

Is a Change as Good as a Rest?

Investigating Part-Time Reserve Service as a Method of Stress Recovery

By
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Abstract

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By Patrick A. Horsman

Abstract: Reservists in the Canadian Armed Forces have received little if any attention from an occupational health perspective despite the fact that many hold a full time civilian job and work part-time for the military. The purpose of the present study was to examine: A) How stressors from the civilian and Reserve job interact in predicting mental health and organizational outcomes; and B) If Reserve Service can act as a form of recovery experiences; and if so, whether or not those experiences can buffer the impact of stressors experienced in the civilian job. Results indicate that the effects of stressors remain within job in predicting job satisfaction and turnover; that recovery experienced during Reserve employment has a direct impact on strain symptoms; and that these Recovery Experiences also moderate the relationship between conflict in the civilian workplace and strain. Study implications, limitations and directions for future research are discussed.

August 30, 2011

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Is a Change as Good as a Rest?

Investigating Part-Time Reserve Service as a Method of Stress Recovery.

It is the working man who is the happy man. It is the idle man who is the miserable man.

–Benjamin Franklin

The Canadian Forces (CF) consists of two primary components: the Regular Force soldiers who commit themselves full-time to military service, and Reserve personnel who are trained to perform the duties of a military soldier but are under no obligation to deploy or move geographic regions like their Regular Force counterparts. While considerable research has been done on different aspects of occupational health related to military service in the Regular Force (see Lefroy, 1982; Leiter, Clark, & Durup, 1994; Dobрева-Martinova, Villeneuve, Strickland, & Matheson, 2002; Hackett, 2002; Fikretoglu, Brunet, Guay, & Pedlar, 2007), little work has been done concerning occupational health psychology in the Canadian Reserve Forces.

The role of Reservists in the Canadian Forces, as indicated by the government of Canada, “is to augment, sustain, and support the Regular Force at home and abroad” (Forces.ca, 2011). They also train to perform as an aide to civil power in case of domestic emergencies. Reserve members often complete periods of full-time work on a contractual basis, and back fill vacant Regular Force jobs for temporary periods of duty. While some Reserve soldiers work full-time on a contract basis in key planning and support positions across the country, the vast majority work part-time, one evening per week and one weekend per month with the option to go on course or short contracts to support training during the summer months (Park, 2008). Outside of the military, part-time Reservists are normally from one of three different groups: full-time students finishing high school or

attending local colleges or universities; seasonal or part-time workers in other fields that require supplemental income to increase annual earnings; or individuals with established full-time civilian careers who serve in the military during their off-work time (Park, 2008). It is this latter group of individuals, the full-time civilian part-time soldier, which is the focus of the current study.

At present, there exists the widespread belief among employees that working longer hours is detrimental to physical and psychological wellbeing (e.g., Ettner & Grzywacz, 2001). Concerns that working hours are increasing, at least for some groups of employees, have led to researchers to more closely examine the impact of work hours on a variety of individual outcomes. For the most part, research in this field has focused on what would be deemed negative outcomes. For example, longer work hours are associated with outcomes such as employee stress (e.g., Park, Kim, Chung & Hispana, 2001), accidents (Trimpop, Kirkaldy, Anthensau & Cooper, 2000), lifestyle behaviors (Sparks, Cooper, Fried & Shirom, 1997) and work – family functioning (Ng & Feldman, 2008).

To extrapolate, working two jobs, (i.e. a full-time civilian job and a part-time Reserve job), would be predicted to negatively impact individual well-being as it, by definition, involves working longer hours each week. However, this simplistic prediction does not consider the nature of the work or the characteristics of the working environment. In line with this idea, a meta-analytic review by Sparks et al. (1997) suggested that any negative effects of working long hours on physical health may be exacerbated if the job involved primarily sedentary work or required sustained attention

overtime. Similarly, one might expect that long hours are harder on individuals when their jobs require a high level of physical exertion (Totterdell, 2005). Yet individuals work extra hours for a variety of reasons, and that these reasons may matter in determining the effects of working extra hours on individual outcomes. In their meta-analysis, Ng and Feldman (2008) hypothesize, and find support for the suggestion, that working extra hours is a function of social identity. Although the effects are small to moderate, they found that individuals who see their work as central to their lives are more likely to work longer hours, as are individuals with higher educational and organizational levels. Brett and Stroh (2003) reported similar findings when they tried to identify why male managers worked in excess of 60 hours per week. They reported that the best explanation was that male managers were highly rewarded for doing so and that the managers who worked long hours received higher salaries and reported higher psychological rewards (e.g., job satisfaction, job involvement) than managers who worked shorter hours.

These findings are consistent with Conservation of Resource Theory (COR), which argues that people are motivated to obtain and protect psychological resources that they deem to be valuable (Hobfoll, 2001). Furthermore, COR dictates that individuals will invest their psychological resources, when necessary, if they feel they will gain more resources as a consequence. In this case, working more hours could be deemed as making an investment of psychological resources in the short term (i.e. experiencing stress or work-life conflict) in order to gain more valuable resources (i.e. higher salaries, job satisfaction, or social standing) in the future. The same argument, therefore, might be

made regarding Reserve employment; whereby an individual may willingly work a second job if it offers them the opportunity to gain valuable psychological resources as a consequence.

In the present study, I focus on job demands-resource theory (Bakker & Demerouti, 2007), which draws upon COR, to argue that part-time military employment may offer both additional stressors and additional resources to individuals who hold a full-time civilian occupation. Specifically, I will examine whether employment in the Reserves provides the individual with resource-recovery experiences that might mitigate the impact of stressors from their civilian occupation. In this sense, Reserve Military employment is seen as not just adding hours to the work week but as affording individuals psychological resources via recovery experiences that enhance their civilian employment experience.

Why Examine Work Stress?

By now the negative consequences of work stress on both the individual and organization have been well documented. Some often cited effects of workplace stress on the organization include: decreased organizational commitment (e.g. Klassen & Chiu, 2011; Meyer, Stanely, Herscovitch, & Topolnysky, 2002), decreased satisfaction with the job (e.g. Zangaro, & Soeken, 2007), increased turnover (Podsakoff, LePine, & LePine, 2007), absenteeism (Darr & Johns, 2008), and increased counterproductive work behaviours (e.g. Tucker, Sinclair, Mohr, Adler, Thomas, & Salvi, 2009). Conversely, the effects of workplace stress on the individual range from fatigue, burnout, and lower level strain (eg. Machin & Hoare, 2008), to work-family conflict (Kelloway, Gottlieb, &

Barham, 1999), gambling and other addictive behaviours (e.g. Elman, Tschibelu, & Borsook, 2010), increased blood pressure, increased risk of coronary heart disease (Kivimäki, Virtanen, Elovainio, Kouvonen, Väänänen, & Vahtera, 2006), and other physical symptoms of strain.

The causes of workplace stress are equally numerous and include, but are not limited to: organizational role stressors, difficult work schedules, organizational injustice, poor leadership, work-family conflict, harassment and discrimination, workplace aggression, the physical work environment, a lack of workplace safety, economic related stress, technology stressors, problematic industrial relations, and even organizational politics (Barling, Kelloway, & Frone, 2005). Academic efforts have now moved beyond the mere identification of stressors and outcomes to a more thorough examination of the interaction between the situation and the individual (Cooper, Dewe, & O'Driscoll, 2001). Recent work has focused on variables in the individual and the environment that moderate and mediate the stress-outcome relationships, all of which are involved in this particular instance. This study endeavours to build a structural model which delineates the process by which stressors and organizational outcomes in each job interact with psychological health and a theoretical process of resource recovery that may occur during Reserve employment.

Work Characteristics as Stressors

While there are many stressors that one could examine that might be prevalent in both the civilian and Reserve occupation, stressors related to characteristics of the working environment seem most appropriate in this case. Specifically, this study will

examine two role stressors, ambiguity and overload, in addition to interpersonal conflict at work. Each of these stressors has an established literature and known relationships with other variables of interest in this study.

Role ambiguity is defined as having an inadequate understanding of not only the tasks to be completed but also what steps are to be taken in order to accomplish those tasks. In contrast, role overload is seen as having more work than is possible to complete based on the time and resources available (Örtqvist & Wincent, 2006). While the two are indeed related to aspects of the job, they are not necessarily related to each other in any large capacity. A meta-analysis of the relationship between both role stressors and various outcomes conducted by Örtqvist and Wincent (2006) found that they also had different relationships with the consequences of interest. While role overload tended to be most highly related to emotional exhaustion, propensity to quit, and tension; ambiguity, on the other hand, was also related to decreased job satisfaction, commitment, and other outcomes in addition to sizeable relationships with propensity to quit, and tension. Although these two facets of role stress may act differently, in combination they are still considered to be a sizeable stressor resulting from the work environment (for a detailed review see Jex & Beehr, 1991).

Interpersonal conflict at work was also of great interest in this case. Not to be confused with role conflict, which some consider as being an embedded aspect of role overload (Cooper, Dewe, & O'Driscoll, 2001), interpersonal conflict includes the full range of conflict behaviours that occur between individuals, including minor disagreements and arguments, rudeness, or more heated yelling matches or even physical

assault (Dijkstra, De, Carsten, Evers, & van Dierendonck, 2009). Many people consider interpersonal conflict to be one of the most important characteristics in the work environment (e.g. Keenan & Newton, 1985) and it has been shown to result in increased strain if left unchecked (Dijkstra, De, Carsten, Evers, & van Dierendonck, 2009). Interpersonal conflict is of particular interest as members of the military are sometimes stereotyped as experiencing high levels of conflict and aggression in the workplace. Further, even if conflict and aggression may be considered socially acceptable in a military environment, authors have previously demonstrated that it is detrimental. For instance, Jex and Thomas (2003) examined a sample of American soldiers and found that interpersonal conflict had a negative impact on group functioning. Therefore the stressor variables of interest in this study consisted of the two previously mentioned role stressors and interpersonal conflict.

Stress Outcomes

As with all research, decisions must be made early on regarding what outcome measures to include and their purpose. Jex and Crossley (2005) identify a taxonomy of stress outcomes which differentiates between psychological, physical, and behavioural outcomes for the individual and the organization. Due to the constraints at hand this study opted to examine the psychological realm of this taxonomy, and therefore included measures of general well-being as an individual outcome and job satisfaction and turnover intent as relevant outcomes for the organization.

Job satisfaction is one of the most studied variables in I/O Psychology. It is, of course, a measure of how satisfied an individual is with their job, and can be measured

globally or via specific facets such as pay, work hours, environment etc. (Spector, 1997). Decreased job satisfaction has been established as an important consequence of workplace stress (Klein & Verbeke, 1999) and also as an antecedent variable in predicting job performance and turnover intentions (e.g. Shore & Martin, 1989). Likewise, turnover intentions, although still an attitudinal measure and not the actual behaviour of quitting, remains one of the most salient attitudinal outcomes to organizations as the costs of training a new employee to are immense, and in many cases it takes some time for the new employee to get up to speed. Role stressors have been shown to predict turnover intentions both directly and indirectly through job satisfaction (Antón, 2009; O'Driscoll, & Beehr, 1994).

As discussed by Warr (2005) general mental health consists not only of the presence of mental health *symptoms* but also earlier indicators of subjective well-being such as affective states and fatigue. Affect consists of current feelings, or moods, and can be positive or negative (Warr, 2005). Mood is an important pre-cursor to individual behaviours; in fact, many organizational outcomes may be entirely mediated by mood (Bruk-Lee & Spector, 2006). For example, Spector and Fox (2002) found that negative emotional states in response to work related events were directly linked to counterproductive work behaviours such as sabotage, theft, hostility, and work avoidance. Increased negative affect is also highly related to experiencing role-related stress in the occupation (Barling & MacIntyre, 1993).

Work-related fatigue, which is the result of repeated exertion throughout the working day, has also been related to health problems (Meijman, 1989). Fatigue is

considered to be cumulative, and when insufficient recovery occurs following the working day the effects of fatigue are compounded as the next working day begins (Van der Beek, Meijman, Frings-Dresen, Kuiper, & Kuiper, 1995). Fatigue, sometimes termed need for recovery, has been shown to predict health complaints and sleep quality (Sluiter, van der Beek, & Frings-Dresen, 1999). Theoretically, it is thought that fatigue is a mediator in the stress-strain relationship such that insufficient recovery from fatigue results in more advanced forms of strain such as psychological, physical and behavioural symptoms (Winwood, Winefield, & Lushington, 2006).

In comparison, psychological strain, as another marker of mental health, is also cited as a precursor to more advanced physiological and behavioural strains (Kahn & Byosiere, 1992). Symptoms of psychological strain include anxiety, feelings of worthlessness, irritation, and emotional exhaustion amongst other variables (Barling, Kelloway, & Frone, 2005). Indeed, the correlation between workplace stressors and strain is well established, as are the consequences (Jex & Beehr, 1991) and the inclusion of psychological strain in this study warrants little justification. It is thought that together, in combination, psychological strain, fatigue, and negative affect make up a strong indicator of general mental health.

Yet the relationships between workplace stress and each of these outcome variables do not occur in isolation. For instance, job satisfaction has been previously shown to share sizeable correlations with burnout, self-esteem, depression, and anxiety (Faragher, Cass, & Cooper, 2005). Such a relationship could be the result of a third variable which causes or is caused by both (i.e. stressors and turnover intentions) or a

more linear process involving mediation. As evidence in support of the latter, a meta-analysis completed by Huang (2009) found that job satisfaction mediated the relationship between stressors and strain. Furthermore, Structural Equation Modeling was used by Conley and You (2009) to examine the relationships between role stressors, satisfaction, commitment, and turnover intent in a sample of teachers. They found that the relationship between stressors and turnover intent was mediated by both job satisfaction and commitment. These findings informed the present study by suggesting a process of mediation would occur amongst the outcome variables, which was incorporated into different versions of the theoretical model presented later on.

Stress Recovery

Recently, recovery experiences have received a great deal of attention as a powerful individual difference moderator. Stress recovery was born of the respite literature, and considers the quality of experiences individuals have during their off work time; or their time away from the stressors of the working environment (Westman & Eden, 1997). While the specific activity an individual might engage in will vary considerably it may provide positive benefits to the individual as long as it engages one of the many recovery mechanisms. According to early work on recovery experiences by Sonnentag and Fritz (2007) these mechanisms include psychological detachment from the work environment, relaxation which increases positive mood, pursuit of mastery experiences and learning which increases self-efficacy and control over off-work time, and improved feelings of control. In addition, early writings on recovery experiences by Meijman and Mulder (1998) also included a component of social affiliation. Stevens and

Day (2011) investigated an expanded version of the recovery scale which found a social component, amongst other facets such as hope/planning, optimism, and physical activity. Simultaneous work by Bourgeois, Sommerhalder, Horsman, and Day (2010) also provided additional support for the addition of a social affiliation component into recovery experiences.

Theoretically, recovery experiences work opposite the stress process and buffer the negative effects of stress preventing more advanced strain (Meijman & Mulder, 1998). Work by Fritz and Sonnentag has shown that recovery activities engaged during the weekend are related to improved job performance following the weekend (2005) and that relaxation and mastery experiences coupled with positive work reflection improved well-being and performance if engaged during a week's vacation (2006). Further, poor recovery experiences contribute to increased fatigue and poor well-being (Sonnentag & Zijlstra, 2006). In essence, recovery experiences afford the individual an opportunity to rebuild psychological resources which in turn helps them to combat the negative effects of workplace stressors (Fritz & Sonnentag, 2006).

As can be seen, the majority of published recovery research to date has focused on traditional respites from work, such as weekends and longer vacations. Although recovery theory explicitly states that it is not the activity itself that matters, only the process that is activated, only one study has examined military service or secondary roles as a recovery experience. Etzion, Eden, and Lapidot (1998) investigated extended periods of Reserve Service in the Israeli military as a form of respite using a matched pairs design. Following a period of Reserve Service those who served showed significant

decreases in stress and burnout, and this effect was moderated by the degree of psychological detachment the member experienced while they were gone. This work clearly informed the present study as it demonstrated that Reserve Service could indeed act as a form of respite, and that recovery experiences could moderate the stressors effects. However, this study involved a lengthy break of several months from the stressors of civilian employment and unfortunately does not elude as to what day-to-day effects service in the Canadian Forces Reserves might produce. In addition, it considered only the facet of psychological detachment despite the fact that service with the Reserves may also afford opportunities to engage the other facets of recovery, particularly mastery experiences and social affiliation.

Reserve Service & the Dual Role

As previously mentioned, this study will focus on part-time Army Reserve soldiers in the Canadian Forces. While the relationships between role stressors, satisfaction, turnover, and indicators of psychological health presented above are well established in civilian populations, full-time military populations have received considerably less attention and part-time Reserve soldiers even less so. On the Regular Force side, a study of 1068 members of the CF by Dobрева-Martinova, Villeneuve, Strickland, and Matheson (2002) found that occupational role stress predicted both individual strain and job satisfaction. They also examined the impact of leadership, support, and coping strategies on those relationships but found that despite contributing main effect variance they did not interact with role stressors to buffer their effects. Similarly, another study by Day & Livingstone (2001) examined whether coping style

could moderate the effect of acute and chronic stressors on health symptoms in a sample of 521 military personnel. While positive coping styles had no impact, negative coping styles in many cases amplified the impact of the role stressors.

While these studies indicate that the stressor-strain process in military employment is likely to mirror that of the civilian occupation, and that coping style does not buffer those relationships, they do not provide any evidence as to how the two occupations might differ within person between jobs. There is one publication, research by Schaubroeck, Judge, and Taylor (1998), which has examined differences across jobs for Reserve personnel. They found that individual reports of job satisfaction and role conflict were correlated across job, but that the relationship was not of a high magnitude, indicating that self-reports of job attitudes and experiences were likely not dispositional in nature. Outside of the military, two job studies have become a popular way to investigate within person variability on a number of issues. For example, Inness, Barling, and Turner (2005) recruited 105 individuals with two jobs in order to examine the impact of individual difference variables on supervisor-targeted aggression. They found that although individual characteristics were a contributing factor, situational variables explained proportionally more variance. In addition, their results also indicated that prediction of supervisor targeted aggression was constrained to within-job, and that situational factors they examined in one job did not correlated with behaviours in the other. Thus, a similar design was adopted to examine the within person between job effects for those who serve in the Reserves in an attempt to address the aforementioned shortcomings of the literature surrounding part-time Reserve employment.

Hypotheses

The primary intent of the present study was to develop a path model which included aspects of both civilian and military employment, organizational outcomes, and health outcomes for the individual. While the focus of this study was exploratory, it was entered into with the purpose of examining several broad questions. At a very basic level, one was to confirm whether previous findings by Schaubroeck, Judge, and Taylor (1998) regarding experiences differing within the individual across jobs for Reserve members holds true for other constructs, such as overload, ambiguity, interpersonal conflict, and turnover intentions. Additionally, because of the voluntary nature of Reserve Service we generally expected more positive responses from the Reserve job. Therefore hypothesis one:

H1: There will be significant differences in self-reports of Civilian and Reserve employment experiences. Specifically, individual reports of stressors experiences will be higher in the civilian occupation, as will turnover intentions, while reports of job satisfaction will be higher in the military occupation.

It was also necessary to know whether stressor experiences predict workplace outcomes primarily within or across jobs. While the majority of evidence indicates that job attitudes should be the results of experiences in that job (e.g. Inness, Barling, & Turner, 2005), it is important to understand if stressors in one job could have an impact on attitudes towards the other; thus hypothesis two models within and across job effects with the expectation that most effects will remain within job:

H2: Stressors will be related to job satisfaction and turnover intent within each job, but not across jobs.

It is also thought that the relationship between stressors and turnover intent would be at least partially mediated by job satisfaction based on findings by Conley and You (2009). Moving beyond the confines of each individual job, hypothesis three attempted to determine which variables in the study contributed to individual well-being. In this case, well-being consisted of a combination of self-reports on psychological strain symptoms, fatigue, and negative mood occurrence. It was expected that stressors in each occupation would contribute to negative well-being, and that this relationship might be mediated by job satisfaction as indicated by Huang (2009). In addition, it was hypothesised that the quality of recovery experiences in the Reserve occupation would contribute positively to well-being. Therefore hypothesis 3 adds psychological well-being and recovery to the model:

H3: Civilian stressors, military stressors, and recovery experiences during military employment will predict self reports of psychological well-being.

If all prior hypotheses were true, and there was a main effect of recovery experiences on well-being, it would open the door for the final hypothesis. Knowing that Reservists have previously reported heightened recovery experiences while serving (Etzion, Eden, & Lapidot, 1998) and that higher quality recovery experiences have been linked with reduced burnout and stress (Sonnentag & Zijlstra, 2006) then one might believe that Reserve Service could contribute to positive well-being by affording opportunities for resource recovery which in turn buffers the effect of work stressors from the primary civilian job on strain. Despite the fact that coping style has been previously shown not to moderate within job (Dobrevva-Martinoval, Villeneuve, Strickland, & Matheson, 2002), let alone across job, it was felt that recovery experiences offered promise as a buffer against

the negative effects of workplace stressors. Specifically, it was hypothesised that those Reservists who experienced higher levels of recovery on the job would report lower levels of psychological symptoms despite exposure to equivalent stressors in the civilian job. Thus the fourth hypothesis added an interaction term to the model:

H4: On the job recovery experiences from the part-time Reserve Military job will moderate the relationship between stressors in the civilian job and individual well-being outcomes such that the impact of conflict on strain symptoms will be reduced at high levels of recovery.

Each of these hypotheses were tested via a process of exploratory structural equation modeling, which resulted in a model of relatively good fit; the results of which are discussed herein.

Method

Design & Participants

This study adopted a cross-sectional design in order to explore within-person across job variance in response to questions about the workplace and the individual. A total of N = 331 Army Reservists from the Land Force Atlantic and Land Force Central regions were recruited through military channels to complete a short, voluntary survey. The response rate was approximately 65%. Due to the specific hypotheses being examined, the sample consisted only of those who held a full-time civilian job outside of the military and worked for the Army Reserves on a part-time basis. In the Canadian Forces this is called Class “A” service, and typically consists of one regular training evening per week and one weekend per month. In total, 24 different military units were represented, with 22.4 % of the sample coming from the Atlantic Region, which includes Nova Scotia, New Brunswick, Prince Edward Island, and Newfoundland, while the

Table 1
Study Participants by Military Occupation

MOSID	Occupation	N	%
00005	Crewman	18	5.4
00008	Artilleryman	27	8.2
00010	Infantryman	113	34.1
00015	Lineman	3	.9
00129	Vehicle Technician	7	2.1
00161	Military Police	24	7.3
00164	Cook	4	1.2
00166	Musician	4	1.2
00168	Supply Technician	7	2.1
00171	MSE Operator	2	.6
00178	Armoured Officer	2	.6
00179	Artillery Officer	6	1.8
00180	Infantry Officer	27	8.2
00181	Engineer Officer	2	.6
00204	Legal Officer	1	.3
00210	Musician Officer	2	.6
00213	Intelligence Officer	1	.3
00214	Military Police Officer	1	.3
00298	RMS Clerk	11	3.3
00328	Logistics Officer	4	1.2
00329	Signal Operator	22	6.6
00334	Medical Technician	1	.3
00339	Combat Engineer	23	6.9
00341	Signals Officer	9	2.7
00349	Chaplain	2	.6
	Missing	8	2.4
	Total	331	100

remainder were from all across the Central Ontario region. At the request of the military ethics board, age was collected as a categorical variable. While the ages of participants ranged from between both extremes of 16 and 60 years old the vast majority fell between 16 and 45, with the most frequently reported category being the range of 26-35 years at 27%. Not surprisingly, at least 80 % of the sample was male while the remainder was female or not indicated.

In total, 25 different military occupations were represented in the study. The most common were Infantry NCM, Artillery NCM and Infantry Officer. For a complete breakdown of the frequency of each military occupation refer to Table 1. In comparison, the civilian occupations represented in the study were quite

diverse. Although each self-report job title was not classified in the same fashion as the military structure, job types ranged from farming and agriculture to public works, office duties, and teaching. The average tenure in the civilian job was $M = 82$ months ($SD = 92$) while it was somewhat higher in the Reserves at $M = 127.8$ months ($SD = 108$).

Measures

The survey instrument consisted of 11 scales and several demographic questions addressing aspects of workplace stressors, job characteristics, job attitudes and health outcomes. Because of the within-person across job design of this study any scale designed to address aspects of a specific job was asked twice; once about the primary civilian occupation and once in regards to the part-time Reserve occupation. The entire survey totalled 138 items and took participants about 20-30 minutes to complete. Descriptive statistics and inter-scale correlations for each scale are presented in Table 2.

Workplace Stressors. Three short established scales were used to capture a range of workplace stressors from within each occupation. Each workplace stressors scale was asked twice; once targeted at each occupation.

Workplace Conflict. Conflict at work was measured using the Interpersonal Conflict at Work Scales (ICWS) developed by Spector and Jex (1998). The ICWS consists of four items asking about the frequency of conflict behaviours in the workplace (e.g. "How often do other people yell at you at work?") rated on a five-point frequency scale ranging from 1 "*never*" to 5 "*very often*." Higher scores indicate a greater reported amount of workplace conflict ($\alpha_{\text{civilian}} = .83$; $\alpha_{\text{military}} = .81$).

Role Ambiguity. Role ambiguity was measured using a four-item scale developed by Kelloway and Barling (1994), which was validated on CF military personnel. Participants rated their level of agreement on a seven-point Likert scale (1, *Strongly Disagree* to 7, *Strongly Agree*) to statements regarding the clarity of their work role (e.g. “I don’t know what performance standards are expected of me”). Higher scores represent a greater degree of ambiguity. The final version of the scale used in analysis only made use of 3-items, as the one reversed item did not fit psychometrically ($\alpha_{\text{civilian}} = .79$; $\alpha_{\text{military}} = .85$).

Work Overload. Perceived workload was measured using the Quantitative Workload Inventory (QWI) (Spector & Jex, 1998). The QWI uses five items to assess the frequency of work overload (e.g. “How often does your job leave you with little time to get things done?”) on a five-point frequency scale ranging from 1, *less than once per month* to 5, *Several times per day*; where higher average scores indicate a greater perceived workload ($\alpha_{\text{civilian}} = .87$; $\alpha_{\text{military}} = .93$).

Job attitudes. Measured job attitudes included job satisfaction and turnover intent. The attitudes scales were used as a set of mediating and outcome variables that within each job. That is, they were occupation specific and therefore each scale was administered twice, with the civilian job and then the Reserve job as targets.

Job Satisfaction. A one-item measure of job satisfaction (“overall how satisfied are you with your job?”) was used in order to help reduce the total number of items in the survey instrument. Single-item measures have been previously shown to be a valid means of assessing job satisfaction by Wanous, Reichers, and Hudy (1997). Participants rated

their level of agreement with the statement on a seven-point scale of agreement (1, *Strongly Disagree* to 7, *Strongly Agree*).

Turnover Intent. Turnover intent was measured using a three-item scale validated by Kelloway and Barling (1994). Participants were asked to rate their level of agreement with the scale items (e.g. “I often think about quitting my civilian job”) on a 7 point Likert scale (1, *Strongly Disagree* to 7, *Strongly Agree*) with higher scores equating to higher intentions to quit ($\alpha_{\text{civilian}} = .90$; $\alpha_{\text{military}} = .80$).

Health Outcomes. Three measures of psychological health symptoms were selected as outcome variables in order to model the stressor- strain relationship. Fatigue was chosen in addition to psychological strain and negative affect because it has been shown to fully mediate the relationship between stressors and more distal health outcomes such as behavioural strain (Sluiter, Van der Beek, & Frings-Dresen, 1999). Further, because of the intent to model the relationships in this study using SEM a set of three outcomes is ideal in order to indicate a latent psychological strain variable.

Negative Affect. Negative affect was measured using the 10-item negative affect sub-scale of the Positive and Negative Affect Scale (PANAS) (Watson, Clark, & Tellegan, 1988; $\alpha = .85$). Participants rate the extent to which they have felt a particular emotion (e.g. “Nervous.”) over the past several weeks on a five-point scale (1, *Very Slightly* or Not at All to 5, *Extremely*). Higher scores represent a more negative affect.

Fatigue. Fatigue was measured via the need for recovery scale ($\alpha = .70$), an 11-item measure developed by Sluiter, Van der Beek, and Frings-Dresen (1999). Respondents select the most correct response between “yes” or “no” for each of the

questions (e.g. “My job makes me feel rather exhausted at the end of the working day”) and the total number of responses indicating fatigue are added up as a summative score.

Strain. The General Health Questionnaire 12-item version (GHQ 12; $\alpha = .86$), a short version of the GHQ validated by Penninkilampi-Kerola, Miettunen, and Ebeling (2006), was used to measure psychological strain symptoms on a seven-point frequency scale ranging from 1 (*not at all*) to 7 (*all the time*). For example, one item asks “have you lost much sleep from worry?” while another asks “have you been feeling unhappy or depressed?”

On the Job Recovery Experiences. The sole moderating variable of interest in this study is Stress Recovery, which reflects the primary hypothesis that higher perceptions of recovery experienced in the part-time Reserve occupation will buffer the negative impact of workplace stressors on job attitudes and health outcomes in the full-time civilian occupation. In order to measure the moderating variable it was necessary to adapt existing measures of Recovery to reflect on the job experiences. The foundation of the scale reflects the original Sonnentag and Fritz (2007) 16-item measure, which measured the perceived quality of Recovery Experiences across four dimensions (Detachment, Relaxation, Mastery Experiences, & Control). However, the final scale also reflects commentary by Meijman and Mulder (1998), which suggests that recovery experiences involves a social component, and recent work by Stevens and Day (2011) which generated several new items for the existing sub-scales. The final scale was modeled on that used by Bourgeois, Sommerhalder, Horsman, and Day (2010), which incorporates the above noted work and commentary. Each statement was modified so that

it directly applied to the work environment via the stem “While I am at my military job.” In total there were 25 items administered; five items representing each of five sub-scales: Detachment from the civilian job ($\alpha = .88$; e.g. “I distance myself from my civilian work.”); Relaxation at work ($\alpha = .78$; e.g. “I am able to unwind.”); Mastery Experiences ($\alpha = .89$; e.g. “I better myself.”); Control ($\alpha = .88$; e.g. “I take care of things the way I want them done.”); and Social Affiliation ($\alpha = .86$; e.g. “I socialize with others.”). Each statement was rated on a five-point scale of agreement, where 1 represents *I do not agree at all* and 5 *I fully agree*. Therefore higher scores represent a greater degree of on the job recovery experiences.

Because the On the Job Recovery Experiences scale was created for and was the primary focus of this study the psychometric properties had to be closely examined before it could be used in the structural model. More detailed results of the Factor analysis are presented in the results section. Following the factor analysis one item was dropped from each of the 5 sub-scales, resulting in a 20 item measure or recovery experiences for use in hypothesis testing.

Procedure

This study used a military sample, and thus had to pass through a military ethics review process. Once the survey was approved, the support of the army was an integral part of the survey’s success. A letter of support was distributed to all Reserve units in the Atlantic and Central areas by the Chief of Land Staff. This letter identified the purpose of the study and requested that each unit supply a point of contact (POC) to liaise with the research team in order to arrange for the distribution and collection of surveys. Once a

Table 2
Descriptive Statistics and Inter-scale Correlations

Scale	M(SD)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	
Civilian Job																			
1	Conflict	2.02 (.83)																	
2	Ambiguity	2.90 (1.32)	.03																
3	Overload	3.63 (.98)	.27**	-.09															
4	Satisfaction	5.11 (1.78)	-.06	-.33**	.11														
5	Turnover	3.09 (1.98)	.11	.32**	-.07	-.70**													
Military Job																			
6	Conflict	2.00 (.78)	.23**	-.01	.03	-.11	.07												
7	Ambiguity	2.62 (1.28)	.03	.08	.04	.07	-.06	.21**											
8	Overload	3.11 (1.15)	.08	-.01	.17**	-.03	.04	.30**	-.13*										
9	Satisfaction	5.72 (1.19)	-.05	-.04	-.06	.04	.04	-.22**	-.37**	.04									
10	Turnover	2.19 (1.40)	.06	-.05	.02	.06	-.01	.24**	.35**	-.04	-.47**								
Mental Health																			
11	Neg. Affect	1.59 (.60)	.35**	.04	.12*	-.17**	.14*	.31**	.06	.13*	-.04	.19**							
12	N for Rec	5.05 (2.55)	.29**	.08	.27**	-.16**	.16**	.09	.00	.01	-.02	.00	.43**						
13	Strain	2.57 (.88)	.21**	.21**	.02	-.34**	.35**	.31**	.09	.12*	-.07	.21**	.60**	.46**					
Recovery																			
14	Detachment	3.36 (1.01)	-.01	.19**	-.05	-.29**	.24**	-.08	-.16**	.08	.18**	-.18**	.04	-.03	.08				
15	Relaxation	3.01 (.82)	.07	.03	.03	-.16**	.03	.01	-.18**	-.01	.27**	-.20**	.00	-.02	-.10	.28**			
16	Mastery	3.80 (.79)	-.04	.06	-.04	-.15**	.12*	-.13*	-.48**	.22**	.46**	-.26**	-.06	-.05	-.11*	.41**	.37**		
17	Control	2.93 (.93)	.03	.02	.11*	.02	-.08	-.23**	-.16**	-.04	.25**	-.18**	-.04	.03	-.11*	.16**	.38**	.33**	
18	Social	3.40 (.83)	.05	-.04	-.03	-.07	-.01	-.03	-.24**	-.04	.29**	-.23**	-.12*	-.16**	-.29**	.23**	.55**	.42**	.28**

Notes. * = $p < 0.05$; ** = $p < 0.01$

unit identified the approximate number of personnel who met the criteria of full-time civilian, part-time soldier survey packages were mailed out to the unit POC. In each envelope package there was a consent form and the survey; which was distributed to the appropriate personnel at the next opportunity. Once complete the survey was returned to the unit POC sealed in the envelope, who then mailed the completed surveys back to the research team for data input and analysis. The entire distribution and return process took approximately 3 months to complete.

Results

Recovery Experiences Factor Analysis

A factor analysis was conducted to ensure that the recovery experiences items used in the survey loaded on the five intended factors once the stems were changed to reflect on the job experiences. Extraction was via Primary Axis Factoring with Varimax rotation and a forced five-factor solution. The initial solution indicated that several items did not load very highly on the intended factor. One item was therefore removed from each of the five sub-scales in order to remove the problematic items while balancing the scales; resulting in a 20-item measure of On the Job Recovery Experiences. A second Factor analysis yielded a stable five-factor solution which accounted for total of 72.9% of the item variance. The rotated factor matrix and communalities are presented in Table 3.

Recovery Experiences & Group Differences

Next, it made sense to examine the recovery scales more closely in order to evaluate to what extent individuals reported being able to engage in recovery experiences

Table 3
Factor loadings and Extraction Communalities for Recovery Experiences

Sub-Scale/Item	Factor loading					Extraction Community
	1	2	3	4	5	
Psychological Detachment						
1. I forget about my civilian work	.21	.07	.81	.02	.05	.71
2. I don't think about my civilian work at all	.07	.03	.88	.09	.11	.81
3. I distance myself from my civilian work	.19	.04	.79	.07	.00	.67
4. I get a break from the demands of my civilian work	.20	.07	.62	.10	.18	.47
Relaxation						
5. I kick back and relax	-.08	.15	.18	.17	.49	.33
6. I participate in leisure activities	.16	.14	.03	.34	.71	.67
7. I am able to unwind	.17	.17	.05	.25	.76	.70
8. I am able to do the things that I enjoy	.46	.17	.16	.19	.46	.51
Mastery						
9. I make use of my abilities	.64	.20	.22	.19	.04	.54
10. I better myself	.79	.09	.24	.16	.05	.72
11. I learn new things	.82	.13	.13	.15	.06	.73
12. I learn more about something that I enjoy	.80	.12	.16	.21	.16	.76
Control						
13. I decide my own schedule	-.03	.79	.05	.03	.16	.65
14. I determine for myself how I spend my time	.08	.83	.07	.14	.16	.75
15. I take care of things the way I want them done	.27	.78	.01	.10	.09	.70
16. I am able to make choices about the details of my activities	.26	.74	.07	.12	.10	.65
Social Affiliation						
17. I spend quality time with my friends and/or family	.12	.15	.06	.73	.29	.66
18. I socialize with other	.22	.06	.12	.61	.26	.51
19. I keep in touch with friends and/or family	.14	.04	.04	.80	.18	.70
20. I spend time with the people I care about	.27	.16	.11	.72	.14	.65

Notes. Extracted using PAF with Varimax rotation and Kaiser normalization

on the job. Figure 1 shows the mean self-report score for each recovery sub-scale. As can be seen, to at least some extent the study participants reported engaging all of the recovery experiences. Mastery experiences, social affiliation, and psychological detachment were reported as the recovery processes engaged most frequently in the military job. A closer examination of the Reserve military variables by rank, however,

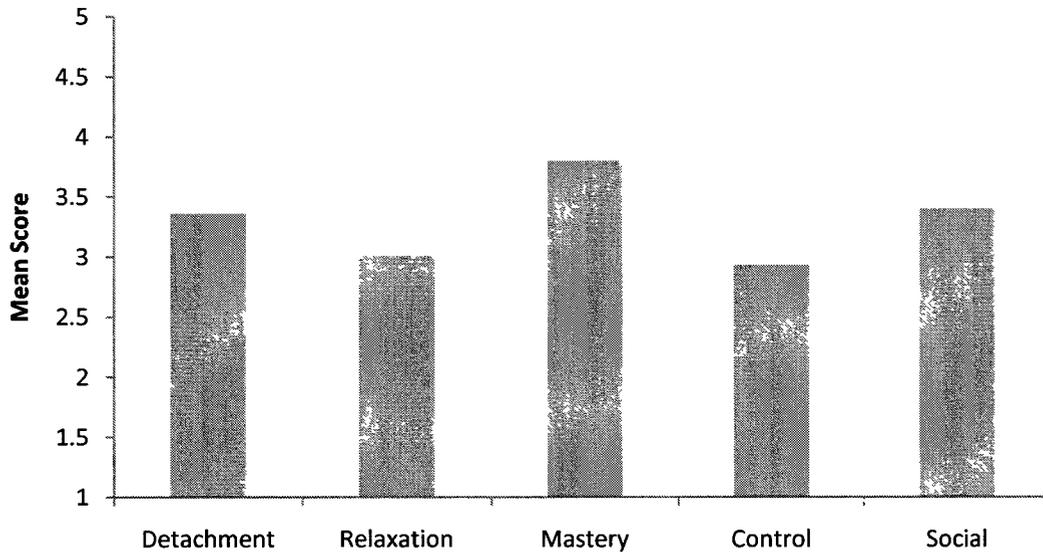


Figure 1. Mean self-report On the Job Recovery Scores during Military Employment

revealed surprisingly few group differences. While the omnibus MANOVA for mean scores by rank was significant ($F_{(50, 1360)} = 2.65, p < 0.001$), there were only significant univariate effects for the interpersonal conflict at work scale, and both the control and social affiliation recovery sub-scales. Table 4 presents the mean scale scores for each of the military variables by rank and the results of the univariate F tests. Pairwise comparisons using Tukey's Honestly Significant Difference (HSD) demonstrated that for the interpersonal conflict at work sub-scale only the two extremes were significantly different; with Privates and Corporals reporting significantly more conflict than Lieutenant Colonels. For the Control recovery sub-scale, pairwise comparisons revealed the exact trend you would expect. The Privates and Corporals as well as the Officer

Table 4
Mean Scale Scores and Univariate Effects by Rank in the Military Occupation

Scale	Pte-Cpl	MCpl-Sgt	WO-CWO	OCdt-Lt	Capt-Maj	LCol+	<i>F</i>	<i>p</i>
Conflict	2.11 (.76)	1.99 (.70)	1.81 (.74)	1.99 (.61)	1.59 (.62)	1.41 (.58)	3.96	<.01
Overload	3.13 (1.31)	2.98 (1.01)	3.37 (1.12)	3.17 (.98)	3.05 (.94)	3.2 (.88)	.41	>.05
Ambiguity	2.47 (1.77)	2.7 (1.33)	3.17 (1.60)	3.01 (1.44)	2.59 (1.20)	2.46 (1.23)	1.57	>.05
Satisfaction	5.67 (1.24)	5.62 (1.30)	6.17 (.71)	5.46 (.93)	5.86 (1.06)	6.75 (.46)	2.22	>.05
Turnover	2.22 (1.45)	2.26 (1.36)	2.19 (1.56)	2.25 (1.53)	2.04 (1.14)	1.33 (.44)	.73	>.05
Detachment	3.38 (1.03)	3.35 (.96)	3.15 (1.07)	3.59 (1.06)	3.26 (.89)	4.06 (.44)	1.27	>.05
Relaxation	3.06 (.88)	3.04 (.81)	3.03 (.68)	2.74 (.69)	2.81 (.67)	2.75 (.65)	1.15	>.05
Mastery	3.83 (.81)	3.68 (.85)	3.81 (.59)	3.89 (.85)	3.83 (.62)	4.06 (.59)	.62	>.05
Control	2.67 (.96)	3.00 (.83)	3.32 (.66)	2.89 (.66)	3.66 (.77)	3.78 (.34)	9.04	<.001
Social	3.51 (.89)	3.46 (.82)	3.58 (.62)	2.96 (.78)	3.00 (.69)	3.21 (.45)	3.34	<.01

Notes. df for all *F* tests = (5, 277). SD in parenthesis under M for each variable.

Cadets to Lieutenants reported significantly less control over their at work activities in comparison to Non-Commissioned Members of the rank of Master Corporal and above and Officers of the rank of Captain and above. In turn, self-reports of control for Lieutenant Colonels were higher than those of Master Corporals and Sergeants, while the differences amongst ranks of Master Corporal to Chief Warrant Officer and Captain/Major were not significant. Tukey's HSD showed no significant differences between groups on the social affiliation sub-scale. A second analysis by group, comparing Combat Arms trades to Support trades also revealed significant multivariate

differences ($F_{(10, 270)} = 2.17, p < 0.05$), although univariate effects indicated the differences were isolated on the interpersonal conflict at work ($F_{(1, 277)} = 8.06, p < 0.01$) and Overload ($F_{(1, 277)} = 7.79, p < 0.01$) scales. Combat Arms trades reported significantly higher interpersonal conflict at work ($M = 2.08, SD = .79$) than the support trades ($M = 1.81, SD = .59$) and significantly higher overload ($M = 3.24, SD = 1.15$) in comparison ($M = 2.82, SD = 1.15$). On all the other military variables the differences between Combat Arms personnel and Support personnel were not significant.

Across Job Differences

Hypothesis one postulated that individuals would report different stress experiences and attitudes between their full-time civilian job and part-time Reserve job, suggesting that the specific variables collected in this study were more state based than trait based. This hypothesis was tested using a 2-factor repeated measures MANOVA. The omnibus test for significant multivariate effects was significant ($F_{(5, 266)} = 17.12, p < 0.001$), indicating that the linear combination of variables was significantly different across jobs. Table 5 includes the mean scores for each of the job specific variables and results of the univariate F tests. As hypothesised, overload and ambiguity were significantly higher in the civilian occupation; as were turnover intentions. Job satisfaction was also significantly lower in the civilian occupation than in the military role. However, self-reports of experienced conflict were not significantly different between jobs.

Table 5
Univariate Effects of the 2-way Repeated Measures MANOVA

Scale	Civilian M (SD)	Military M (SD)	<i>F</i>	df	<i>p</i>	η^2
Conflict	2.01 (.82)	1.99 (.76)	.180	1, 270	>.05	.001
Overload	3.60 (.99)	3.11 (1.17)	34.08	1, 270	<.001	.112
Ambiguity	2.91 (1.33)	2.65 (1.31)	5.93	1, 270	<.05	.021
Satisfaction	5.15 (1.76)	5.73 (1.22)	20.57	1, 270	<.001	.071
Turnover	3.08 (1.98)	2.20 (1.42)	35.93	1, 270	<.001	.117

Notes. MANOVA results for N=271 who had completed all of the items necessary for each scale.

Measurement Model

The measurement model was built at the scale level, thus it included the scale scores for the stressor variables, job satisfaction, and turnover intent in each occupation, a latent mental health symptoms variable indicated by the three health outcomes, a latent recovery construct indicated by the 5 recovery sub-scales, and the recovery x civilian stress interaction terms. In developing the structural model the original intent was for the three stressor variables, overload, conflict, and ambiguity, to act as the three indicators for a latent workplace stressors variable within each job. However, on examination of the zero order correlations it became apparent that the three were virtually orthogonal and that they could not be treated as aspects of the same construct. Although they represent different role stressors the presence of one does not necessarily require the presence of another in this case. Therefore in order for the model to sufficiently work it was necessary to use each stressor variable as a measured construct.

The interaction terms for the model were built using the procedure outlined by Little, Bovaird, and Widaman (2006). This procedure is ideal for use in SEM as it incorporates a completely orthogonalized interaction term and thus does not negatively

impact the main effect estimates once entered into the model. The process for creating an interaction term using this method began by creating a set of multiplicative terms by multiplying the observed indicators of recovery by each of the observed stressor variables. Next, each set of the new interaction products was regressed onto all of the main effect indicators for that product in order to remove all main effect variance. The residual product was saved, thus creating a new set of completely orthogonalized indicator variables. These variables were then used in the model to indicate a latent interaction construct. For more information on this procedure and specific applications please see Little, Bovaird, and Widaman (2006).

The measurement model was run in AMOS 14 after having correlated all exogenous variables. In this case all variables were exogenous save for the indicators of recovery, mental health symptoms, and the three interaction constructs. Fit statistics indicate the measurement model was a good fit to the data. Detailed fit statistics are presented in Table 6 along with the fit statistics for subsequent structural models.

Structural Model

The first model tested, henceforth referred to as model 1, attempted to combine the three stressor variables in each occupation as a formative indicator using the method suggested by Kenny (1994). In this method a path is created between each exogenous stressor variable and the latent formative indicator, with one path fixed to zero in order to provide a scale of measurement. The formative indicator is given no disturbance term, which causes each of the indicator paths to become weighted coefficients. The rationale was that a formative indicator would limit the number of paths to the endogenous

variables and therefore might drastically improve overall interpretability and subsequent ability to evaluate the hypotheses in question. Model 1 included within and across job effects with job satisfaction serving as a partial mediator of the path from the formative indicators to mental health symptoms and turnover intent in each job. The theoretical path model is presented in Figure 2.

Overall fit statistics, which are presented in Table 6, indicated a good fit. However, a closer examination of the structural paths indicated that some of the stressor variables were not loading significantly on the formative indicator. Noting that this could be problematic moving forward it was also necessary to test a competing model that included no formative indicators, only direct paths from each stressor and interaction term to the endogenous variables. Figure 3 demonstrates the theoretical model without the composite indicators. The statistical differences between the fit of models 1 & 2 were negligible. At this point a decision was made to move forward without the composite indicator. The unstandardized and standardized coefficients of model 2 are presented in Table 7.

Table 6
Model Fit Indices

Model	χ^2	df	<i>p</i>	CFI	RMSEA	pclose	AIC	$\Delta \chi^2$	Δ df	<i>p</i>
Measurement	611.2	385	.000	.912	.042	>.05	1029.2			
Model 1	663.9	435	.000	.911	.040	>.05	981.9			
Model 2	643.7	417	.000	.911	.041	>.05	997.7	19.8	18	<.05
Model 3	369.1	169	.000	.890	.060	<.05	535.1			
Model 4	361.6	171	.000	.895	.058	>.05	523.6	7.5	2	<.05

Notes. Model 2 was compared to Model 1. Model 4 was compared to 3 but not 1 & 2 because they were not nested.

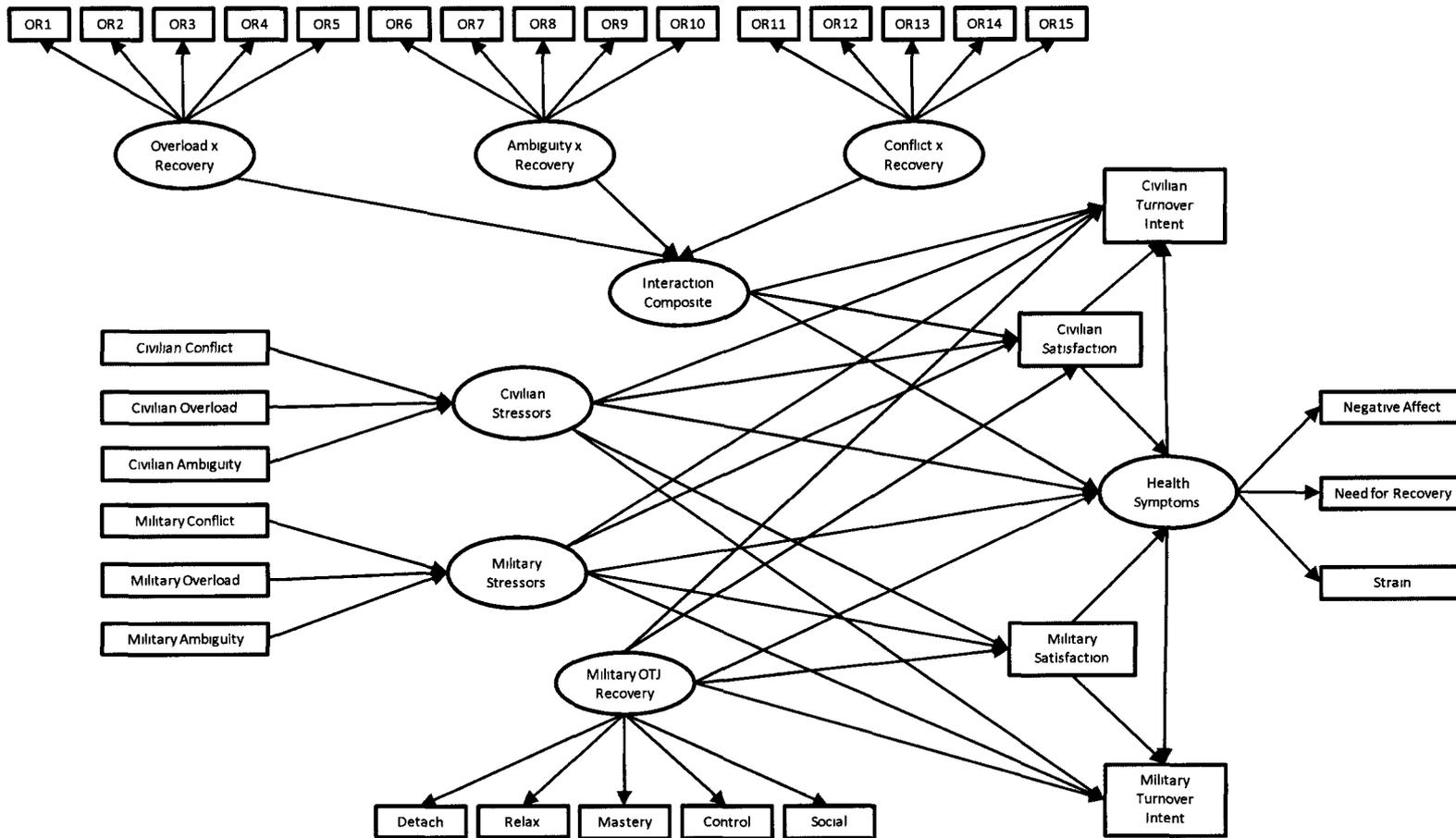


Figure 2. Theoretical Model 1: Full Model with Across Job Effects and Composite Indicators. Exogenous variable inter-correlations and error/disturbance terms have been removed for the purposes of simplicity in presenting the theoretical model.

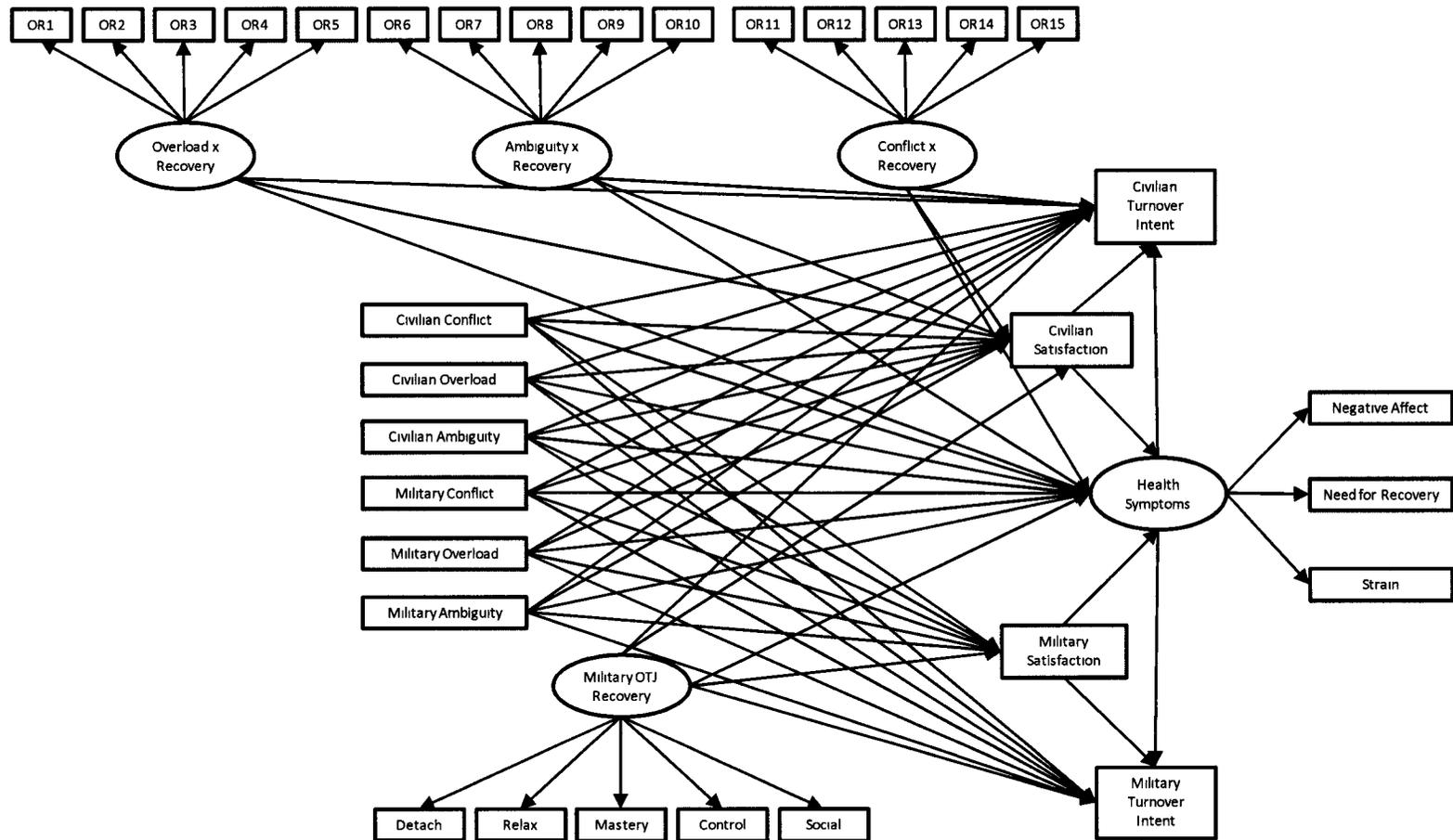


Figure 3. Theoretical Model 2: Full Model with Across Job Effects, No Composites. Exogenous variable inter-correlations and error/disturbance terms have been removed for the purposes of simplicity in presenting the theoretical model.

Table 7
Unstandardized and Standardized Estimates for Paths in Model 2

Parameter Estimate			Unstandardized	Standardized	<i>p</i>
Civilian Ambiguity	→	Civilian Satisfaction	-.44 (.07)	-.33	<.001
Civilian Ambiguity	→	Military Satisfaction	-.05 (.05)	-.06	ns
Civilian Ambiguity	→	Civilian Turnover	.12 (.07)	.08	ns
Civilian Ambiguity	→	Military Turnover	-.09(.05)	-.08	ns
Civilian Ambiguity	→	Health Symptoms	.06 (.03)	.11	ns
Civilian Overload	→	Civilian Satisfaction	.09 (.10)	.05	ns
Civilian Overload	→	Military Satisfaction	-.05 (.07)	-.04	ns
Civilian Overload	→	Civilian Turnover	-.07 (.09)	-.04	ns
Civilian Overload	→	Military Turnover	-.04 (.07)	-.03	ns
Civilian Overload	→	Health Symptoms	.05 (.04)	-.06	ns
Civilian Conflict	→	Civilian Satisfaction	-.11 (.12)	-.05	ns
Civilian Conflict	→	Military Satisfaction	.01 (.08)	.01	ns
Civilian Conflict	→	Civilian Turnover	.10 (.11)	.04	ns
Civilian Conflict	→	Military Turnover	-.02 (.09)	-.01	ns
Civilian Conflict	→	Health Symptoms	.22 (.05)	.24	<.001
Military Ambiguity	→	Civilian Satisfaction	.06 (.09)	.04	ns
Military Ambiguity	→	Military Satisfaction	-.10 (.06)	-.10	ns
Military Ambiguity	→	Civilian Turnover	-.03 (.08)	-.02	ns
Military Ambiguity	→	Military Turnover	.11 (.06)	.10	ns
Military Ambiguity	→	Health Symptoms	-.04 (.04)	-.07	ns
Military Overload	→	Civilian Satisfaction	.09 (.09)	.06	ns
Military Overload	→	Military Satisfaction	.01 (.06)	.01	ns
Military Overload	→	Civilian Turnover	.04 (.08)	.03	ns
Military Overload	→	Military Turnover	-.01 (.06)	-.01	ns
Military Overload	→	Health Symptoms	.05 (.04)	.07	ns
Military Conflict	→	Civilian Satisfaction	-.33 (.13)	-.15	<.05
Military Conflict	→	Military Satisfaction	-.25 (.09)	-.16	<.01
Military Conflict	→	Civilian Turnover	-.09 (.12)	-.03	ns
Military Conflict	→	Military Turnover	.13 (.10)	.07	ns
Military Conflict	→	Health Symptoms	.23 (.06)	.24	<.001
Military Recovery	→	Detachment	1.0	.46	---
Military Recovery	→	Relaxation	.98 (.15)	.55	<.001
Military Recovery	→	Mastery	1.37 (.18)	.81	<.001
Military Recovery	→	Control	.83 (.15)	.42	<.001
Military Recovery	→	Social	1.03 (.15)	.58	<.001
Military Recovery	→	Civilian Satisfaction	-.71 (.27)	-.19	<.05
Military Recovery	→	Military Satisfaction	1.17 (.23)	.46	<.001
Military Recovery	→	Civilian Turnover	.04 (.25)	.01	ns
Military Recovery	→	Military Turnover	-.72 (.24)	-.24	<.01

Military Recovery	→	Health Symptoms	-.57 (.16)	-.36	<.001
Civilian Satisfaction	→	Health Symptoms	-.15 (.03)	-.36	<.001
Civilian Satisfaction	→	Civilian Turnover	-.71 (.06)	-.64	<.001
Military Satisfaction	→	Health Symptoms	.10 (.05)	.16	<.05
Military Satisfaction	→	Military Turnover	-.35 (.07)	-.28	<.001
Health Symptoms	→	Negative Affect	.57 (.05)	.71	<.001
Health Symptoms	→	Need for Recovery	1.89 (.21)	.55	<.001
Health Symptoms	→	Strain	1.0	.84	---
Health Symptoms	→	Civilian Turnover	.28 (.16)	.09	ns
Health Symptoms	→	Military Turnover	.26 (.12)	.10	<.05
Overload x Recovery	→	OR1	.88 (.11)	.52	<.001
Overload x Recovery	→	OR2	1.0	.75	---
Overload x Recovery	→	OR3	.73 (.08)	.60	<.001
Overload x Recovery	→	OR4	.53 (.09)	.39	<.001
Overload x Recovery	→	OR5	.93 (.09)	.71	<.001
Overload x Recovery	→	Civilian Satisfaction	.05 (.17)	.01	ns
Overload x Recovery	→	Civilian Turnover	.01 (.15)	.00	ns
Overload x Recovery	→	Health Symptoms	.08 (.07)	.06	ns
Ambiguity x Recovery	→	OR6	.37 (.10)	.25	<.001
Ambiguity x Recovery	→	OR7	1.0	.74	---
Ambiguity x Recovery	→	OR8	.70 (.09)	.54	<.001
Ambiguity x Recovery	→	OR9	.66 (.11)	.40	<.001
Ambiguity x Recovery	→	OR10	1.18 (.13)	.75	<.001
Ambiguity x Recovery	→	Civilian Satisfaction	.01 (.14)	.01	ns
Ambiguity x Recovery	→	Civilian Turnover	.19 (.12)	.07	ns
Ambiguity x Recovery	→	Health Symptoms	.02 (.06)	.02	ns
Conflict x Recovery	→	OR11	.67 (.08)	.43	<.001
Conflict x Recovery	→	OR12	1.0	.88	---
Conflict x Recovery	→	OR13	.69 (.06)	.58	<.001
Conflict x Recovery	→	OR14	.99 (.07)	.73	<.001
Conflict x Recovery	→	OR15	.89 (.07)	.69	<.001
Conflict x Recovery	→	Civilian Satisfaction	.24 (.16)	.12	ns
Conflict x Recovery	→	Civilian Turnover	.15 (.14)	.05	ns
Conflict x Recovery	→	Health Symptoms	.14 (.07)	.12	<.05

Notes. For unstandardized estimates standard error is presented in parenthesis.

Development of Model 3, presented in Figure 4, began the exploratory process of removing non-significant paths and non-contributing variables established in model 2 in order to improve interpretability and simplify discussion. During the process the

relationships between some variables changed as non-significant terms were removed from the model. Overload, which did not significantly predict any variable in the model, was removed entirely, along with its interaction term. The ambiguity interaction term was also taken out. The result was such that all remaining effects for the stressor variables were within job only. In addition, there was no direct effect of civilian stressors on civilian turnover, for example, which also held true within the military job. Instead, the relationship between stressors and turnover was entirely mediated by either job satisfaction or mental health symptoms. The resultant model was also a relatively good fit to the data but was no longer nested with because the two latent interaction variables were removed, and therefore could not be compared statistically with models 1 and 2.

The paths in model 3 also fit the hypothesis of the study, except for one exception. The path loading between Recovery Experiences and Civilian Satisfaction was negative, such that higher recovery would result in less satisfaction with the civilian job. This triggered a hypothesis that perhaps the path was backwards; where low satisfaction might result in seeking out recovery opportunities, which would mediate the path between civilian satisfaction and mental health. Specifically, it was thought that those who were dissatisfied with their civilian jobs might want to get away or detach, thus the path was drawn from civilian satisfaction directly to psychological detachment, which was tested as model 4. The standardized coefficients and structural model are presented in Figure 5. Not only did this structural path return as significant, but the resultant model was also statistically a better fit based on the chi-square difference test. Therefore model 4 will be the focus of all further discussion.

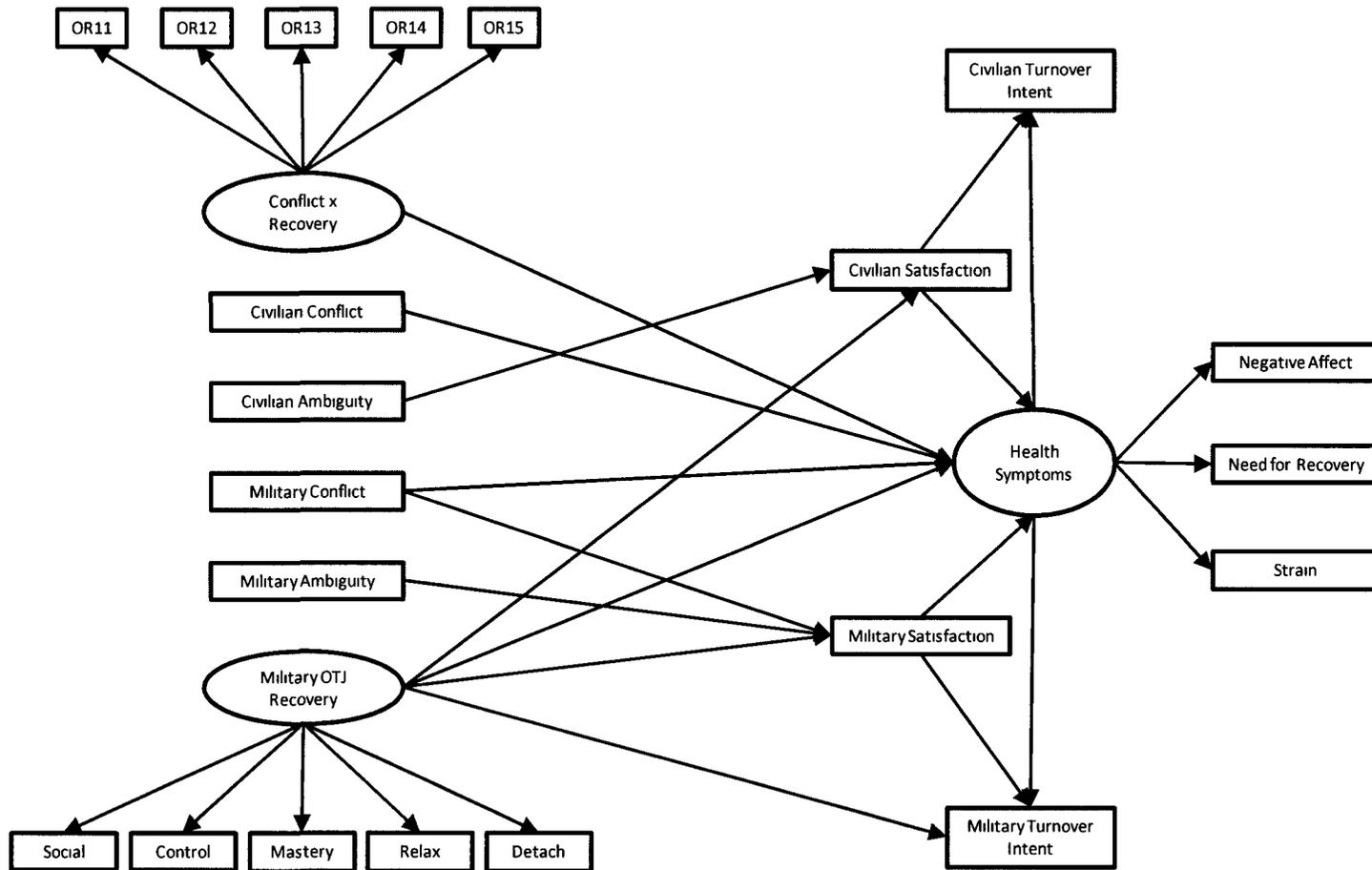


Figure 4. Theoretical Model 3: All Non-Significant Paths and Variables Removed. Exogenous variable inter-correlations and error/disturbance terms have been removed for the purposes of simplicity in presenting the theoretical model.

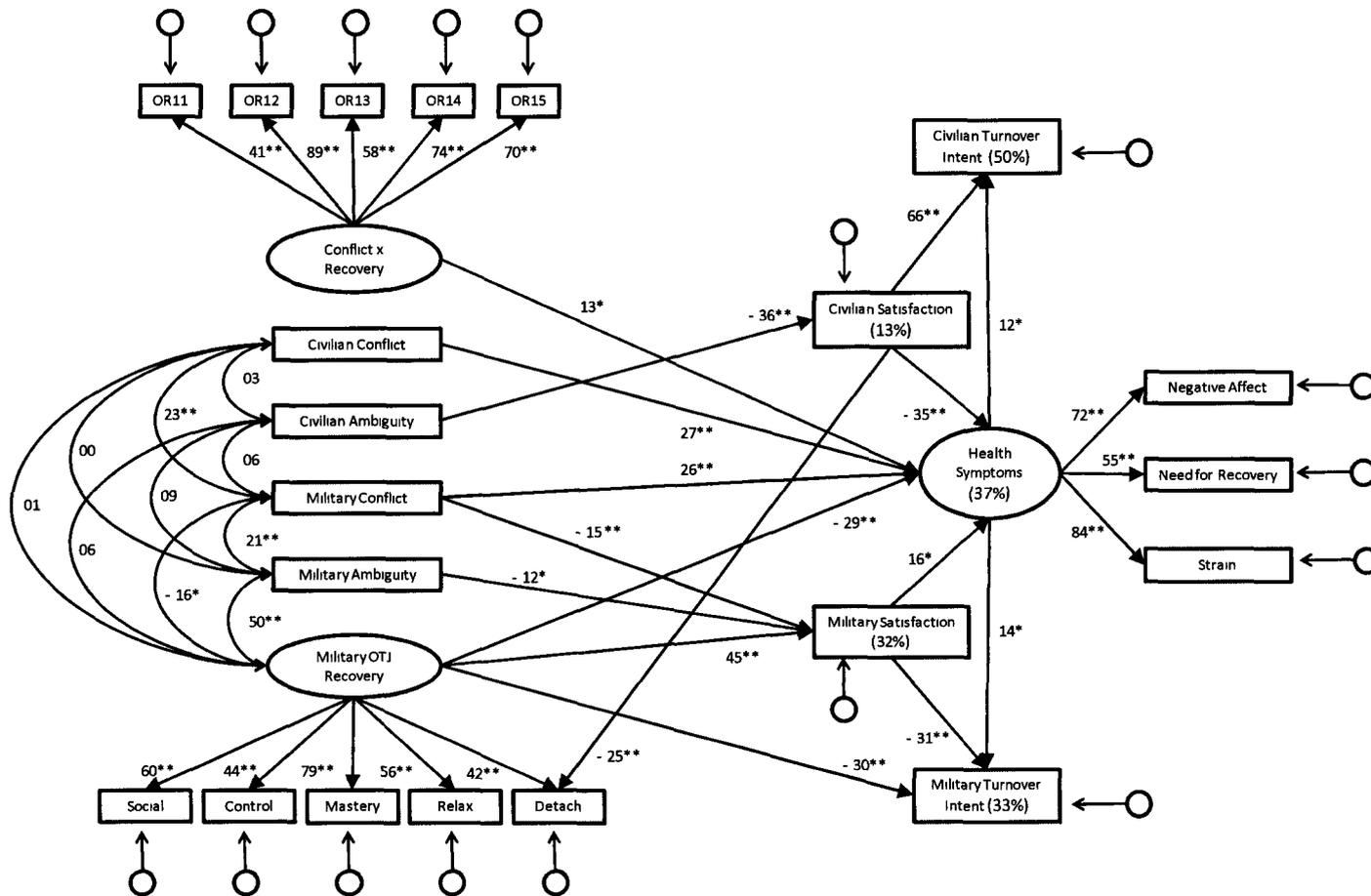


Figure 5. Standardized Results of Model 4: Final Model. $\chi^2 (171) = 361.6$, CFI = .895, RMSEA = .058, PCLOSE > 0.05. Model run on N = 331 participants using AMOS 14. Means and intercepts were estimated for missing cases. * = $p < 0.05$; ** = $p < 0.01$

As can be seen in Figure 5, the final model supported hypothesis 2, as the stressor variables predicted within job outcomes and both predicted mental health symptoms. Hypothesis 3 was supported, as Recovery Experiences contributed main effect variance to mental health symptoms. Furthermore, recovery experience also contributed a variety of direct and indirect effects to other outcomes. Standardized total effects for model 4 are presented in Table 8. The final hypothesis regarding the ability of recovery experiences to moderate the effect of stressor variables in the civilian job on mental health symptoms was partially supported. While overload was removed from the model entirely and the interaction between ambiguity and recovery was not significant, the interaction with conflict was a significant predictor of mental health symptoms. The interaction effect was graphed using the technique described by Aiken and West (1991) for graphing continuous independent and moderating variable interactions, as can be seen in Figure 6. There appears to be a clear main effect of recovery on mental health symptoms, as noted by the fact that with all other variables held constant, individuals who experience high

Table 8
Standardized Total Effects for Model 4

	Exogenous		Endogenous		
	Civilian Satisfaction	Military Satisfaction	Mental Health Symptoms	Civilian Turnover	Military Turnover
Civilian Conflict			.273	.032	.037
Civilian Ambiguity	-.360		.127	.252	.017
Military Conflict		-.149	.235	.028	.078
Military Ambiguity		-.123	-.02	-.002	.035
Recovery Experiences		.446	-.219	-.026	-.472
Civ Conflict x Recov			.126	.015	.017
Civilian Satisfaction			-.352	-.699	-.048
Military Satisfaction			.159	.019	-.288
Mental Health				.119	.137

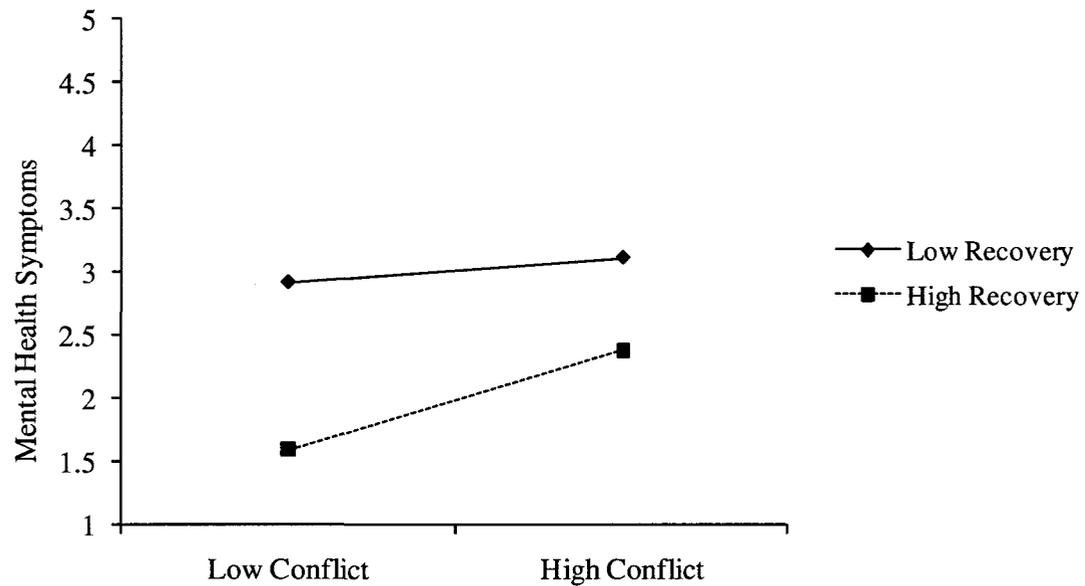


Figure 6. Standardized Interaction of Recovery Experiences and Interpersonal Conflict in the Civilian Job on Mental Health Symptoms graphed using the Aiken & West (2001) method.

recovery during military employment experience less mental health symptoms. However, those who combined low conflict in the civilian job and high recovery during military employment experienced the fewest mental health symptoms (i.e. psychological strain, negative affect, and fatigue) in comparison to their peers. A test of simple slopes demonstrated that at a low level of recovery (e.g. a score of 2) the slope of the relationship between conflict and health symptoms would be about 0.58 ($t_{(320)} = 0.356, p > 0.05$) while at a higher level of recovery experiences (e.g. a score of 4) the slope of the line increases to 0.83 ($t_{(320)} = 0.314, p > 0.05$).

Discussion

Within Job Effects

An examination of the stressors in each occupation reveals that ambiguity was a direct predictor of satisfaction in each job, but did not predict psychological health symptoms. In the civilian occupation the relationship between ambiguity and health symptoms was entirely mediated by job satisfaction, while in the Reserve occupation ambiguity appears to have no impact on health symptoms, via mediation or otherwise. The same pattern holds true if we consider job satisfaction as a mediator between ambiguity and turnover intent in each occupation. In the civilian job there is still a sizeable indirect effect of ambiguity on turnover intentions, but in the military occupation the effect is very small. Even with overload dropped from the final model, it appears as though role stressors may still have an important impact on outcomes in the civilian job, but mostly only contribute to appraisals of job satisfaction in the military occupation.

In the military occupation, interpersonal conflict at work appears to be the stressor of primary concern. It not only had a direct effect on both job satisfaction and psychological health but also an indirect effect on turnover intentions. In the civilian occupation, on the other hand, conflict also predicted health symptoms, but did not predict job satisfaction directly and the indirect total effect on turnover intentions was small. In both occupations satisfaction was a direct predictor of turnover intentions, and in the civilian job the total effect was extremely large, accounting for about 48.8% of the variance. In the civilian job, higher satisfaction also predicted lower reported health symptoms. In the military job, however, increased satisfaction predicted increases in

symptoms, albeit only in very small increments ($R^2 = .025$). While the reason for this is purely speculation, it is possible that there is a contrast effect involving high satisfaction with part-time employment that relates to dissatisfaction with the full-time job.

Regardless, there appears to be something different about each occupation that causes the stressors to function in different fashions. Perhaps in the primary civilian job, where the individual spends a great deal of their time, tolerance for ambiguity is lower because they have to deal with it on a day-to-day basis, while in the part-time job some ambiguity is to be expected due to the nature of employment in the military. A certain level of conflict in the civilian occupation could be seen as normal, or the individual may acclimatize, thus it doesn't affect evaluations of satisfaction only strain. Conversely, going to your secondary job during your time off and encountering conflict might be seen as making a choice to experience a stressor, which could be appraised as more threatening by the individual and thus more readily considered when evaluating overall satisfaction with the job.

Despite the intricacies of the stressor variables measured in this study, the evidence supports the notion that individual appraisals of stress experiences and attitudes are more heavily state based (i.e. related to the job) than trait based (i.e. related to the individual); conflict experiences being the notable exception. It is entirely possible that in the case of conflict certain individuals are more prone to be involved in or experience conflict events, thus contributing to similar ratings across jobs. However, it might also be the case that conflict is equally uncommon across jobs, and that infrequency contributed to equally low ratings in both cases.

While there are certainly individual differences in how stressors are assessed and attitudinal responses, it appears individuals are able to frame those appraisals specific to factors related to the target occupation, rather than being based on global or individual factors alone. In addition, the stressor variables examined in this study only predicted effects within the target occupation, and did not account for significant variance across occupations. This further indicates that the individual is able to make cognitive assessments regarding their job using job-specific information, be it consciously or unconsciously. This is important, as it means that the addition of a secondary-service role did not negatively impact stress experiences in the other occupation, therefore adding weight to the argument that employers should support Reserve military service.

There is, of course, the possibility that time-based or strain-based conflicts may occur, much like those experienced in the case of work-family conflict. In such instances time spent in one occupation or strain from one occupation might negatively impact the other. However, these issues might be managed by liaising between both organizations and establishing clear expectations for which role assumes primary responsibility. Future studies taking this into account might also examine organizational and supervisor support for Reserve employment amongst other factors.

Mental Health & Stress Recovery

As previously mentioned, mental health in this study, as indicated by fatigue, affect and psychological strain, was successfully predicted by stressors and satisfaction in each job, which aligns with previous research. Of additional importance is the idea that each role contributes to a global measure of health symptoms, which in turn predicts

domain specific turnover intentions as a partial mediator. However, the truly unique contribution of this study rests in the addition of on the job recovery experiences during employment in the secondary role, which also significantly predicted psychological health and moderated the relationship between conflict in the primary role and health outcomes. Therefore recovery experiences attained in the secondary role were able to contribute to global appraisals of health and had a positive effect on experiences in the primary role, which supports the idea that a change in environments might be as good as a rest for promoting recovery from work related stress.

In addition to across job effects, higher recovery experiences during military employment predicted higher satisfaction and lower turnover intentions within job. The facets of recovery appear to map well onto what we know of Reserve service which, in addition to psychological detachment from the civilian job, promotes mastery experiences and social affiliation. It was not surprising that relaxation was the lowest reported recovery activity attained via Reserve service. This information begs the question: can we recover from stress we experience in our jobs while we are working? Future research might examine within job moderation effects, but the answer is at least half a yes, as recovery did contribute main effect variance to the model.

Practical Implications

From a practical standpoint, the information contained in this study could be used by both the Canadian Forces, to inform the Reserve attrition model, and by those who have a vested interest in gaining the support of civilian employers for part-time Reserve service. From the perspective of the military, the variables in this sample explained 33%

of the variance in turnover intention, the strongest predictors of which were satisfaction with the military job and on the job recovery experiences. While this study also explained 32% of the variance in job satisfaction, most of that variance was again attributable to on the job recovery experiences, and not to interpersonal conflict or role ambiguity. Thus recovery experiences should be the key variable of interest to military personnel in this case, and they should investigate how they might maximize recovery experiences during military employment for part-time Reserve soldiers in order to capitalize on the relationship between high recovery experiences and low intent to turnover. While more research is necessary, it will likely be attempts that focus on improving mastery experiences, social affiliation, and psychological detachment from the civilian job that are most successful.

From the perspective of civilian employers, this study represents preliminary evidence that stressors experienced during part-time military service are not related to appraisals of the civilian job. Further, it appears that engaging in recovery experiences during military employment is directly related to reduced symptoms of psychological strain, negative mood, and fatigue. Considering the link between these variables and further symptoms of behavioural and physiological strain, which might result in lost working hours to the organization, civilian employers would do well to encourage higher quality recovery experiences during off-work time. As Reserve military service appears to be one such avenue, there is a strong argument for supporting Reserve service as a means of improving individual health. Furthermore, psychological health represents only one of many possible benefits that civilian employers might gain via supporting reserve

service, as Reserve members also receive formal leadership training, practice delivering presentations and teaching, and learn new technology and technical skills, all of which might be useful in the civilian occupation. The benefits of Reserve training as applied to the civilian work environment represent an entirely separate stream of research, which this study might ultimately contribute to in its own way.

Study Limitations

As with any research, the findings of this study were of course limited by several factors. First and foremost, as the survey was cross-sectional in nature it is not possible to determine the temporal order of the predicted effects nor is it possible to ascertain causality. While survey designs maximize generalizability, they limit realism and precision of findings. Despite the weighted ratios of men to women and Ontario based to Atlantic participants the demographic characteristics of the sample were roughly what you would expect of Canadian Army Reservists, and on the whole were representative of the population of interest. Although it was not the intent of this study to generalize beyond Army Reservists, because the study population was so specific, it may not be appropriate.

A second limitation in this study was one of measurement. While role overload, ambiguity and interpersonal conflict at work are known workplace stressors, they are not necessarily equally important or as highly related as often discussed. In this case role overload emerged as a poor predictor of job related attitudes and mental health symptoms. However, it is possible that those who hold full-time civilian jobs and still choose to work part-time in the Reserves like to be busy, and therefore perceptions of

overload based on a frequency scale of measurement were not related to stress in this sample. The low magnitude of the relationships between each of the stressor variables in turn limited how they could be combined in the structural model. Furthermore, because all variables were measured by self-report, it is not possible to examine if recovery could be contributing any antecedent moderating effects. It could be possible that although individuals might receive the same quantity of a stressor, that they might not perceive it as equally stressful because the moderation effect of recovery is buffering the interpretation of stressor experiences rather than the result of stress becoming strain. Using objective stressor measures might allow examination of this problem.

One final limitation that might be discussed was the length of the survey instrument. Although it would have been ideal to collect information on several other variables regarding each job, the sheer number of items required to do so would have made the survey too lengthy to complete in a desirable amount of time, and likely would have had a negative impact on the response rate. Some measures that were desirable but were excluded were: measures of perceived stress to add to the model between the stressor variables and outcomes in each job; and recovery at work during civilian employment. As these variables were not central to the hypotheses at hand it was necessary to remove them from the final version of the survey.

Future Research

Future research in this area should of course begin by examining the limitations mentioned herein. For example, a longitudinal diary study could be devised to more thoroughly examine the temporal order of the relationships between the different

variables in civilian and Reserve employment and to tease out causal effects. A laboratory study might also be devised that controlled the level of each individual stressor variable administered to the participant and examined the outcomes from an experimental perspective. As noted in McGrath (1981) the results of a given research question must be triangulated by adopting several different research strategies. In addition to adopting new strategies, a similar methodology might be used on a new sample which incorporates more structural elements, such as measures of perceived stress and objectively measured stressor variables in order to more thoroughly investigate where Recovery moderation effects occur in the model.

In addition to working within the same population one might also extend this research in several directions, to include Army Reservists that are also full-time students or to investigate similar effects in samples of individuals who are not in the Reserves but still have a full-time and a part-time job. Research topics in this sphere are virtually unlimited, and may even include topics such as continuing education or volunteer work as stress recovery; or recovering from work stress while at work, which may for example occur over lunch hours and designated breaks or even as a consequence of being in the working environment. These topic areas coupled with examining different outcome variables other than turnover and satisfaction opens the door to a multitude of future research.

Conclusion

As noted previously this was an exploratory study and as such the findings must be weighted with other evidence. However, hypotheses 2 & 3 were entirely supported,

hypothesis 1 was mostly supported, and hypothesis 4 was at least partially supported. The findings presented herein do indicate that Reserve Service can act as a form of Recovery Experiences for CF Army Reserve soldier who have a full-time civilian job. Although working in the military role may expose an individual to stressors which have an impact on mental health, it also allows the individual to recover valuable resources which directly impact mental health and can buffer the effect of workplace stressors. This result is consistent with the tenants of job demands-resources theory and the premise of conservation of resources theory which speculates that individuals will invest psychological resources to gain further resources. Recovery experiences also directly predict turnover intentions in the military role and military job satisfaction, which mediated the relationship between stressors and turnover intent. In sum, this study provides new evidence to support job satisfaction as an important mediating variable and indicates that off-work recovery experiences, regardless of the specific activity, may serve as a key individual difference moderator. The results of this study could also be used by Reserve personnel to inform the Reserve attrition model and to help sell the Reserves as a worthy cause for Civilian employers to support.

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