs they are in a leadership role and you have to follow that. [CF member #11, focus group]

It is very important. If the unit is tight then it is easier to ask someone something who you have laughed with, than someone who yells at you about something. Cohesion is big in productivity too. The social functions give the jr ranks the chance to talk to other ranks and just talk to each other. If you have some concerns you can talk to them on a personal note.[CF member #27, focus group]

After discussing the results from the surveys, the participants took part in an exercise to confirm the interpretation from the thematic analysis of the interview data. The researcher isolated and cut out phrases (approximately 130 phrases) from all twenty-nine interviews that represented aspects of their job that they felt influenced their sense of job control. On the table 14 envelopes were presented with the category clearly labelled on the front. Each participant gathered approximately six or seven phrases that were randomly piled on the table and were asked to read the phrase on each piece of paper and then place it into the envelope with the most appropriate category for that phrase. This

exercise was to ensure the categories that were formed from the researcher's thematic analysis were correctly interpreted and sorted similarly by the participants.

This exercise took approximately forty-five minutes and the participants were encouraged to discuss the phrase with others or with the researcher if they felt unclear or they felt there was not a suitable category for that phrase. The outcome from this exercise resulted in 95% of the phrases having the same phrase-category fit as the researcher (123/130 phrases). However, the interesting development from this exercise was the process encouraged the participants to discuss the reason behind these phrases. As a result of the 14 categories initially provided to focus group participants, two of the categories were collapsed into the remaining 12. The participants felt that two of the categories were better suited within the existing categories. For example, the category that described a common coping skill "venting with others", naturally collapsed into the, "support of co-workers" or "support from friends and family," Another category called, "red tape and paperwork," was discussed and the participants felt the phrases fit better under the categories, "workplace structure" and "supervisor/leadership". The debriefing exercise was an excellent opportunity to further probe into the root causes influencing the CF members' sense of control in the workplace and provided the participants an opportunity to reflect on these workplace factors as a group.

Summary

In this study, the researcher gathered data from three different sources: surveys, interviews, and a focus group. The findings contributed and gave context to the research questions: (1) which aspects of the job do CF members identify as important in order to

have control in their job? (2) How do CF members' perceive low control situations to affect their health and job performance?

The findings from the interviews address the first research question, where the respondents voiced similar experiences around job control and the factors influencing it. Job control in the military was described by NCMs as a complex and multifaceted concept, characterized by the following factors: (1) lack of sleep; (2) a heavy workload; (3) supervisory issues; (4) lack of control due to rank structure; (5) lack of control over postings; (6) impact of rank structure on social relationships; and (7) importance of having support from family and friends.

Providing insight into the second research question were the survey and interview findings. The survey results suggest that the respondents felt they performed adequately regardless of their sense of control and/or health ratings. This is a very interesting finding, one where "job performance" seems to be interpreted as following orders; a marked distinction from its use in other workplaces that differ in structure and mandate. The survey data also revealed mental health was a concern for one-third of the respondents, and this was echoed in the interviews with examples of members' feelings of anxiety and stress. The interviews also addressed self-assessed health status. Overall health status was measured by asking respondents to rate their health as being excellent, very good, good, fair, or poor. Self-assessed health has been shown to be a reliable and valid indicator of health status and has been shown to be highly predictive of mortality (CF HLIS, 2004). In this study, fifty-one percent of the participants reported having excellent, very good, or good health status, thirty-eight percent reporting fair health status and seven percent reported a poor status of health (Table 4).
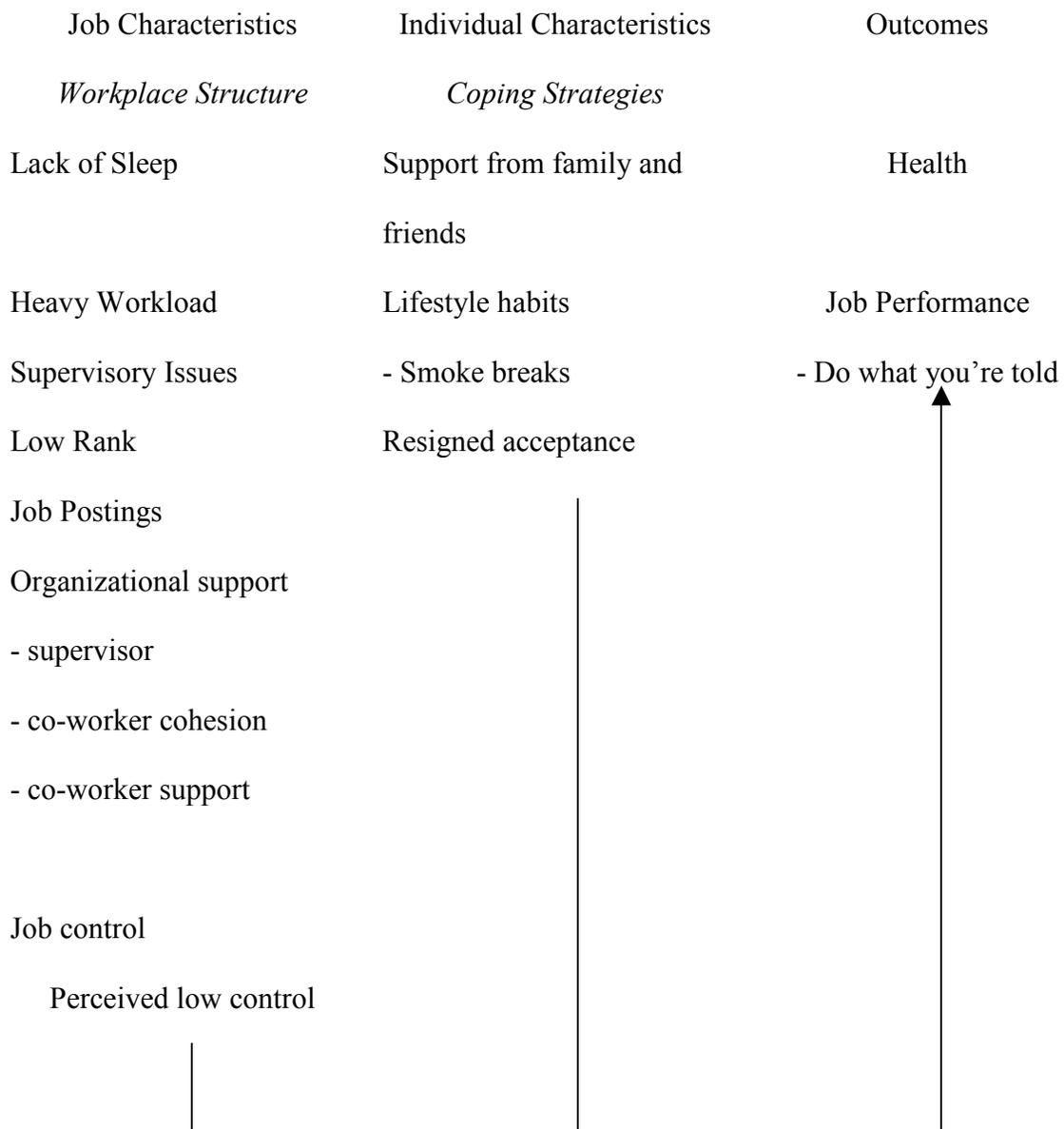
Conceptualizing the Results

The organizational structure and culture in the military is different than most other organizations and is designed specifically to ensure reliability and consistency in war operations. In clarifying the salient factors influencing CF members' perceptions of job control and how these perceptions affected their perceived health and job performance, Figures 2, 3 and 4 present the distinctive findings from this study. Informed by the results from this study, the initial job control model (Figure 1) has been reconceptualized to reflect the unique aspects of the CF environment (Figure 2), and accommodate for the overlapping and interactive factors influencing job control, (Figure 3). Figure 4 presents the outcomes of perceived job control on health and job performance as indicated in this study

Overall, the results support the factors included in the adaptation of Hackman and Oldham's (1975) model that guided this study. Figure 2 presents a revised version of the model found on page 126 to display the results from this study. The data emphasize the salience of factors classified as 'job characteristics' as defining and shaping NCMs experiences of low control, their coping strategies and contributing to their mental health, lifestyle habits and perceived job performance. Specific references to the structure of the workplace and the nature and extent of organizational support provided to members were detailed by research participants as integral to perceived job control. Social support beyond the workplace was described by members more appropriately as an individual coping strategy, as they were clear on the distinction between what support in the workplace provided them compared to that which they sought out from family and friends.

As included in the original model and evidenced in the literature, a lack of job control created anxiety and stress, affecting participants' mental health. Some of the coping strategies recounted in the interviews to deal with the stress revolved around engaging in lifestyle habits that can compromise physical and mental health, and are often addictive. As such, these individual characteristics were described as also affecting members' health. Finally, the results both support and tweak the influence of job control on job performance. The model and literature argue that minimal control translates into inadequate performance. This is not relevant, however, in a military context where obeying commands is seen as getting the job done. Nonetheless, as in other work environments, the lack of decision making authority afforded low ranking members frequently constrained their interest in going above and beyond the call of duty.

Figure 2. Job Control Model for the Military

Job Characteristics	Individual Characteristics	Outcomes
Workplace Structure	*Coping Strategies*	
Lack of Sleep	Support from family and friends	Health
Heavy Workload	Lifestyle habits	Job Performance
Supervisory Issues	- Smoke breaks	- Do what you're told
Low Rank	Resigned acceptance	
Job Postings		
Organizational support		
- supervisor		
- co-worker cohesion		
- co-worker support		
Job control		
Perceived low control		

To summarize, the contributing factors influencing job control for the participants in this study reflected interactive and overlapping relationships that together contributed to a decreased sense of control. Elucidating the factors identified by the CF members as affecting job control the researcher found that workplace characteristics, support and individual characteristics were not mutually exclusive. Lack of sleep, heavy workload, lack of control over career postings, and low rank fell within the realm of workplace characteristics; however, supervisory issues fell within the realms of both workplace characteristics and co-worker cohesion. Social relationships that occur within the workplace have a far-reaching impact on workers' mental and physical well-being (Kelloway, Sivanathan, Francis, & Barling, 2005). Given the importance of the supervisor to support their subordinates for advancement and increased autonomy, it can be argued that the supervisor has a responsibility to provide direction, feedback and emotional support to their followers.

The original job control model based on Hackman and Oldman's (1975) job characteristic model demonstrated support to be a buffer in low control workplaces. The results from the cohesion scale did not produce specific patterns regarding how participants' rated cohesion as a CF member. This study found support to be described more accurately as co-worker cohesion, a friendship or liking among workers and a common commitment to the CF. Participants felt that cohesion is important particularly at sea when the workload is heavy and work hours are extended, a notion of task cohesion. Yet, when the ship is along side, cohesion is viewed differently depending on age and rank. On shore, participants described the importance of having colleagues to talk to regarding

their work, someone who understands the military environment and often at the same rank level. Equal rank level was important for the members to trust each other and not be threatened by the power of higher ranks, thus co-worker support fell within both co-worker cohesion and workplace characteristics on the model. The workplace structure is such that ranks do not mix with other ranks. Traditionally in the military, most members at the lower ranks are younger providing a peer group with common interests and similar life stage, and for whom social cohesion is important. However, this presents a challenge for older members at lower ranks, where finding compatible peers is more difficult. The older members in the junior ranks found they preferred to not spend their leisure time with colleagues and enjoyed the company of family and friends outside of work.

Thus, also overlapping with co-worker cohesion and individual characteristics was support from family and friends. Support outside of the workplace was identified as important in dealing with low control environments, people they can trust and vent to about workplace issues. This was particularly true for older CF members at the lower ranks, where support outside of the workplace was important in order to socialize with others in the same life stage as themselves. A network of social support has shown to be an important coping strategy for enhancing individual well-being (Kelloway, Sivanathan, Francis, & Barling, 2005).

Individual characteristics also includes resigned acceptance as a strategy to deal with the low control environments, if the situation is truly accepted it can often be an adaptive coping mechanism in low control environments (Folkman & Moskowitz, 2004). In the CF HLIS (2004), the majority of regular force members felt they could deal with day-to-day demands or unexpected and difficult problems. The primary way CF members

dealt with stressful demands was to try and solve the problem (80% of respondents).

However, when exploring low control and unpredictable situations imminent in military

culture, the workplace structure or task specific situations are often not "solvable", but

beyond of the control of any one member. Therefore, the participants in this study

described having to accept the situations in which they had no control; a cognitive shift

towards controlling their expectations and relinquishing their power to affect change.

Acceptance has been shown to be beneficial in low control situations (Bond & Bunce,

2003; Folkman & Moskowitz, 2004). How do CF members deal with a lack of control if

they do not accept their situation?

Lifestyle habits were also a part of individual characteristics, but also extended

beyond into workplace characteristics and co-worker cohesion. Many of the lifestyle

habits were found to be practices entrenched in military culture and provided a sense of

belonging and social support. For example, smoking was identified as a way to deal with

low control since taking smoke breaks allowed some autonomy in their work schedule

and provided a place to be at ease and talk with others. Also, adopting compromising

lifestyle habits such as smoking and drinking, proved useful in distracting members from

their stark reality. In the military culture there is a long-standing tradition of heavy

drinking among the lower ranks, and particularly in foreign ports (Pack, 1982). Drinking

has been reported as a response to the stress of heavy work demands at sea, ship

confinement for long periods of time and the frustration of being away from friends and

family back home (Ames, Cunradi, Moore, & Stern, 2007). Similar results were found

among the participants in this study.

The drinking is more of a binge thing, like at ports you just get hammered drunk and erase that horrible week you just had. It really puts a halt on everything cause you need a day to recover. [CF member #28, interview]

I am a binge drinker. I don't drink often. It depends. When I am at sea, soon as that ship is tied up along in port and we are done for the day then watch out. That is the binge right there. But I go months without having a drink. When I first started I drank a lot I partied a lot it was an everyday thing. I compare it to university living in the dorm, "what we are doing tonight", we go drinking. Now that I am living on my own though I rarely drink I don't really have the desire to drink. The only time is when ship is in port and then you just let it go. [CF member #17, interview]

Contrary to these findings, the CF HLIS (2004) found that ninety-three percent of junior NCMs reported good to excellent ability in dealing with unexpected and difficult problems and only two percent of CF members reported drinking alcohol or using drugs or medication as a way to deal with stress. Perhaps CF members do not associate heavy drinking, or smoking with a way of dealing with stress generated from having no control but more so as an embedded part of military culture.

Addressing the second research question regarding the influence of job control on health and job performance, Figure 3 illustrates the findings in this study supporting the literature, which shows evidence for low job control and its relationship to ill health (Bond & Bunce, 2001, 2003; Karasek & Theorell, 1998; Noblet & LaMontagne, 2006;

Terry & Jimmieson, 1999). Unlike others' work, the findings did not support a

relationship between job control and job performance, perhaps due to the unique way job

performance plays out in the military. The survey results found that participants agreed or

completely agreed that they were hardworking and productive despite their perception of

low job control or mental health. Explaining their high performance scores on the survey,

in the interviews and focus group participants indicated that performance equates to do

what they are told: get the job done. The reality of the CF is one of hierarchical structure,

of command and control, and of following orders. Although taking initiative is

encouraged, junior NMCs are subordinate to those ranks above, thus their productivity is

defined and limited by the chain of command.

Figure 3. Outcomes of perceived job control
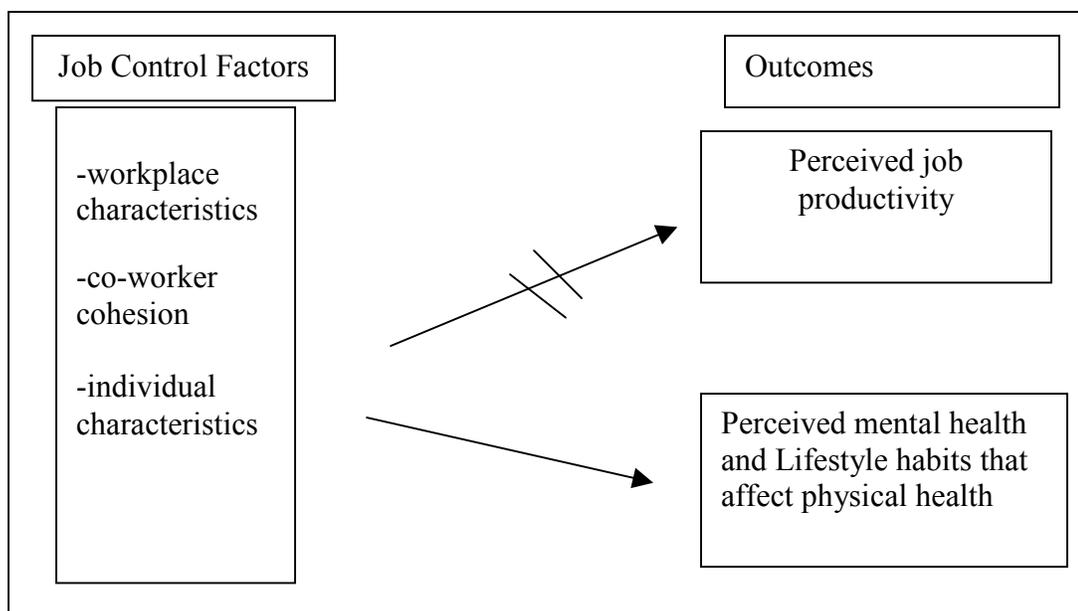
The findings from the study are discussed in further detail in the next chapter, contextualized in terms of existing literature and theory. Implications for military policy and practice, and future research follow in Chapter 6.

CHAPTER 5

DISCUSSION

I have very little control over most of my military life, I go where the career

manager tells me, I dress and go where they tell me go, the supervisor tells me to

do this and I do it. So really since day one, I have had very little control over

anything. [CF member #19, interview]

The above quote represents the organizational culture for many military members

and the aim of this study was to explore and understand how job control is perceived in

the military environment and its affect on CF members. For this project, twenty-nine

regular non-commissioned CF members, working full-time in the Pacific Fleet,

completed a survey and a semi-structured interview to describe experiences and

perceptions of job control, and their perceptions of how job control influenced perceived

health and job performance. This chapter offers a discussion of the findings as they relate

to our current understanding of workplace control, health and job performance. The

findings will also be discussed in terms of insight into practical solutions to enhance the

perception of control or to buffer the negative outcomes of a low control work

environment. The findings compliment and contribute to the current literature on

psychosocial aspects of job control and employee health, and offer a twist to the

established link between job control and performance. The survey for this study was

adapted from the Unit Morale Profile administered to CF members across Canada

intended to capture a unit's strengths and weaknesses regarding the "human dimensions"

of the military workplace (UMP, 2001). Fifty-four items from the UMP were used in this

study, consisting of five scales: job control, organizational support, job performance,

mental health, and unit cohesion. The findings from the surveys indicated participants:

- Perceived a low level of decision latitude;

- Felt ambivalent regarding support from the CF, particularly in terms of their well-being, and being taken advantage of;

- Mental health was an issue for approximately one-third;

- Mental health improved with advancing age but not with length of service.

The unit cohesion scores did not reveal any observable patterns. This may have been due to the fact that the survey questions referred to a type of social cohesion (quality of the emotional bonds of friendship, liking, caring, and closeness among group members), distinct from the experiences of social support described in the interviews and focus group session. Older NCMs articulated less of a concern for cohesion than the need for social support outside of the workplace. For younger members, social support was found in relationships with co-workers in other sections within the same rank level, and/or friends and family outside of work, and cohesion was described as important for tolerating life at sea.

The interviews asked the participants to describe a situation at work where they felt they had very little or no control, what helped or hindered their sense of control, how they dealt with their situation and how this situation affected their health and performance. The qualitative analysis resulted in four main themes (i.e. work schedule, workplace structure, social support within and beyond the workplace, and personal strategies for dealing with low control), nine categories (i.e. heavy workload, working at sea, career postings, supervisors hold the control, low rank, support, compromising behaviours). The categories fit with three broad domains informed by the theoretical model of job control. The categories and subcategory were interpreted to provide insights

regarding the frequency and patterns of factors that affect control in the workplace (Gremler, 2004). The results confirmed the complexity of the workplace, taking into account personal experiences, individual personalities and the social and physical environment. The commonalities, despite each participant's unique account detailing a work situation they characterized as low control, shaped the categories most important in low control military settings.

The focus group session was instrumental in verifying the interpretation of the categories. The researcher along with the six participants discussed the results from the surveys at which time the participants provided further context and specific examples regarding areas of particular concern. The participants also took part in an exercise of peer debriefing where they examined many phrases extracted from the interviews and then compared and sorted them into the categories provided. Previous to this exercise the researcher had developed the categories and reviewed them with the research supervisor and a research committee member. All participants felt they could identify with the phrases and confirmed the categories fit the context.

The findings from this study contribute to and support the literature on job control and workplace health promotion, but most importantly the findings identify the salient issues specific to NCMs and their working environment. It is important to recognize and address specific conditions that contribute to employee ill-health and productivity and this study raises the awareness of the work-health relationships and the consequences for NCMs working in the Pacific Fleet. From these results, practical suggestions to guide doctrine, enhance retention, decrease attrition, and enhance the long-term health of CF members, can be recommended.

Personal and situational variables influence individuals' perception of their workplace. Where one person may find their workplace intolerable, another can shake it off and not be bothered. There is substantial disparity in the way individuals perceive and respond to their work environments, and previous work has demonstrated that job control and social support are predictive of health and performance outcomes (Bond & Bunce, 2003; De Lange et al., 2004, Karasek & Therorell, 1990; Noblet & LaMontagne, 2006).

Job control

Research regarding job control has been well documented, and the lack of control and limited participation in the workplace has been shown to put employees at risk for physical and psychological stress disorders such as, cardiovascular disease, anxiety, burnout, psychosomatic health complaints and depression as well as indirectly linked to lifestyle behaviours such as, alcoholism, smoking and sedentary behaviour (Karasek & Theorell, 1990; Landsbergis et al., 1998; Stahl, 1991; Terry & Jimmieson, 1999). A lack of job control has been linked to situations producing stress such as work overload, and poor supervisory support in both cross-sectional and longitudinal studies (Karaske, Michie, & Williams; 2003, Noblet & LaMontagne, 2006; Sapolsky, 2003; Terry & Jimmieson, 1999). Similarly, Fox, Spector and Miles (2001), found that the most salient issues influencing perception of control for workers were: organizational constraints/ structure, interpersonal conflict, and perceived injustice.

These environmental risk factors arise from the way work is organized, including: work schedule, job structure and design, interpersonal aspects of work, and management style (National Institute of Occupational Safety and Health [NIOSH], 1996). All of the above aspects were mentioned as significant to the CF respondents in this study.

However, as presented in the previous chapter, the findings from this study, contrary to the bulk of evidence in the literature, suggest that the low control military environment did not negatively influence self-reported job performance. Participants perceived themselves as hardworking and productive despite their reported low levels of job control. The hierarchical structure of command and control, and following orders offers a unique take on performance in the military setting. Junior NMCs are subordinate to those ranks above, their productivity is defined and limited by the chain of command thereby equating job performance with getting the job done.

> I joined when I was 32 and I used do "civy" work and it was all about the money and there was pressure and it is not like that in the military and it is not uncommon for people to just get by. Do what you are told and when you are finished that like a good robot then you get your next thing. Just doing what you are told; it's what you gotta do. [CF member #10, interview]

Further studies are needed to explore job performance in a broader scope in military like settings. In particular, a criterion for on-the-job behaviours that extends beyond accomplishing the task to benefit the individual, the work group and the entire organization (Somers & Birnbaum, 1998). Studies are needed to explore how the effort reward model (Siegrist, 1996) can be applied to military performance, where CF members are adequately rewarded and there is an incentive to do more than merely what you were told to do. Further, capturing supervisors' perspectives of the performance of their subordinates may also reveal how the culture of command and obey is perpetuated.

Leadership and Supervision

The supervisor or chain of command was repeatedly described as a very important factor in how CF members feel about their workplace and their sense of control. There is evidence of this in civilian organizations where supervisors and managers directly affect the amount of control experienced by employees given the close behavioural and psychological proximity of this relationship (Kelloway, Sivanathan, Francis, & Barling, 2005). Within a hierarchical structure, it is often the employees' goal to climb the ranks and raise their status within the organization. Also tied to rank is annual salary and increased autonomy. Promotions and postings (job changes) in the military rely on yearly personal evaluation reports (PER) from the supervisor and therefore the supervisor is an integral part of a CF members' success in the military. As we know, individuals sense their "place" in organizational hierarchy and this can greatly affect their overall health (Marmot, 2004), and are tied to perceptions of control and stress. It has been shown that lack of supervisor support negatively affects health and increases sickness absence among employees (Vaananen et al., 2003), particularly when employees perceive poor treatment from their supervisor, such as not paying attention to employee concerns and/or not treating employees in a fair manner. Although there are other forms of supervisor injustice (procedural or distributive), it has been found that how supervisors treat employees can negatively affects their health and wellbeing (Kelloway et al., 2005). The findings from this study support the evidence that social organization of work, including supervisory styles and relationships in the workplace, contribute to overall health (Wilkinson & Marmot, 1998; Noblet, 2003; Kelloway et al., 2005).

Addressing the concerns regarding the participants' dissatisfaction with their supervisor is directly related to increasing concerns regarding leadership and the need for change in the CF (Garnett, 2001). Leadership is paramount in the Canadian Forces and there are a number of publications that specifically state the CF doctrine on leadership. Among the doctrinal statements, leadership has always been the primary function of all commissioned and non-commissioned officers (DND Canada, 1978; 2004), and according to the current doctrinal authority leadership is defined as

> That combination of persuasion, compulsion and example *that makes people do what you want them to do.* Anyone who directs and influences people in such a way that they will act with willing obedience, confidence, respect, and loyal cooperation in order to accomplish a mission (DND Canada, 1978). [Italics added for emphasis]

This authoritative definition is almost thirty years old and contradicts current civilian organizational practices where the focus is on participatory work teams, work flexibility and supportive work environments (Kuhn, 2007). The traditional nature of the military continues to embrace this authoritative way of thinking. There have been numerous articles discussing leadership in the military and most recently transformational leadership has been discussed as the ideal. Transformational leadership is defined as a leader who promotes: admiration, respect, and trust; motivation and commitment to shared goals and visions; innovative and creative approaches; and growth reflecting the unique needs and desires of individual followers (Bass, 1985). Transformational leaders are meant to encourage innovative goals, inspire others, reward critical thinking and importantly, care for the well-being of workers (UMP, 2001). These behaviours are said

to promote unit effectiveness and performance, and to utilize the potential of individuals (Ahroson & Eberman, 2002). Reflecting on the traits of transformational leadership compared to the findings from the interview data, there seems to be a disconnect between practice and the ideal. The participants felt their supervisors held the fate of their military career and many felt that getting a "good" supervisor was the luck of the draw. Supervisors' people skills and management of conflict situations were most significant to the participants. The management style greatly influenced the participants' perception of control.

> The supervisor can make ya or break ya. It doesn't matter you can be great and if your supervisor doesn't like you. It all comes down to a piece of paper. They don't know me in Ottawa and if all of a sudden this guy hates me then what do you do, that is one thing you don't have control over, you can't do nothing about that. [CF member #11, interview]

These findings provide an opportunity to inform leadership practices that would enhance the positive experiences of CF members by training supervisors with the skills and resources required to effectively manage people. The supervisor becomes a key influence in their subordinates' perception of control and indirectly will provide a positive influence on the heath and performance of their workers (Kelloway et al., 2005). The focus group data supported the interview data in that participants felt strongly that their performance and health was directly related to their relationship with their supervisor and chain of command. Some participants even shared their intent to leave the forces due to their supervisor situation.

Now my 20 years are up and I would love to stay in, I would love to do my 35 but

I have to sail, it not so much about going on the trip, I have gone on 4 tours. It is

going on the tour with him [my supervisor]. I told my divisional officer I will not

sail with him and he is the reason I am getting out at my 20 years. [CF member

#6, interview]

Drawing on the results of this study it appears there are several supervisor-

subordinate avenues to explore. One may be the concern regarding perceived injustice

from supervisors. There is evidence that a lack of control creates a sense of injustice and

in turn has been linked to diminished employee health (Cropanzano, Goldman, &

Benson, 2005). A second related area worth investigating is the evidence of participants

receiving conflicting messages from their command, which could lead to role conflict and

increased stress on CF members. Role conflict can be defined as two or more

incompatible demands on employees (Katz & Kahn, 1978), and in this study the findings

from the surveys illustrated that the participants felt they are to do what they were told,

yet they also felt they were encouraged to show initiative. These differing beliefs could

lead to stress with the increased challenge of having to comply with both expectations at

one time and feeling unclear in their role as a NCM (Beehr & Glazer, 2005). Cropanzano,

Goldman and Benson (2005) suggest that conflict on the job engenders anxiety, in fact,

"Gaps between what is desired and what is obtained are deleterious to health

psychological and physical functioning, at least if these gaps are excessively large"

(p.72). The factors described above are specifically related to junior ranks and may not be

identified by higher ranking members. Thus to positively impact CF members' sense of

job control and subsequently their perception of health and performance, it seems critical to address job control issues relevant for each rank.

This study has outlined several ways leadership is related to employees' perception of job control and in light of the findings more research is need to fully explore the relationship between leaders in the CF and junior NCMs. Clearly, leaders influence the perception of job control, job performance and health of CF members. Given the demands on the Canadian military due to current peacekeeping efforts, leadership training would be a primary strategy for the sustainability and well-being of CF members.

Support

In order to better deal with low control and workplace demands, interview questions were directed at the how the participant felt supported. This study found that both support in the workplace and support from friends and family were identified as an important part in dealing with low control at work. An important modifying factor of poor working conditions and employee health is that of social support. Poor social support at work predicts both increased psychological morbidity and more brief periods of absenteeism for mental health reasons (Tennant, 2001). In addition, social support has been found to protect against the incidence of depressive and anxiety disorders in low control workplaces (Plaisier et al., 2007). The participants in this study described this positive influence of social support,

> I have my wife, I sometimes talk her ear off and she does the same to me. I come home from work and I vent and she does the same. She is a good listener, she gives some advice. She is very supportive.[CF member #27, interview]

Support refers to a sense of belonging, trusting others and helpfulness of others and has been associated with good health (Liukkonen, Virtanen, Kivimaki, Pentti, & Vahtera, 2004). Expanding on the concept of support is the notion of social capital, which includes workplace support, sense of belonging and mutual trust. It has been argued that social capital may influence psychological and biological influences that promote people's health and improve quality of life (Putnam, 2000 as cited in Liukkonen et al, 2004). Social capital is measured by membership of groups, trusting others and helpfulness of others and has been associated with good health (Veenstra, 2000 as cited in Liukkonen et al., 2004). Therefore, social capital seems an appropriate concept for further study in the military setting where trust and teamwork are important in order to carry out mission objectives. Especially, since the findings from this study found that social support is an important part of dealing with low control situations. The need to vent and have others that understand their situation was reported as helpful. Co-worker support was particularly important during deployments when contact with family and friends outside of work were difficult to maintain due to the secrecy of deployment and technical challenges aboard ship. The working situation was described as different than most other occupations making it hard for family and friends to understand what CF members are going through. For others it was important to have support outside of work to help maintain work-life balance; they want to walk through the gates at the end of the day and not hang out with the people they share a "mess" with.

A challenge with the military environment is shifting the culture to erase the stigma attached to having to ask for help and/or needing emotional support and this could be achieved through increasing the social capital of CF members. Mental health

promotion at work advocates increasing the resources available to cope with work stress, creating social supportive structures and developing policies around conflict, confidentiality and harassment (Kuhn, 2007). This would include developing ways to improve relationships across ranks without upsetting the command structure.

Another contradictory but important finding is that participants who were smokers felt they had both control over their work schedule by taking smoke breaks, and also felt a sense of belonging and community among other smokers; as one participant put it, "it is a neighbourhood kinda thing." The smokers felt that during their smoke breaks, rank mattered less and they felt comfortable being part of the conversation. This culture around smoking needs to be explored. Could the same social environment be emulated with groups around a healthier common interest? What type of social group might have the benefit of exercising some control over their work schedule? This may include exploring how workplace policies might facilitate a healthy bond and/or discourage unhealthy ones either in spite or because of military rank.

Cohesion

Unit cohesion is an important characteristic of the CF and is necessary for morale, effectiveness and retention in military operations (Ahronson & Eberman, 2002). Cohesion can provide strength and courage to operational assignments in dangerous and ambiguous military operations (Hamilton, 2006). Although cohesion can be measured through surveys, it has more to do with the complex human dimensions that are difficult to quantify, as was the case with this study.

The survey results from the cohesion scale focused on social cohesion and did not produce consistent findings. Social cohesion, defined as the nature and quality of the

emotional bonds of friendship, liking, caring, and closeness among group members differs from task cohesion, which is more closely related to a shared sense of commitment to the mission; a team with the expertise to perform a task or service in a unified way (DND, 2005; UC website, 2007). Although both types are important, a host of studies in the organizational literature have found that task cohesion correlates more positively with morale and performance (Harrell & Miller, 1997; MacCoun, Kier, & Belkin, 2006; UC website, 2007). MacCoun, Keir and Belkin express the concern that if social cohesion is too high negative consequences can result, including excessive socializing, ineffective decision-making and insubordination. Importantly, coworkers can perform effectively as a team without necessarily liking each other and there is evidence that successful performance (attaining the group goal) promotes cohesion and enhances morale rather than the reverse (MacCoun, Kier, & Belkin, 2006). The findings from this study found a wide variation in how the participants' rated their cohesion. The data from interviews found the older participants were most concerned with support from friends and family than how they interacted with members of their unit. Interestingly, age and rank of the member was an important factor in the level of co-worker cohesion described by the participants. There were instances where the member was a junior rank yet was older than his fellow colleagues and these individuals expressed the need to receive support from family members and spend time with friends outside of the workplace. Despite the discrepancy of the survey findings, significant data were extracted from the focus group and interviews confirming the importance of cohesion in the workplace, especially during operational deployments where work relationships were magnified due

to the intense work schedule. The findings indicate that social cohesion is important to

the participants but to what extent and for what purpose remains unclear.

Personal strategies in coping with low control

Personal strategies developed to cope with low control in the workplace were

identified as critical to maintaining peace of mind and outlined the social norms within

the military culture. Due to the nature of the workplace, the military is inherently

saturated with low control situations. The workplace structure and strict regimen is in

place to handle ambiguous and life-threatening situations designed so that little control is

afforded to members, especially in the lower ranks. Consequently, CF members reported

many occurrences where they applied unhealthy lifestyle behaviours in order to deal with

their work situation. For many, the adoption of unhealthy habits such as overeating,

increased tobacco use, excessive video game play, aggressive behaviour, and alcohol

consumption were a means of immediate satisfaction and escaping the reality of having

little job control. The choice of coping strategy is important for long-term health as the

unhealthy lifestyle habits often carry on well after the stressful situation has passed.

> I distracted myself with video games or movies and then when I got home and if I
>
> didn't want to do anything or something was going on with my wife or my son
>
> was doing badly in school or something, I would go and hide away and play video
>
> games that was my escape I learned it on the ship. Even though I am not stuck in
>
> a war zone I still cope that way. [CF member #15, interview]

Coping is defined as a transactional variable that refers to the environment and the

person. It consists of the thoughts and behaviours a person uses to manage the demands

of the situation (Lazarus & Folkman, 1984; 1987). To explore coping strategies more

closely the researcher examined the coping phrases within the transcripts and sorted them according to Lazurus and Folkman's eight coping categories classified as either active-focused coping (doing something to change the situation) or emotion-focused coping (an internal way of dealing with the situation). Active coping includes: (1) confrontive coping, (2) seeking social support and (3) planned problem solving. Emotion-focused coping includes: (4) accepting responsibility, (5) escape/avoidance, (6) distancing, (7) self-control, and (8) positive reappraisal (Folkman & Moskowitz, 2004).

The results showed that both types of coping were employed, yet the majority of respondents utilized emotion-focused coping, aimed at improving the negative emotions often associated with low control settings. This is consistent with the coping literature where individuals with an external locus of control or the feeling that any action taken by the individual will not make a difference, is dealt with by using emotion-focused coping to minimize the immediate negative outcomes of the situation. In the present study it was found that distancing (described as recognizing a problem but purposively disregarding it), and escaping/avoidance (where the individual tries to escape or flee from the problem by indulging in activities such as drinking or drug use) were found to be the popular choices to cope with low control (Folkman & Moskowitz, 2004). Both these coping strategies are emotion-focused and, although regarded as less effective than problem-focused coping, depends on the extent to which the situation is controllable. When comparing the two forms of emotion-focused coping, Folkman and Moskowitz (2004) describe distancing as often adaptive in low control situations where the individual feels there is nothing they can do to change the situation. Escape/avoidance is usually a

maladaptive way of coping and has consistently been associated with poor mental health outcomes and addictive behaviours.

This study found that coping styles were important in deciding how individuals dealt with their situation and whether is was effective. Accepting that one does not have control over all situations is important and it was revealed in the interview data that most participants described situations in which they characterized an external locus of control, meaning they felt most work situations were outside of their control and this has been found to be more beneficial in low control situations. However, it has been shown that an external locus of control has the potential to exaggerate people's perceptions of lack of control and perhaps increase a sense of helplessness (Seligman, 1998; Spector & Fox, 2002). It is important to note that coping processes are not inherently good or bad but need to be evaluated in each specific situation and consideration of the context must be taken into account. More research is needed to better understand strategies used to cope with the low control settings inherent in the CF, and potential interventions such as proactive coping to help members prepare for unpredictable and low control environments. A related concept is to explore the outcomes of common coping strategies and understanding more fully what skills are best suited for low control work environments. This could also lead to more healthy outlets for dealing with stress and control.

Another strategy used by the participants was acceptance. The participants acknowledged they had little decision latitude and therefore felt they had to accept their situation, trying not to think about it or focusing on factors they did have some control over. Acceptance as a form of adaptive coping was identified as a popular technique used

to deal with military situations. Bond and Bunce (2003) found this individual characteristic to lead to positive outcomes in psychotherapy. When employees accepted their situation, they tended to engage in less escaping behaviours (i.e. drinking alcohol), were better able to notice the degree to which they had control in a given situation and most importantly act in the workplace according to their values and goals (maximizing work performance, mental health and job satisfaction). Consistent with the findings from Bond and Bunce, Hayes at al. (1996) found that this individual characteristic of acceptance might modify psychological problems such as substance abuse and depression.

The participants in this study felt that as a military member, low control situations were part of the military environment, particularly as a junior rank. Resigned acceptance was an important part of dealing with low control situations and made it possible to carry on with their work.

It doesn't bother me I understand that I gotta do what they tell me to do. Everyday I have no control. I don't think about that stuff because nothing I can do. [CF member #19, interview]

This was an encouraging finding since acceptance has been found to moderate the relationships between job control, health and productivity in longitudinal studies (Bond & Bunce, 2001, 2003). As explained by Hayes et al. (1996), acceptance is a learned characteristic that allows for a more effective use of an individual's energies, formerly directed towards avoidance, or complaints, allowing the member to focus on their values and goals. This is an avenue to explore further, to facilitate a greater level of peaceful acceptance for those individuals struggling to cope with their situation. However, it is

important to distinguish if acceptance was indeed an adaptive from of coping or merely a "reluctant resignation" to what seems to be a "no-win" situation. This is particularly important when discussing the concept of empowerment. Empowerment encompasses: autonomy, support, impact on work and self-efficacy, which all contribute to a positive work environment and work outcomes yet, in the military environment both autonomy and impact on the workplace are inhibited by the rigid work structure. Further research is suggested in this area to explore, how CF members can feel empowered despite the command and control structure?

Another perspective on acceptance can be shown through the literature on self-efficacy and control enhancing strategies. In particular, the differences between the participants who felt that, despite their uncontrollable situation, they were able to preserve a strong sense of personal control, even those for example, who described a workplace situation where they had absolutely no control over the outcome.

Individuals with a high level of self-efficacy feel they have the personal resources to deal with most situations. As well, they look at difficult situations as a challenge, set high standards and persist longer at achieving their goals. High levels of self-efficacy in the military setting could be beneficial since CF members would feel more confident in tackling new assignments, entering hostile environments, and dealing with demanding conditions - all an integral part of military life. Further research that examines self-efficacy and its association with performance and sense of control would be helpful in understanding what level of self-efficacy is most beneficial to military operations, and how self-efficacy can be nurtured. This is especially relevant for military employees as high levels of self-efficacy produce positive outcomes such as reduced task anxiety,

improved performance, increased motivation and increased effort (Bandura, 1977; Welch & West, 1995).

Control enhancing strategies focus on two levels of dealing with low control situations - primary and secondary control strategies. Primary control involves attempts to change or fix the environment. As such, the individual will try and modify the objective circumstances in ways that help gain more control. In contrast, secondary control involves a "reframing" or cognitive restructuring in how the individual appraises the situation (adjusting hopes, goals, expectations). This reframing is developed in order to achieve a greater sense of control without changing the objective circumstances (Chipperfield, Perry, & Menec, 1999). In uncontrollable situations the secondary control strategy is beneficial. This was often the case with the respondents who felt their experiences and time in the military helped to shift their expectations.

> You have to leave your work at work and I know that from other jobs that it gets stressful and I mean the military made me more relaxed after years of seeing stuff, there is no reason to boil up and go mad and I just say, 'why'. [CF member #6, interview]

Individual coping is worth exploring in the military context. Further research needs to be conducted that focuses on interventions addressing the most suitable way to cope with low control environments, where they are monitored and assessed for their impact on CF members. Particularly in the case of military deployments, which must include a close examination of the social and organizational conditions of the workplace. Furthermore, the far-reaching health consequences of long-term exposure to these

conditions argue for workplace health promotion interventions using longitudinal research designs.

The participants in this study stated they came into the military expecting to follow command, and this was clearly established during basic training where higher-ranking CF personnel established an authoritative relationship with the new recruits. Participants appeared to understand their role in the CF and this is important since the way employees interpret their role in the workplace can lead to a perception of demands, constraints or even opportunities to engage in certain behaviours (Beehr & Glazer, 2005).

> It is not like working at Staples or something where you have a say. The structure of this place is that you follow the rules, it is the way it has to be. [CF member #21, interview]

However, one area beyond the scope of this study is that of personality-environment fit. CF personnel choose to join the military and the element they would like to work in, despite any awareness they may have of a low control environment. This brings about the question regarding those employees more attracted to a structured workplace. A classic review of human and animal studies examining control and stress found there are a number of subjects that find high control situations to be stressful (Averill, 1973). Furthermore, there is evidence that low control in difficult situations may reduce individual stress since these individuals can then shift the responsibility to others and merely follow orders rather than having to make self-directed decisions (Schaubroeck & Fink, 1998). Therefore, having control in difficult and unpredictable situations may benefit only those who are confident that they can use it and that they will be effective. Thus, a focus on increasing control may not work for some employees

and/or need be directed towards areas in the workplace where employees feel confident and comfortable with their abilities. This is a consideration when implementing workplace health promotion initiatives designed to increase employee control, job performance and health. It highlights the need to involve all rank levels in workplace changes and job design.

CHAPTER 6

CONCLUSION

Organizational and health promotion researchers have repeatedly confirmed the convincing relationship between job control and health and job performance. This study investigated these relationships within a military setting and the results provided a unique contribution to the job control literature that may help distil useful policies and practices for men and women serving in the Canadian Forces.

An objective of this study was to capture the experiences of what CF members' perceived to influence job control. As presented in the preceding chapters, the findings revealed that there were several factors influencing non-commissioned members' sense of control in the workplace in both negative and positive ways, including organizational structure, support and individual coping strategies. The findings argue for a multi-level approach to address the factors that negatively impact CF members' sense of control. This would include an approach to understand health beyond the individual's risk profile to include the wider social and community contexts. The socio-ecological model is most helpful in this regard (Matson-Koffman , Brownstein, Neiner, & Greaney, 2005) and coincides with the 'settings-based' approach to health promotion in the workplace (Dooris, Poland, Kolbe, de Leeuw, McCall, & Wharf Higgins, 2007; Whitelaw, Baxendale, Bryce, Machardy, Young, & Witney, 2001). A socio-ecological model is one that considers multi-level influences on behaviour and health - intrapersonal (cognitive, affect), interpersonal (social supports and relationships), community/organizational and policy determinants (economic, physical, cultural, social) - to understand the interrelationships between personal behaviour and environmental conditions for health (Stokols, 1996). Utilizing a settings-based approach to promote the wellbeing of CF

members would augment the current health promotion programs that primarily focus on changing individual behaviours.

The role of the supervisor played a large part in how satisfied and committed the members were regarding their job. Adaptive coping strategies are suggested for dealing with the unique military environment comprised of long work hours and confinement to a ship while working at sea, and the unpredictable situations during deployments. Some suggestions to enhance well-being and decrease stress during deployments include investigating the sleep/work schedules, develop ways to find personal time during deployments, develop strategies for dealing with being "trapped at work", and perhaps learning proactive coping skills before deployments as a preventative measure to ensure positive emotional health. Positive personal coping strategies could promote a sense of control and a healthy and productive career experience for CF members.

Co-worker cohesion was found to be beneficial for CF members particularly during deployments, although the form of cohesion varied among participants depending on age, rank and life stage. A greater understanding of cohesion is needed in order to meet the needs of all CF members.

The participants from the study felt that health was affected by their sense of low job control and was related to the power held by their supervisor and chain of command. The surveys revealed that mental health was an issue for one-third of the respondents. Research on job control and mental health, using Karasek's job demand – control model, has found low control predicted psychological strain, depression, and anxiety (Schaubroeck & Fink, 1998). Mental health in the workplace has increased sharply in the recent years and the CF is not exempt (CFHLIS, 2004; Haslam, Atkinson, Brown, &

Haslam, 2005). Mental illness has been found to impair performance due to symptoms such as fatigue and poor concentration, which is likely to transfer to an overall decrease in productivity and morale (Haslam et al., 2005; Head et al., 2002).

The surveys from this study indicate that job performance was not affected by low job control and was discussed in greater detail in the interviews and focus group. The feeling was that job performance was temporarily affected in acute situations but overall, members still completed the required tasks. What does job performance actually mean in the military setting? It appears that members equate performance with following orders. Each member felt they did what they were told and worked to get the job done. In an environment limiting decision latitude, this was perceived as performing well on the job.

Due to a lack of control from both organizational origins and individual employee characteristics, this study supports the argument for a comprehensive approach to workplace health promotion addressing the social and organizational conditions that contribute to ill-health (Bond, 2004; Noblet, 2003). Such an approach would be important for reaching the hierarchy of ranks in the military workplace (Noblet & LaMontagne, 2006). There are three levels to the comprehensive setting approach to workplace health promotion as outlined by Noblet and LaMontagne and could benefit the CF. First, the individual is addressed with the aim of equipping them with skills, knowledge and resources to cope with unfavourable situations. Secondly, the inter-face between the individual and the organization is explored. This includes support groups, role clarification, and participatory decision-making programs where appropriate. Thirdly, the physical, organizational and social level is addressed where re-design strategies, recruiting and placement, and organizational development programs are implemented. At

all three levels the initiatives need to be based on the specific needs and conditions of the

workplace and their impact on employees, thus it is important to understand the

workplace and significant issues from the workers' perspectives (Bond & Bunce, 2001).

Addressing the issues identified from the workers themselves may positively impact on

CF members' sense of job control and subsequently their perception of health and

performance. This may be particularly pertinent when it comes to issues concerning the

junior ranks, as they are often not in a position to make decisions. The results from this

study found that all the participants mentioned their supervisor or chain of command as

an important factor influencing one's sense of control, health and performance in the

military setting.

> Somebody who comes to the workplace and is yelling, first you are trying to run
>
> away from him [supervisor] and sometimes you are not even doing the job you
>
> are supposed to be doing because you are just trying to run away from him. [CF
>
> member #24, interview]

> I would say it [mental health] is directly related to your chain of command, your
>
> supervisor, or your Divisional Officer. If they are not there they can break you.
>
> You will feel these awful feelings everyday you go into work whereas if you have
>
> the support and the support of your chain of command then there is no stopping
>
> how far you can go. [CF member #14, focus group]

> Our chief at our unit, he was sincere in saying that he would be there for me to
>
> talk to, but there is something there that I find kinda, well a little suspicious about

talking to a senior rank. You know they say it is confidential but it goes in your

notes so there is that resistance there where you don't trust. [CF member #1, focus

group]

The comprehensive approach holds promise for addressing the supervisor-

subordinate relationship early in a CF members' career by educating and preparing

individual recruits for transformational leadership roles, having clear job expectations

and trusting support systems Ongoing leadership development programs made available

to all CF members may have profound implications for the health and performance of CF

members.

Reflection on the research process

The researcher in this study must carefully consider the implications of her

research, the potential consequences, the emphasis and the tone (Bodgen & Biklen,

2003). Reciprocity and the exploitation of participants are her responsibility and as such

must reflect how she speaks and writes about CF participants and interprets their words.

Although knowledge can never be understood from a completely objective point of view,

it is important to find ways of including the participants into the interpretation of the

findings. To address this the researcher used a peer debriefing technique (Miles &

Huberman, 1994) to allow the participants to be involved in the interpretation of the

results, a means to validate what their working lives are like. In this collaborative

environment the participants voiced their understanding of the findings and what the

findings represented. Throughout the study the researcher became aware of the

challenges junior NCMs face, the pull between understanding the need for structure and

control in order to carry out dangerous missions; however, they also desired autonomy

and freedom as professionally trained working adults. In choosing to serve their country

the participants understand their role as a CF member and focused on aspects of their

workplace that caused unnecessary frustration. The researcher's desire is to reflect the

participants' commitment to the CF, and increase the awareness of health promoting

actions that will positively influence NCMs and their long-term health. How their stories

are presented are as important as what is presented (Sparkes, 2001) and reminds the

researcher to be conscious of her presence, her power as a researcher and her biases, yet,

unavoidably this is merely the researcher's representation of the findings, her

construction of knowledge. "All written work, however factual and authoritative is

composed and crafted" (Bochner & Ellis, 1996, p. 127). Although the mixed method

research guided the study's design and methodology an orientation of cooperative inquiry

also permeated its design. Cooperative Inquiry is used in communities and organizations

to understand the world, making sense of life and developing new ways of looking at

phenomena (Hills & Mullet, 2000). It is founded on the principle that good research can

only occur when research is done *with* people rather than *on* people. This was reflected in

the peer debriefing process during the focus group where participants where able to take

part in viewing phrases from the interviews to sort and describe their fit with their

everyday work experiences and the best category fit.

Strengths and Limitations

The choice of a multi-method design, utilizing surveys, semi-structured

interviews and a follow up focus group was deemed the most suitable approach to

answering the research questions, considering the evidence that using global control

measures underestimates the outcomes and does not give explanations of the workplace

variables (de Lange et al., 2003). The Unit Morale Profile survey provided a greater depth of understanding of control in the military, and was helpful in obtaining valuable information that verified and strengthened the findings from the interviews, particularly when the findings from the surveys were discussed further in the focus group session. The small sample size limited the study, particularly in obtaining sufficient quantitative data to explore relationships among the dependent and independent variables. A sample of 29 participants was too small to generate meaningful statistical results. Furthermore, cause-effect cannot be established or assumed due to the self-reported and cross-sectional nature of the surveys, interviews and focus group.

Qualitative interviews are regarded as a method providing a rich source of data, allowing the respondents a free range of responses within an overall research framework. As such, it reflected the participants' normal way of thinking (Gremler, 2004). Particular strengths of this study were the peer debriefing process held in the focus group, returning the full transcripts to the participants as means of "member checking", having a civilian non-researcher and research participants examine the categories and quotes as a means of validating the thematic analysis (Guba & Lincoln, 1989). A response from one of the participants in the study,

> All the quotes in the email seemed to be as correct as I can see. I really enjoyed your work. Thank you for letting everyone complain about their job.
>
> "it is a sailors god given right to bitch and complain, as long as the job gets done" -some old sea dog [quote at the end of participant response] (CF member, validity check, #28)

These procedures were performed to add rigour to the categorization process and thus increase reliability of the findings.

One of the limitations of qualitative research is the difficulty in using large, representative samples for obtaining data that are generalizable to other working populations. However, the aim of this study was to describe and understand the factors most salient to non-commissioned CF members regarding low job control in the military. The approach used was very useful in defining the domains of job control that were relevant for the population in this study.

The interview questions asked the respondents to be retrospective, therefore the data are subject to recall bias; a limitation of this study as it relied on the respondent to remember and recall an accurate and truthful report of a situation where they felt little or no control at work and how this influenced their health and performance (Gremler, 2004). In addition, the culture in the military is such that it must appear that CF members are in control of all situations (their first priority is to fight for their country); to fight in war they need to appear fearless and mentally strong. Therefore, the self-presentation bias due to the stigma attached to the perception of weakness may reflect a fourth limitation. In order to "save face" many respondents focused on external causes affecting their perceptions on how much control they felt they had in their workplace.

Recommendations for future research

Based on the findings from the present study the researcher offers several recommendations for further research. Recommendations to further advance our understanding of the CF workplace fall within the three areas illustrated in the job control model guiding this study: workplace characteristics, cohesion, and individual

characteristics. Some specific examples include research to more fully elucidate the relationship between supervisors and subordinates in the CF, as it relates to control. Some examples of research questions include: What factors identified by junior NCMs are most important in the supervisor-subordinate relationship and how do these factors impact behaviour? Or, how does transformational leadership training for senior NCMs influence subordinates' organizational citizenship at work?

Another area to investigate would be research that explores both social and task cohesion among CF members, and the best way to nurture cohesion for the current demographics in the CF. Cohesion is one aspect that may increase our understanding of what constitutes enhanced job performance and employee health. A research question to address this could be: What type and at what level is cohesion important for junior ranks in the CF? It is important to note that cohesion needs will vary depending on the type of operational deployment and should be considered in future research.

Other suggestions at the individual level would be an intervention to measure the effectiveness of coping strategies to address the needs and health of CF members. An emphasis on health outlets for coping with low control would be particularly important given the tendency of CF members to be seduced by health compromising and potentially addictive behaviours. Exploring individual locus of control could address this issue to gain a greater understanding of where one places their sense of control and how this influences their coping choices. Related to coping, yet beyond the scope of this study, would be to consider the contributions of personality traits. It has been found that personality characteristics are more helpful to individuals in areas in which there was little opportunity for control, for example at work (Folkman, Lazarus, Gruen, &

DeLongis, 1986). One such personality trait to consider for further research is that of hardiness. Hardiness has been defined by Kobasa, Maddi, and Kahn (1982) as "a constellation of personality characteristics that function as a resistance resource in the encounter with stressful life events" (p. 169). In military groups, hardiness has been identified as a significant moderator of combat exposure to stress in US Gulf War soldiers (Bartone, 1999; 2004). A critical aspect of the hardiness trait is in the interpretation, or the meaning that people attach to situations. Bartone (2004) feels that hardiness can be learned and "that it is probable that in military units, this "meaning-making" process is something that leaders can influence and the hierarchical structure puts leaders in a position to exercise substantial control and influence over subordinates" (p. 8).

The research methods used were appropriate for this study; however, another useful and appropriate mixed method design would include the sequential explanatory design consisting of two distinct phases: first, the quantitative results are collected and analyzed followed by the collection and analyses of the qualitative data as a means to refine and explain the statistical results in more depth (Creswell et al., 2003). This mixed method design is especially useful when unexpected results arise from a quantitative study (Morse, 1994).

Further research in this area is recommended using different methods to capture more objective means of measurement. Specifically, observations of work tasks, effectiveness outcomes and/or supervisory performance ratings to capture a more accurate picture of job performance. More objective health measurements beyond self-reported health ratings, such as employee health records (sick leave, injuries, annual

fitness results) and individual health measures, such as heart rate, blood pressure and cholesterol levels would more accurately describe health outcomes.

This study would benefit from other valid and reliable scales as a means to measure individual characteristics such as coping, self-efficacy and personality traits to increase our understanding of CF members and the most suitable ways to enhance the health and performance of the CF. These methods rely on recalling past events or personal reflection of their behaviour and are more susceptible to retrospective and recall biases that may distort the accuracy of the participants' reports. The problem with retrospective bias when examining the effects of personal characteristics on behaviour is that as time passes people may be less likely to report actual coping and reactions and more likely to report trait-like behaviours (Hahn, 2000). This may distort how job control actually influences the individual on a daily level. Methodologies suggested to counteract these challenges are ethnographic case studies, to obtain detailed descriptions of a single event or setting. This will allow the research to focus on how people create and understand their daily work practices by collecting data as it happens (Bogden & Biklen, 2003). Another suggestion is the diary methodology used by participants to provide accounts of experiences within a few hours of a workplace situation.

Research design in workplace settings strongly favours cross sectional and self-report measures that cannot produce cause and effect results. Workplace interventions using longitudinal designs are needed to test theory and provide evidence for long-term practice. Some examples based on the results of this study would be to provide transformational leadership training to supervisors and measuring worker outcomes (performance, stress, job satisfaction) over time. A similar design could be conducted

utilizing a coping intervention for junior NCMs and subsequent measures of health over time. This is especially important as organizational cultures and individual behaviours are slow to change and results of these changes take time to manifest.

The results from this study show the complexity of the relationship between the workplace and employees. As indicated in this study, research in this area needs to consider the various components of the workplace and the specific needs of the employees at levels within the organization.

Contributions to theory and practice

Previous research on job control has revealed associations between work characteristics and both health and performance measures. The present study contributes to the current literature and found distinctive differences among this low control work environment compared to most civilian workplaces. Generated from the data obtained in this study the results expand on the current literature in that outcomes from low control work environments are due to the interrelationships between the workplace structure, the social environment and the employee. Supporting the most recent research, the factors influencing employees' sense of job control are not mutually exclusive but complimentary. This study suggests new concepts to investigate in low control workplaces both separately and in combination, including the influence of hierarchical workplaces on social norms and cultural practices, and employee coping and behaviours within low control environments. An example from the present study would be to explore an alternative for non-smokers that would provide the same benefits that the smokers perceive, such as an increased sense of autonomy around their work schedule and an enhanced sense of social cohesion.

Figure 3 updates the job control model presented in chapter 1to be relevant for the military workplace. The CF naturally has many low control situations and is decidedly different from most civilian workplaces. This study found that job control did not influence job performance. The data revealed that job performance in the lower non-commissioned ranks of a military setting was different than what would be expected in civilian workplaces and therefore, the lack of autonomy and merely doing what is required appears to create a ceiling effect on employee productivity. Effective coping has been linked with workplace performance and the use of coping can lead to adaptation of demanding and stressful situations (Folkman & Moskowitz, 2004). However, job performance, as an outcome of low control isn't as relevant in the military context and can be accomplished with minimal control: Moving up the ranks in the military results from following orders consistently and quietly.

CF members have expectations of life long tenure and with this sense of job security combined with low job control, and with little concern regarding performance, or the fact that increasing control for CF members may not be possible in the structured military environment, the focus must turn to changing perceptions of control by developing appropriate coping skills in order to prevent poor health outcomes and compromising behaviours (Ippolito et al., 2005; Troup & Dewe, 2001).

The results of this study suggest a realistic adaptation of the demand-control model in a military context consisting of: low control along with high demands (heavy workload, repetitive tasks, or unpredictable tasks) and adaptive emotion focused coping strategies (distancing: acceptance, healthy distractions, and support) as a means to positively influence CF members' wellbeing. Differing from the study conducted by

Ippolito et al. (2005) who found that active coping was linked with perceived control, this study suggests that active coping, demonstrated by doing something in order to deal with the problem, is not always possible in the military environment and implies that a level of control exists. Emotion focused coping is demonstrated when the individual avoids or escapes the problem or tries to think of something else to get their mind off the problem. This type of coping has been found to be more appropriate in situations affording employees very little control (Theorell et al., 2005; Ippolito et al., 2005; Lazarus, 1984). Thus, further research is needed to explore and test coping interventions where members are taught adaptive emotion focused coping strategies and its influence on health (both objective and subjective measures). The utility of an adapted theory of demand + control + emotion focused coping in low control work environments must be investigated.

Another suggestion would be to try influencing the culture around job performance to move beyond simply getting the job done. Perhaps creating an intrinsic reward system (not based on pay or promotion), increasing ownership over completed work or increasing participation in work process (completion dates, goal setting) would provide the impetus to increase productivity and empower junior ranking NCMs.

The diversity of demographics of junior NCMs calls for changes in social practices within the military culture. Older NCMs entering the CF later in life desire a different focus on co-worker cohesion and rely on greater support from family and friends outside of the workplace. Thus life stage and subsequent rank are important factors to consider in order to fulfill the social needs of workers within a hierarchical work structure.

   The results from this study suggest implications for other work settings that have similar rank structures and rigid protocols. Adapting the current literature to include these connections may advance our conceptual thinking for other similar workplaces such as law enforcement, emergency responders (coast guard, fire and ambulance), factory/assembly workers and some government agencies. This seems especially true for police work in that several studies have found that the main stressors identified by police officers were factors over which the officers had little personal control such as, work schedules, problems with management, bad supervisors, promotional opportunities and work environment (Lawrence, 1984; Malloy & Mays, 1984; Newman & Rucker-Reed, 2004; Storch & Panzarella, 1996). Shared findings and collaboration with other researchers in this area may contribute to a comprehensive model of work design, which would consider opportunities for employee support in and beyond the workplace, effective leadership practices, and the facilitation of appropriate coping skills to deal with these distinctive work environments. Such an evidence based model that could be utilized in a variety of low control work environments as a means to improve quality of work life and better understand employee-environment relationships. Keeping in mind the need to balance health promotion interventions informed by epidemiological evidence with members' experiential knowledge of health in choosing what and how to address issues (Roussos & Fawcet, 2000), collecting data directly from populations for whom health promotion initiatives are designed may produce more appropriate and effective programs and policies (Thomas et al., 2004).

Dissertation summary

The present research project emerged from the researcher's personal experience working within the military environment and previous research with military personnel. The setting for the study was of interest to the researcher after spending years working in the military environment as a civilian and in her efforts to deliver 'health promotion' programs (e.g., smoking cessation, stress management, and healthy eating) to CF members. These programs resembled individually-based and behaviourally focused interventions designed to increase members' knowledge and skills of their lifestyle choices, typically implemented as discrete activities rather than as part of a comprehensive health and wellness portfolio. After securing funding for a research project exploring quality of life for new CF recruits, the issue of members' perceptions of control arose as influencing their professional and personal lives as a CF member. Together, these experiences provided the momentum and curiosity for further inquiry into the salient factors around job control and how these perceptions of control influenced perceptions of performance and health.

Whilst delving through the literature related to job control it became apparent to the researcher that organizational structure and support are paramount factors influencing employees' perceptions of control. The literatures clearly points to the importance of workplaces adopting strategies to increase control and support and thus improve individual health and performance. At the outset of this study, the researcher naively assumed that, armed with enough evidence to support a comprehensive approach to health promotion, the implementation of layered and coordinated programs and policies to address workplace structure and context would be a logical and rationale

recommendation. As discussed by Antonovsky (1996) and Green, Poland and Rootman (2000), the adoption of an ecological model, which integrates the workplace environment, the social systems and employee factors, would provide the necessary paradigm shift towards a setting-based approach to advancing a sense of control from a health promotion perspective. "Whole systems thinking" is an important means of connecting people with place, and moving beyond the popular choice of health promotion programs directed solely at individuals.

Therefore, the researcher proposed to carry out her exploration using a concurrent triangulation approach using both quantitative and qualitative methods as a means to address the research questions, (1) which aspects of the job do CF members identify as influencing their sense of job control? And, (2) how do CF members' perceive low control situations to affect their perception of health and job performance? The researcher administered surveys and conducted interviews with twenty-nine non-commissioned participants from the CF, stationed at CFB Esquimalt, as well as a follow-up focus group. The results from the research supported the current literature on health promotion and also contributed to our understanding of the differences that occur within low control workplaces. The categories resulting from the qualitative data analyses were organization-wide (i.e. structure, leadership, support, and individual) giving support to the theory of a multi-level approach to facilitate effective change and employee health (Kuhn, 2006; Dooris et al., 2006).

According to the ecological model and its systems-based orientation, effective change and initiatives in health promotion must address all levels of the organization. Moreover, as stated by Dooris et al. (2006), "Effective mainstreaming is likely to make

health promotion less visible as a tangible entity and a key challenge is to allow the

language of health to recede" (p. 339). In fact, health promotion initiatives that are blind

to an organization's bottom line are at best irrelevant, and at worst risk alienating both

employees and management from their (albeit admirable) intentions (Dooris et al.). This

is particularly pertinent to the military culture where stigma around ill-health still exists

and the convention of order prevails. Perhaps muting the emphasis on "health" and

instead connecting the initiatives with the organization's values would better serve

programs or policies attempting to enhance CF members' sense of job control (Lee,

Cheng, & St Leger, 2005). It is important for researchers to use a variety of methods to

address workplace health, drawing on the leadership principles that include a balance of

intuition and emotion along with rigidity and strategic objectives. This would include

capitalizing on the suggestions and knowledge of frontline employees (Zimmerman,

Lindberg, & Plsek, 2001).

Despite the current vogue in health promotion toward participatory techniques,

equity, and decentralized power, these are not always practical in a military environment

or acceptable in the case of active duty and mission objectives. In the military, increasing

autonomy and empowerment of individuals would be considered beyond current practice

and not entirely germane within a military environment. It is difficult to understand the

need for command and control during day-to-day duties in peaceful environments, yet

entirely prudent in dangerous and life threatening situations. If increasing a sense of job

control is useful for retaining its members, what amount and type of job control is the

best fit for the CF? Can enhancing some level of job control make a difference to

members' sense of cohesion, productivity beyond simply completing a task, and mental

health? In recognizing the realities of the military environment, the way ahead for military health promotion may be starting with the language and issues identified by the participants, their realities and concerns regarding leadership development, task cohesion, and coping behaviours during deployments – directing the focus away from "health" towards the issues that make most sense to CF members and most likely to be implemented by military command.

In sum, emerging from the revised models of job control (Figures 2, 3, 4), several conceptual and practical implications, as well as avenues for further research have been described, that relate to the structure of the workplace, its influence on and from the social context and the individual. In keeping with a settings-based approach to effect change, a comprehensive, multi-level approach to the long-term development of policies, training protocols and cultural practices is recommended. Mindful of the very definition of health promotion itself - , "…to increase control over and improve [peoples'] health…" strategies intended to enhance job control must conform to and be conceivable in a military context. Ultimately, such strategies need to be compatible with, contribute to and update the tradition that is captured in the phrase 'command and control'.

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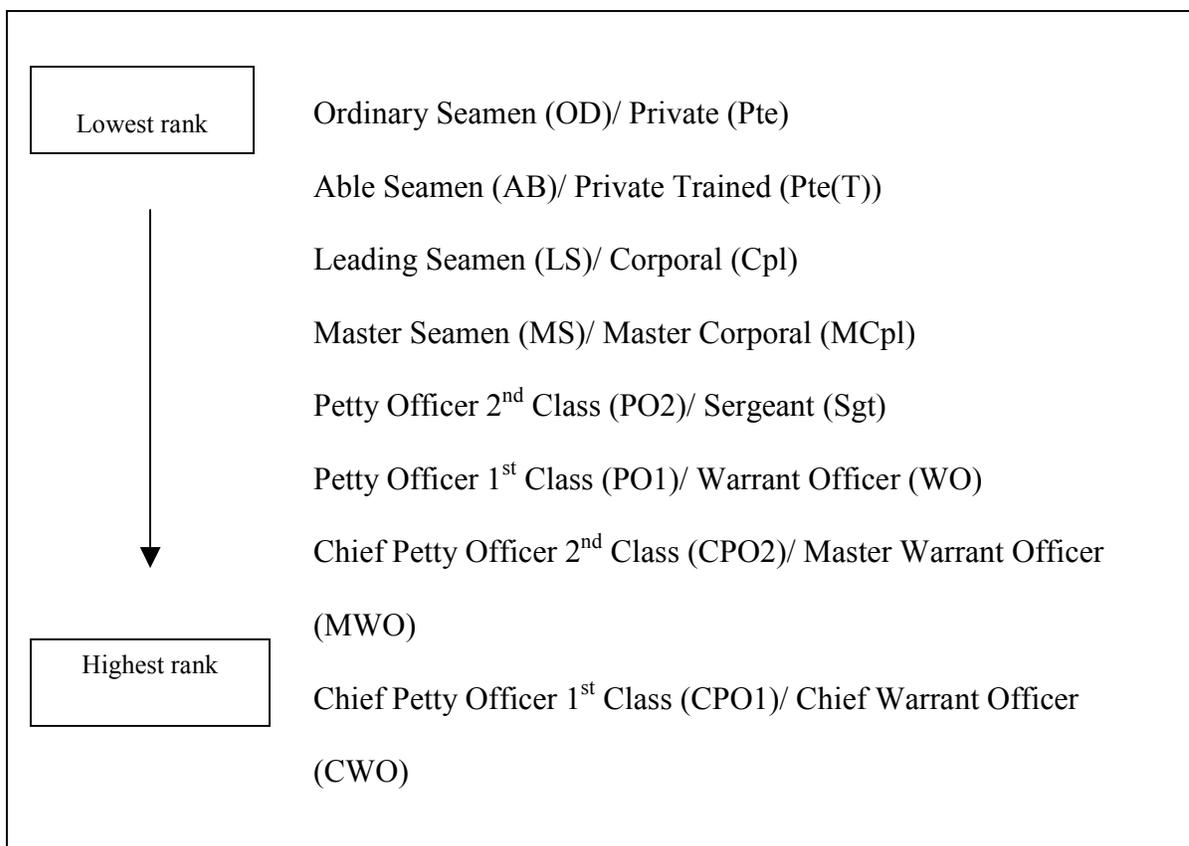
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APPENDIX A

Canadian Forces Rank Structure for NCMs - Lowest to Highest

Lowest rank	Ordinary Seamen (OD)/ Private (Pte)
	Able Seamen (AB)/ Private Trained (Pte(T))
	Leading Seamen (LS)/ Corporal (Cpl)
	Master Seamen (MS)/ Master Corporal (MCpl)
	Petty Officer 2nd Class (PO2)/ Sergeant (Sgt)
	Petty Officer 1st Class (PO1)/ Warrant Officer (WO)
	Chief Petty Officer 2nd Class (CPO2)/ Master Warrant Officer (MWO)
Highest rank	Chief Petty Officer 1st Class (CPO1)/ Chief Warrant Officer (CWO)

APPENDIX B

Unit Moral Profile (2006)

Your participation in completing this questionnaire or any specific question is voluntary. If you decide to participate please answer the questionnaire honestly.

Thank you for your participation.

Please put an X on the number that best reflects your answers.

1	2	3	4	5
Completely Disagree	Disagree	Neither Agree or Disagree	Agree	Completely Agree

Job Control (Autonomy)

1.	I feel like I can make a lot of inputs to deciding how my job gests done.	1 2 3 4 5
2.	I feel pressured at work	1 2 3 4 5
3.	I am free to express my ideas and opinions on the job.	1 2 3 4 5
4.	When I am at work, I have to do what I am told	1 2 3 4 5
5.	I feel like I can pretty much be myself at work	1 2 3 4 5
6.	There is not much opportunity for me to decide for myself how to go about my work..	1 2 3 4 5
7.	I am allowed and encouraged to show initiative.	1 2 3 4 5
8.	I can do my work according to my own jodgement.	1 2 3 4 5

Organizational Support

1	2	3	4	5
Completely Disagree	Disagree	Neither Agree or Disagree	Agree	Completely Agree

1.	The CF/DND values my contribution	1 2 3 4 5
2.	It the CF/DND could hire someone to replace me at a lower salary, it would.	1 2 3 4 5
3.	The CF/DND does not appreciate any extra effort from me.	1 2 3 4 5
4.	The CF/DND strongly considers my goals and values.	1 2 3 4 5
5.	The CF/DND would ignore any complaint from me.	1 2 3 4 5

6.	The CF/DND disregards my best interests when it makes decisions that affect me.	1 2 3 4 5
7.	Help is available from with the CF/DND when I have a problem.	1 2 3 4 5
8.	The CF/DND really cares about my well being.	1 2 3 4 5
9.	Even if I did the best possible job, the CF/DND would fail to notice.	1 2 3 4 5
10.	The CF/DND is willing to help when I need a special favour.	1 2 3 4 5
11.	The CF/DND cares about my general satisfaction at work.	1 2 3 4 5
12.	If given the opportunity the CF/DND would take advantage of me.	1 2 3 4 5
13.	The CF/DND shows very little concern for me.	1 2 3 4 5
14.	The CF/DND cares about my opinions.	1 2 3 4 5
15.	The CF/DND takes pride in my accomplishments at work.	1 2 3 4 5
16.	The CF/DND tries to make my job as interesting as possible.	1 2 3 4 5

Job Performance

1	2	3	4	5
Completely Disagree	Disagree	Neither Agree or Disagree	Agree	Completely Agree

1.	I consider myself hardworking.	1 2 3 4 5
2.	I consider myself productive.	1 2 3 4 5
3.	I consider my unit effective in terms of attaining its objectives.	1 2 3 4 5

Health at Work (mental health)

1	2	3	4	5
Completely Disagree	Disagree	Neither Agree or Disagree	Agree	Completely Agree

1.	Did you feel tired-out for no good reason?	1 2 3 4 5
2.	Did you feel nervous?	1 2 3 4 5
3.	Did you feel so nervous that nothing could calm you down?	1 2 3 4 5

4.	Did you feel helpless?	1 2 3 4 5
5.	Did you feel restless or fidgety?	1 2 3 4 5
6.	Did you feel so restless that you could not sit still?	1 2 3 4 5
7.	Did you eel depressed?	1 2 3 4 5
8.	Did you feel that everything was an effort?	1 2 3 4 5
9.	Did you feel so sad that nothing could cheer you up?	1 2 3 4 5
10.	Did you feel worthless?	1 2 3 4 5

Cohesion

1	2	3	4	5
Completely Disagree	Disagree	Neither Agree or Disagree	Agree	Completely Agree

1.	I enjoy being part of the social activities of my section	1 2 3 4 5
2.	I'm happy with the amount of teamwork involvement I have within the section.	1 2 3 4 5
3.	I would miss the members of my section if I were to stop working with them.	1 2 3 4 5
4.	I'm happy with my section's level of motivation to succeed.	1 2 3 4 5
5.	My section does not give me enough opportunities to improve my personal performance.	1 2 3 4 5
6.	In a social context, I enjoy other parties more than section parties.	1 2 3 4 5
7.	I do not like the work practices of my section.	1 2 3 4 5
8.	My section members have conflicting aspirations for the section's performance.	1 2 3 4 5
9.	We all take responsibility for any failure or poor performance by our section.	1 2 3 4 5
10.	My section members rarely party together.	1 2 3 4 5
11.	My section members have conflicting aspirations for the section's performance.	1 2 3 4 5
12.	My section would like to spend time together even during time off and leave.	1 2 3 4 5
13.	Members of my section do not stick together outside of work.	1 2 3 4 5
14.	My section members do not communicate freely about each member's responsibilities in the section.	1 2 3 4 5

APPENDIX C

Semi-structured Interview Questions

1. Think of a time at work when you felt you had very little or no control over a situation. What were the general circumstances leading up to this experience? (context)

   - How many were involved

   - What was going on

   - Where did it take place

2. How did you feel about your job at this time? (focus)

3. Describe what you observed of others in this situation, your co-workers and your supervisor (Support).

4. Describe how you dealt with this situation. What did you do? And what were you thinking regarding this situation? (Individual characteristics)

   - Do you feel you had the resources to handle the situation?

   - How did it make you feel? Why?

   - Did you keep trying the same approach?

5. What did you feel helped or hindered your level of control over the situation (i.e., structure of your workplace, organizational rules, personal resources, lack of support, physical set-up…)?

6. What were the outcomes of the situation? How did this situation affect your job performance? Did it affect your health? For example, did it make you

anxious, exhausted, affect your sleep, lose weight, did you feel nervous/agitated…?

7. Compared to others that you know on your ship or living on the base, how would you rate your over-all general health (excellent, good, fair, poor)? What factors about your life contribute to your health rating? Did a Medical Doctor ever tell you, you have high blood pressure and/or high cholesterol and/or a fast heart rate? Do you have troubles sleeping? Do you find you are often anxious? Are you presently on prescribed medication?

APPENDIX D

Acronyms

AB	Able Seamen
BPSO	Base Personnel Selection Officer
CF	Canadian Forces
CFB	Canadian Forces Base
CF HLIS	Canadian Forces Health and Information Survey
CPO1	Chief Petty Officer (1st class)
DND	Department of National Defence
MARPAC	Maritime Pacific
MS	Master Seamen
NCM	Non-commissioned Member
OD	Ordinary Seamen
PER	Personal Evaluation Report
UMP	Unit Morale Profile