

WOMEN WORKING IN NON-TRADITIONAL ROLES

“I’ve Got Your Six”:

The Importance of Peer Support to Women Working in Non-Traditional Roles

By

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Abstract

Women continue to be under-represented in non-traditional roles, including the Canadian military. These women often experience high levels of job stress, which may contribute to increased burnout and work-family conflict. A sample of 749 female officers and non-commissioned members (NCMs) of the Canadian Armed Forces (CAF) who self-identified as having family care responsibilities were surveyed, with the aim of exploring the associations between job stressors (psychological safety, interpersonal justice), job stress, and strains (burnout, work-family conflict), and the moderating effect of peer support and transformational leadership on these outcomes. Results suggest that peer support can moderate the influence of both psychological safety and interpersonal justice on burnout (through job stress), however, transformational leadership did not provide any moderating effect. Results highlight the importance of a peer support network in the workplace for women in non-traditional roles, with the aim of improving psychological well-being and retention of these workers.

Keywords: Women, non-traditional role, gender bias, peer support, burnout, work-family conflict, psychological safety, interpersonal justice, military

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Women Working in Non-Traditional Roles

Attraction, retention, and attrition of women in non-traditional work roles continues to be of concern to organizations that strive to achieve gender balance. This is particularly salient within the Canadian Armed Forces (CAF), as women currently make up only 16% of the Canadian military (Statistics Canada, 2020). Women in non-traditional roles, and particularly the Canadian military, experience high levels of job stress, which can contribute to adverse outcomes such as increased levels of burnout and work-family conflict (Jensen & Deemer, 2019; Winkel, 2019). In turn, these adverse outcomes may be significant contributors to the high level of attrition of women from non-traditional roles, including the CAF (Blais et al., 2018; Waruszynski et al., 2019).

As military institutions around the world have traditionally been male-dominated organizations, women who join the ranks may feel the need to behave in ways that are counter to traditional social roles. Pressure to change their behaviour at work in ways that are outside of social norms can be difficult to maintain, resulting in one feeling as if they must be one person while at work and another when elsewhere. This in itself can be stressful and contribute to the decision to attrit from a work environment that creates stress. This is just one example of work-related adversities that may lead to the attrition of women from non-traditional roles including the Canadian military. Identifying potential contributors to challenges women face in the CAF along with ways and resources to support them and ameliorate such challenges could have the potential to modify organizational conditions and create a more welcoming and inclusive environment. With better tools in place to help women manage workplace job stressors,

this may contribute to increased retention of women in non-traditional roles such as the CAF.

There exists a considerable body of research that explores the experiences of women who are employed in non-traditional roles, but most of the research was collected largely from a non-military perspective. In conducting research for the present, reading was conducted on women in STEM academic programs (Barth et al., 2015; Schuster & Martiny, 2017), agriculture (Baxter et al., 2011) chemical manufacturing firms (Burrige, 2013), executive roles (Cook & Glass, 2014; Eisner, 2013), engineering firms (Dasgupta et al., 2015), skilled trades (Denissen, 2010; Frank & Frenette, 2019); and the oil industry (Miller, 2004), to name a few. The purpose of the present research was to explore whether peer support and transformational leadership across these and other domains could have a moderating influence on the effect of workplace stressors, burnout, and work-family conflict for women working in non-traditional roles. In fact, the title of this document stems from this very concept. Saying “I’ve got your six” in a military setting equates to when non-military people say, “I’ve got your back” or “I’m here for you,” providing support whenever necessary. This research also aimed to bridge the gap in research on women in the military. Thus, the data examined herein were collected exclusively from women in the Canadian military, which will hopefully improve the validity and relevancy of the findings. First, though, a brief exploration of the foundations of modern-day women at work is presented.

A Very Brief History of Women at Work

Struggling against social norms, an early wave of feminism occurred with the arrival of the 20th century, with the suffragist movement throughout Europe and North

America (Derleth, 2018). Anti-suffragists, some of whom were other women, accused those fighting for the right to vote as waging “war against the very foundation of society” (p. 451). At that time, women were typically steered away from academics and towards more domestic pursuits such as sewing and cooking, which meant that for those who made it as far as completing secondary school, they still lacked the academic foundation that was required for post-secondary studies and eventual employment outside of the home. While many colleges and universities opened their doors to women in the late 19th and early 20th centuries, most women gave in to family and societal pressure and chose the traditional path of homemaker (Dilli, 2019). Many women who aspired to professional employment were held back by the “marriage bar” (Sturge, 1921) which excluded married women from working, while single women were typically rejected from the workforce because of their potential to marry and have a family. Married or otherwise, society found a way to hold women back from pursuing careers outside of the home.

With the deployment of able-bodied males to fight during the two world wars, women provided an essential workforce, responding to recruitment campaigns such as “Do the job HE left behind: Apply, U.S. Employment Service” (Hoover Institution Library & Archives, 1943). This led to a short-lived but significant uptake of women into non-traditional roles such as that of factory worker and mechanic. Once the men returned from war, however, the expectation was that women would return to their primary role of homemaker, as women were seen as “temporary and unskilled” workers (Bracke, 2019). As a result, the transition of women into the workforce maintained a glacial pace until the second feminist movement, which took place through the 1960s and 1970s (Derleth,

2018). During this period there was a steady increase in the number of women entering the labour market. With increased access to contraception, women had control of their reproduction and were free to pursue their career aspirations while delaying marriage and child-rearing responsibilities until a time of their choosing (Harris, 2015). This also allowed women to better manage their family size (Goldin & Katz, 2000), as a larger family meant more responsibility in the home and greatly reduced the ability for women to obtain or maintain a professional career.

Initially most women entered the workforce in medical services, educational services, and public administration (Milkman, 2012), however, throughout the 1970s and 1980s an increasing number of occupations opened to women. As it was becoming less frowned upon to work outside of the home (Moen, 1991), married women with children became the fastest growing sector of the labour force. Increased exposure to women in the workplace facilitated a feminist posture and increased acceptance of women working outside of the home, thereby expanding gender roles to include women performing work that was previously done only by men (Bolzendahl & Myers, 2004). As women moved into these jobs and the roles became *feminized*, many work roles became devalued in the eyes of the employers, resulting in lower salaries and less prestigious opportunities being available to female workers (Levanon et al., 2009). While women increased in numbers in the workforce, the gendered division of labour persisted.

Although there has been some movement in the social expectations of gender roles over the last few decades (Gaunt, 2013; Smits et al., 2003), societal beliefs in gender roles continue to steer the definition of the roles of men and women within the home and at work (Eagly, 1987; Eagly & Wood, 1999), resulting in widespread

employment and wage inequity between the genders (*The power of parity*, 2015; Vogelstein, 2018) and workplaces that are often not only unwelcoming, but often toxic to women (Rossiter & Sochos, 2018; Schuster & Martiny, 2017). Although anecdotal evidence suggests that women experience adverse outcomes when employed in roles that are not considered traditional for women, it is important that this research captures more than anecdotes to better understand the experiences of women at work in non-traditional roles. Notably, men also work in non-traditional roles such as nursing and early childhood education, which merits its own research (Gaunt, 2013; Perra & Ruspini, 2013). While the study of males in female-dominated employment is an important research area and would add to this growing body of research, the study of males in non-traditional roles goes beyond the scope of the present research. As such, this study focused on role incongruity bias and resulting adverse outcomes experienced by women who work in non-traditional, predominantly male roles.

The Effects of Role Incongruity for Women

Social Role Theory

Social role theory (Eagly & Wood, 1999) was developed to explain socially-based attitudes pertaining to gender roles within society. According to social role theory, members of society possess beliefs pertaining to the capabilities of men and women, which can lead to stereotypical beliefs about each gender's distinct role within society. Qualities or behavioural tendencies that are predominant in each gender are believed to be best utilized when taking on specific roles at work and in the home. For example, women are thought to be more nurturing than men, which then translates in the belief that women are better equipped to stay at home and take care of the children. Those who

adhere to these expectations are seen favourably within society, whereas those who deviate from these socially-based rules are often shunned (Heilman, 2001). These socially-founded expectations greatly influence individual decisions throughout life (Eagly & Wood, 2013). Social role theory considers specific roles, including occupations, and diffuse roles, such as the broader gender-based roles and shared expectations that are applied universally across a society or culture (Diekmann & Goodfriend, 2006). Historically, the role of the male in the family has been that of provider, whereas the female's responsibility has predominately been as child bearer, caregiver, and homemaker (Coltrane, 1996; Barrett, 2004). These gender-congruent behaviour expectations have produced powerful societal norms and stereotypes over time (Eagly, 1987; Eagly & Wood, 2011; Heilman, 2001), culminating in the gender-specific work roles that women at work continue to struggle with today.

According to the social role theory, males are *agentic* in that they are assertive, aggressive, self-confident, and controlling (Eagly, 1987). Males are, thus, expected to be drawn to work roles that fulfill agentic life goals such as meeting career ambitions and achieving higher income status. Conversely, women are *communal* in nature in that they are kind, helpful, and concerned with the well-being of others. Women are expected to pursue occupations that meet their communal needs, such as caring for others and relationship-building (Eagly, 1987; Prentice & Carranza, 2002). Thus, *role congruence* occurs when men and women occupy work roles that society deems align with the strengths and attributes of their gender (Eagly & Karau, 2002).

Role Congruity Theory

Grounded in social role theory, *role congruity theory* (Eagly & Karau, 2002; Prentice & Carranza, 2002) is an aspect of social role theory that applies specifically to the workplace. Eagly and Karau (2002) suggest that social roles extend beyond communities and into the workplace and reinforce social stereotypes in work environments. According to the role congruity theory, a work group will be seen favourably and as more competent when the role of the group aligns with the socially-developed gendered expectations for that group, such as men pursuing employment as mechanics or women pursuing nursing or teaching roles. When this societal expectation is violated, workers may face backlash and prejudicial treatment from supervisors and co-workers (Faludi, 1991; Moss-Racusin et al., 2010; Perra & Ruspini, 2013). Women at work have been a target of prejudice for perceived femininity, attractiveness (Johnson & Chan, 2019), being pregnant, or even having the capacity to become pregnant -- a form of bias termed the *Motherhood Penalty* (Benard, 2008). Concurrently, they are also penalized for demonstrating characteristics that are thought of as agentic and therefore masculine (Eagly & Karau, 2002; Gaunt, 2013). Prejudicial treatment in the workplace can also manifest as exclusion from promotion or hiring practices and unfair compensation for work performed (Eagly & Karau, 2002; Rudman, 1998; Shen, 2013).

Even when a woman is seen as successful in her work role, this is not without disadvantages. Women who employ agentic behaviour and achieve success at work may still be viewed by some as devious, manipulative, selfish, and a *dragon lady* (Coleman, 2019; Sinclair & Kunda, 2000). Having to walk this fine line between agentic and communal behaviour undoubtedly contributes to job stress experienced by women at

work (Long, 1998; Zheng et al., 2018). Receiving recognition and reward for a job well done is at times impeded for working women, making it difficult for advancement, regardless of skill or qualification level (Cotter et al., 2001; Maume, 2004). The concept of the glass ceiling (Loden, 1985) has traditionally addressed the dearth of women (and minorities [Cook & Glass, 2014; Folke & Rickne, 2014], which is not addressed in the present research) in executive roles. Cotter and colleagues (2001) suggest that if limited access to advancement is present throughout the various levels of the organizational structure, then this is no longer simply a glass ceiling. Rather, it reflects the presence of systemic gender discrimination and barriers at all levels within the workplace, akin to a glass labyrinth (Eagly & Carli, 2007). It is only when this discriminatory treatment increases in severity as one advances up the corporate ladder that the glass ceiling phenomenon appears. Cotter's research is relevant to the present research because it emphasizes the advancement barriers faced by women at all levels of an organizational structure and not just when competing for top executive roles. When women assert themselves at work, their efforts can be interpreted by both peers and supervisors as shrill, emotional, and unbalanced, making it difficult for women to establish credibility and obtain promotions (Madaan & Pradhan, 2017; Merryn, 2020). A form of exclusion at work, women report a lack of access to powerful mentors (McDonald & Westphal, 2013), as male leaders often select male mentees with whom they have more in common and who they deem more likely to succeed than female mentee candidates (Elacqua et al., 2009; Timberlake, 2005). Such gender bias can frustrate women's career progression efforts (Eagly, 2007; Gaunt, 2013) in many occupations, but likely even more so for women working in non-traditional occupations. As the purpose of this research was to

examine adverse outcomes faced by women who work in non-traditional roles, the above reminds us that these barriers and gender-based difficulties are faced by women at all levels of the workplace.

Women at Work in Non-Traditional Roles

The ideas of *men's* and *women's* work roles are widespread, although many people cross this gendered divide to gain employment in roles that are considered non-traditional for their gender (McDowell, 2015; Perra & Ruspini, 2013). A *non-traditional work role by gender* is defined as one in which fewer than 25% of the workers in that field are made up of that gender (Frank & Frenette, 2019; US Department of Labor, 2006). This is commonplace in the domains of science, technology, engineering, and math, fields that are collectively referred to as *STEM* occupations, as well as with hands-on skilled trades.

Despite recruitment efforts by both government and industry, women remain in the minority in STEM fields, as well as in trades-related occupations (Boothby & Drewes, 2010; Shaw et al., 2019) such as construction, mechanics, and the oil industry. Only one in five apprentices in skilled trades training programs is a woman, and even fewer move on to working in the skilled trades after apprenticeship training (Boothby & Drewes, 2010; Frank & Frenette, 2019). Early efforts from stakeholders to increase the number of women in STEM fields saw an upswing of women completing STEM bachelor's degrees in the 1980s and 1990s, but that early success has since fallen off (Stoet & Geary, 2018; Wall, 2019). "Leaks in the STEM pipeline" (Barinaga, 1992; Pell, 1996) result in many women who demonstrate interest, skill, and motivation toward STEM courses in high school withdrawing from that stream, either to enter another

academic stream or leave academics altogether (Shaw et al., 2019). Women who successfully complete a STEM education and then enter a related work environment continue to face obstacles at work such as toxic workplaces, sexual harassment and sexual violence, gender bias, and lack of advancement or promotion in the male-dominated STEM world (Merryn, 2020; Schuster & Martiny, 2017). Although the majority of women who undertake STEM studies prefer to be mentored by someone of their gender (Kricorian, 2020), the supply of available women mentors in STEM is scarce. Even when women are mentored by other STEM women, this serves only to place additional workload and burden on the mentors who are women. The need to continually prove their competence, as well as provide valuable mentoring to junior STEM women, is counterproductive to the success of all women in STEM work domains (Swafford, 2020). Given the low uptake and retention of women moving into STEM and skilled trades despite the recruitment efforts, it is important to consider some of the barriers that are experienced by women in these fields.

Working women are faced with the “double bind” paradox (Eagly & Karau, 2002), which states that women must choose between two equally undesirable outcomes. The socially-based double bind describes the expectation for women to be kind, caring, and considerate. If women display these behaviours at work, they may be liked by co-workers, but they are less likely to be respected. If women at work display assertiveness, they may advance in the company and may be respected, but they will be less liked by co-workers. The double bind theory also puts women in the conflicted role of pressure to meet society’s stereotypical expectations of women as caregivers and homemakers while also pursuing advancement at work. When women demonstrate behaviours at work such

as agentic behaviour, this is incongruent with gender-stereotypical expectations. The double bind paradox is especially salient for women in non-traditional jobs, as they are seen as further challenging societal boundaries by pursuing work in traditionally male-dominated roles (Denissen, 2010). Finding the balance between the societal expectations of being a woman and being effective at work has proven challenging for these women (Barth et al., 2015), as society expects that women choose roles that allow them to be clean and delicate (Eden, 1992) and not to pursue physically demanding roles that require them to get dirty and physical at work (Miller, 2004), such as in mechanics, construction, and the oil industry. When women break this traditional mold, they can find themselves on the receiving end of ill treatment from both society and the workplace (Leskinen et al., 2015), which can result in adverse psychological and physiological impacts on the recipient (Jahnke et al., 2019; Szabo et al., 2012).

The non-traditional work role for women has gained a reputation of being unwelcoming, gender-biased, discriminatory, and harassing from both co-workers and supervisors (Burrige, 2013; Dionne-Simard, Galarneau, & LaRochelle-Cote, 2016; Frank & Frenette, 2019), which may explain the slow uptake of women into non-traditional jobs. Those women who do take on non-traditional work routinely report the need to outperform male colleagues to be considered for the same promotion and hiring opportunities (Joshi et al., 2015; Lyness & Heilman, 2006). Additionally, women working in male-dominated environments have reported experiencing gender bias from co-workers, a lack of voice, and the absence of a peer support network (Quartaro, 2009). For example, women who work in fields such as the oil industry are routinely faced with the choice to either adapt to the heavily masculinized industry, or to leave (Eden, 1992;

Leskinen et al., 2015). Although choosing to adapt may serve only to reinforce the deep gender divide already prevalent in domains like the oil industry, it is what many women in this and similar industries must do, simply to maintain their jobs. However, these altered behaviours can contribute to workplace stressors felt by women working in non-traditional roles (Jahnke et al., 2019; Miller, 2004). With the frequency with which these stressors are experienced by women in non-traditional roles, it is not surprising that they would feel heightened job stress, resulting in both physical and psychological strain.

The Job Stressor – Stress - Strain Model

Workplace role stressors are defined as work-related, environmental, and objective factors which lead to maladaptive behaviours in the worker (Margolis, 1974; McLean, 1974, as cited in Beehr & Newman, 1978). When exposure to these adverse conditions is prolonged and unremedied, it can lead to *job strain* in the worker, which is the adverse and subjective outcome that workers experience as a result of role stressors (Beehr, 1976; Beehr & Newman, 1978; Karimi et al., 2011; Um & Harrison, 1998). Early research into the association between work-related stress and worker well-being (Beehr, 1976) proposed that although workplace stress may exist, given certain workplace conditions such as group cohesiveness, this stress need not always result in job-related strain. Further analysis explored the connection between work stress and specific mental and physical health outcomes in the worker. This led to the development of the *stressor-stress-strain* model (Beehr & Newman, 1978), whereby the presence of workplace stressor(s) leads to development of job stress, which in turn contributes to elevated levels of job strain in the worker, manifested in physiological and/or psychological form.

Workplace stressors can be broken down into two sub-categories: *chronic* or ongoing workplace stressors and *acute* job stressors (Beehr et al., 2000; Fenlason & Beehr, 1994; Pratt & Barling, 1988). Chronic workplace stressors include the repeated exclusion from key meetings or processes at work, ongoing harassment, or unfairness in the distribution of recognition or rewards, including pay. Acute stressors include a single incident of harassment, being “called out” or belittled in front of peers or being overlooked for a deserved reward or promotion. Whether chronic or acute, these stressors are frequently experienced by women who work in non-traditional roles, resulting in elevated stress levels among the female workers (Beaton et al., 2015; Jahnke et al., 2019).

In cases where these workplace stressors remain unresolved, the prolonged elevated stress experienced can lead to adverse mental and physical health implications (Clays et al., 2007; Halbesleben & Buckley, 2004; Rossiter & Sochos, 2018). These adverse outcomes are referred to as *job strain*. Examples of job strain are headaches, stomach aches, insomnia, anxiety, irritability, inability to focus, depression, high blood pressure, heart disease, and stroke, to name a few (Gershon et al., 2009; Haines, 2018; Jahnke et al., 2019; McCarty, 2007).

The present research explored the influence of two work-related stressors on commonly reported job strain outcomes among women in non-traditional work roles: *burnout* and *work-family conflict*.

Burnout as a Job Strain

Burnout is defined as the psychological strain reaction that workers experience when they suffer prolonged exposure to chronic emotional and interpersonal workplace stressors (Demerouti et al., 2001; Halbesleben & Buckley, 2004; Rossiter & Sochos,

2018; Sinval et al., 2019). The components of burnout were initially described as emotional exhaustion, a sense of being detached or depersonalized, and a reduced sense of personal accomplishment or competence (Maslach & Jackson, 1981). Maslach and colleagues' studies in the early 1980s used this three-factor model, which focused largely on social workers. Demerouti and colleagues later reduced the measure to the two factors of exhaustion and depersonalization, which allowed later studies on burnout to explore a wider range of employment types (Demerouti et al., 2001; Halbesleben & Demerouti, 2005), including those in which women are in the minority.

Burnout is not uncommon among working women. Women often experience job stress and pressure to prove their competence when compared to male co-workers, and the stress effect can be amplified when women work in non-traditional roles (Baxter et al., 2011; Jensen & Deemer, 2019). When their gender work identity breaks gender norms, as seen when women work in male-dominated roles, this stressor can create conflict within the work team dynamic, increase job stress, and lead to increased burnout among those who do not meet the stereotypical gender role (McCarty, 2007; Shen, 2013; Sonderen et al., 2017; Stasny, 2014; Veldman et al., 2017).

Work-Family Conflict as a Job Strain

For those women who also have family responsibilities, the strain can also manifest as conflict within the home. When the workplace demands so much of one's time and energy that there is not enough time or energy left to fulfill the demands of the home role, an inter-role conflict is created (Greenhaus & Beutell, 1985). Additionally, when job stressors such as workload, role ambiguity, injustice, or feelings of exclusion or incompetence, among others, result in workers experiencing elevated stress, it becomes

increasingly difficult for workers to leave that stress at work at the end of the day. The resulting elevated work pressure and stress come home with the workers, spilling over to create conflict in the home (Ferguson et al., 2012; Koslowski, 2001). As this stressor originated at work but the stress led to strain in the home, this strain is termed *work-family conflict* (Higgins et al., 1992).

Although men are becoming increasingly engaged in family care (Kolpashnikova, 2018), women are still more likely to take on the role of the primary caregiver at home, even when they are also employed outside of the home (Rubin & Wooten, 2007; Treas et al., 2011). Women are also more often responsible for the myriad of responsibilities that come with coordinating family life (Mills, 2015). Where for some, time at home is restful, for many women it is merely a shift from paid work to unpaid work (Glover & Kirton, 2006; Lind & Brzuzy, 2008; Linos & Kirch, 2008). When there are not enough hours in the day to complete both the paid and unpaid “to do” lists, stress levels increase, adding to conflict at home, work, or more likely, both. Working women often feel that they must do more than just their job, and outperform their male colleagues, just to be considered for the same promotions and opportunities. This means frequently taking on additional roles and projects and taking work home, which takes away from family time and adds to strain in the home (Joshi et al., 2015; Lyness & Heilman, 2006).

Women also are more likely than men to be absent from work due to family demands such as children’s medical appointments, and report absences due to short-term illnesses (Bekker et al., 2009), absences that are noticed by their male peers, especially when women are in the minority and working in a non-traditional role. These absences are a result of the accumulation of stressors experienced by women, which include actual

illness, using their sick days to care for sick family members, work stressors, and/or marital/family conflict (Fried et al., 2002).

The examination of work-family conflict is highly relevant in the present research because although it is a common outcome for women to strive to excel both at work and at home, it is even more relevant for women who have the added stressor of trying to be successful in a non-traditional role while concurrently managing family life at home (Coronel et al., 2010). It is commendable that anyone should strive to maintain a productive level of work while facing work-related stressors. If trying to find a balance between work and home life, one could easily see how this would not be sustainable in the long term. When combined, these circumstances could be significant contributors to the high attrition of women from STEM, technical fields, and other non-traditional roles for women.

Job Stressors for Women in Non-Traditional Roles

Women working in non-traditional roles are routinely exposed to workplace stressors such as gender bias, sexual harassment, sexual violence, exclusion, the glass ceiling effect, among other forms of ill treatment. It is logical to expect, therefore, that the combination of these job stressors will have a spillover effect into the home, thereby aggravating the level of work-family conflict (Azami, 2018; Erdogan, 2019; Rubin & Wooten, 2007). Of all of these stressors, however, there are two in particular that are a reaction to the many biases that working women, and especially those in non-traditional roles, experience and that lead to greater burnout and increased work-family conflict. The cumulative effect of stressors experienced by women is compounded when experienced from the perspective of one working in a non-traditional role (Jensen & Deemer, 2019;

Veldman et al., 2017). The present research explored how the two key job stressors of low psychological safety and low interpersonal justice influence job stress and contribute to strain in the form of perceived higher levels of burnout and work-family conflict.

Low Workplace Psychological Safety as a Job Stressor

A psychologically safe work environment is one in which employees feel that it is safe to speak up without facing repercussions, that they are heard when they have something to say, and where they can see that both peers and leadership are engaged in organizational outcomes (Edmondson, 1999). Conversely, workplaces in which employees are marginalized, excluded from decision-making, or belittled when they share ideas are perceived as psychologically unsafe (Webster et al., 2018). In work environments in which there is a high level of interpersonal familiarity among the genders, workers feel more at ease in discussing ideas and asking for help; however, in environments where women workers are already marginalized, such as those in non-traditional roles, women are given fewer opportunities to engage with others and contribute ideas. When women are not able to contribute, this could be interpreted by peers and leadership as a lack of knowledge or skill. Applying the stressor-stress-strain model (Beehr, 1976), those who work in a psychologically unsafe workplace, which in this case is the stressor, experience elevated job stress, leading to strains such as increased turnover intentions, reduced job satisfaction, and lower productivity, among others (Dollard et al., 2019; Idris, 2012; Ivey & Michaud, 2018; Rossiter & Sochos, 2018). As strong interpersonal relationships are key to a psychologically healthy workplace, women who are feeling marginalized and are in the minority will likely face difficulties in establishing such relationships with men at work. Working every day in a

psychologically unsafe workplace can adversely affect one's mental and physical health (Edmondson & Lei, 2014), and women may feel that simple day-to-day interactions with co-workers and supervisors can put their competence, career, and well-being at risk (Dollard et al., 2019).

To examine the influence of psychological safety on stress, burnout, and work-family conflict, the following hypotheses were explored:

- H1 *Lower psychological safety would be associated with higher burnout, through the mediating influence of job stress.*
- H2 *Lower psychological safety would be associated with higher work-family conflict, through the mediating influence of job stress.*

Low Workplace Interpersonal Justice as a Job Strain

Interactional justice is defined as the way in which individuals who are impacted by decision making, in this case at work, are treated with dignity and respect (Greenberg & Cropanzano, 2001). Interactional injustice can manifest in workers as reduced organizational commitment, increased turnover intentions, and depending on the work environment, increased workplace theft, increased absenteeism (or presenteeism), reduced productivity, motivation, and self-esteem, aggression toward peers, and verbal abuse, among other negative outcomes (Barsky & Kaplan, 2007; Biétry & Creusier, 2018; Perko et al., 2016). There are two sub-components of this form of justice, *informational* and *interpersonal justice*. The widespread and open sharing of information, rationale, and explanation for a decision is defined as *informational justice*. In contrast, *interpersonal justice* exists in the workplace when workers feel they are treated with

respect, dignity, and politeness by both supervisors and co-workers, upon the implementation of new procedures (Ahmed et al., 2018).

Given the myriad of challenges often faced by women in non-traditional roles, research already supports that these women also typically experience workplace injustice (Campbell, 2013; Dishon-Berkovits, 2018; Topbas, 2019). Women who are highly invested in their jobs yet feel that there are imbalances in fairness at work are much more likely to experience burnout relative to their male coworkers (Linos & Kirch, 2008). Additionally, the incidence of psychological and/or physiological injury leading to disability was four times higher when workers were exposed to multiple workplace stressors including injustice in terms of effort and reward, over those who experienced a single workplace stressor (Juvani et al., 2018). According to Biétry and Creusier (2018), workers who are already marginalized can suffer further injustices by being excluded from important dialogue, promotion, and advancement opportunities. This could be even more prevalent among women working in non-traditional roles. These injustices could possibly contribute to the level of job stress experienced, leading to adverse mental and physical health outcomes among women working in these adverse environments. As women in non-traditional roles frequently experience being treated with a lack of respect, dignity, and politeness, interpersonal justice was the focus of injustice in the present research. To examine the influence of interpersonal justice on stress, burnout, and work-family conflict, the following hypotheses were explored:

H3 *Lower interpersonal justice would be associated with higher burnout, through the mediating influence of job stress.*

H4 *Lower interpersonal justice would be associated with higher work-family conflict, through the mediating influence of job stress.*

Moderators of the Stressor – Stress - Strain Model

Kahn and Quinn (1970) postulated that psychological support in the form of group cohesiveness, as well as leader support, could moderate existing job stress and the resulting job strain. This was explored further by Beehr (1976), who found that although women working in non-traditional roles are likely to experience higher levels of job stress and this stress is likely to result in higher levels of burnout and work-family conflict, this may not be the case for all women working in these fields. It is possible that there are some supports for women that could reduce job stress, particularly support from colleagues. Therefore, the present research explored the role of supportive peers and leaders in reducing the negative effects of injustice and lack of psychological safety on job stress and strain for women working in non-traditional roles.

Peer Support as a Moderator

When workers feel safe to give and receive help and support to each other, share mutual respect, compassion, and empathy, they are building the foundations of a peer support network in what they feel is a psychologically safe environment (Mead et al., 2001). In a workplace where peer support exists, workers have each other with whom they share common background, knowledge, or experiences. Peer support at work is invaluable not only as a safe avenue to discuss work ideas, but as an outlet where workplace frustrations, injustices, and other job stressors can be safely discussed, and can also serve to reduce feelings of loneliness, discrimination, and rejection, and boost confidence in one's abilities (Fenlason & Beehr, 1994; Rossiter & Sochos, 2018).

However, a peer support network would be challenging to nurture in an environment where one is in the minority (Levy-Tzedek et al., 2018). As women comprise the minority in non-traditional workplaces, it can at times be impossible to share ideas and nurture workplace relationships when those with whom you would normally connect are few and far between, leaving no avenue for connection with others, no outlet for stress or frustration, and no confidence to address perceived workplace injustices (Veldman et al., 2017).

Considerable research has been dedicated to the positive effect of peer support as a moderator of the influence of workplace stressors on stress and strain. In examining the stress-strain model using a group of social workers, Koeske and Koeske (1993) observed that the significance of the association between stress and emotional exhaustion was buffered when the social workers had access to social support. Ruggiero and colleagues (1997) observed that women who were exposed to workplace discrimination and injustices responded differently, depending on whether they had a strong social support network. Those without such a network would often attribute the poor treatment to their own lack of competence, whereas those who had a strong support network were able to recognize and address the poor treatment and injustices head-on. Um and Harrison (1998) also determined that emotional exhaustion and burnout resulting from workplace stress could be moderated by co-worker support, resulting in an improved capability to cope with job stressors.

Peterson and colleagues (2008) explored job stress and burnout in a group of 151 healthcare workers, with findings suggesting that both job stress and burnout could be moderated through feeling a sense of belonging and talking to someone in a similar

situation. In this case, peer support and a stress outlet proved to be effective and inexpensive methods for reducing the adverse effects of working in a stressful environment.

Peer support has also been shown to moderate the effect of stressors on work-family conflict. The National Athletic Trainers Association of the USA (NATA) recognized the need to examine work-life balance among their athletic trainers due to issues with retention, especially among trainers who were women, and specifically explored stress and work-life balance during peak competition season. A longitudinal study examining exhaustion and work-life balance among athletic trainers of both genders (Mazerolle & Eason, 2016) found that an increase in the number of hours worked adversely impacted levels of work-family conflict and exhaustion. Although these strains were significantly impacted during peak competition season, trainers who reported having personal and co-worker support reported lower levels of exhaustion and work-family conflict overall. These findings suggest that peer support at work could moderate the levels of exhaustion (burnout) and work-family conflict experienced by women in a stressful work role.

Swendiman and associates (2019) demonstrated that in a surgical work environment, medical students felt that they would be putting their surgical career and further academics at risk by pointing out life-threatening errors made by more senior surgeons. In this psychologically unsafe work environment, junior surgeons who failed to speak up when such errors were made wound up suffering from psychological distress, which often led to chronic stress, exhaustion, low job satisfaction, and depersonalization, the hallmarks of burnout.

In an effort to identify the importance of a peer support network to the success of women in non-traditional work roles, Dasgupta and colleagues (2015) examined the experiences of women at the academic foundational level in a non-traditional program. A study of female engineering students who were placed in work groups of 75%, 50%, and 25% female revealed that gender breakdown of groups significantly influenced the level of female success in engineering programs in earlier undergraduate years. The influence of gender on anxiety levels was most apparent in the earlier years of study, the point at which females are more likely to fall through the “leaky pipeline” that was described earlier. Females in male-dominated and gender-parity groups where perceived psychological safety was lower, also experienced lower verbal participation levels (which results in reduced learning outcomes) throughout all academic years. These results suggest that when women who work in non-traditional roles have access to peers who are also women, it fosters higher levels of learning, engagement, confidence, and retention in the workplace.

Given the limited access that women in non-traditional roles have to a peer support network, it was important that the present research closely examine the complex relationships that can exist between women in a non-traditional role and their co-workers, both men and women, and the support that can exist between peers. To better understand the potential moderating effects that peer support may have on stress, burnout, and work-family conflict experienced by women working in non-traditional roles, the present research tested the following hypotheses:

H5 *Higher levels of peer support would ameliorate the negative effect of low levels of psychological safety on job stress and consequently, burnout.*

- H6 *Higher levels of peer support would ameliorate the negative effect of low levels of psychological safety on job stress and consequently, work-family conflict.*
- H7 *Higher levels of peer support would ameliorate the negative effect of low levels of interpersonal justice on job stress and consequently, burnout.*
- H8 *Higher levels of peer support would ameliorate the negative effect of interpersonal injustice on job stress and consequently, work-family conflict.*

Transformational Leadership as a Moderator

Of equal importance to examining peer relationships in the workplace is the influence that workplace leadership has on the well-being of employees. Behaviours of organizational leaders typically set the tone for what defines acceptable workplace conduct (Stollberger et al., 2020; Volmer, 2012). Transformational leaders may inspire employees to be high achievers while working toward positive organizational change in a mutually respectful and professional work setting (Volmer, 2012). High transformational leadership has been shown to contribute to increased job satisfaction and feelings of interpersonal justice among workers, as well as reduced worker exhaustion and burnout, all while maintaining focus on the organizational goals (Reb, 2019). Conversely, despotic or authoritarian leadership has been shown to increase employee stress and anxiety (De Clercq et al., 2020). This increased stress and anxiety can lead to employee burnout, and the stress is often carried over into the home life, leading to increased levels of work-family conflict (Nauman, 2018).

Although transformational leadership is typically used as a predictor variable in research, the moderating effect of transformational leadership has also been examined. Jansen and colleagues (2008) found that the level of transformational leadership

moderated the social integration, vision, and contingency rewards of senior executive teams within ambidextrous (meaning they can pursue conflicting organizational goals concurrently) organizations. Wang and Walumbwa (2007) researched the moderating influence of transformational leadership on employee perceptions and engagement and withdrawal at work. They found the level of support received from co-workers during times of family stress was conditional based on the level of transformational leadership in the workplace. Further, when examining the correlations between time pressure at work and the job strain of exhaustion (a key component of burnout) and work-family conflict, high transformational leadership effectively moderated both exhaustion and work-family conflict in the workplace (Syrek et al., 2013).

Although some research indicates otherwise (Arnold & Connelly, 2013), much of the existing research into transformational leadership suggests that high levels of this type of leadership may moderate the influence of job stressors experienced at work on job stress and strains such as burnout and work-family conflict (Warszewska-Makuch, 2015). To examine this possible influence, the following hypotheses were explored:

- H9 *Higher levels of transformational leadership would ameliorate the negative effect of low psychological safety on job stress and consequently, burnout.*
- H10 *Higher levels of transformational leadership would ameliorate the negative effect of low psychological safety on job stress and consequently, work-family conflict.*
- H11 *Higher levels of transformational leadership would ameliorate the negative effect of low interpersonal injustice on job stress and consequently, burnout.*

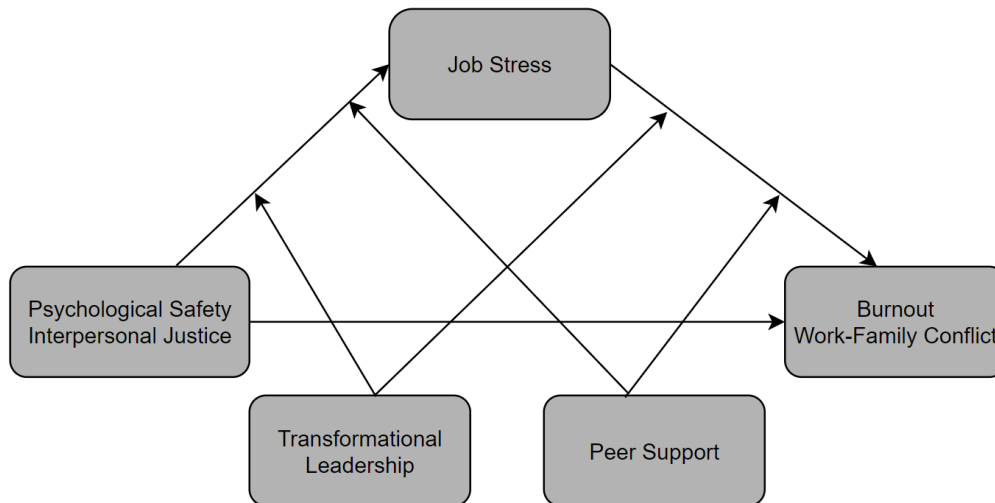
H12 *Higher levels of transformational leadership would ameliorate the negative effect of low interpersonal injustice on job stress and consequently, work-family conflict.*

Research Context

This research was conducted using secondary data provided by the Director General Military Personnel Research and Analysis team within the Canadian Armed Forces. A conceptual model of the associations between the variables that were explored in the hypotheses is depicted in Figure 1.

Figure 1

Conditional PROCESS Model



Women have repeatedly demonstrated their ability to perform to a high standard in both traditional and non-traditional roles (Dasgupta et al., 2015; De Mascia, 2015; Swafford, 2020; Vogelstein, 2018), yet the representation of women across many non-traditional fields is still in the minority, including within the Defence community. Arguably the most non-traditional role for women, that of military member (Abrams,

2016; Szitanyi, 2020), is a work environment already rife with stressors simply due to the uniqueness of the job requirements. From the day of enrolment, women soldiers, sailors, and air personnel face the daily struggle to prove that they have “what it takes” to wear the military uniform in what has traditionally been and continues to be a masculine institution (Davis, 2009; Veldman et al., 2017). Although women in uniform continue to challenge the masculine culture of the CAF, the reality of continually being in the spotlight as a woman in a *man’s role* and having your every movement, decision, and task performance scrutinized, only serves to add to the work-related stress of being a woman in uniform (Davis, 2009; Veldman et al., 2017), resulting in strains such as burnout and work-family conflict.

Although all military occupations (with the exception of Roman Catholic Priest) have been open to women since the 1980s, women still make up only 16% of all military members. Despite costly recruitment campaigns, attraction, retention, and attrition of women continue to be challenges within non-traditional roles, including the CAF. As the Defence community in its entirety is non-traditional employment for women, the purpose of this research was to add to the existing body of knowledge surrounding the job strains experienced by women working in non-traditional, and more specifically, military jobs.

The job stressor-job stress-strain model (Beehr, 1976; Beehr & Newman, 1978; Karimi et al., 2011; Umm & Harrison, 1998) was employed to examine the indirect effects of two workplace job stressors, low interpersonal injustice, and low psychological safety, on job stress and subsequently, job strain (e.g., burnout, work-family conflict). Existing research suggests that these moderating factors may mitigate the adverse effects of working in non-traditional roles (Huyghebaert et al., 2018; Ivey & Michaud, 2018;

Karimi et al., 2011). As such, the possibility that support at work from either peers or leadership could buffer the negative effects of job stressors and job stress on strain was also examined.

Method

To test the hypotheses, secondary survey data were used. These data were collected in 2018 by the Director General Military Personnel Research and Analysis (DGMPPRA) team within the Department of National Defence (Blais et al., 2018) using the Defence Workplace Well-Being Survey. This study had the aim of better understanding the workplace well-being of both military and civilian members of the Canadian Armed Forces Defence Community and to inform the actions of National Defence leadership toward optimizing the psychological health of the Defence Team. The initial survey was administered to the Regular Force, Reserve Force, and civilian members of the Defence team in English (82%) and French (28%). Ethics approval for the distribution of the questionnaire was granted by the Department of National Defence/Canadian Armed Forces Social Science Research Review Board. These data are being used with the permission of DGMPPRA, Department of National Defence, Ottawa.

Procedure

Surveys were distributed to all members of the Regular and Reserve Force via the Defence Wide email system between May and August 2018 and had a response rate of 32% based on the number of distributed surveys. Stratified random sampling was employed to ensure adequate representation across the military (Regular Force, Reserve Force, gender, rank, years of service). Respondents provided informed consent and were assured that only aggregate data would be reported. Participants were given the option to

complete the questionnaire in either English or French, and due to the length of the questionnaire (40 pages), participants had the option to save and exit the document at any time and return to it later.

To encourage responses from those serving in the Reserve Force, which for some is a part-time work commitment with limited access to the Defence Wide email system, an additional postcard and covering letter that included the questionnaire link were sent to their military place of work. Respondents provided informed consent and were assured that only aggregate data would be reported.

Common Method Variance

The survey was conducted keeping in mind the best practices to manage the influence of common method variance (Craighead et al., 2011; Krosnick, 1999). Although using a common source (e.g., survey) for data collection is less than ideal, in some instances it is the most practical, given the environment, as was the case of the present research. The Defence Workplace Well-Being Survey is a 40-page self-report survey that took considerable time to complete. To minimize the potential of fatigue, participants were frequently offered the opportunity to save their progress so they could return to the survey at a later time, which allowed them to complete the survey questions when their schedule permitted and may have served to reduce poor-attention data. In an effort to reduce social desirability influence in responding (Paulhus, 1984; Paulhus & Reid, 1991), participants were assured of their anonymity from the outset and were given the opportunity to withdraw from the survey at any time and without penalty, should they wish. The assurance of anonymity may have also reduced the effect of *optimizing*, which requires considerable cognitive effort to deduce the intent of the question so they can

provide the optimal response, or *satisficing*, which is using minimal cognitive effort to select an acceptable response (Simon, 1956). Additionally, participants were given several weeks to complete the survey, thereby minimizing any pressure to speed through the items due to a looming deadline. Survey items were constructed using rating scales that included words to describe each point in the scale rather than a numeric scale, as participants tend to assume that most others land in the middle of a numeric rating scale and as such, would be more likely to respond in kind (Schwarz et al., 1985). Using words rather than numbers also gives participants a better understanding of the meaning of each point in a scale, and better enables them to accurately represent their true feelings in their selection (Krosnick & Berent, 1993). Reverse coding was used intermittently throughout the survey, which was intended to reduce inattentive responding; however, the efficacy of this method has shown to be inconsistent and may contribute to reduced internal consistency of the measures used (van Sonderen et al., 2013; Weems & Onwuegbuzie, 2001; Zhang et al., 2020).

Participants

Participants for the present research were a subset of the original dataset, consisting of 749 Royal Canadian Air Force members of the Reserve and Regular Canadian Armed Forces who self-identified as women with dependent responsibilities in the home, either through caring for children or having elder care responsibilities. The present study analyzed data from all participants who identified as women, including four participants whose sex at birth was male and who identified as transgender.

Of the 749 women participants, 588 (78.5%) completed the survey in English and 161 (21.5%) completed it in French. The breakdown of Regular to Reserve participants

was 605 (80.8%) to 144 (19.2%). Survey completion by rank was 36.3% junior non-commissioned member (NCM), 32.0% senior NCM, 13.8% junior officer, and 17.9% senior officer; these values approximate the breakdown of rank in the CAF in general.

The average age of participants was in the 35 to 44 age group and participants had completed an average of 11 to 15 years of military service. Five hundred ninety-six participants (80%) were married (including common-law) with dependents, whereas 153 (20%) self-identified as single with dependents.

Figure 2

Distribution of Participants by Military Rank Group (n = 749)

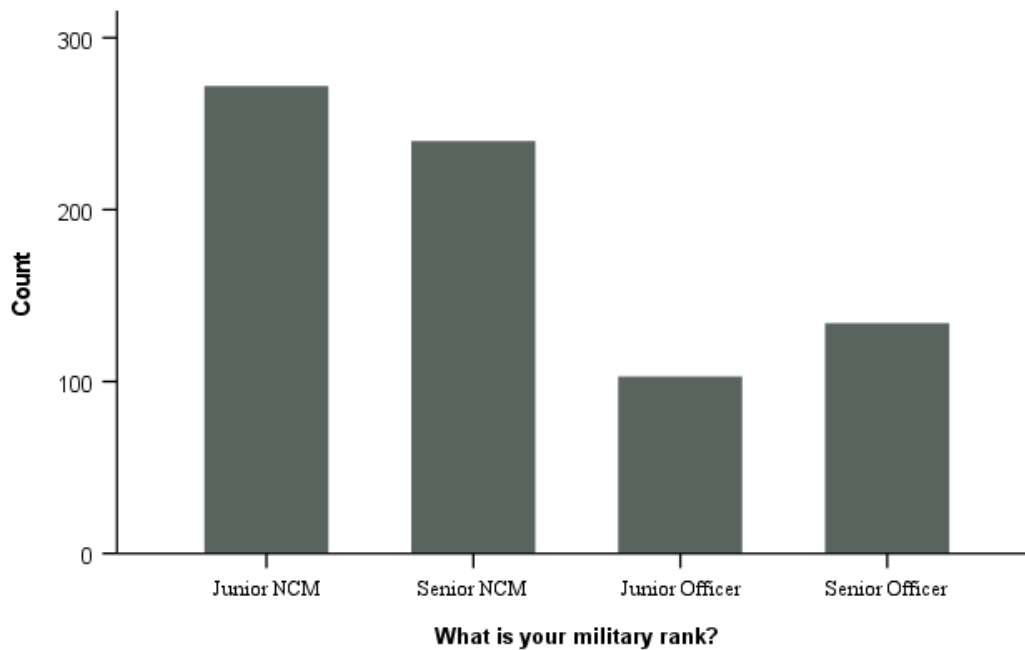


Figure 3

Distribution of Participants by Age Group (n = 749)

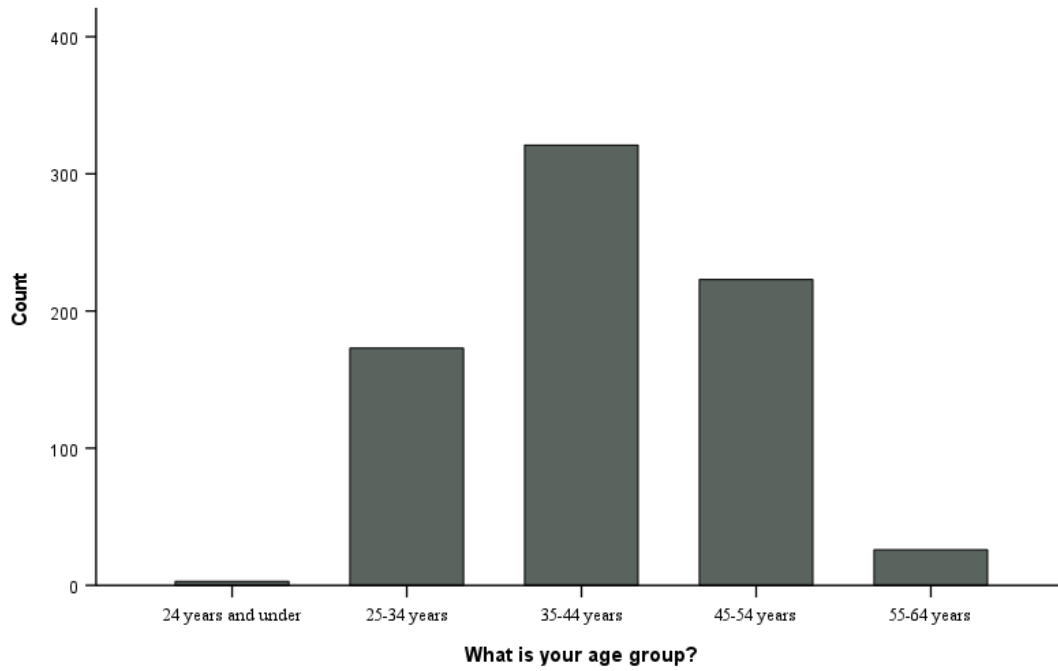
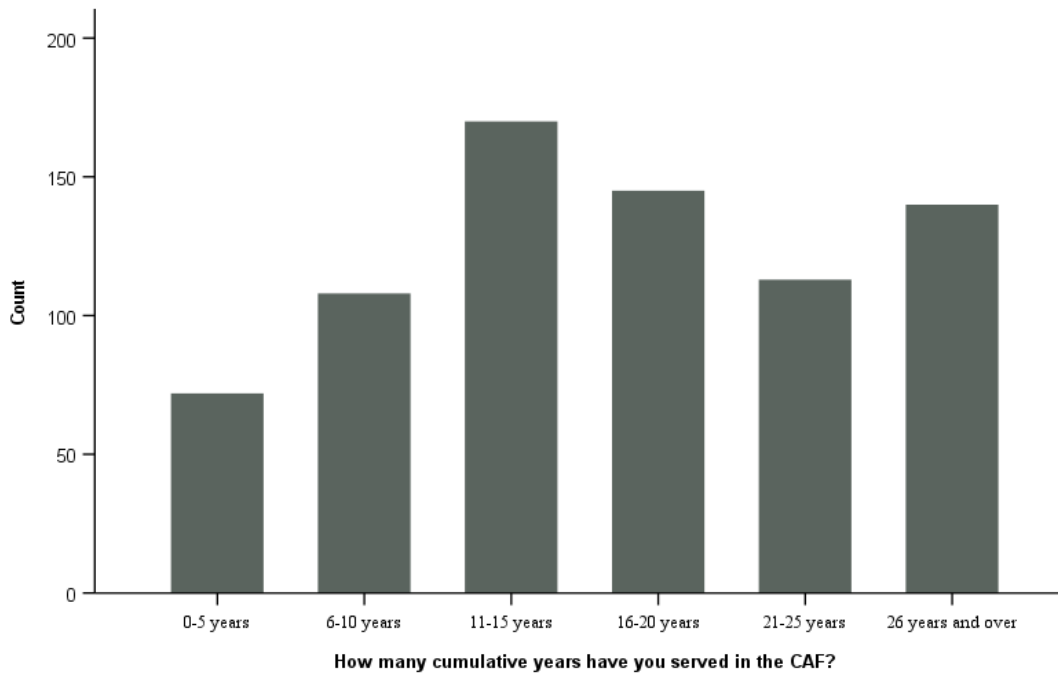


Figure 4

Distribution of Participants by Years of Service in the Canadian Armed Forces (n = 749)



Measures

Psychological Safety

Psychological safety was measured using the seven-item Team Psychological Safety Scale (Edmondson, 1999), which was validated on workers in the manufacturing industry and has a reported Cronbach's α ranging from .76 (French) to .83 (English). In the present study the Cronbach's α was .85. With scores ranging from 1 (*Very inaccurate*) to 7 (*Very accurate*), participants were asked to indicate how accurate each statement was, based on their experience, and higher scores represented higher levels of psychological safety. One example of the items is "Members of this team are able to bring up problems and tough issues."

Interpersonal Justice

The four-item Interpersonal Justice Subscale of the Organizational Justice Scale (Colquitt, 2001) was used to measure interpersonal justice. This scale was validated on university students and workers from the automobile manufacturing industry and had a reported Cronbach's α ranging from .79 to .92. In the present study the reported Cronbach's α was .93. Using a five-point scale ranging from 1 (*To a very small extent*) to 5 (*To a very large extent*), participants were asked to indicate the extent to which their co-workers and supervisors exhibited certain behaviours such as "Treat you in a polite manner." Higher scores indicated that people felt they were treated more fairly.

Job Stress

Job stress was measured using the eight-item short-form version of the 15-item General Job Stress Scale created by Stanton and colleagues (2011) and modified Yankelevich et al. (2012). This scale was validated using undergraduate students and

aerospace employees, with a reported Cronbach's α ranging from .79 to .85. With response options of "yes," "no," and "?" for undecided, participants were asked to select the option that best described their job. Examples of the eight items were "demanding," "pressured," "calm," "nerve-wracking," and "overwhelming." After recoding the positive items, responses to each item were summed so that possible scale scores could range from 0 to 16. Higher scores indicate greater reported job stress. The Cronbach's α for the present sample was .85.

Burnout

The Exhaustion/Vigor subscale of the Oldenburg Burnout Inventory (Demerouti et al., 2003) was used to assess burnout. The Exhaustion/Vigor subscale used eight of the original 16 items of the scale, with a reported Cronbach's α ranging from .74 to .93. Participants were asked to indicate the strength with which they agreed with each of the eight statements on a Likert-type scale, with scores ranging from 1 "strongly disagree" to 7 "strongly agree." Higher scores indicate higher levels of burnout. An example of a burnout-related item is "There are days when I feel tired before I arrive at work." Cronbach's alpha for the present study was .83.

Work-Family Conflict

This outcome variable was measured using the five-item Work-Family Conflict subscale of the Work-Family Conflict Scale (WFCS) (Netemeyer et al., 1996) and was validated using samples of teachers, administrators, small business owners, and realtors. The English version of the scale, taken from Netemeyer and colleagues (1996), had a reported Cronbach's α ranging from .88 to .89, while the French version α , from Mathieu and Mathieu (2012) was .86. Using a Likert-type scale, participants were asked to

identify the extent to which they agreed with each statement (e.g., “The demands of my work interfere with my home and family life”) with scores ranging from 1 “strongly disagree” to 7 “strongly agree.” Higher scores indicate a higher degree of work-family conflict in participants and the reported Cronbach’s alpha for the present study was .96.

Moderators

Peer Support

The six-item Relatedness subscale of the Work-Related Basic Need Satisfaction Scale (WRBNS) was used. This scale was developed and validated by van den Broeck et al. (2010) on university students, researchers, and staff in The Netherlands. Using Likert-type response options, participants were asked to indicate the extent to which they agreed with items such as “At work, I can talk with people about things that really matter to me,” with response options ranging from 1 “totally disagree” to 5 “totally agree”. Higher scores indicate greater levels of peer support. The reported Cronbach’s α in the present research was .89.

Transformational Leadership

The seven-item Global Transformational Leadership Scale (Carless et al., 2000) was employed. This scale was validated using Australian retail bank managers and has a reported Cronbach’s α of .93. Using a five-point Likert-type scale, participants were asked how often their supervisor displayed specific behaviours such as “Communicates a clear and positive vision of the future.” Response options ranged from 1 “Rarely or never” to 5 “Very frequently, if not always” and higher scores indicate higher levels of perceived transformational leadership. The reported Cronbach’s α of this measure in the present research was .97.

Results

Preliminary Analyses

Assumptions Testing

The data were checked for normal distribution and homoscedasticity, which were met at the scale level. Absolute skewness scores not exceeding 1.08 ($SE = .06$) and kurtosis scores of 1.21 ($SE = .13$) or less were obtained. Multicollinearity was tested using Variable Inflation Factor (VIF) and the highest obtained VIF score among all variables was 3.10. As no value was over 10, this indicates that there was no issue with multicollinearity among the variables. Given the sample size, examinations of variance beyond the Levene's Test were required, as the Levene's Test will produce significantly small p values and unacceptably low power with such large samples (Gastwirth et al., 2009). As such, the variance among the data was further examined using the Brown-Forsythe test and Welch's test of equal variance. All but two of the variables demonstrated significantly differing variances. If the populations are symmetric, however, or at least similar in shape and if the largest variance is no more than four times the smallest, the analysis of variance is most likely to be valid (Howell, 2002). Although not all identical, the sample sizes in the present research were similar and were all normally distributed. Therefore, the observed heterogeneity of variance was deemed acceptable.

Descriptive Statistics

The means, standard deviations, and correlations between research variables are shown in Table 1. The Cronbach's α for each scale is displayed on the diagonal and all α values are greater than .85, indicating good internal consistency of the scales.

ANOVAs Based on Rank and Years of Service

Both rank and years of military service were control variables within the present study. Controlling for these two variables was necessary to ensure that as much variance as possible be attributed to the effects being examined, and not to the control variables. As would be expected, rank and years of service were moderately correlated ($r = .40$). To examine the associations between control and research variables, a series of one-way ANOVAs and several pairwise contrasts were run based on rank (Table 2) and years of service (Table 3).

The two NCM groups, junior and senior, reported a significantly lower level of psychological safety, interpersonal justice, peer support, and work-family conflict than all officers. Junior NCMs reported significantly lower levels of psychological safety, interpersonal justice, peer support, transformational leadership, and work-family conflict compared to Senior NCMs. Junior Officers reported significantly lower levels of psychological safety and interpersonal justice compared to Senior Officers.

An analysis of variance (ANOVA) was conducted to examine the association between years of service and all research variables. A significant difference was observed between years of service and psychological safety, $F(5, 740) = 5.80, p < .001, \eta_p^2 = .038$; interpersonal justice; $F(5, 742) = 7.32, p < .001, \eta_p^2 = .047$; peer support, $F(5, 740) = 3.28, p < .01, \eta_p^2 = .022$; and transformational leadership, $F(5, 741) = 2.66, p = .01, \eta_p^2 = .018$. There were no significant differences between years of service and burnout, work-family conflict, or job stress.

Table 1*Means, Standard Deviations, Correlations, and Cronbach's α for Measured Variables*

Variable	Range	<i>M</i>	<i>SD</i>	1.	2.	3.	4.	5.	6.	7.
1. Psychological Safety	1-7	5.1	1.3	(.85)						
2. Interpersonal Justice	1-5	4.1	0.9	.74**	(.93)					
3. Job Stress	1-16	8.5	5.0	-.35**	-.26**	(.85)				
4. Burnout	1-4	2.5	0.6	-.49**	-.40**	.58**	(.89)			
5. Work-Family Conflict	1-7	4.0	1.8	-.35**	-.21**	.61**	.53**	(.96)		
6. Peer Support	1-5	3.6	0.8	.65**	.57**	-.24**	-.44**	-.27**	(.89)	
7. Transformational Leadership	1-5	3.7	1.2	.63**	.59**	-.27**	-.40**	-.27**	.45**	(.97)

Note: Cronbach's α are in parentheses on the diagonal

* $p < .05$; ** $p < .01$; *** $p < .001$

Table 2*One-Way Analyses of Variance of Measured Variables by Rank Group*

Variable	Rank				df	F	η_p^2
	Junior NCM	Senior NCM	Junior Officer	Senior Officer			
	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)			
Psychological Safety	4.70 ^{a,b,c} (1.44)	5.25 ^a (1.18)	5.16 ^b (1.29)	5.37 ^c (1.13)	3, 743	11.58***	.045
Interpersonal Justice	3.77 ^{a,c,d} (1.04)	4.23 ^a (0.81)	4.13 ^{b,c} (0.88)	4.42 ^{b,d} (0.69)	3, 745	19.63***	.073
Peer Support	3.46 ^{a,b,c} (0.91)	3.69 ^a (0.79)	3.70 ^b (0.77)	3.76 ^c (0.69)	3, 743	5.69***	.022
Transformational Leadership	3.53 ^{a,b} (1.20)	3.74 ^a (1.16)	3.70 (1.18)	3.82 ^b (1.10)	3, 744	2.30	.009
Job stress	8.30 (5.23)	8.91 (4.86)	8.00 (5.24)	8.29 (4.57)	3, 745	1.08	.004
Burnout	2.48 (0.67)	2.45 (0.63)	2.44 (0.64)	2.44 (0.62)	3, 744	0.26	.001
Work-Family Conflict	3.71 ^{a,c} (1.89)	4.02 ^{a,b} (1.72)	4.10 (1.82)	4.57 ^{b,c} (1.82)	3, 744	6.80***	.027

Note: Means with the same superscript indicate that they are significantly different

* $p < .05$; ** $p < .01$; *** $p < .001$

Table 3

One-Way Analyses of Variance of Measured Variables by Years of Service

Variable	Years of Service						df	F	η_p^2
	0–5	6–10	11–15	16–20	21–25	26 +			
	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)			
Psychological Safety	4.70 ^{a,b} (1.30)	4.74 ^{c,d} (1.45)	5.04 ^e (1.34)	5.10 ^{a,c,f} (1.30)	5.05 ^g (1.28)	5.51 ^{b,d,e,f,g} (1.09)	5, 740	5.80***	.038
Interpersonal Justice	3.79 ^{a,b,c} (0.88)	3.8 ^{d,e,f,g} (1.00)	4.03 ^{d,h} (1.04)	4.12 ^{a,e,i} (0.81)	4.19 ^{b,f} (0.91)	4.40 ^{c,g,h,i} (0.75)	5, 742	7.32***	.047
Peer Support	3.52 ^a (0.84)	3.47 ^b (0.87)	3.64 ^c (0.86)	3.61 ^d (0.80)	3.53 ^e (0.81)	3.85 ^{a,b,c,d,e} (0.74)	5, 740	3.28**	.022
Transformational Leadership	3.56 (1.14)	3.45 (1.21)	3.63 (1.19)	3.65 (1.17)	3.70 (1.22)	3.96 (1.03)	5, 741	2.66**	.018
Job Stress	8.33 (5.10)	8.81 (5.01)	8.61 (5.40)	8.81 (4.98)	7.69 (4.81)	8.30 (4.64)	5, 742	0.85	.006
Burnout	2.47 (0.59)	2.53 (0.67)	2.48 (0.69)	2.48 (0.60)	2.48 (0.60)	2.33 (0.65)	5, 741	1.48	.010
Work-Family Conflict	3.79 (1.87)	4.10 (1.73)	4.07 (1.88)	4.19 (1.80)	4.09 (1.69)	3.77 (1.99)	5, 741	1.09	.007

Note: Means with the same superscript indicate that they are significantly different

* $p < .05$; ** $p < .01$; *** $p < .001$

Hypothesis Testing

Hayes' PROCESS Macro model 75 (Hayes, 2013) and SPSS version 27 were employed to explore whether either psychological safety or interpersonal justice indirectly affected either burnout or work-family conflict. These associations were further explored to determine if the levels of burnout and work-family conflict were conditional based on the levels of peer support or transformational leadership available to the workers. To examine the hypotheses, the PROCESS application was repeated for each predictor and outcome variable, using the mediator of job stress. To examine the hypotheses, the PROCESS application was repeated for each predictor and outcome variable, using the mediation of job stress (Hayes, 2015). The conditional PROCESS model representing the associations between variables was previously presented in Figure 1.

The Conditional Indirect Effect of Psychological Safety on Burnout

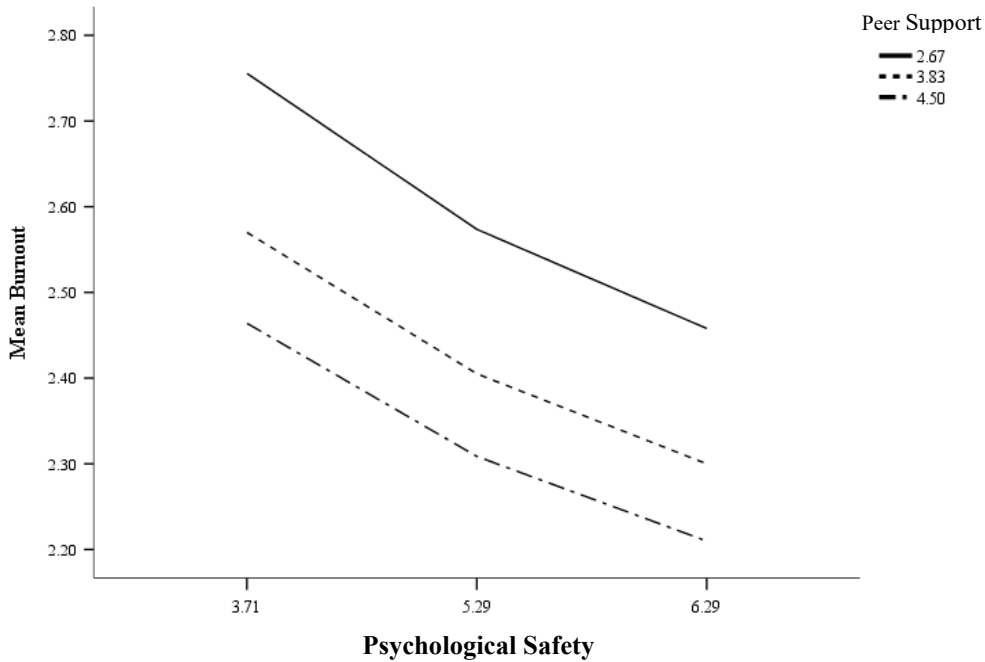
To examine the conditional indirect effects, the association between psychological safety and burnout through job stress was explored. There was a significant negative effect between psychological safety and job stress, meaning higher levels of psychological safety would lead to higher levels of job stress; however, no such association appeared between job stress and burnout, except when peer support and transformational leadership were very low. As the significant association between job stress and the moderators was only seen under this condition, this finding only partially supports H1. Although job stress on its own had no direct effect on burnout, when peer support or transformational leadership were very low, high job stress led to high burnout (See Table 4 and Figure 5).

Table 4*The Conditional Indirect Effect of Psychological Safety on Burnout*

	Job Stress (M)			Burnout (Y)		
	<i>b</i> Coeff.	SE	LL, UL (95% CI)	<i>b</i> Coeff.	SE	LL, UL (95% CI)
Job Stress (<i>M</i>)	--	--	--	-0.02	0.02	-0.05, 0.01
Psychological Safety (<i>X</i>)	-1.57**	0.51	-2.56, -0.58	-0.08***	0.02	-0.12, -0.04
Transformational Leadership (<i>W</i>)	-0.71	0.64	-1.96, 0.55	-0.09*	0.03	-0.15, -0.02
Peer Support (<i>Z</i>)	-0.40	0.79	-1.94, 1.14	-0.32***	0.05	-0.42, -0.22
<i>X</i> x <i>W</i>	0.08	0.13	-0.17, 0.33	--	--	--
<i>X</i> x <i>Z</i>	0.05	0.16	-0.26, 0.37	--	--	--
Indirect Effect (<i>X</i> x <i>M</i> x <i>W</i>)	--	--	--	0.003	0.003	-0.004, 0.01
Indirect Effect (<i>X</i> x <i>M</i> x <i>Z</i>)	--	--	--	0.02***	0.005	0.01, 0.03
Constant	17.26***	2.19	12.96, 21.56	3.83***	0.19	3.45, 4.21
Model Summary	$R^2 = .13,$ $F(7, 734) = 15.84, p < .001$			$R^2 = .47,$ $F(8, 733) = 81.98, p < .001$		

Note. $N = 742$. Control variables were years of service and rank. LL = lower limit; UL = upper limit; * $p < .05$; ** $p < .01$; *** $p < .001$

An example of the influence of peer support on low psychological safety on job stress and subsequently, burnout is depicted at Figure 5. The image shows that at any peer support was able to ameliorate the effect of lower psychological safety on burnout. Therefore, higher levels of peer support are associated with lower burnout levels among workers.

Figure 5*The Conditional Indirect Effect of Psychological Safety on Burnout**The Conditional Indirect Effect of Psychological Safety on Work-Family Conflict*

The direct effect between psychological safety and job stress was significant and negative, indicating that higher levels of psychological safety were associated with lower levels of job stress. The direct effect of job stress on work-family conflict was significant and positive, which indicated that higher levels of job stress led to higher work-family conflict. As the association between psychological safety and job stress was negative and significant, and the association between job stress and work-family conflict was significant and positive, the product of these two associations would be negative and significant. Therefore, one can conclude that the association between psychological safety and work-family conflict is negative, significant, and through job stress. Neither peer support nor transformational leadership moderated the level of job stress in this model (see Table 5).

Table 5*The Conditional Indirect Effect of Psychological Safety on Work-Family Conflict*

	Job Stress (M)			Work-Family Conflict (Y)		
	<i>b</i> Coeff.	SE	LL, UL (95% CI)	<i>b</i> Coeff.	SE	LL, UL (95% CI)
Job Stress (<i>M</i>)	--	--	--	0.17***	0.05	0.08, 0.27
Psychological Safety (<i>X</i>)	-1.55**	0.51	-2.54, -0.56	-0.19**	0.06	-0.31, -0.07
Transformational Leadership (<i>W</i>)	-0.66	0.64	-1.92, 0.60	-0.02	0.10	-0.22, 0.18
Peer Support (<i>Z</i>)	-0.38	0.79	-1.93, 1.16	-0.22	0.15	-0.52, 0.07
<i>X</i> x <i>W</i>	0.07	0.13	-0.18, 0.32	--	--	--
<i>X</i> x <i>Z</i>	0.05	0.16	-0.26, 0.37	--	--	--
Indirect Effect (<i>X</i> x <i>M</i> x <i>W</i>)	--	--	--	-0.001	0.01	-0.02, 0.02
Indirect Effect (<i>X</i> x <i>M</i> x <i>Z</i>)	--	--	--	0.01	0.01	-0.02, 0.04
Constant	17.18***	2.19	12.87, 21.48	3.61***	0.57	2.49, 4.73
Model Summary	$R^2 = .13,$ $F(7, 734) = 15.77, p < .001$			$R^2 = .44,$ $F(8, 733) = 72.04, p < .001$		

Note. $N = 742$. Control variables were years of service and rank. LL = lower limit; UL = upper limit; * $p < .05$; ** $p < .01$; *** $p < .001$

The Conditional Indirect Effect of Interpersonal Justice on Burnout

A negative and significant direct effect of interpersonal justice on both job stress and burnout was observed, suggesting that low interpersonal justice can contribute to higher levels of both job stress and burnout. In this association, the level of burnout was conditional, based on the moderating effect of peer support. The association between interpersonal justice and job stress was negative and significant, but there was no significant association between job stress and burnout, except for when peer support or transformational leadership were very low. In general, higher interpersonal justice reduces burnout and this decrease is more pronounced in the presence of high levels of peer support or transformational leadership (see Table 6 and Figure 6).

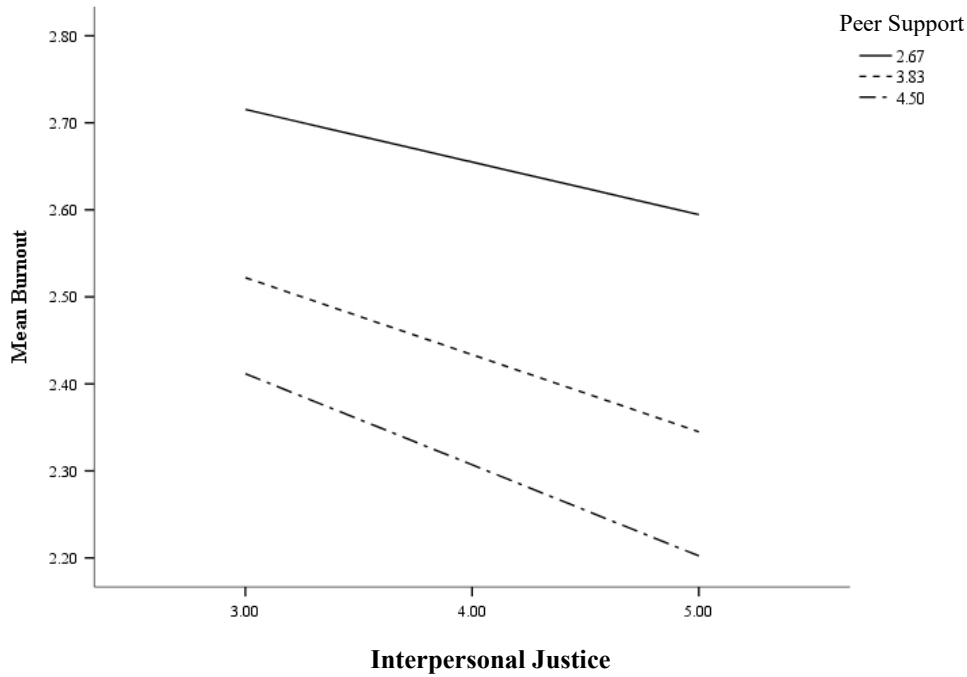
Table 6*The Conditional Indirect Effect of Interpersonal Justice on Burnout*

	Job Stress (M)			Burnout (Y)		
	<i>b</i> Coeff.	SE	LL, UL (95% CI)	<i>b</i> Coeff.	SE	LL, UL (95% CI)
Job Stress (<i>M</i>)	--	--	--	-0.02	0.02	-0.05, 0.01
Interpersonal Justice (<i>X</i>)	-1.42*	0.71	-2.82, -0.03	-0.07**	0.03	-0.12, -0.02
Transformational Leadership (<i>W</i>)	-1.50*	0.72	-2.91, -0.08	-0.10**	0.03	-0.17, -0.03
Peer Support (<i>Z</i>)	-0.71	0.95	-2.58, 1.15	-0.34***	0.05	-0.44, -0.24
<i>X</i> x <i>W</i>	0.22	0.18	-0.12, 0.57	--	--	--
<i>X</i> x <i>Z</i>	0.01	0.23	-0.45, 0.47	--	--	--
Indirect Effect (<i>X</i> x <i>M</i> x <i>W</i>)	--	--	--	0.003	0.003	-0.003, 0.01
Indirect Effect (<i>X</i> x <i>M</i> x <i>Z</i>)	--	--	--	0.02***	0.005	0.01, 0.03
Constant	18.22***	2.62	13.08, 23.37	3.84***	0.20	3.46, 4.23
Model Summary		$R^2 = .10,$			$R^2 = .47,$	
		$F(7, 736) = 12.02, p < .001$			$F(8, 735) = 80.76, p < .001$	

Note. $N = 744$. Control variables were years of service and rank. LL = lower limit; UL = upper limit; * $p < .05$; ** $p < .01$; *** $p < .001$

Figure 6

The Conditional Indirect Effect of Interpersonal Justice on Burnout



The Conditional Indirect Effect of Interpersonal Justice on Work-Family Conflict

In examining direct effects, higher interpersonal justice led to lower job stress, and when job stress was high, work-family conflict was also high. High interpersonal justice also led to lower job stress, and similarly, when job stress was high, so was work-family conflict. There was no moderating effect of either peer support or transformational leadership and no other significant findings were observed in this model. The results are shown in Table 7.

Table 7*The Conditional Indirect Effect of Interpersonal Justice on Work-Family Conflict*

	Job Stress (M)			Work-Family Conflict (Y)		
	<i>b</i> Coeff.	SE	LL, UL (95% CI)	<i>b</i> Coeff.	SE	LL, UL (95% CI)
Job Stress (<i>M</i>)	--	--	--	0.19***	0.05	0.10, 0.29
Interpersonal Justice (<i>X</i>)	-1.41*	0.71	-2.80, -0.01	0.06	0.08	-0.09, 0.21
Transformational Leadership (<i>W</i>)	-1.46*	0.72	-2.88, -0.04	-0.11	0.10	-0.31, 0.09
Peer Support (<i>Z</i>)	-0.74	0.95	-2.61, 1.13	-0.36*	0.15	-0.65, -0.07
<i>X</i> x <i>W</i>	0.21	0.18	-0.13, 0.56	--	--	--
<i>X</i> x <i>Z</i>	0.02	0.23	-0.44, 0.48	--	--	--
Indirect Effect (<i>X</i> x <i>M</i> x <i>W</i>)	--	--	--	-0.003	0.01	-0.02, 0.02
Indirect Effect (<i>X</i> x <i>M</i> x <i>Z</i>)	--	--	--	0.01	0.01	-0.02, 0.03
Constant	18.24***	2.63	13.09, 23.40	3.23***	0.58	2.09, 4.38
Model Summary	$R^2 = .10,$ $F(7, 736) = 11.85, p < .001$			$R^2 = .43,$ $F(8, 735) = 70.36, p < .001$		

Note. $N = 744$. Control variables were years of service and rank. LL = lower limit; UL = upper limit; * $p < .05$; ** $p < .01$; *** $p < .001$

Summary of Results

The results of the 12 hypotheses explored in the present research are shown in Table 8 below. Higher psychological safety was associated with lower job stress, and therefore lower burnout (H1), but only when peer support or transformational leadership were low. Higher psychological safety was associated with lower job stress, and consequently, lower work-family conflict (H2). Higher interpersonal justice was associated with lower job stress, and therefore, lower burnout (H3), but again, only when peer support or transformational justice were low. Higher interpersonal justice (H4) was associated with lower job stress, and subsequently, lower work-family conflict.

Moreover, high peer support ameliorated the influence of low psychological safety on high job stress, reducing the influence of high job stress on burnout (H5). This means that the level of influence that psychological safety had on burnout through job stress was conditional on the level of peer support available. Additionally, peer support also ameliorated the influence of low interpersonal justice on high job stress and subsequently, high burnout (H7). Thus, the influence of interpersonal justice on burnout through job stress was also shown to be conditional on the level of peer support available.

Table 8*Summary of Hypothesis Testing Results*

Hypothesis	Relation	Result
H1	Psychological Safety → Job Stress → Burnout	Partially supported
H2	Psychological Safety → Job Stress → Work-Family Conflict	Supported
H3	Interpersonal Justice → Job Stress → Burnout	Partially supported
H4	Interpersonal Justice → Job Stress → Work-Family Conflict	Supported
H5	Psychological Safety → Job Stress → Burnout (moderated by Peer Support)	Supported
H6	Psychological Safety → Job Stress → Work-Family Conflict (moderated by Peer Support)	Not Supported
H7	Interpersonal Justice → Job Stress → Burnout (moderated by Peer Support)	Supported
H8	Interpersonal Justice → Job Stress → Work-Family Conflict (moderated by Peer Support)	Not Supported
H9	Psychological Safety → Job Stress → Burnout (moderated by Transformational Leadership)	Not Supported
H10	Psychological Safety → Job Stress → Work-Family Conflict (moderated by Transformational Leadership)	Not Supported
H11	Interpersonal Justice → Job Stress → Burnout (moderated by Transformational Leadership)	Not Supported
H12	Interpersonal Justice → Job Stress → Work-Family Conflict (moderated by Transformational Leadership)	Not Supported

Discussion

The purpose of the present research was to explore whether workplace psychological safety and interpersonal justice influence the levels of burnout and work-family conflict experienced by women working in non-traditional roles. The possibility that these associations occurred through job stress was also examined. Additionally, the moderating influences of peer support and transformational leadership were explored, as previous research suggested that these constructs could moderate adverse job stress and strain (e.g., Mead et al, 2001; Peterson et al., 2008; Blais et al., 2018; Kelloway et al., 2013). Given the high attrition rates of women in the military and non-traditional jobs in general, understanding the factors that influence burnout and work-family conflict could provide us with the necessary tools to better support women and encourage their participation in non-traditional roles.

Specifically, it was found that psychological safety had an indirect effect on burnout and work family conflict through job stress. In other words, in work environments in which the workers experience low psychological safety and also report higher levels of job stress, higher rates of burnout and work-family conflict are likely to occur. Moreover, the indirect effect of psychological safety on burnout was moderated by peer support. As such, environments that are permeated by a lack of psychological support and high levels of job stress could create the perfect environment for the occurrence of high rates of burnout among employees. However, high peer support could buffer the effect of job stress and ultimately reduce burnout.

Finally, interpersonal justice also had an indirect effect on burnout that was also moderated by peer support. However, high levels of peer support again buffered the

adverse impact of high job stress on burnout. In other words, in workplaces in which the workers perceive low levels of interpersonal justice, experience high levels of stress, and have low levels of peer support, they are also more likely to report higher burnout.

Although research suggests that higher levels of work-family conflict occur among working women (Aazami, 2018; Ferguson et al., 2012; Karimi et al., 2011) and specifically among those in non-traditional roles (Erdogan, 2019; Gaunt, 2013; Mazerolle & Eason, 2016), the present research did not uncover any significant findings with regard to work-family conflict. This variable was shown to correlate highly with the other research variables, but nonetheless, the predicted associations between work-family conflict and the other variables in the present research were nonsignificant.

The Associations Between Psychological Safety, Job Stress, and Burnout

Although a considerable body of research has identified associations between psychological safety, workplace stress, and psychological health (e.g., Dollard et al., 2019; Idris, 2012; Ivey & Michaud, 2018; Rossiter & Sochos, 2018), these studies have not specifically examined the job strain of burnout among women in non-traditional roles. Dollard and colleagues (2019) discussed the importance of psychosocial safety climate at work and its connection to psychological distress, reduced workplace efficacy, and burnout in workplaces with high demands and low provision of resources, but only in the general sense. Findings in the present research indicate that women who work in non-traditional roles and perceive their workplace to be a psychologically safe environment are more likely to experience lower levels of job stress, and consequently, lower levels of burnout. This finding was consistent with Jensen and Deemer (2019) in which women scientists working in an unwelcoming and “chilly” environment were more likely to

experience burnout and emotional exhaustion. However, as the workplace became more welcoming, burnout levels were reduced.

The Associations Between Interpersonal Justice, Job Stress, and Burnout

As was hypothesized based on past research (e.g., Campbell, 2013; Haines, 2018; Yerkes, 2017), there was a significant indirect effect of interpersonal justice on burnout. This also aligns with previous findings by Dishon-Berkovits (2018), who determined that workplace justice relates to the dimensions of job burnout (emotional exhaustion, cynicism, and personal accomplishment) and job stress. Further, Topbaş and colleagues (2019) identified a significant and inverse association between both organizational and interactional justice and burnout, indicating that as justice levels increase, reported levels of worker burnout significantly decrease. The findings in the present research indicate that in workplaces in which women in non-traditional roles who experience a high level of interpersonal justice are more likely to experience lower levels of job stress, and consequently, lower levels of burnout.

Since the late 1980s, unfair treatment in the workplace and the culture of "suck it up and move on" have been widely accepted in the military ("*Embrace the Suck*" and *More Military Speak*, 2007; Ward, 2014). A reflection of this culture in our results is women scoring on the higher end of the spectrum on the interpersonal justice scale, meaning they may be misperceiving the level of justice that exists in their workplace. One possible explanation as to why interpersonal justice did not significantly reduce the rates of burnout or work-family conflict may be because a ceiling effect was encountered, where most women may believe that they have experienced high levels of interpersonal justice through their time in their military, when compared to non-military groups, this

may not be the case. Given the sample size and the history of injustice toward women in the military (Davis, 2009; Veldman et al., 2017), it is unlikely that this group of women had *not* experienced significant interpersonal injustice at work. Rather, it is more likely that this survey did not capture their experiences or possibly that the women in the survey felt that if they told the truth about the systemic injustices that they face, they could be subject to career-limiting repercussions at work (Stamarski & Son Hing, 2015).

Transformational Leadership: An Effective Moderator?

Throughout the present research, transformational leadership did not moderate the effect of psychological safety or interpersonal justice (through job stress) on either burnout or work-family conflict. In the sample group studied, these job strains remained uninfluenced by the level of transformational leadership at work.

Given that the majority of research on transformational leadership has demonstrated it to be a means of improving the overall health of a workplace, thereby reducing the occurrence of job strains among workers (Arnold & Connelly, 2013; Perko et al., 2016; Reb, 2019; Syrek et al., 2013), it was surprising to find in the present study that transformational leadership had no moderating effect on the influence of psychological safety or interpersonal justice (through job stress) on either burnout or work-family conflict. The findings in the present study may suggest that within the CAF environment writ large there is a systemic problem with the leadership such that it is not transformational enough to effect positive change within its workforce (von Hlatky & Lacoursière, 2019). The CAF continues to pour resources into training its leadership to a standard that inspires a high level of leadership, ethics, and integrity (*Duty with Honour: The Profession of Arms in Canada*, 2003); however, in order for the leadership to appear

as possessing integrity and effective leadership skills, the work force completing the survey questionnaire must also perceive that their leaders are working hard to deliver that level of leadership and integrity to all of their workforce, including those in the minority. At the present time, the CAF is experiencing a crisis of sexual misconduct among all ranks and especially the leadership (Watkins et al., 2017). In early 2021 several high-ranking military leaders were removed from their post due to sexual misconduct, with allegations of offences over decades of service (Cotter, 2016; *The path to dignity and respect: the Canadian Armed Forces sexual misconduct response strategy*, 2020). Given the duration and widespread culture of sexual misconduct in the CAF that extends from the lowest of ranks to the highest of leadership, it is possible that the women who completed the survey simply did not see the CAF leadership as exceptionally transformational (Sadler, 2018).

Conversely, it is possible that the measure used to explore the perceptions of leadership from the perspective of female workers in male-dominated roles was insufficient in grasping the nuances of this association. The absence of any significant findings pertaining to the influence of transformational leadership on the explored job strains suggests that there is more to be examined in this association, specifically as it pertains to women in the CAF and other non-traditional roles. Although it was not measured in the present research, perhaps examining the influence of supportive leadership on job strains among women in non-traditional roles would be more useful when studying this sample group.

The Moderating Influence of Peer Support

Although transformational leadership proved ineffective at protecting from adverse psychological effects such as burnout and work-family conflict, peer support proved useful in this regard. When examining the association between either psychological safety or interpersonal justice and burnout through job stress, peer support had a significant moderating effect on the influence of job stress on burnout. This means that in the association between psychological safety and burnout as mediated through job stress, higher levels of peer support led to lower reported levels of burnout among women working in non-traditional roles. Also, in the association between interpersonal justice and burnout, mediated through job stress, high levels of peer support resulted in lower reported levels of burnout among this same group. This aligns with previous research (Beehr et al., 2000; Bruce, 2005; Rivera-Torres, 2013), which suggest that higher levels of workplace emotional and peer support serve to reduce job strains related to high job stress.

Fostering Peer Support Networks. The *top-down* approach in developing strong leadership to inspire organizational success remains of great importance to the CAF organization. The present research suggests that the fostering of peer support networks for military women, who are by definition in the minority at work, should also be of great importance to the CAF. This concept, however, has largely been overlooked. The above findings suggest that the fostering of peer support networks for military women may contribute to reduced burnout, which may reduce attrition.

Peer support networks can evolve organically, given the right environment. According to Sunderland and Mishkin (2013) of the Canadian Mental Health

Association, formalizing the peer support network in the workplace ensures that the nationally standardized and appropriate training is provided to the peer support worker. Ideally, an internal employee would be selected based on their lived experience, empathy, and interpersonal communication skills. Training an employee from the workplace is preferred over bringing in an external facilitator, as trust would more readily evolve with someone who is familiar to the workforce and has shared experiences. Buy-in from leadership is essential to the successful implementation of peer support networks in the workplace, as at times, requests and suggestions may arise from the network that could lead to improved worker circumstances. Without leadership engagement, the peer support facilitator would have limited abilities to enact change that could contribute to improved employee mental health outcomes (Baynton, 2011).

The required training does not only include peer support workers. Additionally, the cultural intelligence of the organization needs to evolve to better model an environment of inclusiveness; however, this does not simply happen without behaviour training and modelling from leadership. Culturally intelligent individuals do not jump to assumptions about others, especially in a multicultural or multi-gendered environment. Rather, they wait until they have gathered sufficient information about the person, while also collecting information about the situation, before rendering a decision (Triandis, 2006). The culturally intelligent leader would demonstrate the model of appropriate behaviour toward those who differ from them, and in a culturally intelligent workplace, workers would follow this example. Increased cultural intelligence as it pertains to the present research can be achieved through improved knowledge, motivation, and

behavioural change surrounding acceptance and supporting of women who work in roles that are filled almost entirely by men (Davis, 2009; Veldman et al., 2017).

Peer Support and the Conservation of Resources Theory. *Conservation of Resources (COR)* theory is a stress model that associates burnout with the loss of resources (Hobfoll & Freely, 1993). Resources can be defined as time, money, staff, energy, support, motivation, training, confidence, etc. According to this theory, people will either gain or lose resources. Those who gain resources are more likely to continue to gain, while those who lose resources are more likely to continue to lose. This loss of resources can lead to increased stress in the worker and, often, burnout is the result of the loss of energy resources due to high workplace demands and a lack of associated rewards. This theory can be applied to women in non-traditional work roles, as these women often face a myriad of challenges in the workplace, which too often leads to burnout and attrition. COR theory suggests that workplace interventions that focus on increasing or reinforcing worker resources should be implemented in order to reduce vulnerability to resource loss. The suggestion above for leadership to nurture and support the development of peer support networks for women in non-traditional roles aligns with COR theory, as this theory suggests that the social support resource at work can greatly alleviate stress in workers, providing not only emotional support, but also a helping hand where needed (Chen et al., 2009). Those who have strong social support, or in this context, a strong peer support network in the workplace, will be better situated to *gain* rather than lose resources, which can be the case when there is buy-in from leaders and co-workers alike.

Measuring Work-Family Conflict

Previous research has explored the importance of interpersonal justice in the workplace and how it relates to work-family conflict (e.g., Judge, 2004; Yerkes, 2017). Based on past research, the expectation in the present research was that workers who reported low levels of workplace justice would also report higher job stress and for those with family circumstances, higher levels of work-family conflict. To better capture this dynamic, only women with caregiving responsibilities in the home were included in this study.

Surprisingly, no significant association between our job stressors, job stress, and work-family conflict was observed. This may be due to a number of causes. The sample used consisted of working military women who identified as single, married, widowed, or cohabitating and all had some form of family care responsibilities at home, either through caring for children or elders. As many new recruits are typically young and without dependents, it is expected that for this group, work-family conflict would not yet have manifested. The source of any existing conflict was not explored, which means that the present research did not identify whether it stemmed from work or home. Also, it is likely that once conflict began to arise between work and home, many women may have left the military in favour of responsibilities in the home. These are important nuances that were not captured by the limited measure of circumstances that was employed. The five-item subscale of the Work-Family Conflict Scale developed by Netemeyer, Boles, and McMurrian (1996) did not address this spectrum of parenting and relationship potentials so this research was unable to represent a realistic picture of work-family conflict that may truly exist. A better measure to be employed could be the Work and Family Conflict

Scale developed by Haslam and associates (2015), which examines more of the family dynamic, as well as the bi-directional association of conflict between work and family. This measure addresses not only conflict in the home as a result of workplace job stressors, but stress that is brought to work as a result of stressors that originate in the home.

An earlier examination of the bi-directional flow of work and home conflict explained that the prioritization of work versus home, termed *role salience*, tells us the origin of work- or family-related conflict (Gutek et al., 1991). Those who possessed a high work/low home salience would experience lower work-family conflict, but those who placed greater value on their time spent in the home, yet still worked outside the home, would experience higher home-work conflict. This directional flow was termed either *family-work interference* (FWI) or *work-family interference* (WFI), depending on the source of the strain (Allen et al., 2013). This association was also reflected in research by Aazami and colleagues (2018), who observed that women of the *sandwich generation* who had both elder care and childcare responsibilities in the home (high home salience/low work salience) were more likely to experience family-based interference in their work role rather than the opposite.

To further complicate things, when there is a combination of the stressors that come with working in a non-traditional role with the potentially high levels of conflict that originate in the homes of women with low work/high home salience, this may mean that women in non-traditional work roles may face adversity from both directions. The present research did not probe the role salience of participants so without a baseline for

both work and home, it was impossible to identify the range or origin of role conflict faced by these women.

Examining Participants by Rank, Years of Service, and Age

When examining the rank groups in the present study, it is understandable that due to their newness in the CAF and their overall youth, that Junior NCMs would report the lowest job stress and work-family conflict. However, of the four rank groups, Junior NCMs reported the most adversity, having reported the lowest levels of psychological safety and peer support of all participants.

Examining participants by years of service also provided notable observations. For example, as years of service increased overall, both psychological safety and interpersonal justice tended to increase, with the highest levels reported by those with 26+ years of service. This group also enjoyed significantly higher levels of peer support and the lowest reported burnout in comparison with those with fewer than 10 years of service. At this point in a military career, workers are on the cusp of retirement and are considering pension options. They have a strong network from coast to coast due to the nature of CAF mobility and are typically highly effective in their roles by this time, which means there is possibly less work pressure. It bears mentioning that those who struggled the most with burnout in the first decade of service may have left the CAF. This would create an artificial *improvement* in burnout rates at the 10-year point, when in fact, members chose to attrit rather than remain in a workplace that presented so many physically and psychologically costly job strains.

No notable difference in work-family conflict level was seen in the first 15 years of service; however, this increased significantly at the 16-20-year mark, differing from

those with 0-5 years of service. This is a reasonable finding, given that the majority of people who join the CAF do so before they have family care responsibilities. Work-family conflict levelled off at 26+ years of service, which is when children would typically be gone from the home, thereby greatly reducing caregiving responsibilities.

It is noteworthy that the effect sizes for all of these differences based on rank or years of service are small (i.e., partial eta squared less than 6%) (Newcombe, 2012), which suggests that other factors are stronger contributors to the outcome variables of burnout and work-family conflict, but it is still important to control for effects related to rank and years of service.

Attrition of Women

It is important to keep in mind that many voices were not heard in this data collection: those people who chose to leave the CAF at key exit points due to job strains such as burnout or work-family conflict. Contract durations for new members of the CAF are initially short in duration (e.g., three to nine years for most occupations), and those who are faced with more adversity than they can manage will inevitably leave the organization when the opportunity presents rather than renew a contract. This exit phenomenon may influence our findings in that the appearance of adversity such as burnout seems to lessen around the 10-year mark, when in reality it is simply that those who have burned out have chosen to leave the CAF, leaving fewer burned-out individuals behind to represent the group with 11-to-15 years of service. The reported levels of burnout were highest and psychological safety was lowest among women who had served between six and ten years in the CAF. Interpersonal justice, peer support, and transformational leadership also approached their lowest levels for this same group.

Additionally, the level of job stress reported by this group was only exceeded by that of senior officers. Therefore, it is highly likely that the women who were the most stressed, burned out, and suffering from the highest levels of work-family conflict left the CAF at a key exit point, between the six and ten-year point.

Chronic isolation from peers takes away a valuable buffer between job stress and burnout. According to the job strain theory, daily small stressors can pile on and produce adverse effects down the line. Here, the daily grind of the job in addition to the lack of support can be translated to burnout, and potentially job attrition for women in the CAF. Given the high attrition rates of women in the military and non-traditional jobs in general, understanding the factors that influence burnout and work-family conflict could provide leadership with the necessary tools to better support women and encourage their participation and retention in non-traditional roles.

Research Limitations and Future Directions

Single Method Data Collection

Using a single method for data sourcing can lead to common method bias. This can be minimized by employing multiple methods of data collection (Podsakoff et al., 2003; Podsakoff et al., 2012). The present research employed a single method of data collection, the self-report survey using Likert-type scales, which does not allow us to make causal interpretations and may increase the risk of common method bias. Also, using a combination of data collection methods such as surveys, scenarios, and interviews may have added to the richness and validity of the obtained data. Adding in qualitative data through interviews or focus groups would not only provide women a voice that would be heard, but they would also get a sense of peer support through hearing similar

concerns from other women in the same organization. This method would also reduce the variance that could be attributed to common method bias.

Generalizability of Findings

Data were only used from Air Force personnel. Without similar information from the Army and Navy, it is not possible to determine if the issues identified in the present research are generalizable to women employed in uniform within these other two CAF environments. Arguably, the Army and Navy are frequently seen by CAF members at large as the more “hard core” environments for women in uniform and it is important that future research specifically explore the experiences of women across all roles within the CAF, including the Army, Navy, and Air Force.

Within the structure of the military, which is arguably a non-traditional environment for women, females can be subdivided into traditional and non-traditional roles (Mota et al., 2011). For example, the CAF employs many women in uniform in roles that are traditionally filled by women in the civilian workforce, such as in nursing and administration. The CAF also employs women in roles that are traditionally filled by men, such as aircraft mechanics, vehicle mechanics, and pilots, albeit in far smaller numbers. When the data were collected for the original research, participants were not specifically asked to identify their occupation within the organization. Thus, the opportunity to explore the effects of serving in a traditional versus non-traditional role within the military was lost.

Further, as the CAF presents a unique work environment, the applicability of the findings in the present research to civilian women working in non-traditional roles can be limited. Employment within the CAF includes additional job stressors such as relocating

to other parts of the country (and often outside the country) away from friends and family, irregular and unpredictable work demands such as taskings and deployments, and the requirement to maintain a certain standard of physical fitness, which is routinely tested. These variables were not included in the present research, but no doubt contribute to CAF workplace stressors.

Future Research

The large attrition of women from the CAF at the six-to ten-year point in their service merits further study, with the aim of identifying the issues that ultimately lead to the decision to attrit. Further research may also determine whether recommendations from the present research could improve working conditions to the point of increasing retention of military women beyond what for many is the breaking point.

It was previously discussed that men and women experience job stress differently. This fact reinforces the need to examine the experiences of not only women who work in non-traditional roles, but also men (e.g., Rochlen, 2009; McDowell, 2015). Societal pressure surrounding gender roles unnecessarily creates systemic barriers to both men and women who pursue non-traditional work roles (e.g., Barth et al., 2015; Diekman & Goodfriend, 2006; Gaunt, 2013; Rochlen, 2009). The present research focused on the experiences of women who work in non-traditional roles; however, no less important is the voice of men who do the same. It would further demolish gender barriers if greater voice were given to both men and women who choose to pursue work roles outside that which is deemed within social norms.

Future research should consider a more intersectional approach and examine how not only gender, but race, sexual orientation, disability, and religious identities influence

work attrition in highly homogenized work environments. Individuals from under-represented and under-served populations, may experience various forms of prejudice in the workplace, which could in turn reduce their likelihood of staying at that job. It would also be important to examine cross-gender peer support, as the majority of CAF membership will remain men. This research will provide important insights into whether women are accepted in their non-traditional role by both subordinates and peers.

Given that the predominant finding in the present research was related to the importance of a peer support network in the workplace, future research could consider how the peer support network varies over the course of the career. For example, measuring one's peer support network both before and after an extended work absence due to pregnancy or illness could identify feelings of resentment among workers. Based on the results that identified the importance of peer support network in protecting from burnout, this could partially explain why women tend to leave the workplace after having had a baby.

Finally, it would be useful to explore how one's peer support network changes over the course of one's career. As promotions are granted and a worker moves into a leadership role, the dynamics of workplace relationships shift. Future work could explore how the loss of a previously established peer support network due to promotion, pregnancy, or illness could influence burnout, work-family conflict, and other job strains, especially among women in non-traditional roles.

Research and Practical Implications

The current research contributes to the existing literature by directly exploring a sample of military women in order to better comprehend how job stress and strains can

influence the decision made by women to attrit from a non-traditional work role.

Managers can use the present findings when making decisions about employee placement to facilitate a work environment that fosters high peer support. This may serve to reduce the influence of job stress on job strains among workers, which may also increase personnel retention, thereby directly contributing to employment equity and gender balance in the workplace. It is the goal of the Canadian government and the CAF to increase the number of women in the military, with the aim of achieving 25% women among all ranks by the year 2025 (Government of Canada, 2020). To achieve such numbers in under four years would likely take rapid and drastic measures, one of which could be re-examining how and where women are posted within the CAF across Canada and abroad. Career managers, who make posting decisions as to where military members will relocate for their next work placement, should strive whenever possible to co-locate women on military Bases by occupation group. In non-military roles that do not require relocation, managers could more easily build the foundations of peer support groups for women in non-traditional roles by creating gender-based teams. This concept has been successfully trialed (Boschini, 2007; Dasgupta et al., 2015; Lemoine, 2019; Neumeyer, 2019), with results suggesting that gender-based teams struggle less with factions and enjoy increased cohesion and success.

Linkages have been made between the present findings and Conservation of Resources theory. As this is a widely used theory to identify sources of stress leading to burnout at work, tying the implications surrounding the significance of peer support as a means of stress reduction to such a widely accepted and applied theory may help to

increase the support and resources for the implementation of peer support networks for women in non-traditional roles.

Across all non-traditional occupations, women continue to attrit for a variety of reasons. A few years ago, Lieutenant-General Christine Whitecross told a packed townhall meeting about the Australian Defence Force (ADF) and how they were losing women due to the ADF's inflexibility regarding seemingly small issues. The General told the audience that a highly qualified female senior officer was in the process of leaving the Defence Force for the simple reason that by the time she dropped her child off at school, she was unable to secure parking at work and was inevitably late for key meetings. This not only made her look unprofessional in front of her peers but started every day with an accumulation of job stress. At her exit interview she was asked, "What would it take to make you stay?" She replied, "a parking spot." All it took was for someone to ask the right question, listen to the response, and be willing to take appropriate action. Future research should strive to ask the right questions, but early enough to take action so that these valuable workers are heard, and hopefully, retained and supported at work.

Conclusion

The present research identified the importance of peer support in moderating the influence of job stress on burnout among women working in non-traditional roles, and the significant role that leadership plays in encouraging peer support networks in the workplace. Previous studies have examined the influence of job stress on burnout and conflict, among other job strains (e.g., Adamo, 2013; Eden, 1992; Maslach et al., 2001); however, very few studies have directly examined the experiences of military women (e.g., Serré, 2019; Waruszynski et al., 2019). The findings in this research suggest that in

work environments where participants experience low levels of interpersonal justice or psychological safety, which is often the case for women in non-traditional roles, high peer support may reduce the influence of job stress on the resulting burnout.

It is important that leadership better understand the importance of peer support in order to increase attraction and retention of women into non-traditional roles such as the Canadian military, STEM occupations, and skilled trades. The cultural intelligence of organizations that employ women in non-traditional roles also need to evolve to ensure that both leaders and workers create an environment of inclusiveness for all.

Given the push within both the private and the public sector to attract and recruit women into their workforce, organizations must grow and evolve into bodies that value all workers and offer equal opportunities to people of all genders. For many workplaces, this cultural shift has been glacially slow, especially in the domains that are non-traditional work roles for women. The present research has indicated that employers should be proactive in their organizations to encourage and promote a diverse and welcoming climate for all workers. Specifically in non-traditional workplaces, fostering the development of peer support among all workers so that each will have the other's "six" is the ideal outcome. To do so would decrease burnout and possibly other job strains such as turnover, absenteeism, and reduced productivity, resulting in the increased attraction and retention of women into non-traditional roles.

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Appendix - Measure Items

Psychological Safety. Team Psychological Safety Scale (Edmondson, 1999). Cronbach's $\alpha = .76$ (French), $.83$ (English), validated on workers in the manufacturing industry.

Response options: 1 (*very inaccurate*) to 7 (*very accurate*)

The following statements refer to how you may feel about your work environment and those you work with. Please respond by indicating how accurate each statement is to your experience.

1. If you make a mistake on this team, it is often held against you.
2. Members of this team are able to bring up problems and tough issues.
3. People on this team sometimes reject others for being different.
4. It is safe to take a risk on this team.
5. It is difficult to ask other members of this team for help.
6. No one on this team would deliberately act in a way that undermines my efforts.
7. Working with members of this team, my unique skills and talents are valued and utilized.

Interpersonal Justice: Interpersonal Justice Subscale of the Organizational Justice Scale (Colquitt, 2001). Cronbach's $\alpha = .79$ to $.92$, validated on university students and workers from the automobile manufacturing industry

Response options: 1 (*to a very small extent*) to 5 (*to a very large extent*)

The following statements refer to your experience with individuals in your workplace.

Please indicate the extent to which individuals (coworkers, supervisors, etc.)...

1. Treat you in a polite manner.
2. Treat you with dignity.

3. Treat you with respect.
4. Refrain from improper remarks or comments.

Job stress: General Job Stress Scale, modified version (Yankelevich, Broadfoot, Gillespie, Gillespie, Guidroz, 2012)

Cronbach's $\alpha = .79$ to $.85$

Response options: "yes" = 2, "no" = 0, and "?" = 1

Some jobs can be more job stressful than others. For each of the following words or phrases, please select "yes" if it describes your job, "no" if it does not describe your job, and "?" if you cannot decide.

1. Demanding
2. Pressured
3. Calm
4. Many job stressful things
5. Hassled
6. Nerve-racking
7. More job stressful than I'd like
8. Overwhelming

Burnout: The Oldenberg Burnout Inventory (Demerouti, Bakker, Vardakou, & Kantas, 2003)

Cronbach's $\alpha = .83$ (English), $.89$ (French)

Response options: 1 (*strongly disagree*) to 7 (*strongly agree*)

The following statements refer to some of the feelings and attitudes you may have towards your work. Please read over the following statements and indicate the extent to which you agree or disagree by selecting the best fitting response.

1. There are days when I feel tired before I arrive at work.
2. It happens more and more often that I talk about my work in a negative way.
3. After work, I tend to need more time than in the past in order to relax and feel better.
4. Lately, I tend to think less at work and do my job almost mechanically.
5. During my work, I often feel emotionally drained.
6. Over time, one can become disconnected from this type of work.
7. Sometimes I feel sickened by my work tasks.
8. After my work, I usually feel worn out and weary.

Work-Family Conflict: Work-Family Conflict Subscale of the Work-Family Conflict Scale (WFCS) (Netemeyer, Boles, & McMurrian, 1996)

Cronbach's $\alpha = .88$ to $.89$ (English), validated by Netemeyer, Boles, and McMurrian (1996), while $\alpha = .86$ (French), taken from Mathieu and Mathieu (2012).

Response options: 1 (*strongly disagree*) to 7 (*strongly agree*)

This section examines the balance between the demands of your work and personal life (e.g., studies, civilian work, family, and spouse). Please read over the following statements and indicate the extent to which you agree or disagree by selecting the best fitting response.

1. The demands of my work interfere with my home and family life.
2. The amount of time my job takes up makes it difficult to fulfill family responsibilities.

3. Things I want to do at home do not get done because of demands my job puts on me.
4. My job produces strain that makes it difficult to fulfill my family duties.
5. Due to work-related duties, I have to make changes to my plans for family activities.

Peer Support: Relatedness Subscale of the Work-Related Basic Need Satisfaction Scale (WRBNS) (van den Broeck, Vansteenskiste, Witte, Soenens, & Lens, 2010).

Cronbach's $\alpha = .81$ (English), $\alpha = .85$ (French), validated by van den Broeck et al. (2010).

Response options: 1 (*totally disagree*) to 5 (*totally agree*)

The following six items refer to your feelings about others in your workplace. Please indicate the extent to which you agree or disagree with each item by selecting the best fitting response.

1. I don't really feel connected with other people at my job.
2. At work, I feel part of a group.
3. I don't really mix with other people at my job.
4. At work, I can talk with people about things that really matter to me.
5. I often feel alone when I am with my colleagues.
6. Some people I work with are close friends of mine.

Transformational Leadership: Global Transformational Leadership Scale (Carless et al., 2000). Cronbach's $\alpha = .93$, validated using Australian retail bank managers behaviours.

Response options: 1 (*rarely or never*) to 5 (*very frequently, if not always*)

The following items refer to your supervisor or the person you report directly to. Please indicate how often your supervisor does the following:

1. Communicates a clear and positive vision of the future.
2. Treats staff as individuals, supports, and encourages their development.
3. Gives encouragement and recognition to staff.
4. Fosters trust, involvement, and cooperation among team members.
5. Encourages thinking about problems in new ways and questions assumptions.
6. Is clear about his/her values and practices what he/she preaches.
7. Instills pride and respect in others and inspires me by being highly competent.