Enhancing Organizational Support for Emergency First Responders and their Families:
Examining the Role of Personal Support Networks after the Experience of Work-Related Trauma

by

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ABSTRACT

ENHANCING ORGANIZATIONAL SUPPORT FOR EMERGENCY FIRST RESPONDERS AND THEIR FAMILIES: EXAMINING THE ROLE OF PERSONAL SUPPORT NETWORKS AFTER THE EXPERIENCE OF WORK-RELATED TRAUMA

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First responders are at risk for the development of mental health disorders due to work-related trauma exposure. Despite the frequency of trauma exposure, previous research has found that many first responders fail to seek help from their respective organizations. Rather, it has been demonstrated that individuals are more likely to attempt to cope themselves or seek support from friends and family members. To expand on this line of research, the purpose of this dissertation was to explore the support process from multiple perspectives, including investigating the role of personal support networks in individual adjustment to a traumatic work-related event, in addition to exploring the factors that shape the efficacy of support interactions from the perspective of support providers.

To address this, Chapter 1 used cross-sectional survey data from a policing sample (n = 158), which included sworn officers, auxiliary staff, and civilian members, to explore the relationships between trauma exposure, appraisal, enacted coping strategies, support seeking, and psychological impairment. In addition to the quantitative data obtained, the quality of the support received was explored using data from open-ended responses. Findings support previous research, with spouses representing the most common source of helpful support.

To supplement findings from the cross-sectional survey, Chapter 2 explored the support process from the perspective of support providers using a multi-method approach, including an online questionnaire and qualitative interviews with spouses of first responders. Qualitative data
from 38 spouses of first responders (police: 13; fire: 3; paramedic: 22) provided insight into the nuanced nature of support initiation and provision, including barriers limiting first responders’ help-seeking behaviour and the challenges spouses face when providing support. Findings highlight the importance of aligning the support provided to a partner’s needs, with emotional support being most frequently described as effective.

Together, this research informs future directions for skills-based intervention research for first responders and their spouses in Chapter 3. Additionally, findings from both studies provide key takeaways for individuals, organizations, and communities. Together, these can inform the development of a network of resources, including evidence-based programs and mental health initiatives to support emergency first responders and their families across Canada.
DEDICATION

This dissertation is dedicated to my father, Mike Ewles, and my mother, Cristal Diemer-Ewles. To my father, your commitment to your community is unparalleled and the positive impact you have had on others, both in and out of uniform, is beyond measure. You have always been an advocate for change, and demonstrate courage, conviction, and compassion in every facet of your life. I can only hope to exhibit some of these qualities. To my mother, you are the embodiment of strength. Thank you for the sacrifices you made to support your family, and for your enduring commitment to improving the lives of those around you. Together, you form an unshakeable team, and consistently challenge yourselves and others to be and do better.

I would also like to recognize the first responders serving their communities across Canada. To these women and men, thank you for your continued dedication to the safety, health, and well-being of others. As a proud member of a policing family, I recognize the difficult and demanding nature of your work, and the personal toll this can take. To you, I extend my admiration and deepest gratitude. To their families, thank you for sharing your loved ones with those in need, and for the sacrifices you make to support them.
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To the I/O faculty, thank you for guiding and challenging me throughout my years as a graduate student at the University of Guelph. This program has shaped me into the research-oriented practitioner I am today. To the students in the I/O program, both past and present, thank you for your camaraderie. In particular, I would like to acknowledge Leann Schneider, Jenny Cao, Eugénie L. Saint-Laurent, Dan van der Werf, Thomas Sasso, Jessica Sorenson, and Rebecca Lee. I am so thankful for the life-long friendships we have fostered and I look forward to celebrating your future successes, both personal and professional.

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To my parents, I am eternally grateful for the lessons you instilled in me. Thank you for the sacrifices you have made, your endless love and support, and for encouraging me to pursue my dreams. This degree has not been easy; thank you for being there every step of the way. And finally, to my husband, Tom Gatien, thank you for taking this journey with me and for embracing my goals as your own. I will be forever grateful for your encouragement, compassion, and consideration throughout this process. Your love and support have carried me through difficult times and I am proud to share this accomplishment with you.
# TABLE OF CONTENTS

ABSTRACT ....................................................................................................................... ii
DEDICATION .................................................................................................................... iv
ACKNOWLEDGMENTS ..................................................................................................... v
TABLE OF CONTENTS .................................................................................................... vii
LIST OF TABLES ............................................................................................................... xi
LIST OF FIGURES ........................................................................................................... xii
LIST OF APPENDICES ...................................................................................................... xiii
OVERVIEW ....................................................................................................................... 1
CHAPTER I ......................................................................................................................... 6
Examining the Role of Enacted Social Support for Police Service Members Following a
Traumatic Work-Related Event: A Cross-Sectional Analysis ........................................... 6
    The Present Study .......................................................................................................... 8
    Job Demands, Job Stressors, and Stress Appraisal ......................................................... 9
Coping and Enacted Social Support .................................................................................. 12
    Immediate coping responses ......................................................................................... 13
    Maladaptive coping ....................................................................................................... 14
    Social support seeking as coping .................................................................................. 16
    Efficacy of social support ............................................................................................. 18
Stress Responses and Strain Following Trauma Exposure ............................................... 20
    Impairment .................................................................................................................. 21
Methods ............................................................................................................................ 23
Participants ......................................................................................................................... 23
Measures Used for Hypothesis Testing ............................................................................. 25
    Demographics .............................................................................................................. 25
    Critical events ............................................................................................................. 25
    Stress appraisal .......................................................................................................... 26
Coping ............................................................................................................................... 26
    Impairment .................................................................................................................. 28
    Random responding .................................................................................................... 29
Measures Used for Exploratory Analyses ......................................................................... 29
<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social support in first responder relationships</td>
<td>114</td>
</tr>
<tr>
<td>Perceived barriers to seeking and providing support</td>
<td>114</td>
</tr>
<tr>
<td>Challenges providing effective support</td>
<td>117</td>
</tr>
<tr>
<td>Research Aims for the Present Study</td>
<td>120</td>
</tr>
<tr>
<td>Reflexivity</td>
<td>122</td>
</tr>
<tr>
<td>Methods</td>
<td>124</td>
</tr>
<tr>
<td>Sample Description and Recruitment Process</td>
<td>124</td>
</tr>
<tr>
<td>Preliminary Questionnaire Measures</td>
<td>125</td>
</tr>
<tr>
<td>Demographics</td>
<td>125</td>
</tr>
<tr>
<td>Motivations for providing support</td>
<td>125</td>
</tr>
<tr>
<td>Motivations for not providing support</td>
<td>126</td>
</tr>
<tr>
<td>Relationship satisfaction</td>
<td>127</td>
</tr>
<tr>
<td>Social support</td>
<td>127</td>
</tr>
<tr>
<td>Preliminary Questionnaire Results</td>
<td>128</td>
</tr>
<tr>
<td>Preliminary Analyses</td>
<td>128</td>
</tr>
<tr>
<td>Missing data</td>
<td>128</td>
</tr>
<tr>
<td>Outliers</td>
<td>128</td>
</tr>
<tr>
<td>Sample descriptives and correlations</td>
<td>129</td>
</tr>
<tr>
<td>Exploration of Social Support Provision</td>
<td>129</td>
</tr>
<tr>
<td>Social support cues</td>
<td>132</td>
</tr>
<tr>
<td>Ability to meet partner’s support needs</td>
<td>133</td>
</tr>
<tr>
<td>Summary</td>
<td>137</td>
</tr>
<tr>
<td>Interview Data Collection &amp; Analysis Procedure</td>
<td>137</td>
</tr>
<tr>
<td>Transcription and Approach to Qualitative Analysis</td>
<td>139</td>
</tr>
<tr>
<td>Coding procedure</td>
<td>140</td>
</tr>
<tr>
<td>Interview Results</td>
<td>142</td>
</tr>
<tr>
<td>Support Context</td>
<td>142</td>
</tr>
<tr>
<td>Partner’s schedule and home demands</td>
<td>144</td>
</tr>
<tr>
<td>Impact, work identity, and separating work from home</td>
<td>147</td>
</tr>
<tr>
<td>Summary of support context</td>
<td>150</td>
</tr>
<tr>
<td>Support Process</td>
<td>151</td>
</tr>
<tr>
<td>Section</td>
<td>Page</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>Support signals</td>
<td>151</td>
</tr>
<tr>
<td>Challenges or barriers to providing support</td>
<td>155</td>
</tr>
<tr>
<td>Changes in support over time</td>
<td>166</td>
</tr>
<tr>
<td>Reciprocity</td>
<td>170</td>
</tr>
<tr>
<td>Summary of support process</td>
<td>172</td>
</tr>
<tr>
<td>Support Outcomes</td>
<td>173</td>
</tr>
<tr>
<td>Successful strategies</td>
<td>173</td>
</tr>
<tr>
<td>Unsuccessful strategies</td>
<td>180</td>
</tr>
<tr>
<td>Summary of support outcomes</td>
<td>183</td>
</tr>
<tr>
<td>Future Supports</td>
<td>184</td>
</tr>
<tr>
<td>Strengths</td>
<td>184</td>
</tr>
<tr>
<td>Areas of improvement</td>
<td>187</td>
</tr>
<tr>
<td>Desired resources</td>
<td>190</td>
</tr>
<tr>
<td>Summary of future supports</td>
<td>196</td>
</tr>
<tr>
<td>Discussion</td>
<td>197</td>
</tr>
<tr>
<td>References</td>
<td>204</td>
</tr>
<tr>
<td>CHAPTER III</td>
<td>258</td>
</tr>
<tr>
<td>Discussion and Future Directions for Intervention Research</td>
<td>258</td>
</tr>
<tr>
<td>Summary of Key Findings</td>
<td>260</td>
</tr>
<tr>
<td>Limitations</td>
<td>264</td>
</tr>
<tr>
<td>Future Directions for Intervention Research</td>
<td>267</td>
</tr>
<tr>
<td>Future directions for social support interventions in first responder relationships</td>
<td>269</td>
</tr>
<tr>
<td>Couple-based interventions for PTSD</td>
<td>270</td>
</tr>
<tr>
<td>What Can Individuals and Families Do?</td>
<td>274</td>
</tr>
<tr>
<td>Implications</td>
<td>276</td>
</tr>
<tr>
<td>Conclusions</td>
<td>278</td>
</tr>
<tr>
<td>References</td>
<td>280</td>
</tr>
</tbody>
</table>
LIST OF TABLES

Table 1. Demographic Characteristics ................................................................. 24
Table 2. Critical Event Exposure and Associated Stress ........................................ 31
Table 3. Descriptive Statistics and Correlations Between Study Variables ................ 34
Table 4. Outer Loadings for Stress Appraisal, Problem-focused Coping, Active Emotion-focused Coping, Avoidant Emotion-focused Coping, Enacted Social Support, and Impairment ..... 38
Table 5. HTMT Ratios, Significance, and Confidence Intervals for Study Variables ........ 41
Table 6. Type of Social Support Sought from Each Source Following a Stressful or Traumatic Event .................................................................................................................. 45
Table 7. Descriptive Statistics and Correlations Between All Variables – Survey Short Form... 95
Table 8. Descriptive Statistics and Correlations Between All Variables – Survey Long Form... 96
Table 9. Social Network Score Frequencies ........................................................... 100
Table 10. Demographic Characteristics .................................................................. 125
Table 11. Descriptive Statistics and Correlations Between Study Variables ................. 130
Table 12. Type of Social Support Sought by First Responders and Type of Support Provided by Spouses ........................................................................................................ 132
Table 13. Interview Results Sections and Associated Research Questions ................. 142
Table 14. Relationship Stressor Code Frequencies ................................................. 143
Table 15. Support Signal Code Frequencies ....................................................... 152
Table 16. Successful Support Strategy Code Frequencies ....................................... 173
Table 17. Unsuccessful Support Strategy Code Frequencies .................................... 180
Table 18. Desired Resources Code Frequencies .................................................... 190
Table 19. Missing Data Demographic Characteristics ............................................. 225
Table 20. Social Support Dimensions ..................................................................... 269
**LIST OF FIGURES**

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Enacted social support as a mediator between stress appraisal and strain</td>
<td>8</td>
</tr>
<tr>
<td>2</td>
<td>Theoretical model used to test the mediating effects of enacted social support and coping on impairment</td>
<td>10</td>
</tr>
<tr>
<td>3</td>
<td>Structural model with standardized path coefficients</td>
<td>43</td>
</tr>
<tr>
<td>4</td>
<td>Alternative structural model with standardized path coefficients</td>
<td>99</td>
</tr>
<tr>
<td>5</td>
<td>Process model of the prototypical caregiving interaction</td>
<td>119</td>
</tr>
<tr>
<td>6</td>
<td>Interview data coding procedure</td>
<td>141</td>
</tr>
</tbody>
</table>
# LIST OF APPENDICES

<table>
<thead>
<tr>
<th>Appendix</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Missing Data Analysis</td>
<td>77</td>
</tr>
<tr>
<td>B</td>
<td>Additional Study Measures</td>
<td>78</td>
</tr>
<tr>
<td>C</td>
<td>Critical Events Checklist</td>
<td>80</td>
</tr>
<tr>
<td>D</td>
<td>Stress Appraisal</td>
<td>83</td>
</tr>
<tr>
<td>E</td>
<td>Coping (Brief COPE)</td>
<td>85</td>
</tr>
<tr>
<td>F</td>
<td>Impairment</td>
<td>87</td>
</tr>
<tr>
<td>G</td>
<td>Random Responding</td>
<td>88</td>
</tr>
<tr>
<td>H</td>
<td>Social Network</td>
<td>89</td>
</tr>
<tr>
<td>I</td>
<td>Internal Advertisement</td>
<td>90</td>
</tr>
<tr>
<td>J</td>
<td>Introductory Email Message</td>
<td>91</td>
</tr>
<tr>
<td>K</td>
<td>Consent Form</td>
<td>92</td>
</tr>
<tr>
<td>L</td>
<td>Debriefing Form</td>
<td>94</td>
</tr>
<tr>
<td>M</td>
<td>Additional Tables</td>
<td>95</td>
</tr>
<tr>
<td>N</td>
<td>PLS-SEM Analyses with Alternate Measure of Social Support</td>
<td>98</td>
</tr>
<tr>
<td>O</td>
<td>Social Network Score Frequencies</td>
<td>100</td>
</tr>
<tr>
<td>P</td>
<td>Study Advertisement</td>
<td>221</td>
</tr>
<tr>
<td>Q</td>
<td>Preliminary Questionnaire Information &amp; Consent Form</td>
<td>222</td>
</tr>
<tr>
<td>R</td>
<td>Missing Data Demographic Characteristics</td>
<td>225</td>
</tr>
<tr>
<td>S</td>
<td>Motivations for Caregiving</td>
<td>226</td>
</tr>
<tr>
<td>T</td>
<td>Motivations for Not Caregiving</td>
<td>228</td>
</tr>
<tr>
<td>U</td>
<td>Relationship Satisfaction</td>
<td>230</td>
</tr>
<tr>
<td>V</td>
<td>Social Support</td>
<td>232</td>
</tr>
<tr>
<td>W</td>
<td>Debriefing Form</td>
<td>233</td>
</tr>
<tr>
<td>X</td>
<td>Interview Information &amp; Consent Form</td>
<td>234</td>
</tr>
<tr>
<td>Y</td>
<td>Interview Guide/Script</td>
<td>236</td>
</tr>
<tr>
<td>Z</td>
<td>Coding Guide</td>
<td>239</td>
</tr>
<tr>
<td>AA</td>
<td>Summary of Study Results for Participants</td>
<td>254</td>
</tr>
</tbody>
</table>
OVERVIEW

Over the last decade, research on occupational health has shifted emphasis away from the negative consequences of work for physical health towards the study of health promotion. This shift is largely driven by the impact of mental health on individual and organizational outcomes (Macik-Frey, Quick, & Nelson, 2007). For example, it is estimated that mental illness results in 20.7 billion dollars of lost productivity per year in Canada alone (Wilson, Guliani, & Boichev, 2016). Given this trend, employee health and well-being is now understood as a key driver of organizational success and has been identified as one of the top ten workplace trends for three consecutive years by the Society for Industrial and Organizational Psychology (SIOP 2016, 2017, 2018). As a result, many organizations are now actively recognizing their role in supporting employee health and well-being by reducing the impact of work-related stressors.

To support the implementation of occupational health initiatives within Canada, the Mental Health Commission of Canada (MHCC, 2013) launched the National Standard for Psychological Health and Safety in the Workplace to provide organizations with guidelines and recommendations for supporting employee mental health and well-being. In particular, the MHCC (n.d.) cites increased productivity and employee retention as potential benefits for participating organizations, reflecting the positive impact of improved employee health and well-being on organizational outcomes. The importance of such initiatives is particularly relevant when examining high stress occupations, as the implications stemming from chronic work strain can be severe.

To demonstrate, emergency first responders, including police officers, firefighters, and paramedics, face potentially traumatic events in addition to high work demands, bureaucratic stressors, and public pressure. Each of these work stressors is associated with high levels of
strain (Kleim & Westphal, 2011; Haugen, Evces, & Weiss, 2012; Van Der Velden et al., 2012). Given these stressors, first responder occupations have been identified as some of the most stressful jobs worldwide (e.g., Dantzer, 1987; Johnson et al., 2005; Russell, 2014). Not surprisingly, these occupations are associated with chronic psychological and physical impairments, including burnout (e.g., Regehr & Millar, 2007), physical illnesses (e.g., cardiovascular disease; Anderson, Litzenberger, & Plecas, 2002; Waters & Ussery, 2007), and trauma-related disorders (e.g., PTSD; see Haugen et al., 2012 and McFarlane & Bryant, 2007 for reviews). Within Canada, lifetime prevalence rates for PTSD within emergency first responder populations are estimated to be between 8% and 32% (see Wilson et al., 2016 for a review and estimated prevalence rates by occupation). Moreover, a recent survey of Canadian Public Safety Personnel (PSP; n = 5,813), which included first responders, found that 44.5% of the sample screened positively for one or more mental disorders, including PTSD, depression, anxiety, and alcohol use disorder, among others (Carleton et al., 2018). Together, this research demonstrates the negative physical and psychological impact of work stressors on first responders.

Given the nature of the demands within these occupations, PTSD has recently been established as a presumptive work-related illness for first responders in Ontario and Manitoba (Government of Manitoba, 2015; Ontario Ministry of Labour, 2016). Long-term strain stemming from routine occupational stressors, such as PTSD, can incur significant costs to organizations due to impaired performance, absenteeism, long-term disability leave, and turnover (Reynolds & Wagner, 2007). Given the associated financial and operational implications, first responder organizations are now looking for evidence-based approaches to support internal initiatives aimed at reducing strain and promoting long-term health and well-being.
One approach to targeting strain within these occupations is to explore the various social supports available to first responders, both internal and external to the organization. Within the literature, social support has been widely acknowledged as a mechanism that can help buffer the negative effects of stressors when individuals mobilize resources through personal connections (Cohen & Wills, 1985; Jacobson, 1986). Within first responders, social support research has focused on the role of the organization as the main provider of support. However, it has been found that after the experience of trauma, many individuals fail to seek help from their respective organizations (e.g., Heffren & Hausdorf, 2016). Rather, individuals report that they are more likely to deal with the issues themselves or seek help from friends or family members (Heffren & Hausdorf, 2016). As a result, many of the initiatives currently employed by first responder organizations may not be accessed by individuals in need. Moreover, there is currently little understanding of the types of support that are being sought from external sources, as well as their perceived efficacy.

To address this, the first study in the dissertation (Chapter 1) explored the role of enacted social support following exposure to a traumatic work-related event in a policing sample (n = 158). This research provided insight into the stress appraisal of various types of critical events experienced by individuals, either directly or indirectly, as a result of their work in policing, as well as the specific coping mechanisms utilized, and the types of support sought from various sources in their network (e.g., spouse, supervisor, friend outside of work). Additionally, qualitative responses from open-ended questions provided insight into the most effective and least effective supports within individuals’ social support networks, as well as the most helpful type of support provided by these sources following the experience of a stressful or traumatic event at work.
This information was supplemented by a theoretical and qualitative exploration of the role of personal support networks after trauma exposure using interview data from partners of first responders (Chapter 2). Collectively, this second chapter provided insight into the strategies employed by spouses, as well as the barriers faced in the provision of social support, and the unique stressors or pressures present in this context. Together, the information obtained from the cross-sectional survey data and the qualitative interviews were used to explore possible future intervention research. This discussion was aimed at providing the most commonly utilized sources of support with the necessary knowledge, skills, and abilities to provide effective social support to first responders in need (Chapter 3).

Specifically, the information obtained from both studies helps address the negative effects associated with misdirected social support by reinforcing the identification and implementation of effective supportive strategies, in addition to promoting support mobilization for both first responders and their families. Together, this information provides a more comprehensive understanding of stress experiences specific to first responders, and can further occupational health initiatives and programs for first responders and their families.

Although many first responder organizations are attempting to mitigate traumatic stress experiences for individuals through a variety internal programs (e.g., critical incident stress debriefing, peer support, etc.), little is known about the efficacy of these supports in practice. In particular, concerns have risen regarding the impact of stigma and organizational barriers on first responders’ willingness to access available programs; however, there is currently limited data available to inform these issues. For example, Haugen, McCrillis, Smid, and Nijdam’s (2017) systematic review and meta-analysis of stigma and barriers to mental health care within first responders revealed only fourteen articles, reflecting predominantly quantitative analyses of
perceived stigma with U.S. policing samples. Thus, there is a need for additional research to explore individual experiences of stigma and barriers to mental health care in greater depth across first responder professions.

Findings from this dissertation address this need by providing insight into these issues from the perspective of both first responders and spouses. Specifically, results from the quantitative and qualitative analyses highlight the powerful role of stigma, professional culture, and perceived lack of organizational support (e.g., supervisor support) on first responders’ help-seeking behaviour. These findings help identify gaps in current occupational health initiatives; highlighting the challenges associated with the organization acting as the primary provider of support for first responders.

Given the financial impact of employee mental health on organizational functioning and implications for performance (e.g., Wilson et al., 2016), it is imperative that first responders have access to a range of supports, both internal and external to the organization, to promote help-seeking behaviour. Findings from the present dissertation inform organizational directives, including the importance of addressing systemic-level barriers related to stigma and professional culture, in addition to incorporating external supports to supplement current occupational health initiatives (i.e., incorporating spouses and families, community groups, and third party resources) to better support individuals coping with traumatic stress experiences. By extending mental health efforts outside of traditional organizational boundaries, these industries move towards reducing stigma and creating resourceful support networks, which can support the mental health and well-being of first responders across Canada. These implications are discussed in Chapter 3.
CHAPTER I

Examining the Role of Enacted Social Support for Police Service Members Following a Traumatic Work-Related Event: A Cross-Sectional Analysis

The study of stress, coping, and well-being in the workplace is essential to supporting individual and organizational functioning in all industries. However, this research becomes crucial when considering the extreme work stressors faced by emergency first responders. Emergency first responders, including police officers, fire fighters, and paramedics, experience a variety of critical events at work. These events are potentially traumatic in nature, and can have a debilitating effect on individual functioning and mental health (Alexander & Klein, 2009; Corneil, 1995). For police officers specifically, such work-related demands include incidents of violence, aggression, accidents, and death (Garcia, Nesbary, & Gu, 2004), which are often encountered daily (Brown & Campbell, 1990; Waters & Ussery, 2007).

According to the American Psychiatric Association (2013), traumatic events generally include witnessing or being exposed to death, actual or threats of death, sexual violence, or serious injury (DSM-5). For first responders, such events are a common experience, often reflecting routine work demands. However, repeated exposure to such critical events can result in strain over time, particularly if they are perceived to be traumatic to the individual (i.e., pushing them to their limits psychologically, emotionally). Over time, trauma exposure can result in strain for first responders, including impaired functioning at home and at work. For example, such events can negatively impact psychological and physical well-being, including the development of various trauma-related disorders (e.g., Posttraumatic Stress Disorder [PTSD]; McFarlane & Bryant, 2007), and the increased use of avoidant coping strategies (e.g., substance abuse) to manage the impact of the stressors experienced (Anshel, 2000; Can & Hendy, 2014).
In extreme cases, the negative psychological impact of this work can be irreversible. To demonstrate, between April 2014 to April 2015 38 Canadian first responders committed suicide (Skelly, 2015). Thirteen of these suicides occurred within a ten-week span (Armstrong, 2014). These suicides came in the wake of concerns regarding mental health within policing following the 2012 Ontario Ombudsman report. This report outlined concerns regarding the treatment of occupational stress within the Ontario Provincial Police, including the negative stigma surrounding mental health within policing and a general lack of support for those coping with trauma (Ontario Ombudsman, 2012). These concerns highlight the need for research to help the creation and implementation of effective mental health supports within these communities.

As a result, the Canadian Association of Chiefs of Police (2014) has voiced a need for Canadian research to support evidence-based mental health programming. This need is particularly relevant, as much of the research on policing over the past three decades remains theoretically fragmented. Specifically, available research focuses primarily on policing operations using U.S. samples. As a result, there is currently limited understanding of the issues facing policing from an occupational health perspective within the present Canadian context. Moreover, this plea reflects an attempted departure from the traditional stigma surrounding mental health within the policing community, a culture that traditionally emphasizes strength and considers expressing distress to be synonymous with weakness (Anshel, 2000; Biggam, Power, MacDonald, Carcary, & Moodie, 1997; Stuart, 2017; Tuckey, Winwood, & Dollard, 2012). The present study attempted to address this national need by investigating the various enacted coping strategies, including the supports sought by officers after the experience of a work-related traumatic event. This combined with an exploration of the perceived helpfulness of the support received helps identify current gaps or limitations in organizational responses.
The Present Study

Within the occupational health literature, stress is frequently conceptualized as a process, reflecting a relationship between environmental stressors (i.e., characteristics of the work environment that give rise to stress) and individual strain (i.e., psychological and physical outcomes of stress; Hart & Cooper, 2001). This approach to the study of stress provides researchers with a framework to explore individual responses and reactions to an identifiable event within their environment (Hart & Cooper, 2001). In particular, the transactional model of stress and coping by Lazarus and Folkman (1984) has been a dominant theory in the study of stress and trauma, emphasizing the interaction between stress appraisals and coping efforts in response to a traumatic stressor (Hobfoll, 2010).

Consistent with this model and the traditional stressor-strain relationship (e.g., Carlson & Perrewé, 1999), social support seeking was conceptualized as an enacted coping strategy following the experience of stress appraisal stemming from a work-related stressor (see Figure 1). Based on this, it was argued that enacted social support acted as a coping mechanism to reduce the strain experienced when a work stressor was perceived as exceeding an individual’s ability to cope (i.e., stress appraisal). Therefore, individuals experiencing higher levels of stress appraisal would be more likely seek support from various sources in their network in attempt to reduce experience of strain over time.

**Figure 1.** Enacted social support as a mediator between stress appraisal and strain.
Specifically, the present study explored the stress process following exposure to a traumatic event at work. Based on this, it was argued that enacted social support and other coping methods acted as mediators between stress appraisal stemming from the traumatic event and subsequent strain. For the present study, strain was conceptualized as general life impairment, with exposure to a traumatic event at work acting as the initial stressor. To contextualize these relationships for a policing population, different relationships were expected based on the type of coping strategy employed (i.e., problem-focused, active emotion-focused, avoidant emotion-focused, enacted social support) and subsequent impairment (see Figure 2 for hypothesized relationships). Based on this model, it was argued that chronic impairment (e.g., trauma-related disorders) would occur if the enacted coping strategies were insufficient in counteracting the impact of stress appraisal over time.

Job Demands, Job Stressors, and Stress Appraisal

According to Lazarus and Folkman (1984), individuals experience strain when the demands from the environment outweigh the perceived resources available to manage the situation. Within policing, job demands are typically categorized as either operational or organizational, reflecting both the role-specific tasks and the associated bureaucratic responsibilities (Brough & Biggs, 2010; Duxbury, Higgins, & Halinski, 2015). Compared to more traditional conceptualizations of job demands within the general stress literature (e.g., work overload, time pressure, etc.), police officers face added pressure due to the extreme and potentially life-threatening nature of the various tasks associated with their role (Brown & Campbell, 1990; Hickman, Fricas, Strom, & Pope, 2011; Marchand, Nadeau, Beaulieu-Prévost, Boyer, & Martin, 2015; Skogstad et al., 2013), as well as increased organizational and societal
Figure 2. Theoretical model used to test the mediating effects of enacted social support and coping on impairment.
pressure surrounding effective policing practices and ethical conduct (Van Der Velden et al., 2012; Kirkcaldy, Cooper, & Ruffalo, 1995). Based on this, operational job demands for police officers frequently include critical events, which can be perceived as traumatic due to their distressing nature and the perception that the event is potentially threatening to the self, either psychologically or physically (Fox, Spector, & Miles, 2001; Spector, 1998; Spector & Jex, 1998). Specifically, these events reflect deviations from an individual’s previous experiences or routine job demands, highlighting the individualized nature of traumatic stress and that not all events will be perceived the same way (Hart & Cooper, 2001).

Based on the transactional model of stress and coping, the internalization of a stressor as being stressful involves an appraisal process whereby the event is interpreted in relation to personal impact (i.e., primary appraisal) and the ability for an individual to cope with the situation (i.e., secondary appraisal; Lazarus, 1995). According to this view, the appraisal of a current or future event is more important to the experience of stress than the stressor itself, reflecting an interaction between the person and their environment (Lazarus & Folkman, 1984). In particular, negatively appraised events are associated with detrimental physical and psychological health outcomes over time (Aldwin, 2011; Zautra, 2003). This is particularly problematic within policing populations, as many individuals experience an accumulation of stressors due to frequent exposure to critical events. Such events can result in the development of long-term strain (e.g., PTSD) if responses are not managed effectively (Carlson, 2001; Suliman et al., 2009).

\textit{H1: Exposure to a critical event, or series of events, that is perceived as traumatic will be associated with higher levels of stress appraisal.}
Coping and Enacted Social Support

Previous stress research has focused primarily on the role of individual coping processes in managing or mitigating stress experiences (e.g., Folkman, 1984; Folkman, 2013; Lazarus, 1966; Lazarus, 2000). Based on the stress and coping theory (Lazarus & Folkman, 1984), coping is defined as, “realistic and flexible thoughts and acts that solve problems and thereby reduce stress” (pp. 118), reflecting both cognitive and behavioural strategies that target a specific stressor. Within this literature, coping responses are typically categorized in terms of problem-focused, which targets the specific issue causing distress (e.g., planning, problem-solving), and emotion-focused approaches, which target the emotional nature of the stressor (e.g., acceptance, humour; Carver & Scheier, 1994; Folkman, 2013; Folkman & Lazarus, 1980; Folkman, Lazarus, Dunkel-Schetter, DeLongis, & Gruen, 1986). Additionally, strategies are commonly viewed as being adaptive (e.g., acceptance) or maladaptive (e.g., substance use) based on their implications for long-term health and well-being (Brown, Westbrook, & Challagalla, 2005; Carver, Scheier, & Weintraub, 1989). Consequently, problem-focused and active emotion-focused coping (i.e., strategies that actively deal with emotional distress) are commonly seen as adaptive approaches to stress, whereas avoidant emotion-focused coping (i.e., strategies that focus on suppressing or avoiding emotional distress) can be maladaptive over the long-term (Folkman & Lazarus, 1985; Holahan & Moos, 1987).

Interestingly, simultaneous use of both adaptive and maladaptive coping strategies was recently demonstrated in a study of Canadian police officers ($n = 266$; Klauninger, Hausdorf, & Heffren, 2014). Specifically, the researchers found a moderate correlation ($r = .30$, $p < .01$) between adaptive (e.g., acceptance) and maladaptive coping (e.g., substance use), suggesting that officers engage in multiple strategies following exposure to a work-related traumatic event.
However, it is important to note that individual coping strategies are not inherently beneficial or detrimental; rather, the success of the strategy employed depends both on the context of the situation, as well as the characteristics of the individual, including their motivation, previous experiences, skill level, and goals (Folkman, 2013; Smith & Sulsky, 1995).

Previous research has argued that problem-focused coping strategies, or attempts to directly address or mitigate a stressor, are more likely to occur for work-related events (Smith & Sulsky, 1995), whereas, emotion-focused coping strategies, which target the emotional response to a stressor, are more frequently tied to life events in general (Lazarus & Folkman, 1980). Although this distinction applies to many occupational contexts, this approach fails to consider the emotional nature of work-related stressors within policing, as well as the professional constraints and contextual influences associated with police work. Together, the unique nature of traumatic stressors and the environmental pressures present in policing shape the specific coping strategies employed by officers to manage occupational stress experiences in comparison to non-first responder occupations.

**Immediate coping responses.** Critical events faced by officers while on duty require complex coping responses. To demonstrate, role expectations (e.g., taking control) and situational requirements (e.g., staying calm) within policing constrain how officers can respond to stressors, which by extension, limit the coping strategies they can enact in the moment (Anshel, 2000). As a result, research has found that stress experienced by officers often extends beyond the critical incidents themselves (Anderson et al., 2002), suggesting that the coping strategies used to manage work demands in the moment may not address the stressors completely or may contribute to additional experiences of strain. For example, previous research has found problem-focused coping strategies (i.e., related to procedure) to be helpful during a stressful
situation, such as a verbal altercation, allowing officers to minimize stress reactions and respond effectively in the moment (LeBlanc, Regehr, Jelley, & Barath, 2008; Anshel, 2000). However, such problem-focused coping strategies have been associated with higher levels of strain following a difficult work-related event (Patterson, 2003). Thus, while many officers rely on their training to manage immediate reactions to work-related stressors (Anderson et al., 2002), some fail to adequately cope with the delayed stress experience. In particular, critical events that are perceived as traumatic by officers may require the use of additional coping strategies to effectively combat the stress appraisal.

According to the coping literature, problem-focused strategies are often applied in situations where an individual has control; however, reliance on one form of coping in situations that require the use of multiple tailored strategies can inadvertently exacerbate stress experiences (Folkman, 2013). Thus, although problem-focused strategies are beneficial for meeting the job demands associated with critical incidents, they fail to address the emotional nature of traumatic work-related events. This is particularly problematic over time as individuals may enact additional coping strategies (e.g., distraction, avoidance) to manage subsequent distress experiences that fail to address the complex nature of trauma, which can negatively impact health and well-being in the long-term (Anshel, 2000; Lilly, Pole, Best, Metzler, & Marmar, 2009; Ménard & Arter, 2013).

**Maladaptive coping.** Research has consistently reported high levels of maladaptive coping within policing, including high levels of alcohol and substance use (Beehr, Johnson, & Nieva, 1995; Burke, 1994; Ménard & Arter, 2013), and avoidance strategies (Gershon, Barocas, Canton, Li, & Vlahov, 2009; Kaur, Chodagiri, & Reddi, 2013; Powell, Cassematis, Benson, Smallbone, & Wortley, 2014) in response to work-related trauma. While these strategies may be
perceived as helpful in the moment (e.g., consuming alcohol at the end of a shift), they often fail to target the emotionally distressing nature of police work.

The prominent use of maladaptive coping strategies may reflect the traditionally masculine culture of policing (Anshel, 2000; Biggam et al., 1997; Brough, Chataway, & Biggs, 2016; Pasillas, Follette, Perumean-Chaney, 2006), which is often closely tied to individual identity and can result in low levels of distress disclosure. In support of this, previous research has found that after the experience of a traumatic event, many officers reported attempting to deal with the situation themselves rather than seek help from others (Heffren & Hausdorf, 2016). This mentality is particularly problematic for individual health and well-being as previous theory surrounding adjustment to acute stress or trauma has argued that disclosure (e.g., written, verbal) is imperative to helping individuals process their emotional reactions to traumatic events (e.g., Lepore, Ragan, & Jones, 2000; Slavin-Spenny, Cohen, Oberleitner, & Lumley, 2010). Consequently, the culture of policing often results in individuals attempting to cope using their personal resources (or a lack thereof), rather than mobilizing resources within their social network (Stuart, 2008). This situation is further complicated by the pressures associated with male-dominated contexts, as men are less likely to disclose distress, and therefore are more resistant to seeking help for issues surrounding mental health (Berger, Addis, Green, Mackowiak, & Goldberg, 2013).

Together, this research suggested that officers would report employing multiple forms of coping, including problem-focused, active emotion-focused, and avoidant emotion-focused strategies, in attempt to counteract the stress appraisal following a traumatic event.

\textit{H2a: Higher levels of stress appraisal will be associated with higher levels of problem-focused coping strategies.}
\textbf{H2b:} Higher levels of stress appraisal will be associated with higher levels of avoidant emotion-focused coping strategies.

\textbf{H2c:} Higher levels of stress appraisal will be associated with higher levels of active emotion-focused coping strategies.

**Social support seeking as coping.** Closely tied to the literature on coping, social support seeking has been widely acknowledged as a mechanism that can help minimize the negative effects of stress experienced from various demands or stressors (Cohen & Wills, 1985; Jacobson, 1986). Within this literature, social support has been conceptualized as the social resources that are employed to address an individual’s unmet needs in a given situation, which includes both tangible (e.g., access to a loan) and intangible resources (e.g., advice; Jacobson, 1986). Several types of social support have been proposed, including emotional, informational, instrumental support, and self-esteem (House, 1981), each of which target a different aspect of the stress experience (Jacobson, 1986). Support can be further distinguished by form, including perceived support, reflecting the perception that support is available, enacted support, reflecting the process of seeking social support, and received support, which reflects the actual support received in a situation (Haber, Cohen, Lucas, & Baltes, 2007).

Within the literature, it has been argued that measures of enacted or received support more accurately reflect the assistance obtained in a situation compared to global perceptions of support availability, which are more subjective in nature (Haber et al., 2007; Kaul & Lakey, 2003). This argument has received empirical support, as rater agreement has been found to be higher for measures of enacted support compared to perceived support (e.g., Cohen, Lakey, Tiell, & Neely, 2005). Moreover, preliminary meta-analytic findings estimated the relationship between perceived and received support to be moderate (corrected $r = .35$, $k = 23$, $p < .001$, 95%
CI [.32 to .39]; Haber et al., 2007). These results suggest the presence of other underlying factors, including contextual and individual influences that shape perceptions of support in a situation (e.g., personality, relationship characteristics; Haber et al., 2007; Lakey, McCabe, Fisicaro, & Drew, 1996).

Although perceived social support has been linked to global measures of health and well-being (Haber et al., 2007; Uchino, 2006, 2009), received social support is argued to be more important in the study of the stress process, as enacted coping strategies, including social support seeking, reflect the specific strategies employed by an individual to manage a stressor (Carver et al., 1989; Uchino, 2009). Specifically, in situations where an identifiable stressor is present, the impact of distinct coping strategies can be explored in relation to the individual outcomes, including measures of health and well-being (Uchino, 2009). In this sense, it was argued that for the present study enacted social support represented a distinct coping strategy aimed at addressing the experience of stress appraisal stemming from exposure to a traumatic event.

Although previous research suggests that individuals in policing are less likely to seek help for mental health issues (i.e., due to fear of negative repercussions, stigma; Berger et al., 2013; Stuart, 2008), research with similar Canadian samples (e.g., Heffren & Hausdorf, 2014; Klauninger, Hausdorf, & Heffren, 2014) have found that roughly half of the individuals surveyed reported seeking support from others. Based on this, for the present study, it was hypothesized that individuals would seek support from their network after appraising a traumatic event as stressful. Thus, higher levels of stress appraisal would be associated with higher levels of enacted social support.

\[ H3: \text{Higher levels of stress appraisal will be associated with higher levels of enacted social support.} \]
Efficacy of social support. Within the coping literature, it has been argued that social support seeking (i.e., enacted social support) can act as both a problem-focused and emotion-focused coping strategy depending on the resource needs of the individual and the type of support sought (i.e., emotional, instrumental, informational, self-esteem; Folkman et al., 1986). Within a policing context, previous research has found that enacted social support was associated with lower levels of distress stemming from work-related stressors (Patterson, 2003); however, Patterson (2003) did not distinguish between the source and type of support sought by officers, nor the type of support received in the interaction.

Sources of support can be defined as anyone capable of providing social support to the individual (Thoits, 1986). Within policing organizations, internal sources social support include formal organizational programs (e.g., Employee Assistance Programs, psychological services) and direct supervisors. However, after experiencing traumatic events, many police officers fail to seek help from these sources (Heffren & Hausdorf, 2016). Rather, previous research has found that officers reported attempting to cope with the situation themselves or sought support from informal sources, including family members or friends (Heffren & Hausdorf, 2016). Currently, organizational initiatives tend to focus on internal rather than external supports, which may exclude a valuable component of the social support network, including the role of various non-work supports sought by officers (e.g., partner/spouse, friends).

Moreover, while previous research has conceptualized social support as a potential mechanism to help reduce the negative impact of stress, previous research has argued that the support provided must match the type of stress experienced to be beneficial, otherwise the support received may exacerbate the negative outcomes experienced (Kaufmann & Beehr, 1986, 1989; Viswesvaran, Sanchez, & Fisher, 1999). For example, receiving instrumental support from
a spouse or partner to address the emotional nature of a stressor may result in higher levels of distress.

Critics of the social support literature have emphasized the oversimplification of the social support construct in previous research, including the use of aggregate measures that fail to explore the underlying support process (Thoits, 2011; Walen & Lachmen, 2000). More specifically, these measures often ignore the contextual nature of supportive interactions, including the role of social support sources (e.g., work vs. non-work), types (e.g., instrumental, informational, emotional, self-esteem), forms (e.g., received, perceived, enacted), and conditions under which support is provided. Together, these components interact and shape subsequent outcomes (Jackson, 1992; Nurullah, 2012; Veiel, 1985), suggesting that different traumatic events (e.g., type and severity) and support experiences can result in a range of responses or reactions that can be either beneficial or detrimental for individuals.

As a result, there is a need for additional theoretical and empirical work to understand the social support processes unique to first responders after experiencing a work-related traumatic event. Specifically, increased understanding of social support can enhance the quality of mental health initiatives and programs within occupational contexts, and promote long-term individual health and well-being. To address this, the present study examined the types of support sought by officers (e.g., emotional, informational, instrumental, self-esteem) from various work (e.g., supervisor) and non-work sources (e.g., partner/spouse, friend) after experiencing a stressful or traumatic work-related event, in addition to qualitatively exploring the perceived helpfulness of the support received. Given the limited information available currently regarding the support process within the context of trauma and first responders, two exploratory research questions were developed for the present study, including whether the type of support sought and
perceived helpfulness of support received varied by source. Together, this information provides valuable insight for first responder populations by exploring the nuanced role of social support in the experience of work-related stress and strain stemming from trauma exposure.

Research Question 1: Does the type of support sought differ based on source?

Research Question 2: Are certain sources perceived as more helpful than others?

**Stress Responses and Strain Following Trauma Exposure**

Within the literature, strain has been defined as adverse reactions to stress experiences (Hochwarter, Perrewé, & Kent, 1995; Jex, Bliese, Buzzell, & Primeau, 2001; Spector & Jex, 1998), reflecting the range of negative outcomes that can occur when an individual is unable to attain sufficient resources to mitigate perceived stress. Such reactions have negative implications for both individuals and organizations over time. At the individual level, strain within policing has been associated with decreased job satisfaction (Manzoni & Eisner, 2006), increased emotional exhaustion and increased depersonalization for officers (van Gelderen, Heuven, van Veldhoven, Zeelenberg, & Croon, 2007), each of which has implications for critical decision-making and interactions with members of the public. In addition to the negative work implications, strain has been linked to increased intimate partner violence (Gershon et al., 2009) and decreased physical health over time within policing populations (Anderson et al., 2002; Anshel, 2000; Burke, 1994), reflecting the implications of impaired functioning and stress management outside of the work context. At the organizational level, strain has been associated with higher levels of turnover and absenteeism, which incur significant costs to both organizations and the communities in which they exist (Anshel, 2000).

Over time, prolonged strain can lead to chronic psychological or physical strain for individuals, including burnout (e.g., Maslach, Schaufeli, & Leiter, 2001) and depression (e.g.,
Tennant, 2001), which have implications for individual functioning at home and at work. More recently, the discussion of traumatic stressors within policing has surrounded the experience of long-term psychological strain, as indicated by the increased rate of mental illness among police officers, including depression (Gershon et al., 2009) and PTSD (Carleton et al., 2018; McFarlane & Bryant, 2007). To demonstrate, in a recent survey of over 5000 Canadian Public Safety Personnel (PSP, which included first responders), it was found that 44.5% of the sample (n = 1998) screened positively for one or more mental health disorders (e.g., Major Depressive Disorder, Panic Disorder, and Alcohol Use Disorder). More than half of this sample (23.2%; n =1304) screened positively for PTSD (Carleton et al., 2018). Compared to general prevalence rates in Canada (e.g., PTSD in Canada: 9.2%; see Wilson et al., 2016 for a review), these rates suggest that first responders are at an increased risk for developing one or more mental health disorders as a result of event-based or cumulative exposure to occupational stressors. Due to the prevalence of PTSD within these occupations, and the increased awareness surrounding mental health, Ontario and Manitoba recently passed legislation to classify PTSD as a presumptive work-related illness for first responders (Government of Manitoba, 2015; Ontario Ministry of Labour, 2016). This inclusion moves towards the provision of earlier access to care, and reflects the recent concerns within these communities regarding the ability for individuals to cope with work-related trauma.

**Impairment.** As distress focuses on the long-term impact of stress on individual health and well-being, the present study conceptualized strain as an individual’s level of impairment following a traumatic work-related event. Based on this approach, higher levels of impairment reflected a lack of psychological adjustment to traumatic work-related stressors, which negatively impacted individual functioning and well-being. Based on the transactional model of
stress (Lazarus & Folkman, 1984) and the stressor-strain relationship (Carlson & Perrewé, 1999), strain was argued to occur after the experience of a work-related stressor and the enactment of various coping strategies, with differential relationships anticipated based on the type of coping strategy employed.

Based on the trauma and coping literatures, it was expected that higher levels of problem-focused and avoidant emotion-focused coping would be positively related to impairment. Specifically, problem-focused coping strategies reflect immediate coping responses to traumatic events (e.g., planning), and avoidant emotion-focused coping reflect attempts to distract or dissociate oneself from the stress appraisal. Both strategies fail to address the emotionally distressing nature of trauma, which was argued to result in impaired functioning over time.

\[ H4a: \text{Higher levels of problem-focused coping will be associated with higher levels of impairment.} \]

\[ H4b: \text{Higher levels of avoidant emotion-focused coping will be associated with higher levels of impairment.} \]

Contrary to the positive relationship between problem-focused and impairment, and avoidant emotion-focused coping and impairment, it was hypothesized that active emotion-focused coping and enacted social support would be negatively related to impairment following a traumatic event. Specifically, active emotion-focused coping strategies (e.g., acceptance, positive reframing) and support seeking reflect attempts to process emotional reactions to trauma. Based on this, it was expected that both strategies would demonstrate a negative relationship with strain.

\[ H4c: \text{Higher levels of active emotion-focused coping will be associated with lower levels of impairment.} \]
**H4d:** Higher levels of enacted social support will be associated with lower levels of impairment.

**Methods**

**Participants**

Data for the present study were collected as part of an ongoing research partnership with a mid-sized policing organization in the Greater Toronto Area. Survey responses were collected between March 1st and April 4th, 2016. The sample included men and women from various positions within the organization, including sworn police officers, auxiliary staff, and civilian members. A total of 291 participants from 1182 police service members provided data for the study, representing a 25% response rate; this response rate is comparable to other policing samples (see Heffren & Hausdorf, 2016).

Given the challenges associated with policing culture (e.g., stigma surrounding mental health, valuing strength and emotional suppression; Tuckey et al., 2012), anonymity was a necessity for the present survey. As a result, participants were unable to return to their responses if they closed the survey before its completion. Of the original 291 participants, 111 participants were removed due to missing or incomplete data. One additional participant was removed from the final sample due to random responding, resulting in a final sample size of 179. The final sample consisted of 87 men (49%) and 92 women (51%), reflecting a more balanced gender ratio compared to the overall organization (66% and 34%, respectively). Participation in the present

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1 Due to the anonymous nature of the survey, data from civilian members was included in the final sample. Although these individuals are unlikely to experience a critical event directly, they may be indirectly exposed to trauma as a result of their work.

2 Data was deemed incomplete if participants failed to provide a response for the dependent measure (i.e., completed less than 50% of the survey). No significant differences were found between the missing data group and the final trauma sample with respect to trauma exposure or average reported stress (see Appendix A).
study included individuals who had been directly or indirectly exposed to a critical or traumatic event within the previous year (i.e., potential trauma group; \( n = 158 \)), as well as those who had not experienced a critical or traumatic event within the same timeframe (i.e., no trauma group; \( n = 21 \)). Table 1 displays the demographic characteristics for both the potential trauma and no trauma groups.

Table 1

*Demographic Characteristics (\( n = 179 \))*

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<th>No Trauma (( n = 21 ))</th>
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*Note.* Uniform positions include frontline police officers, investigative bureau positions include participants working in a specialized police unit (e.g., homicide), and support/administrative positions include participants working in a support or administrative role (e.g., supervisor).

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To reduce survey fatigue and attrition rates, the survey for participants in the potential trauma group was separated into a short form and a long form. All participants completed the short form of the survey (\( n = 158 \)) with an option to participate in the long form (\( n = 93 \)) for additional compensation (i.e., a second entry into the draw). To preserve power, analyses for the present study were restricted to the short form data.
Measures Used for Hypothesis Testing

**Demographics.** Demographic information was collected using single-item questions regarding sex, role within the organization (uniform position, investigative bureau position, support/administrative position, other [please specify]), and years of police service.

**Critical events.** The critical events checklist used for the present study was adapted from the Life Events Checklist for the DSM-5 (LEC-5). This measure is commonly used with the PTSD Checklist-Civilian version (PCL-C; Stapleton, 2010) for diagnostic purposes and to monitor PTSD symptoms. The original Life Events Checklist (LEC) was developed concurrently with the Clinician-Administered PTSD Scale (CAPS-1) to assess the potential exposure to traumatic events, as well as self-reported symptomology (Blake et al., 1995).

This measure was used to assess the number of critical events participants were exposed to as a result of their work using 14 items, including ‘sudden, violent death (e.g., homicide, suicide)’ and ‘fire or explosion’, among others. A fifteenth item was added, ‘exposure to a communicable disease (e.g., needle prick, saliva)’ based on the common types of stressors officers are exposed to while on duty. Additionally, an open-ended question was provided for participants to identify any other critical event experienced at work not captured by the checklist.

**Event severity.** To gauge the salience and severity of the critical incidents experienced, participants had an opportunity to indicate how stressful they perceived the situation to be on a sliding scale from 0 (*Not stressful at all*) to 100 (*Extremely stressful*). This information was used to confirm that the events included in the measure were relevant to the sample, and to gauge the perceived severity of each type of critical event.

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4 See Appendix B for additional measures included in data collection.
Traumatic event. Participants were asked the length of time since they experienced the last stressful event or series of events (i.e., reflecting an accumulation of critical events), which event was most challenging, and whether they felt the event pushed them to their limit, psychologically or emotionally (see Appendix C). Critical events were deemed traumatic if participants indicated that the event pushed them to their limit (psychologically or emotionally). These data were used as a measure of traumatic event exposure for subsequent analyses. For those who indicated experiencing a critical event, participants were asked to create a keyword and respond to the remaining survey items based on how they responded or reacted to the most recent or most stressful event (or series of events).

Stress appraisal. Three items from the stressfulness domain of the Stress Appraisal Measure (SAM; Peacock & Wong, 1990) were used as a global measure of stress appraisal following the most recent or most stressful event. Items included, “Does this situation create tension in me?”, “Does this situation tax or exceed my coping resources?”, and “To what extent do I perceive this situation as stressful?” (see Appendix D). Original instructions for the SAM reference a potentially stressful situation (i.e., anticipatory stress; Peacock & Wong, 1990); however, for the present study, the items were modified to reflect participant appraisal during the event or immediately after. Each item was rated on a 5-point scale from 0 (Not at all) to 4 (A great deal), with higher scores indicating higher levels of stress appraisal. This scale has demonstrated good internal consistency with values ranging from $\alpha = .74 - .90$ (Peacock & Wong, 1990).

Coping. The shortened-version (Brief COPE; Carver, 1997) of the multidimensional coping inventory (COPE; Carver et al., 1989) was used to assess the various coping strategies (e.g., planning, positive reframing, denial, substance use, etc.) employed by participants after the
most recent or most stressful event (see Appendix E). The Brief COPE uses 28-items to assess 14 types of coping reactions (e.g., “I’ve been turning to work or other activities to take my mind off things”) using a 4-point scale ranging from 1 (Not at all) to 4 (A lot), with higher scores indicating greater use of the associated coping strategy. According to Carver (1997), internal consistency estimates for each of the 14 coping subscales range from $\alpha = .50$ to $.90$.

Although Carver (n.d.) recommends developing composites of the 14 coping subscales based on the data obtained from the sample under investigation, previous traumatic stress research has utilized aggregates based on theory (e.g., Schnider, Elhai, & Gray, 2007). For the present study, the 14 coping subscales were grouped into four aggregates based on theory: problem-focused coping, active emotion-focused coping, avoidant emotion-focused coping, and enacted social support. This method was deemed to be most appropriate for the present study given the contextual nature of coping for emergency first responder samples. Specifically, problem-focused coping included the active coping (items 2 and 7) and planning (items 14 and 25) subscales. Active emotion-focused coping included the venting (items 9 and 21), positive reframing (items 12 and 17), humour (items 18 and 28), acceptance (items 20 and 24), and religion (items 22 and 27) subscales. Avoidant emotion-focused included the self-distraction (items 1 and 19), denial (items 3 and 8), behavioural disengagement (items 6 and 16), self-blame (items 13 and 26), and substance use (items 4 and 11) subscales. Enacted social support included the instrumental (items 10 and 23) and emotional support (items 5 and 15) subscales. Internal consistency estimates for each aggregate ranged from $\alpha = .81 - .92$. 


Impairments. The Work and Social Adjustment Scale (WSAS; Mundt, Marks, Shear, & Greist, 2002) was used to assess impairment after the experience of the most recent or most stressful event based on the degree of impaired life functioning. This measure uses five items on a 9-point scale to indicate the degree of impairment from 0 (Not impaired at all) to 8 (Severely impaired), for a maximum score of 40 with higher values indicating a greater degree of perceived impairment (e.g., “My ability to work is impaired”; see Appendix F). Each statement contained examples of activities that have been impaired. Several of these examples were removed from the individual items to make the measure more relevant to a police sample (e.g., tidying and shopping, collecting and sewing). This measure has demonstrated good internal consistency, with values ranging from $\alpha = .70 - .94$, and test-retest reliability was $\alpha = .73$ (Mundt et al., 2002).

The WSAS has previously demonstrated strong positive correlations with both depression ($r = .73, p < .001$) and obsessive-compulsive disorder ($r = .61, p < .001$), suggesting a strong link between impairment and various forms of psychopathology (Mundt et al., 2002). Moreover, normative data for the WSAS associates a score $\geq 20$ with severe impairment, scores between 10 and 20 with less severe symptoms but still significant functional impairments, and scores $\leq 10$ with subclinical populations (Mundt et al., 2002). A continuous score was used for hypothesis testing in the present study; however, benchmark data was used to provide insight into the degree of impairment experienced by participants after the experience of the most recent or most stressful event.

Approval for use of the WSAS was obtained by Dr. Peter Hausdorf from Dr. I. M. Marks via email on October 20, 2014.
**Random responding.** Five items were developed by Klauninger, Hausdorf, and Heffren (2014) to assess random responding (e.g., “To help me relax, I watch fish swimming”, “To cope I use acupuncture daily”). These were developed to reflect infrequently endorsed statements while still appearing relevant to the survey focus on stress and adjustment. Random response items were dispersed throughout the Brief COPE questions using their corresponding response options, with higher scores across items providing an indication of random responding (see Appendix G).

**Measures Used for Exploratory Analyses**

**Social network.** The social network measure used for the exploratory analyses was developed by Klauninger, Hausdorf, and Heffren (2014) based on House’s (1981) categories of social support (i.e., emotional, instrumental, information, and self-esteem). This measure used a matrix for participants to indicate the type of support sought from seven sources both at work (e.g., direct supervisor, friend at work) and outside of work (e.g., spouse, family member, professional; see Appendix H). Responses can be used to generate a social network score ranging from 0 to 28. For the purposes of the present study, the measure was used to explore the most commonly sought type(s) and source(s) of support following the most recent or most stressful event, or series of events.

**Quality of support.** In addition to the social support matrix, participants were asked several open-ended questions regarding the quality of support, including who the most helpful (or least helpful) source of support was, what that person did that was helpful in coping with the stressful or traumatic event (or why they think the support provided was not helpful), and whether the support they received was what they felt was needed. This information was used to
explore whether certain sources are perceived as more helpful following the experience of a critical or traumatic event.

Procedure

The consenting organization contacted employees internally through an internal advertisement (see Appendix I) and an introductory email message from the research team (see Appendix J) to introduce the study and inform employees on how to participate. Participants completed the survey online either from home or at work. Participants first received a consent form (see Appendix K) before completing the survey. As part of the data collection, all participants completed the demographic questions and critical events checklist. The survey then branched into two versions based on potential trauma exposure, with one version for those who experienced at least one critical event within the past year, and a second version for participants who did not experience a critical event within this timeframe. As compensation, participants were offered the chance to win one of ten $25 gift cards for completing the survey. Upon completion of the survey, participants were presented with the debriefing form (see Appendix L).

Results

Critical Event Exposure

For the purposes of the present study, analyses were restricted to those 158 participants who indicated exposure to at least one critical event in the previous year (see Table 2 for critical event exposure and perceived stressfulness of the event). On average, participants reported experiencing 4.87 ($SE = 0.24$) events in the previous year (range 1 - 13), and an average stressfulness rating of 55.39 ($SE = 1.77$). The most commonly reported critical events included sudden, violent death (e.g., homicide, suicide; $n = 98$), physical assault (e.g., being attacked, a violent struggle taking someone into custody, being hit, slapped, kicked, beaten up; $n = 85$), and
any other stressful event or experience ($n = 104$). These other events included organizational stressors (e.g., lack of supervisor support, discrimination, job insecurity, etc.), occupational stressors (e.g., exposure to the death of a child, interactions with the public, external reviews, etc.), and personal stressors (e.g., financial difficulties, family conflict, etc.) based on participant descriptions. Majority of participants ($n = 115$; 72.8%) reported the most recent critical event, or chain of events, occurring within the last 5.17 months ($SE = .44$), with 42.4% of the sample ($n = 67$) reporting the critical event as traumatic (i.e., that the event pushed them to their limit, psychologically or emotionally).

Table 2

**Critical Event Exposure and Associated Stress ($n = 158$)**

<table>
<thead>
<tr>
<th>Critical Event</th>
<th>Exposure</th>
<th>Stressfulness</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$n$</td>
<td>% of sample</td>
</tr>
<tr>
<td>Natural disaster</td>
<td>4</td>
<td>2.5</td>
</tr>
<tr>
<td>Fire or explosion</td>
<td>61</td>
<td>38.6</td>
</tr>
<tr>
<td>Transportation accident</td>
<td>82</td>
<td>51.9</td>
</tr>
<tr>
<td>Serious accident at work</td>
<td>27</td>
<td>17.1</td>
</tr>
<tr>
<td>Exposure to toxic substances</td>
<td>19</td>
<td>12.0</td>
</tr>
<tr>
<td>Physical assault</td>
<td>85</td>
<td>53.8</td>
</tr>
<tr>
<td>Assault with a weapon</td>
<td>51</td>
<td>32.3</td>
</tr>
<tr>
<td>Unwanted or uncomfortable sexual experiences</td>
<td>37</td>
<td>23.4</td>
</tr>
<tr>
<td>Captivity</td>
<td>13</td>
<td>8.2</td>
</tr>
</tbody>
</table>

645 participants reported experiencing the most recent event, or chain of events, within the previous 1.62 weeks ($SE = .18$); two participants provided responses for both time points.
<table>
<thead>
<tr>
<th>Event</th>
<th>Count</th>
<th>Mean</th>
<th>SD</th>
<th>SE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life-threatening illness or injury</td>
<td>51</td>
<td>32.3</td>
<td>60.92</td>
<td>3.80</td>
</tr>
<tr>
<td>Severe human suffering</td>
<td>65</td>
<td>41.1</td>
<td>64.12</td>
<td>2.88</td>
</tr>
<tr>
<td>Sudden, violent death</td>
<td>98</td>
<td>62.0</td>
<td>51.57</td>
<td>2.73</td>
</tr>
<tr>
<td>Sudden, unexpected death of someone close to you</td>
<td>40</td>
<td>25.3</td>
<td>75.92</td>
<td>3.10</td>
</tr>
<tr>
<td>Serious injury, harm, or death you caused to someone else</td>
<td>14</td>
<td>8.9</td>
<td>54.25</td>
<td>7.72</td>
</tr>
<tr>
<td>Exposure to a communicable disease</td>
<td>18</td>
<td>11.4</td>
<td>66.06</td>
<td>5.75</td>
</tr>
<tr>
<td>Any other stressful event or experience</td>
<td>104</td>
<td>65.8</td>
<td>71.97</td>
<td>2.28</td>
</tr>
</tbody>
</table>

**Preliminary Analyses**

**Missing data.** The pattern of missing data occurred non-randomly throughout the dataset. Given the pattern and the small amount of missing data (i.e., less than 3%), mean substitution was used as a conservative approach to estimate the missing data points while preserving power (Tabachnick & Fidell, 2013). Additionally, this method was preferred over case deletions for the main analyses, as deletions can introduce biases as a result of reduced variability in the dataset (Hair, Hult, Ringle, & Sarstedt, 2017).

**Outliers.** Data was screened for univariate outliers using z-scores, with values exceeding ±3.29 reflecting extreme scores (Tabachnick & Fidell, 2013). Ten univariate outliers were detected on the Brief COPE subscales (denial: \( n = 2 \), substance use: \( n = 5 \), and behavioural disengagement: \( n = 3 \)). Although these values were deemed statistically significant, the frequent use of such coping strategies is not uncommon within policing populations (e.g., Can & Hendy, 2014; Kirby, Shakespeare-Finch, & Palk, 2011; Ménard & Arter, 2013). To address this,

7 PLS-SEM results were compared to those conducted with the removal of missing data, no meaningful differences were found.
subsequent analyses were performed with and without outlier modifications for comparative purposes.

For the modified dataset, identified outliers were recoded to the next highest value and their z-scores were recalculated until the z-scores fell within the acceptable range (i.e., < ± 3.29; Tabachnick & Fidell, 2013). Additionally, data was screened for multivariate outliers using Mahalanobis distances; all probability estimates fell within the acceptable range (i.e., p > .001; Tabacknick & Fidell, 2013).

**Normality.** The distribution of each variable was examined for normality. The Shapiro-Wilk test indicated that all variables were non-normally distributed (i.e., zSkewness and zKurtosis scores exceeding ± 2). It was not expected that these variables would follow a normal distribution. Given this, no transformations were performed in order to preserve the interpretability of results (Tabachnick & Fidell, 2013). As the data violated assumptions of normality, non-parametric tests were chosen for subsequent analyses.

**Sample descriptives.** The means, standard errors, and reliability estimates for each study variable are presented in Table 3. Each variable fell within acceptable range for reliability (e.g., \( \alpha > .70 \); Hogan, 2015).

**Main Analyses**

To evaluate the first hypothesis (i.e., H1: exposure to a critical event, or events, that is perceived as traumatic will be associated with higher levels of stress appraisal), a Mann-Whitney U test was conducted to compare groups. Results indicated that stress appraisal was greater for

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8 PLS-SEM results without outlier modifications were compared to those conducted with outlier modifications, no meaningful differences were found.
<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>SE</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
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<td>.24</td>
<td>--</td>
<td>--</td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2.</td>
<td>55.39</td>
<td>1.77</td>
<td>.04</td>
<td>--</td>
<td>--</td>
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<td>3.</td>
<td>16.47</td>
<td>.61</td>
<td>.04</td>
<td>-.03</td>
<td>--</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>3.34</td>
<td>.10</td>
<td>-.05</td>
<td>.52***</td>
<td>.10</td>
<td>.90</td>
<td></td>
<td></td>
<td></td>
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<td>5.</td>
<td>2.38</td>
<td>.07</td>
<td>-.05</td>
<td>.32***</td>
<td>.11</td>
<td>.49***</td>
<td>.87</td>
<td></td>
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</tr>
<tr>
<td>6.</td>
<td>2.09</td>
<td>.05</td>
<td>.03</td>
<td>.18*</td>
<td>.06</td>
<td>.36***</td>
<td>.60***</td>
<td>.81</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>1.61</td>
<td>.04</td>
<td>.08</td>
<td>.26**</td>
<td>-.08</td>
<td>.45***</td>
<td>.45***</td>
<td>.43***</td>
<td>.83</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>2.27</td>
<td>.07</td>
<td>-.05</td>
<td>.33***</td>
<td>-.07</td>
<td>.46***</td>
<td>.67***</td>
<td>.55***</td>
<td>.46***</td>
<td>.92</td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>15.93</td>
<td>.79</td>
<td>.18*</td>
<td>.51***</td>
<td>-.03</td>
<td>.47***</td>
<td>.41***</td>
<td>.17*</td>
<td>.59***</td>
<td>.27**</td>
<td>.90</td>
</tr>
</tbody>
</table>

*Note.* *p* < .05. **p* < .01. ***p* < .001. Critical events reflect the total number of events reported by participants. Average perceived stressfulness was calculated across the critical events reported by participants.

10 See Appendix M for correlations between all variables included in data collection for both the short and long forms of the survey.
individuals who perceived a critical event as traumatic (i.e., pushing them to their limit psychologically, emotionally; $Mdn = 4.33$) compared to those who did not report a critical event as traumatic ($Mdn = 3.00$), $U = 1268.50$, $p < .001$, $\eta^2 = .24$. The effect size indicates a medium to large effect based on Cohen’s (1988) standards, thereby providing support for the first hypothesis.

**Model analyses.** Partial least squares structural equation modeling (PLS-SEM) was used to analyze the structural relationships between study variables (see Figure 2). PLS-SEM is a multivariate approach that falls under the umbrella of structural equation modeling (SEM). Specifically, SEM encompasses a range of statistical techniques that estimate relationships between unobserved constructs using observed data (Tabachnick & Fidell, 2013). These approaches provide an opportunity to analyze complex theoretical models with multiple independent and dependent variables using a combination of regression and factor analyses (Tabachnick & Fidell, 2013).

Compared to traditional covariance-based structural equation modeling (CB-SEM) techniques, which attempt to recreate a theoretical covariance matrix, PLS-SEM aims to maximize the amount of variance explained in the dependent construct based on the identified predictors in the structural model (Hair, Ringle, & Sarstedt, 2011). This method was deemed appropriate for several reasons. Firstly, the primary goals of the analyses were prediction and explanation rather than theory testing or confirmation (Hair et al., 2017). Specifically, the present study aimed to explore the relative degree of impairment experienced by participants based on the specific coping strategies enacted after experiencing a traumatic event at work, emphasizing the relationships between constructs rather than the relationships between indicators and their latent constructs. Compared to CB-SEM, PLS-SEM combines confirmatory (i.e., principal
components analysis) and exploratory (i.e., multiple regression) techniques by investigating the relative importance of the identified predictors based on the amount of variance accounted for in the dependent latent construct, as well as evaluating the quality of the data based on measurement characteristics (Hair et al., 2011; Hair et al., 2017). Given the need for a contextual approach to the study of traumatic stress within policing, an exploratory rather than confirmatory approach to SEM was better suited to analyze the relationships between study variables.

Secondly, traditional CB-SEM requires data to meet several assumptions, including normally distributed data and large sample sizes, to accurately estimate standard errors and goodness-of-fit (Hair et al., 2011; Hair, Sarstedt, Hopkins, & Kuppelwieser, 2014). In contrast, PLS-SEM is a non-parametric approach that works with small sample sizes and complex models (Hair et al., 2014). Specifically, PLS-SEM provides more robust estimates of structural relationships by transforming non-normal data and applying bootstrapping techniques to small data sets (Hair et al., 2014). Given the skewness of the variables under investigation for the present study, and the relatively small sample size ($n = 158$), PLS-SEM was a desirable alternative to CB-SEM. For these reasons, PLS-SEM was deemed the most appropriate method for the present study.

PLS-SEM was performed using SmartPLS 3 (Ringle, Wende, & Becker, 2015). In addition to providing estimates of outer loadings (i.e., the loading of reflective indicators) and path coefficients using the PLS algorithm, SmartPLS 3 allows for non-parametric significance

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11 A general rule of thumb regarding sample size requirements for PLS-SEM analyses is the larger of the following: 1) 10 times the maximum number of formative indicators, or 2) 10 times the largest number of structural paths tied to a latent construct (Hair et al., 2017; Hair et al., 2014). As the latent constructs with multiple indicators in the present study are reflective, the analyses required at least 40 data points (i.e., four structural paths linked to impairment). However, larger samples sizes are argued to yield more accurate results (Chin, 1998).
testing through bootstrapping techniques. More specifically, the bias-corrected bootstrapping technique was used to correct for skewness, as recommended by Hair and colleagues (2017). This process creates 5000 random subsamples from the dataset to estimate population values, which are used to generate 95% confidence intervals. Additionally, the SmartPLS 3 blindfolding function was used to evaluate the predictive relevance of the model. This omission technique allows you to test the model’s ability to predict missing values by omitting a portion of the data set. This procedure provides an estimate for Stone-Geisser’s $Q^2$ (Geisser, 1974; Stone, 1974), which can be used in combination with the $R^2$ to evaluate the structural model.

**PLS-SEM path models** consist of a structural model (i.e., inner model), which reflects the relationships between constructs, and a measurement model (i.e., outer model), which includes the relationships between each construct and its associated indicators (Hair et al., 2017; Hair et al., 2014). To evaluate data using PLS-SEM, researchers must first examine the measurement model to assess the reliability and validity of the constructs before exploring the structural relationships (Hair et al., 2014).

**Measurement model.** The reliability of reflective constructs with multiple indicators was assessed using both internal consistency (i.e., Cronbach’s alpha; see Table 3) and composite reliability (Hair et al., 2017). Unlike Cronbach’s alpha, composite reliability does not assume that all indicators are equal; rather, composite reliability provides estimates based on individual indicator reliabilities (Hair et al., 2017). However, Hair and colleagues (2017) recommend examining both internal consistency and composite reliability, as the true reliability is argued to fall between these two values. All composite reliabilities for the constructs under investigation were above the recommended value of .70 (Hair et al., 2017). Specifically, the composite reliabilities were as follows: stress appraisal was .94, $p < .001$, 95% CI [.92, .95], problem-
focused coping was \( .91, p < .001, 95\% \text{ CI } [.88, .93] \), active emotion-focused coping was \( .83, p < .001, 95\% \text{ CI } [.70, .87] \), avoidant emotion-focused coping was \( .87, p < .001, 95\% \text{ CI } [.81, .91] \), enacted social support was \( .95, p < .001, 95\% \text{ CI } [.93, .96] \), and impairment was \( .93, p < .001, 95\% \text{ CI } [.91, .95] \) (see Table 4 for outer loadings of each indicator).

Table 4

*Outer Loadings for Stress Appraisal, Problem-focused Coping, Active Emotion-focused Coping, Avoidant Emotion-focused Coping, Enacted Social Support, and Impairment*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Indicator</th>
<th>Outer Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stress Appraisal</td>
<td>SAM17</td>
<td>.92** [.89, .94]</td>
</tr>
<tr>
<td></td>
<td>SAM18</td>
<td>.89** [.85, .92]</td>
</tr>
<tr>
<td></td>
<td>SAM19</td>
<td>.93** [.91, .95]</td>
</tr>
<tr>
<td>Problem-focused coping</td>
<td>BriefCOPE2</td>
<td>.78** [.68, .85]</td>
</tr>
<tr>
<td></td>
<td>BriefCOPE7</td>
<td>.83** [.75, .89]</td>
</tr>
<tr>
<td></td>
<td>BriefCOPE14</td>
<td>.88** [.84, .92]</td>
</tr>
<tr>
<td></td>
<td>BriefCOPE25</td>
<td>.88** [.84, .92]</td>
</tr>
<tr>
<td>Active emotion-focused coping</td>
<td>BriefCOPE9</td>
<td>.72** [.60, .82]</td>
</tr>
<tr>
<td></td>
<td>BriefCOPE12</td>
<td>.64** [.40, .76]</td>
</tr>
<tr>
<td></td>
<td>BriefCOPE17</td>
<td>.51** [.18, .68]</td>
</tr>
<tr>
<td></td>
<td>BriefCOPE18</td>
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<td>.49** [.23, .67]</td>
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<tr>
<td>Impairment</td>
<td>WSAS1</td>
<td>.76**</td>
</tr>
<tr>
<td></td>
<td>WSAS2</td>
<td>.89**</td>
</tr>
<tr>
<td></td>
<td>WSAS3</td>
<td>.88**</td>
</tr>
<tr>
<td></td>
<td>WSAS4</td>
<td>.88**</td>
</tr>
<tr>
<td></td>
<td>WSAS5</td>
<td>.83**</td>
</tr>
</tbody>
</table>

*Note. * *p < .01; **p < .001.*

To explore the validity of the constructs under investigation, the average variance extracted (AVE) was used to assess convergent validity of constructs with multiple indicators (Hair et al., 2017). Hair and colleagues recommend an AVE of .50 or higher, as this suggests that the construct explains more than half of the variance in the associated indicators. The AVE values for the reflective constructs were as follows: stress appraisal was .84, *p < .001, 95% CI [.80, .87]*, problem-focused coping was .72, *p < .001, 95% CI [.66, .77]*, active emotion-focused coping was .34, *p < .001, 95% CI [.24, .40]*, avoidant emotion-focused coping was .41, *p < .001, 95% CI [.31, .50]*, enacted social support was .81, *p < .001, 95% CI [.76, .86]*, and impairment was .72, *p < .001, 95% CI [.67, .78]*. Two constructs, active emotion-focused coping and avoidant emotion-focused coping, fell below the desired value of .50 (Hair et al., 2017). Upon
further examination of the outer loadings for these constructs, two indicators fell at or below the .40 range (i.e., BriefCOPE22, BriefCOPE27), which warranted further examination. These indicators were systematically deleted to examine the impact on composite reliability and AVE of the active emotion-focused coping construct (Hair et al., 2017). Changes in validity were minimal, with modified AVE values remaining below the .50 threshold. Additionally, it is important to note that it is not uncommon for loadings to fall below .70 in the social sciences (Hair et al., 2017). Given the limited benefit associated with their removal, the indicators were kept in the model for the remaining analyses to preserve content validity (Hair et al., 2017).

Previously, it was recommended that the Fornell-Larker criterion and the cross-loadings be examined to assess discriminant validity; however, recent research suggests that these approaches fail to accurately detect discriminant validity (Henseler, Ringle, & Sarstedt, 2015; Voorhees, Brady, Calantone, & Ramirez, 2016). Given this, the heterotrait-monotrait ratio (HTMT) has been argued to be more accurate for assessing discriminant validity in variance-based SEM analyses (Hair et al., 2017). All HTMT values for the present study fell below the desired threshold for constructs that are conceptually related (i.e., < .90; Henseler et al., 2015; see Table 5 for HTMT values).

**Structural model.** To evaluate the structural model, collinearity, coefficients of determination (i.e., $R^2$), path coefficients, effect sizes (i.e., $f^2$), and predictive relevance (i.e., $Q^2$) were examined. First, to assess collinearity, the inner variance inflation factor (VIF) values were examined for each construct in the model; all constructs fell below the desired threshold (i.e., < 5; Hair et al., 2017). Next, the coefficients of determination were examined to explore the in-

PLS-SEM analyses were also performed using the social network score as an alternative measure of enacted social support. A similar pattern of results was found for both measures. The results from the structural model are presented in Appendix N.
<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Traumatic event</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Stress appraisal</td>
<td>.49** [.36, .62]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Problem-focused coping</td>
<td>.25** [.10, .40]</td>
<td>.55** [.41, .67]</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Active emotion-focused coping</td>
<td>.13** [.12, .28]</td>
<td>.42** [.28, .57]</td>
<td>.72** [.59, .83]</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Avoidant emotion-focused coping</td>
<td>.39** [.24, .55]</td>
<td>.49** [.36, .62]</td>
<td>.48** [.38, .61]</td>
<td>.57** [.51, .70]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Enacted social support</td>
<td>.21** [.06, .36]</td>
<td>.50** [.37, .62]</td>
<td>.75** [.63, .85]</td>
<td>.64** [.50, .77]</td>
<td>.48** [.37, .61]</td>
<td></td>
</tr>
<tr>
<td>7. Impairment</td>
<td>.51** [.38, .63]</td>
<td>.52** [.34, .67]</td>
<td>.46** [.31, .60]</td>
<td>.27** [.21, .43]</td>
<td>.65** [.46, .82]</td>
<td>.30** [.14, .46]</td>
</tr>
</tbody>
</table>

*Note. ** p < .001.*
the $R^2$ describes the amount of variance explained by the predictors in the model for each endogenous construct. The coefficients for determination are as follows: stress appraisal, $R^2 = .22, p < .001, 95\%$ CI [.11, .35], problem-focused coping, $R^2 = .24, p < .001, 95\%$ CI [.13, .36], active emotion-focused coping, $R^2 = .19, p < .001, 95\%$ CI [.12, .31], avoidant emotion-focused coping, $R^2 = .21, p < .001, 95\%$ CI [.10, .32], enacted social support, $R^2 = .21, p < .001, 95\%$ CI [.11, .33], and impairment, $R^2 = .41, p < .001, 95\%$ CI [.25, .58]. Specifically, 41\% of the variability in impairment was accounted for by the predictors in the model, representing a moderate-to-large effect in social science research (Hair et al., 2017).

Next, the path coefficients were examined to explore the relationships between constructs in the structural model (standardized coefficients are presented in Figure 3). Seven of the nine paths were significant, demonstrating a medium-to-large effect based on path coefficients (Hair et al., 2017) and $f^2$ (with .02, .15, and .35 indicating a small, medium, and large effect size, respectively; Cohen, 1988). Moreover, the associated confidence intervals did not include zero, providing support for the presence of a relationship between constructs. As hypothesized, experiencing a traumatic event was associated with higher levels of stress appraisal, .47, $p < .001, 95\%$ CI [.33, .59], $f^2 = .28$. Similarly, higher levels of stress appraisal were associated with higher levels of problem-focused coping, .49, $p < .001, 95\%$ CI [.37, .61], $f^2 = .32$, active emotion-focused coping, .44, $p < .001, 95\%$ CI [.35, .56], $f^2 = .24$, avoidant emotion-focused coping, .45, $p < .001, 95\%$ CI [.33, .57], $f^2 = .26$, and enacted social support, .46, $p < .001, 95\%$ CI [.35, .57], $f^2 = .27$. Additionally, as hypothesized, higher levels of problem-focused coping and avoidant emotion-focused coping were associated with higher levels of impairment, .33, $p < .01, 95\%$ CI [.13, .51], $f^2 = .09$ and .60, $p < .001, 95\%$ CI [.42, .74], $f^2 = .43$, respectively.
Figure 3. Structural model with standardized path coefficients. * p < .05. ** p < .01. *** p < .001.
Contrary to expectation, the paths between active emotion-focused coping and impairment, and enacted social support and impairment were non-significant and the confidence intervals included zero, -.18, ns, 95% CI [-.35, .04], $f^2 = .03$ and -.10, ns, 95% CI [-.27, .07], $f^2 = .01$, respectively. Thus, the results failed to provide support for hypotheses 4c and 4d.

Lastly, the predictive relevance (i.e., Stone-Geisser’s $Q^2$ value) was examined. This measure provides an estimate of the model’s predictive relevance using an omission blindfolding procedure (Hair et al., 2017). Based on Hair and colleagues (2017) recommendations (i.e., the omission distance used should be between 5 and 10), every seventh data point was excluded for the blindfolding procedure. All values were above the recommended threshold (i.e., > 0; Hair et al., 2017). Specifically, the $Q^2$ are as follows: stress appraisal = .17, problem-focused coping = .16, active emotion-focused coping = .05, avoidant emotion-focused coping = .07, enacted social support = .16, and impairment = .27; thereby, providing support for the predictive relevance of the model.

**Exploratory Examination of Enacted Social Support**

**Social network.** To better understand the role of enacted social support after the experience of a stressful or traumatic work-related event, the type of support sought after exposure was examined to see if there were differences based on source (i.e., Research Question 1). To explore this question, the frequency of each social support combination (i.e., type x source) was examined using the social support matrix (see Table 6). Based on this data, spouse/partner was the most commonly sought source of support overall ($n = 139$). Specifically, 59 participants reported seeking emotional support, 28 sought informational support, 30 sought instrumental support, and 22 sought support for self-esteem.
In addition to spouses/partners, participants reported frequently seeking support from a friend at work ($n = 131$). Specifically, 50 participants reported seeking emotional support, 35 sought informational, 15 sought instrumental, and 31 seeking support for self-esteem. Thus, compared to other sources, participants reported seeking a range of support from spouses/partners and friends at work after a stressful work-related event, with emotional support being most common.

Table 6

*Type of Social Support Sought from Each Source Following a Stressful or Traumatic Event*

<table>
<thead>
<tr>
<th>Source of Support</th>
<th>Did not seek support from this source</th>
<th>Self-esteem</th>
<th>Emotional</th>
<th>Informational</th>
<th>Instrumental</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supervisor</td>
<td>107 (67.7)</td>
<td>10 (6.3)</td>
<td>15 (9.5)</td>
<td>18 (11.4)</td>
<td>13 (8.2)</td>
<td>56</td>
</tr>
<tr>
<td>Friend at work</td>
<td>50 (31.6)</td>
<td>31 (19.6)</td>
<td>50 (31.6)</td>
<td>35 (22.2)</td>
<td>15 (9.5)</td>
<td>131</td>
</tr>
<tr>
<td>Professional help at work</td>
<td>127 (80.4)</td>
<td>5 (3.2)</td>
<td>2 (1.3)</td>
<td>10 (6.3)</td>
<td>9 (5.7)</td>
<td>26</td>
</tr>
<tr>
<td>Friend outside of work</td>
<td>62 (39.2)</td>
<td>15 (9.5)</td>
<td>42 (26.6)</td>
<td>31 (19.6)</td>
<td>16 (10.1)</td>
<td>104</td>
</tr>
<tr>
<td>Spouse/partner</td>
<td>41 (25.9)</td>
<td>22 (13.9)</td>
<td>59 (37.3)</td>
<td>28 (17.7)</td>
<td>30 (19.0)</td>
<td>139</td>
</tr>
<tr>
<td>Family member</td>
<td>93 (58.9)</td>
<td>10 (6.3)</td>
<td>28 (17.7)</td>
<td>16 (10.1)</td>
<td>14 (8.9)</td>
<td>68</td>
</tr>
<tr>
<td>Professional help outside of work</td>
<td>101 (63.9)</td>
<td>7 (4.4)</td>
<td>11 (7.0)</td>
<td>16 (10.1)</td>
<td>31 (19.6)</td>
<td>65</td>
</tr>
</tbody>
</table>

Note. Percentages were calculated using the total sample size ($n = 158$) as the denominator.
Coping alone. In addition to the data presented above, ten participants reported dealing with stressful or traumatic incidents alone (i.e., not seeking support from any of the seven sources). Further, all participants were asked to elaborate on their actions when attempting to deal with trauma alone. Open-ended responses suggested that first responders use a wide range of behaviours when attempting to manage traumatic stress experiences alone. Some participants reported behaviours consistent with positive coping strategies, including acceptance ($n=10$) or allowing themselves to ‘feel’ the associated emotions ($n=3$). However, the most commonly reported actions included attempts to dissociate, distract, or separate oneself from emotion ($n=13$). Thus, despite sharing the umbrella of being ‘lone’ strategies, there is still some variability in the actions taken by individuals when attempting to cope with work-related trauma by themselves. Sample responses include:

“Just ignore and hope it goes away.”

“Held it in, although realizing it wasn't the best idea.”

“You have to detach yourself from the situation. Rationalize it.”

“I really haven't spoken much to someone about this. I have told the story but not the emotional impact it really has had on me.”

13 See Appendix O for social network score frequencies.
14 Open-ended responses included both support seeking strategies (e.g., speaking to a Psychologist, seeking social support from a friend or family member) and individual-based strategies (e.g., ruminate, suppress, accept, exercise) as attempts to coping with trauma alone.
“[I relied on] myself. Dug deep and got it done.”

“Just dealt with it. Just accepted it.”

**Quality of support.** To explore whether certain sources are perceived as more helpful than others (i.e., Research Question 2), participant open-ended responses were analyzed using quantitative content analysis to categorize responses by source. Content analysis was deemed to be the most appropriate approach, as the primary goal of the analysis was exploratory (Vaismoradi, Turunen, & Bondas, 2013). More specifically, content analysis provides an opportunity to systematically quantify and describe qualitative responses through the application of category rules (Kolbe & Burnett, 1991; Riffe, Lacy, & Fico, 2014). Based on this, responses were grouped based on the identified most helpful ($n_{responses} = 137$) or least helpful source of support ($n_{responses} = 81$). The most commonly reported source of helpful support was a partner or spouse ($n = 44$). Other sources of helpful support included coworker ($n = 33$), Psychologist or other mental health professional ($n = 27$), friend ($n = 14$), and other family member ($n = 10$).¹⁵

Building on previous research (e.g., Semmer et al., 2008), participants were also asked which type of support was most helpful after experiencing a stressful or traumatic work-related event. Specifically, participants were asked what the most helpful source of support did that was particularly helpful. Although the majority of open-ended responses contained relatively little detail, available data provided insight into the aspects of support that are most often perceived as helpful. Specifically, emotional and self-esteem support were commonly reported as being most helpful.

¹⁵ All other sources (e.g., supervisor, god) received five or fewer responses.
helpful, with actions including listening, validating, and providing comfort. Sample qualitative responses include:

“My spouse, just listened.”

“Spouse, listened and was empathetic.”

“My wife, she listened and put it in a different perspective.”

“My spouse has been my sounding board and has been offering advice and support.”

“Spouse. Reassured myself that I did the right thing and the outcome couldn’t be any different.”

“My wife. Helped by listening and normalizing what I felt.”

“Spouse – she is the person who offers unconditional support.”

“My spouse. Expressing how it made me feel and talking about the fragility of life helped to ease the stress I felt in my interactions with the family.”

“Peers and direct supervisors, listened and offered support. Joked about it.”
“Co-worker who listened to me vent when needed.”

“My fellow officer, partner. Listened, shared his feelings about the event, what his reactions were to it.”

The most commonly reported source of unhelpful support was a supervisor or organizational leadership \((n = 37)\), with stigma and fear of repercussions commonly reflecting barriers to seeking support. Sample qualitative responses include:

“I had approached [my supervisor] after a stressful incident at work had occurred along with help for PTSD, I was told to take a few sick days and then I was brushed off. It lead to more drinking to cope.”

“Supervisor. I felt if I approached I would have been removed from the [team].”

“My employer and colleagues. My employer claims to support [those] in need; however, there are MANY examples where colleagues have asked for help only to be treated like they are broken…”

Other sources of unhelpful support include coworker \((n = 7)\) and a spouse or partner \((n = 7)\). Although spouses or partners and coworkers were not the most common source of unhelpful support, responses provided insight into why the support provided (or lack thereof) was not

\(^{16}\) All other sources (e.g., friend, family) received five or fewer responses.
helpful. When participants identified their spouse or partner, or coworker as not supportive, they highlighted a disconnect between the support they needed and what they received in the situation. For partners, reported challenges included those who were uninterested in discussing the issue, too busy, or lacked experience or understanding. Interestingly, for coworkers, responses reflected concerns about stigma and perceptions of negativity. Sample responses include:

“My spouse was not helpful. She said it sounded terrible and didn’t want to hear about it.”

“My wife gave me pity but she really doesn’t understand.”

“Partner [was] supportive but [was] dealing with other stressful issues at the same time.”

“Venting to peers is not ideal. We just feed off of each other’s negativity.”

“Co-workers. They all expected me to be ok and that I should get over [it] or not be affected by the trauma. I heard comments like this so I bottled it all up.”

**Discussion**

Given recent public concern regarding the treatment of occupational stress in policing (e.g., Burke, 2018; Maharaj, 2018; Ontario Ombudsman, 2012; Smee, 2016), there is a demonstrated need for research to support the development of evidence-based mental health resources for first responder organizations across Canada. To address this need, the present study
expanded on previous traumatic stress research by investigating the role of enacted coping strategies on individual impairment following a stressful or traumatic work-related event, or series of events, within a Canadian policing sample. Specifically, the present study examined the impact of various coping styles, including problem-focused, active emotion-focused, avoidant emotion-focused, and enacted social support, on individual functioning, as the unique demands, professional constraints, and contextual influences associated with policing can shape the specific coping strategies employed by individuals after the experience of work-related trauma.

Additionally, given the limited understanding of the support process based on previous research, the present study explored the types of support sought by individuals (e.g., emotional, informational, instrumental, self-esteem) from various work (e.g., supervisor) and non-work sources (e.g., partner/spouse, friend) after the experience of a stressful or traumatic work-related event, as well as the perceived helpfulness of the support received. Together, this information provides insight to help address current gaps or limitations in organizational responses to work-related trauma. This discussion focuses primarily on the findings from the present study and directions for future research; limitations and implications are explored in greater detail in Chapter 3.

As hypothesized, traumatic stressors were associated with higher levels of stress appraisal (i.e., H1). Consistent with the transactional model of stress and coping (i.e., Lazarus & Folkman, 1984), these results suggest that work-related traumatic events were perceived both as directly impacting the self (i.e., primary appraisal) and exceeding an individual’s coping resources (i.e., secondary appraisal; Lazarus, 1995). Although theory suggests that stress appraisals are imperative to individual well-being following stress exposure, few studies have explicitly studied this relationship within the context of traumatic stress (Aldwin & Yancura, 2004; Olff,
Langeland, & Gersons, 2005). This is particularly important, as traumatic events are assumed to result in individual distress. Of the research available, trauma exposure has been associated with negative appraisals, including perceiving a stressor as a threat (i.e., indicating potential harm, lack of control), which in turn, are positively related to distress and long-term strain (e.g., PTSD; Ehlers, Mayou, & Bryant, 1998; McNally, 2003; Olff et al., 2005). Consistent with this research, the present study confirmed the importance of appraisal in traumatic stress responses. This link is important given the impact of appraisals on subsequent coping responses, which can either be beneficial or detrimental to the individual (Folkman et al., 1986; Lazarus & Folkman, 1984).

As expected, higher levels of stress appraisal were associated with higher levels of enacted coping, including problem-focused (i.e., H2a), avoidant emotion-focused coping (i.e., H2b), active emotion-focused (i.e., H2c), and social support (i.e., H3). Consistent with previous research in policing (e.g., Klauninger et al., 2014), participants in the present study reported enacting several types of coping following a traumatic work-related event. These relationships have also been demonstrated within the broader trauma literature. For example, in a sample of rescue workers (n = 463), Prati and colleagues (2011) found positive relationships between a global measure of stress appraisal and several types of enacted coping, including problem-focused coping, avoidance, social support, and meaning-focused coping. Together, this research suggests that individuals often enact multiple strategies in an attempt to cope with traumatic stress experiences. Although some of these strategies may helpful in the short-term (e.g., problem-focused coping; Anshel, 2000; LeBlanc et al., 2008), enacted coping strategies have been found to differentially impact individual health and well-being over time, with some forms of coping exacerbating stress experiences over the long-term (Folkman, 2013; Littleton, Horsley, John, & Nelson, 2007).
As hypothesized, problem-focused coping and avoidant emotion-focused coping were associated with higher levels of impairment (H4a and H4b, respectively). Previous research suggests that problem-focused coping strategies are often used by officers while on duty (i.e., related to procedure or training) as a way to suppress emotions during a work-related stressor (Anderson et al., 2002; LeBlanc et al., 2008). Despite being helpful in the moment, these strategies are often associated with higher levels of distress over time (Marmar et al., 2006; Patterson, 2003).

Similarly, high levels of avoidant emotion-focused coping strategies are commonly reported in policing (e.g., alcohol use; Gershon et al., 2009; Kaur et al., 2013; Powell et al., 2014), and are often associated with lower levels of adjustment following trauma exposure. To demonstrate, a meta-analysis by Littleton and colleagues (2007) from the general trauma literature found a strong positive relationship between overall avoidance coping and distress (mean $r = .37$, $k = 35$, $p < .001$, 95% CI [.29, .44]) following trauma exposure, such as interpersonal violence or severe injury, with similar relationships for both problem/behavioral avoidance (mean $r = .33$, $k = 8$, $p < .001$, 95% CI [.27, .37]) and emotion/cognitive avoidance (mean $r = .31$, $k = 16$, $p < .001$, 95% CI [.17, .43]). These relationships are argued to occur due the inability for these strategies to adequately address the underlying emotional nature of traumatic stressors (Anshel, 2000; Lilly et al., 2009; Ménard & Arter, 2013).

Compared to problem-focused and avoidant emotion-focused coping, active emotion-focused coping (e.g., acceptance, venting) demonstrated no relationship with impairment. Specifically, the path was non-significant and despite being in the hypothesized direction, the associated confidence interval approached zero, thereby failing to provide support for hypothesis 4c. Although previous research has commonly found a stronger relationship between avoidance
coping strategies and individual outcomes (e.g., distress; Brown, Mulhern, & Joseph, 2002; Littleton et al., 2007), it has been argued that active emotion-focused coping strategies play an important role in individual psychological adjustment to trauma. For example, emotion-focused strategies, such as cognitive reappraisal, have been associated with lower levels of distress (e.g., Chartlon & Thompson, 1996; Riolli & Savicki, 2010), fewer trauma symptoms (e.g., Johnsen, Eid, Laberg, & Thayer, 2002), and higher levels of growth (e.g., Linley & Joseph, 2004) following a traumatic event. Although previous research in policing has argued that emotion-focused coping can be detrimental when enacted during a stressful work-related situation (e.g., LeBlanc et al., 2008), processing emotional reactions to stressors is argued to be important for long-term health and well-being (Folkman, 2013; Folkman et al., 1986). The current measure of active emotion-focused coping included several strategies, reflecting both the expression of emotion (e.g., humour, venting), as well as the internal processing of emotion (e.g., acceptance, positive reframing). Thus, there may be an opportunity to explore the role of specific emotion-focused strategies in future research, which may provide more insight into the relationship between active emotion-focused coping and impairment.

Similarly, contrary to expectation, enacted social support was not related to impairment in the present study (i.e., H4d). Previous research has demonstrated a positive relationship between social support and individual health and well-being, with a lack of social support representing a significant risk factor for the development of psychopathology following traumatic event exposure (Brewin, Andrews, & Valentine, 2000; Marmar et al., 2006; Wagner, Monson, & Hart, 2016). Traditionally, social support measures have reflected the perception that support is available rather than the support enacted or received in a situation (Haber et al., 2007;
Kaul & Lakey, 2003). To address this limitation, the present study utilized an enacted coping aggregate to assess support seeking following exposure to a traumatic work-related event.

Although participants in the present study reported seeking social support from their networks, as evidenced by the positive relationship between stress appraisal and enacted social support, little is known about the efficacy of the support received. This may account for the non-significant relationship between social support and impairment, as previous research suggests that the support provided must match the needs of the individual in order to be beneficial for the recipient (Cohen & McKay, 1984; Kaufmann & Beehr, 1986, 1989; Viswesvaran et al., 1999). Thus, it is possible that the support received from the various sources in a participant’s social network was misaligned with their individual support needs.

This explanation is supported by the exploratory findings from the social network matrix and open-ended responses. Here, spouses and friends at work were reported as the most frequently sought sources of support, with participants reporting seeking multiple types of support from each source. Although spouses and friends at work were the most commonly sought sources of support, some participants indicated that support received from a spouse or partner, or a friend at work was unhelpful. Specifically, these qualitative responses highlight a disconnect between the needs of the support seeker and the type of support provided, which may inadvertently exacerbate the stress experience for these participants.

Despite the insight gained from the open-ended responses, there is a need for further research to explore the nuanced nature social support for first responders. Specifically, quantitative measures of social support provide limited understanding of the support process by focusing solely on the perceptions or experiences of the support receiver. Based on this limitation, there is a need to explore the support process from multiple perspectives. To address
this, the next phase of the dissertation focused on exploring the support process from the perspective of support providers. Specifically, this research focused on the experiences of spouses or partners, as they were the most commonly sought source of support in the present study. This research included spouses of police officers, fire fighters, and paramedics as no differences were anticipated based on occupation with respect to spousal support. A qualitative approach was used to explore the unique pressures associated with being in a relationship with a first responder, signs or signals that indicate when a partner needs support, successful support strategies, as well as the challenges or barriers faced by spouses when providing support. By better understanding the complex and nuanced nature of social support, researchers and organizations will be better equipped to design targeted interventions and implement evidence-based best practices to strengthen existing support networks in order to support the long-term health and well-being of first responders.
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Appendix A

To evaluate whether there were any significant differences between the missing data group and the final potential trauma group, an independent samples t-test was performed for both critical event exposure and average perceived stress. For critical event exposure, the homogeneity of variance assumption was not violated, Levene’s $F(1, 227) = 1.16, ns$. The missing data group ($M = 4.31, SE = .32$) did not report significantly higher levels of critical event exposure compared to the final potential trauma group ($M = 4.87, SE = .24$), $t(227) = -1.34, ns, d = .19, 95\% CI [-.09, .47]$.

Similarly, for perceived stress, the homogeneity of variance assumption was not violated, Levene’s $F(1, 226) = 1.71, ns$. The missing data group ($M = 49.30, SE = 2.98$) did not report significantly higher levels of average perceived stress compared to the final potential trauma group ($M = 55.39, SE = 1.77$), $t(226) = -1.84, ns, d = .26, 95\% CI [-.02, .55]$. Both the significance data and confidence intervals suggest that there are no meaningful differences between groups with respect to critical event exposure or perceived stress, thereby supporting the generalizability of the findings obtained from the final potential trauma group.
Appendix B

Additional Study Measures

Distress disclosure. The Distress Disclosure Index (DDI; Kahn & Hessling, 2001) was used as a measure of participant’s likelihood to disclose (or conceal) their distress experiences. The DDI includes 12 items using a 5-point scale ranging from 1 (Strongly disagree) to 5 (Strongly agree), with higher scores indicating a greater likelihood of disclosure (e.g., “When something unpleasant happens to me, I often look for someone to talk to”). Six items from the measure are reverse-coded (e.g., “I typically don’t discuss things that upset me”). The measure has demonstrated convergent and discriminant validity, and good internal consistency (α ranging from .92 to .95; Kahn & Hessling, 2001). Additionally, the measure has demonstrated temporal stability, with a participant scores demonstrating a correlation of .80, p < .001 over a two-month period (Kahn & Hessling, 2001). For the present study, six items were included in the short form of the survey, with the remaining six items appearing in the long form.

Resilience. The Connor-Davidson Resilience Scale (CD-RISC; Connor & Davidson, 2003) was used as a measure of participant resilience. This measure includes 25 items on a 5-point scale ranging from 0 (Not true at all) to 4 (True nearly all of the time) based on how participants have felt over the previous month (e.g., “When things look hopeless, I don’t give up”). Scores are totaled (ranging from 0 to 100), with higher scores indicating a greater level of resilience. This scale has demonstrated convergent and discriminant validity, test-retest reliability (intraclass correlation, r = .87), and good internal consistency (α = .89; Connor & Davidson, 2003). Ten items from the CD-RISC were included in the short form of the survey, with the remaining 15 items appearing in the long form.
**Leader-member exchange.** Leader-member exchange (LMX) was used to assess participant’s relationship with their supervisor. A measure of LMX recommended by Graen and Uhl-Bien (1995) was used based on the modified seven item version by Graen, Novak, and Sommerkamp (1982). Items in this measure are rated on a 5-point scale; anchors varied based on the nature of the question (e.g., strongly disagree to strongly agree, none to very high, etc.), with higher scores indicating a higher level of LMX (e.g., “I have enough confidence in my supervisor that I would defend and justify his/her decision if he/she were not present to do so” and “Regardless of how much formal authority he/she has built into his/her position, what are the chances that your supervisor would use his/her power to help solve problems in your work?”). Previous research using this measure has reported good internal consistency (α = .92; Sparr & Sonnentag, 2008). For the present study, LMX was only measured in the long form of the survey.

**Perceived organizational support.** The 8-item short form of the Survey of Perceived Organizational Support (SPOS; Eisenberger, Huntington, Hutchison, & Sowa, 1986) was used to assess participants’ global perceptions of how supportive their organization is to employees. This measure rates items on a 7-point scale ranging from 1 (Strongly disagree) to 7 (Strongly agree), with higher scores indicating higher levels of perceived organizational support (e.g., “The organization values my contributions to its well-being”). Four items in the measure were reverse-coded (e.g., “Even if I did the best job possible, the organization would fail to notice”). The SPOS has been found to demonstrate good internal consistency, α = .97 (Eisenberger et al., 1986). For the present study, SPOS was measured only in the long form of the survey.
Appendix C

Critical Events Checklist

As a result of your policing profession, have you experienced or been exposed to the following situation in the last 1 year period?

1. Natural disaster (e.g., flood, hurricane, tornado, earthquake).
   If yes, please rate how stressful this event was for you.

<table>
<thead>
<tr>
<th>0</th>
<th>100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Stressful at All</td>
<td>Extremely Stressful</td>
</tr>
</tbody>
</table>

2. Fire or explosion.
   If yes, please rate how stressful this event was for you.

<table>
<thead>
<tr>
<th>0</th>
<th>100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Stressful at All</td>
<td>Extremely Stressful</td>
</tr>
</tbody>
</table>

3. Transportation accident (e.g., a gruesome motor vehicle collision/fatality, boat accident, train wreck, plane crash).
   If yes, please rate how stressful this event was for you.

<table>
<thead>
<tr>
<th>0</th>
<th>100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Stressful at All</td>
<td>Extremely Stressful</td>
</tr>
</tbody>
</table>

4. Serious accident at work.
   If yes, please rate how stressful this event was for you.

<table>
<thead>
<tr>
<th>0</th>
<th>100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Stressful at All</td>
<td>Extremely Stressful</td>
</tr>
</tbody>
</table>

5. Exposure to toxic substances (e.g., dangerous chemicals, radiation).
   If yes, please rate how stressful this event was for you.

<table>
<thead>
<tr>
<th>0</th>
<th>100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Stressful at All</td>
<td>Extremely Stressful</td>
</tr>
</tbody>
</table>
6. Physical assault (e.g., either yourself or someone else being attacked, a violent struggle taking someone into custody, hit, slapped, kicked, beaten up).
   If yes, please rate how stressful this event was for you.

   | 0  | 100 |
   | Not Stressful at All | Extremely Stressful |

7. Assault with a weapon (e.g., either yourself or someone else being shot/shot at, stabbed, threatened with knife, gun, bomb).
   If yes, please rate how stressful this event was for you.

   | 0  | 100 |
   | Not Stressful at All | Extremely Stressful |

8. Unwanted or uncomfortable sexual experiences.
   If yes, please rate how stressful this event was for you.

   | 0  | 100 |
   | Not Stressful at All | Extremely Stressful |

9. Captivity (e.g., either yourself or someone else being kidnapped, abducted, held hostage).
   If yes, please rate how stressful this event was for you.

   | 0  | 100 |
   | Not Stressful at All | Extremely Stressful |

10. Life-threatening illness or injury.
    If yes, please rate how stressful this event was for you.

   | 0  | 100 |
   | Not Stressful at All | Extremely Stressful |

11. Severe human suffering.
    If yes, please rate how stressful this event was for you.

   | 0  | 100 |
   | Not Stressful at All | Extremely Stressful |
12. Sudden, violent death (e.g., homicide, suicide).  
If yes, please rate how stressful this event was for you.

0                                      100  
Not Stressful at All                Extremely Stressful

13. Sudden, unexpected death of someone close to you.  
If yes, please rate how stressful this event was for you.

0                                      100  
Not Stressful at All                Extremely Stressful

14. Serious injury, harm, or death you caused to someone else.  
If yes, please rate how stressful this event was for you.

0                                      100  
Not Stressful at All                Extremely Stressful

15. Exposure to a communicable disease (e.g., through a needle prick, saliva).  
If yes, please rate how stressful this event was for you.

0                                      100  
Not Stressful at All                Extremely Stressful

16. Any other stressful event or experience.  
If yes, please describe.  
If yes, please rate how stressful this event was for you.

0                                      100  
Not Stressful at All                Extremely Stressful

17. How long has it been since you experienced the last stressful event?  
____ Months ____ Weeks

18. Please describe the most challenging event for you from the list above.

19. Please think about the event you just described. Did the event push you to your limit (e.g., psychologically, emotionally)?  
If yes, how? Please describe.
Appendix D

Stress Appraisal

These questions are concerned with your thoughts when you experienced the event or immediately after. There are no right or wrong answers. Please respond according to how you viewed this situation when it occurred or just after. Please answer each question by selecting the appropriate response on the scale below.

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not at all</td>
<td>Very little</td>
<td>Somewhat</td>
<td>A fair bit</td>
<td>A great deal</td>
</tr>
</tbody>
</table>

**During the event or right after were you thinking?**
Factor: CENTRALITY (the perceived importance of the event for one's well-being)
1. Does this situation have important consequences for me?
2. How much will I be affected by the outcome of this situation?
3. Does this situation have serious implications for me?
4. Does this situation have long-term consequences for me?

**During the event or right after were you thinking?**
Factor: CHALLENGE (the anticipation of gain or growth from the experience)
5. Is this going to have a positive impact on me?
6. How eager am I to tackle this problem?
7. To what extent can I become a stronger person because of this problem?
8. To what extent am I excited thinking about the outcome of this situation?

**During the event or right after were you thinking?**
Factor: CONTROL BY OTHERS (the individual's perception of social resources available to him in meeting situational demands)
9. Is there someone or some agency I can turn to for help if I need it?
10. Is there help available to me for dealing with this problem?
11. Are there sufficient resources available to help me in dealing with this situation?
12. Is there anyone who can help me to manage this problem?

**During the event or right after were you thinking?**
Factor: CONTROL BY SELF (the individual's personal coping resources in meeting situational demands)
13. Do I have the ability to do well in this situation?
14. Do I have what it takes to do well in this situation?
15. Will I be able to overcome the problem?
16. Do I have the skills necessary to achieve a successful outcome to this situation?

**During the event or right after were you thinking?**
Factor: STRESSFULNESS (a global measure of stress appraisal)
17. Does this situation create tension in me?
18. Does this situation tax or exceed my coping resources?
19. To what extent do I perceive this situation as stressful?
20. To what extent does this event require coping efforts on my part?

**During the event or right after were you thinking?**
Factor: THREAT (the perception of a potential loss or harm involved in the situation)
21. Does this situation make me feel anxious?
22. Will the outcome of this situation be negative?
23. How threatening is this situation?
24. Is this going to have a negative impact on me?

**During the event or right after were you thinking?**
Factor: UNCONTROLLABILITY (the individual's perception of inability to meet or control situational demands)
25. Is this a totally hopeless situation?
26. Is the outcome of this situation uncontrollable by anyone?
27. Is it beyond anyone’s power to do anything about this situation?
28. Is the problem unresolvable by anyone?
Appendix E

Coping (Brief COPE)

Since the event how much have you done, or may currently be doing, each of the following to cope with what you experienced?

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<thead>
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<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not at all</td>
<td>A little bit</td>
<td>A medium amount</td>
<td>A lot</td>
</tr>
</tbody>
</table>

1. Turning to work or other activities to take my mind off things.
2. Concentrating my efforts on doing something about the situation I’m in.
3. Saying to myself "this isn't real".
4. Using alcohol or other drugs to make myself feel better.
5. Getting emotional support from others.
6. Giving up trying to deal with it.
7. Taking action to try to make the situation better.
8. Refusing to believe that it has happened.
9. Saying things to let my unpleasant feelings escape.
10. Getting help and advice from other people.
11. Using alcohol or other drugs to get me through it.
12. Trying to see it in a different light, to make it seem more positive.
13. Criticizing myself.
14. Trying to come up with a strategy about what to do.
15. Getting comfort and understanding from someone.
16. Giving up the attempt to cope.
17. Looking for something good in what is happening.
18. Making jokes about it.
19. Doing something to think about it less, such as going to movies, watching TV, reading, daydreaming, sleeping, or shopping.
20. Accepting the reality of the fact that it has happened.
21. Expressing my negative feelings.
22. Trying to find comfort in my religion or spiritual beliefs.
23. Trying to get advice or help from other people about what to do.
24. Learning to live with it.
25. Thinking hard about what steps to take.
26. Blaming myself for things that happened.
27. Praying or meditating.
28. Making fun of the situation.

Subscales
Active coping: items 2 and 7
Planning: items 14 and 25
Venting: items 9 and 21
Positive reframing: items 12 and 17
Humour: items 18 and 28
Acceptance: items 20 and 24
Religion: items 22 and 27
Self-distraction: items 1 and 19
Denial: items 3 and 8
Behavioural disengagement: items 6 and 16
Self-blame: items 13 and 26
Substance use: items 4 and 11
Instrumental support: items 10 and 23
Emotional support: items 5 and 15
Appendix F

Impairment

Please answer each of the following questions based on the degree of impairment you experienced as a result of the stressful event.

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all impaired</td>
<td>Moderately impaired</td>
<td>Severely impaired</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. My ability to work.
2. My home management (e.g. cleaning, cooking, looking after home or children, paying bills).
3. My social leisure activities (with other people, such as parties, clubs, dates, home entertainment).
4. My private leisure activities (done alone, such as reading, gardening, walking alone).
5. My ability to form/maintain close relationships with others, including those I live with.
Appendix G

Random Responding

Since the event how much have you done, or may currently be doing, each of the following to cope with what you experienced?

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not at all</td>
<td>A little bit</td>
<td>A medium amount</td>
<td>A lot</td>
</tr>
</tbody>
</table>

1. To help me relax, I watch fish swimming.
2. When something upsets me I imagine it in a balloon and let it float away.
3. To cope I use acupuncture daily.
4. To reduce my stress I run ultramarathons.
5. I talk to a relative from a far-away country.
Appendix H

Social Network

Please indicate who you sought support from after you experienced the event at work. For each source, please indicate the type of support you sought (select all that apply).

<table>
<thead>
<tr>
<th>Source</th>
<th>Support Needed</th>
</tr>
</thead>
<tbody>
<tr>
<td>I did not seek support from</td>
<td>Asked for confirmation that I did the right thing or that I was strong enough to get through the situation.</td>
</tr>
<tr>
<td>this person.</td>
<td>Asked to vent or express my feelings without any comments, just care and empathy.</td>
</tr>
<tr>
<td></td>
<td>Asked for advice or information to help me with the situation.</td>
</tr>
<tr>
<td></td>
<td>Asked for direct help dealing with the situation.</td>
</tr>
<tr>
<td>1. My direct supervisor</td>
<td></td>
</tr>
<tr>
<td>2. A friend at work</td>
<td></td>
</tr>
<tr>
<td>3. Professional help at work</td>
<td></td>
</tr>
<tr>
<td>4. A friend outside of work</td>
<td></td>
</tr>
<tr>
<td>5. My spouse/partner</td>
<td></td>
</tr>
<tr>
<td>6. A family member (not spouse)</td>
<td></td>
</tr>
<tr>
<td>7. Professional help outside of work</td>
<td></td>
</tr>
</tbody>
</table>

8. If you dealt with the situation on your own, what did you do?
9. Who was the most helpful source of support and what did that person do that really helped you deal with the stressful event? Please explain.
10. Who was the least helpful source of support and why do you think the support they provided was not helpful? Please explain.
11. Was the support you received what you felt you needed? Please explain.
### Opportunity to Participate in a Survey
**Studying the Effects of Traumatic Events in Policing**

<table>
<thead>
<tr>
<th>Introduction</th>
<th>This communication requests the participation of members of the XX in a survey that is being conducted by Grace Ewles and Dr. Peter Hausdorf of the University of Guelph in collaboration with the XX.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Background</td>
<td>Grace Ewles and Dr. Peter Hausdorf from the University of Guelph are looking to explore how officers cope with traumatic events on the job. The results of the study will be shared with the XX and posted on the intranet for all employees to access.</td>
</tr>
<tr>
<td>Survey is anonymous</td>
<td>The survey is being conducted through XX and is completely anonymous.</td>
</tr>
<tr>
<td>How to complete the survey</td>
<td>The short survey will take 20-25 minutes to complete and can be accessed by clicking here. It includes responding to questions regarding traumatic events, coping, help seeking behaviours and feelings towards the various types of support structures available to you. After completing the short form, you will be given the opportunity to answer some additional questions focused on additional ways of coping. These questions will take approximately 10 minutes to complete and will make you eligible for another draw.</td>
</tr>
<tr>
<td>Survey deadline</td>
<td>The survey will be available until: <strong>Monday April 4, 2016 at midnight.</strong> For the research to be effective, at least 500 participants are required. Officers who complete the survey will be eligible to win one of 10 <strong>$25 Tim Hortons’ gift cards</strong>. The estimated chances of winning are 1 in 50 (short form) and 1 in 25 (long form).</td>
</tr>
<tr>
<td>Contact</td>
<td>If you have any questions please email Grace Ewles at <a href="mailto:gewles@uoguelph.ca">gewles@uoguelph.ca</a> or contact at XXX-XXX-XXXX.</td>
</tr>
</tbody>
</table>
Appendix J

Introductory Email Message

Hello,

This email has been sent to all members of the XX. We are conducting a survey to understand how individuals cope with stressful events experienced while at work. The online survey is being conducted by researchers from the University of Guelph with the support of the XX. Your participation in the online survey is anonymous and there is no opportunity for your identity to be known to either the research team, or the XX organization.

Please access the research consent form for more information at:

   URL: http://uoguelph.eu.qualtrics.com/SE/?SID=SV_6Szs7qQCHOb2Xm5

At the end of the consent form you will be able to access the survey.

The survey takes approximately 20 minutes to complete. After completing the survey, you will be eligible to be entered into a draw for one of ten $25 Tim Hortons gift cards. Additionally, upon completing of the short survey you will be given the opportunity to answer some additional questions focused on additional ways of coping. These questions take approximately 10 minutes to complete and will make you eligible for another draw. The estimated chances of winning are 1 in 50 (short form) and 1 in 25 (long form). You will also have access to the final outcomes of the study once completed. In order to protect anonymity, once you start the survey you will be unable to save and continue later on – please start the survey when you have time to fully complete the short or long version.

Thank you very much for your support!

Sincerely,

Grace Ewles,
University of Guelph

Dr. Peter Hausdorf,
University of Guelph
Appendix K

Consent Form

Consent to Participate in Research
Title of Project: Studying the Effects of Traumatic Events in Policing

My name is Grace Ewles, I am a PhD candidate Industrial-Organizational Psychology at the University of Guelph working with Dr. Peter Hausdorf. You are invited to participate in an anonymous, online survey which will help establish a clearer picture of the impact of stressful events on members of the police service and what they do in response to these events.

Procedures
Participation will take approximately 25 minutes and involves responding to questions regarding your experiences with stressful events, coping strategies and social support. We are asking that you complete a short survey which will make you eligible for the draw for one of ten Tim Hortons gift cards (worth $25). After completing the short form you will be given the opportunity to complete some additional questions. These questions focus on additional ways of coping and will take 10 minutes to complete. Completing these additional questions will make you eligible for an additional draw for a Tim Hortons gift card worth $25. The estimated chances of winning are 1 in 50 (short form) and 1 in 25 (long form).

Confidentiality
Your participation in this survey is completely anonymous. No one at the XX will know that you participated in the survey. At no point in the data collection process will you be asked to provide identifying information about yourself; additionally, IP addresses will not be collected. Moreover, you may choose to complete the survey on a non-networked computer by connecting to the intranet remotely. The responses you provide will in no way allow the researchers or the XX to connect your information to your identity. The XX will not receive any specific information from question responses, but only a summary of the results in aggregate form. Due to the anonymous nature of the data collected, your responses cannot be removed once submitted. All data will be stored electronically for seven years without identifying information, accessible only by the project director – Dr. Peter Hausdorf.

Participation and Withdrawal
Your participation in this study is completely voluntary. If you volunteer to be in this study, you may withdraw at any time. If you withdraw from the study your data will be deleted from the database. You may skip any questions that you don’t want to answer and still remain in the study. There are no consequences to you if you choose not to participate or to withdraw from the study.

However, you may choose to be entered in a draw for a $25 Tim Hortons gift card upon completion of the survey. There will be three draws in the first week of the survey and two draws in each of the subsequent two weeks. You will be eligible for the draws only in the week that you responded to the survey. If you wish to enter the draw, you will be required to provide your name and contact information. This information will be collected separately from the survey data and
cannot be connected to the survey responses you give. If you complete the longer version of the survey, you can choose to enter another draw for the gift card (one additional draw per week). Therefore, if you complete both the short and long versions of the survey, you could win two $25 Tim Hortons cards.

**Risks and Benefits**
As some of the questions focus on stress in your work, the primary risk of participating in the survey is that these will become salient to you. As the survey is anonymous, please do not use this tool as a way of communicating that you are in need of help as we will be unable to provide support directly. If completing the survey makes you aware of stress that you are feeling and you require support to deal with this, please contact the peer support program, XX, through the intranet for a referral of resources available at the XX. One benefit of participating in the survey is your gaining insight into how you deal with traumatic events at work through your own coping and using your social support network. Your responses to the questions themselves can create this insight. As a result, understanding your use of these resources currently can help you to utilize them in the future.

**Rights of Research Participants**
You are not waiving any legal claims, rights or remedies because of your participation in this research study. This study has been reviewed and received ethics clearance through the University of Guelph Research Ethics Board. If you have any questions or concerns about your rights as a research participant, please contact: Director, Research Ethics; 519-824-4120, ext. 56606: reb@uoguelph.ca. If you have any questions or concerns about this study, or for a summary of the results contact either of the researchers listed below.

<table>
<thead>
<tr>
<th>Project Director:</th>
<th>Primary Researcher:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. Peter Hausdorf</td>
<td>Grace Ewles</td>
</tr>
<tr>
<td>519-824-4120 ext. 53976</td>
<td>XXX-XXX-XXXX</td>
</tr>
<tr>
<td><a href="mailto:phausdor@uoguelph.ca">phausdor@uoguelph.ca</a></td>
<td><a href="mailto:gewles@uoguelph.ca">gewles@uoguelph.ca</a></td>
</tr>
</tbody>
</table>

I agree to participate in the survey. I understand that I can withdraw this consent at any time without penalty. Click **Yes** to continue to the survey. Click **No** to exit from survey.

We invite you to print a copy of this consent form for your personal records.
Appendix L

Debriefing Form

Studying the Effects of Traumatic Events in Policing

The main goal of this current project is to gain a clearer understanding of the interplay between experiencing a traumatic event at work and the short-term adjustment of police service members, and how this relationship is influenced by various coping mechanisms and social support.

There are a number of implications to this study. This research will add to our understanding of how police service members cope with traumatic events and the social support networks that they use. From this, police organizations may be able to enhance and develop organizational programs that will increase members’ coping, help seeking behaviours, support seeking and overall mental health.

Thank you for your participation in this study. We appreciate your contribution to our program of research. A summary of the survey results should be available upon request from the researchers in mid-July 2016.

As some of the questions focused on stress in your work, if these have made you feel stressed and you require support to deal with this, please contact the peer support program, XX, through the intranet for a referral of resources available at the XX.

This study has been reviewed and received ethics clearance through the University of Guelph Research Ethics Board. If you have any questions or concerns about your rights as a research participant, please contact: Director, Research Ethics; 519-824-4120, ext. 56606: reb@uoguelph.ca . If you have any questions or concerns about this study, or for a summary of the results contact either of the researchers listed below.

Project Director:    Primary Researcher:
Dr. Peter Hausdorf   Grace Ewles
phausdor@uoguelph.ca gewles@uoguelph.ca
Department of Psychology Department of Psychology
University of Guelph University of Guelph
519-824-4120 x.53976 XXX-XXX-XXXX
Appendix M

Table 7

Descriptive Statistics and Correlations Between All Variables – Survey Short Form (n = 158)

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>SE</th>
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Note. * p < .05, ** p < .01, *** p < .001. CE = critical events; AVP = average perceived stressfulness; YOS = years of service; SA = stress appraisal; PC = problem-focused coping; AEC = active emotion-focused coping; AvEC = avoidance emotion-focused coping;
ESS = enacted social support; IMP = impairment; SNS = social network score; DDI = distress disclosure index; RES = resilience. SA, DDI, and RES include only the items from the short form of the survey. Critical events reflect the total number of events reported by participants. Average perceived stressfulness was calculated across the critical events reported by participants. Reliability for social network score was calculated using the Kuder-Richardson Formula 20.

Table 8

Descriptive Statistics and Correlations Between All Variables – Survey Long Form (n = 93)

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Note. * p < .05. ** p < .01. *** p < .001. CE = critical events; AVP = average perceived stressfulness; YOS = years of service; SA = stress appraisal; PC = problem-focused coping; AEC = active emotion-focused coping; AvEC = avoidance emotion-focused coping; ESS = enacted social support; IMP = impairment; SNS = social network score; DDI = distress disclosure index; RES = resilience; LMX = leader member exchange; POS = perceived organizational support. SA, DDI, and RES include all items from both the short and long form of the survey. Critical events reflect the total number of events reported by participants. Average perceived stressfulness was calculated across the critical events reported by participants. Reliability for social network score was calculated using the Kuder-Richardson Formula 20.
Appendix N

The coefficients of determination were as follows: stress appraisal, $R^2 = .22, p < .001$, 95% CI [.11, .35], problem-focused coping, $R^2 = .24, p < .001$, 95% CI [.14, .37], active emotion-focused coping, $R^2 = .19, p < .001$, 95% CI [.12, .31], avoidant emotion-focused coping, $R^2 = .21, p < .001$, 95% CI [.11, .33], social network, $R^2 = .10, p < .05$, 95% CI [.03, .20], impairment, $R^2 = .42, p < .001$, 95% CI [.29, .59]. Within this model, 42% of the variability in impairment can be accounted for by the predictors in the model.

Seven of the nine paths were significant and their associated confidence intervals did not include zero, providing support for the presence of a relationship between constructs (see Figure 4). Specifically, experiencing a traumatic event was associated with higher levels of stress appraisal, $.47, p < .001$, 95% CI [.33, .59]. Additionally, higher levels of stress appraisal were associated with higher levels of problem-focused coping, $.49, p < .001$, 95% CI [.38, .61], active emotion-focused coping, $.44, p < .001$, 95% CI [.34, .56], avoidant emotion-focused coping, $.45, p < .001$, 95% CI [.33, .57], and social network scores, $.32, p < .001$, 95% CI [.18, .45]. Problem-focused coping and avoidant emotion-focused coping were associated with higher levels of impairment, $.25, p < .01$, 95% CI [.07, .41] and $.55, p < .001$, 95% CI [.35, .76], respectively. Lastly, similar to the main analyses, the confidence intervals between active emotion-focused coping and impairment, and social network scores and impairment included zero, $-.21, p < .05$, 95% CI [-.38, .02] and $.11, ns$, 95% CI [-.13, .32], respectively.
Figure 4. Alternative structural model with standardized path coefficients. * $p < .05$. ** $p < .01$. *** $p < .001$. 
### Appendix O

Table 9

*Social Network Score Frequencies*

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*Note.* Totals were calculated by summing across each social support combination (i.e., type x source).
CHAPTER II
Severing the Trauma-PTSD Connection with First Responders: A Theoretical Examination and Qualitative Exploration of the Role of Personal Social Support Networks in Traumatic Stress Experiences

Within the last ten years, there has been increasing concern regarding the psychological health and well-being of emergency first responders in Canada. Specifically, concerns have been raised about the prevalence and treatment of trauma-related disorders (e.g., Post-Traumatic Stress Disorder [PTSD]) within these communities, and the implications for individual and family functioning (e.g., Abedi, 2017; Canadian Broadcasting Company, 2019; Howatt, 2018). Compared to lifetime estimates from the general population (see Wilson, Guliani, & Boichev, 2016 for a review of PTSD), research suggests that first responders are at an increased risk for the development of mental health disorders due to event-based or cumulative exposure to occupational stressors (see Carleton et al., 2018), with roughly 10% of emergency first responders worldwide experiencing PTSD following exposure to a traumatic event (Berger et al., 2012).

In response to PTSD and recent suicides among veterans and first responders in Canada, Bill C-211, the Federal Framework on Post-Traumatic Stress Disorder Act, was recently passed by the Senate (Aiello, 2018; Parliament of Canada, 2018). This framework aims to establish a national strategy, including guidelines for the diagnosis and treatment of PTSD, as well as

mechanisms for communicating best practices across the country (Parliament of Canada, 2018). These efforts reflect the need for evidence-based programs to support individuals coping with the aftereffects of work-related trauma exposure.

PTSD can occur due to a single event (described as the anchor event in the *Diagnostic and Statistical Manual of Mental Disorders* [DSM-5; American Psychiatric Association, 2013]), or an accumulation of traumatic event exposure, where individual events were not dealt with effectively over time (Carlson, 2001; Suliman et al., 2009). Exposure to multiple traumatic events, in addition to routine occupational stress (e.g., Kaufmann & Beehr, 1989; Liberman et al., 2002), has been linked to negative long-term outcomes for individuals, including increased comorbidity and functional impairments over time (Karam et al., 2014). To illustrate, results from the World Health Organization’s *World Mental Health Survey*, which surveyed 51,295 adults (i.e., aged 18+) from the general population across 20 countries\(^\text{18}\), indicated that of participants who met the criteria for PTSD within the previous 12-months (1.1% of total sample), those exposed to multiple traumatic events experienced greater functional impairments at home and at work. In addition, they experienced symptoms for a longer duration and had higher rates of comorbidity with other psychological disorders, including anxiety and mood disorders (Karam et al., 2014).

The accumulation of potentially traumatic stressors is particularly salient in first responder occupations, where exposure occurs on a regular basis. In particular, police officers, firefighters, and paramedics experience increased risk for trauma exposure compared to many

\(^{18}\) Surveyed countries include Belgium, Brazil, Bulgaria, Colombia, France, Germany, Ireland, Italy, Israel, Japan, Lebanon, Mexico, Netherlands, New Zealand, the People’s Republic of China, Romania, Spain, South Africa, Ukraine, and the United States of America (Karam et al., 2014).
other occupations as a result of the specific nature of their work (Skogstad et al., 2013). Despite
the common exposure to traumatic events for first responders, there is wide variability with
respect to the impact of these events on individuals. For example, in a Chapter 1, police officers
($n = 158$) reported moderate levels of psychological impairment on average ($M = 15.93$, $SD =
9.95$ using the *Work and Social Adjustment Scale*; Mundt, Marks, Shear, & Greist, 2002), but
these ratings also had a high standard deviation, suggesting a wide range of functional
impairments. This finding is consistent with those put forth by general traumatic stress
researchers, who have argued that although many individuals experience negative symptoms
following exposure to a traumatic event, most do not meet the diagnostic criteria for PTSD
(Benedek, Fullerton, & Ursano, 2007; Creamer, Burgess, & McFarlane, 2001; Liberman et al.,
2002). In the absence of clinically diagnosed PTSD, researchers suggest that many first
responders experience a range of sub-clinical functional impairments, including Post-Traumatic
Stress Symptoms (PTSS), stemming from traumatic job-related stress (e.g., Donnelly, 2012;
Gershon, Barocas, Canton, Li, & Vlahov, 2009).

Researchers suggest that the variability in reactions and responses to trauma is related to
aspects of the traumatic event itself, individual characteristics, such as personality and resiliency
(Skogstad et al., 2013), and individual responses to trauma, including emotional reactions and
dissociation (Ozer, Best, Lipsey, & Weiss, 2003). Given that exposure to traumatic events is a
role requirement for first responders, researchers and organizations need to focus on the aspects
of the events, responses to trauma, and characteristics of individuals that are within the control of
the parties involved. To address this need, the present chapter contributed to the growing body of

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19 Normative data for the *WSAS* associates a score $\geq 20$ with severe impairment, scores between
10 and 20 with less severe symptoms but still significant functional impairments, and scores $\leq
10$ with subclinical populations (Mundt et al., 2002).
research on PTS by exploring the role of social support after trauma exposure as a potential solution for first responders, families, and organizations. As such, the theoretical review in this chapter focused on multiple traumatic events as a precursor to the potential development of PTSD in first responder populations, and examined the role of personal social support networks in reducing PTSD and traumatic stress symptoms. Specifically, the following topics are discussed: a brief review of the research connecting multiple traumatic events with PTSD for first responders, the use and impact of organizational programs to support first responders when dealing with trauma, and the potential for personal support networks to increase this support. In addition to this theoretical review, the present chapter extended available research on personal support networks by exploring spouses’ experiences providing support to their partners using qualitative interview data.

**Role of Social Support Following Trauma Exposure**

Lack of social support has been found to exacerbate PTSD symptoms following exposure to a traumatic event (Marmar et al., 2006; Wagner, Monson, & Hart, 2016) and represents a significant risk factor for the development of psychopathology (meta-analytic estimate: weighted $r = .40$, $k = 11$, $n = 3276$; Brewin, Andrews, & Valentine, 2000). Moreover, previous meta-analytic findings demonstrated the direct and indirect effects of social support on work-related stress (Viswesvaran, Sanchez, & Fisher, 1999). Specifically, social support was found to directly mitigate the impact of work-related stressors (estimated true score: $r = -.12$) and strain (estimated true score: $r = -.21$), in addition to moderating the stressor-strain relationship (meta-analytic estimate: frequency weighted $R^2 = .03$, $k = 68$; Viswesvaran et al., 1999). These findings suggested that individuals lacking social support may be more likely to experience negative responses following exposure to a traumatic event, which can increase their risk for mental
illness. Therefore, social support (or a lack thereof) likely interacts with the type or severity of trauma in producing PTSD.

Critics of the social support literature point to the oversimplification of the social support construct in previous research, including the use of aggregate measures that fail to explore the underlying support process (Thoits, 2011; Walen & Lachmen, 2000). More specifically, these measures often ignore the contextual nature of supportive interactions, including the source of social support (e.g., work vs. non-work), types (e.g., instrumental, informational, emotional, self-esteem), forms (e.g., received, perceived, enacted), and the conditions under which support is provided. Together, these components interact and shape subsequent outcomes (Jackson, 1992; Nurullah, 2012; Veiel, 1985), suggesting that different support experiences for different traumatic events can result in a range of responses or reactions that can be either beneficial or detrimental for individuals.

Based on the range of possible outcomes following trauma exposure, there is a need for additional theoretical and empirical work to understand the social support processes following work-related traumatic events for first responders. Specifically, increased understanding of social support can enhance the quality of mental health programs and promote long-term individual health and well-being across occupations and countries. To address this need, the following sections explored the role of support source, including formal organizational supports and personal support networks, and support type (e.g., emotional, informational) in the social support process within the context of first responder occupations.

**Role of Formal Organizational Supports**

The need to support employee mental health and well-being in response to a wide range of work-related stressors has inspired many internal programs implemented by first responder
organizations. For example, the Toronto Police Service in Ontario, Canada offers members access to ‘Psychological Services’, an internal branch providing psychological supports, including psychological evaluation of new constables, supervisor consultations for work-related psychological issues, and access to an Employee and Family Assistance Program (EFAP; Toronto Police Service, n.d.). Many of the programs implemented by these organizations focus on managing work-related traumatic stress after exposure, including the provision of access to psychological care, debriefing, and crisis intervention programs. Access to these programs can be voluntary or mandatory. With these programs the organization (or its representatives) serve as the main provider of support.

**Formal debriefings.** Despite their good intentions, concerns have been raised about the efficacy of formal debriefing and crisis intervention programs, with some research suggesting that stress symptoms can worsen following participation (see Regehr, 2001 for a review). Specifically, single session debriefings following exposure to a traumatic event have been found to negatively impact individual mental health outcomes (Rose, Bisson, Churchill, & Wessely, 2002). To demonstrate, Rose and colleagues (2002) reviewed 15 single session debriefing studies (n ranged from 30 to 1745) with subjects from various trauma backgrounds (e.g., those attending trauma clinics, soldiers employed on peacekeeping missions, etc.) that utilized a random control trial (RCT) design. They found that that individuals in debriefing conditions did not experience lower levels of psychological distress compared to control groups. Further, one group experienced a significantly higher risk of developing PTSD after 12 months compared to a

20 The meta-analysis included seven studies from the United Kingdom, one from Ireland, one from the Netherlands, five from Australia, and one from the United States of America (Rose et al., 2002).
control (OR 2.51 [95% CI 1.24 to 5.09]). Moreover, no benefits were found with respect to single session debriefing and PTSD symptom severity, depression, or anxiety (Rose et al., 2002).

Compared to single session individual debriefings, group debriefings have historically demonstrated mixed findings, with much of the available research lacking methodological rigor (Tuckey, 2007). However, more recently, researchers have demonstrated the potentially beneficial effects of group debriefing interventions using RCTs. For example, in a sample of Australian volunteer firefighters ($n = 67$), Tuckey and Scott (2014) found that group debriefing following exposure to a shared traumatic event was associated with lower levels of self-reported alcohol consumption and higher ratings of quality of life compared to a control condition. The authors suggested that group debriefings may offer individuals a critical aspect of social support which aids individual adjustment following a traumatic event (Tuckey & Scott, 2014).

**Informal support.** Despite the potential benefits of work-related social support achieved through formal group debriefings, other informal social interactions within the workplace can inadvertently exacerbate occupational stress experiences (Beehr, Bowling, & Bennett, 2010). For example, in a study of non-faculty employees ($n = 403$) at a university in the United States, Beehr and colleagues (2010) found that helping behaviours that are unwanted, that make someone feel inadequate or incompetent, or that draw attention to work stressors can exacerbate occupational stress experiences and result in increased levels of emotional exhaustion and physical symptoms of strain, such as headache or backache. Support from supervisors was more strongly related to self-reported strain compared to support from an individual’s closest colleague, suggesting that ineffective support from supervisors can play a significant role in individual perceptions of non-traumatic work-related stress and strain (Beehr et al., 2010).
In contrast to this finding on non-traumatic work stress, there is evidence to support the benefit of organizational social support (e.g., from supervisors) in individual adjustment to traumatic experiences (e.g., Regehr, Hill, & Glancy, 2000; Stephens & Long, 2000). These findings suggest that perceptions of organizational support play an important role in distress experiences following a traumatic event. However, in situations where first responders personnel require tangible support from their organization, including help from supervisors and peers, individuals must first recognize their own impairment and actively seek out support. This aspect of the support process can be problematic as distress disclosure and help-seeking behaviour are less frequent among first responders (e.g., Heffren & Hausdorf, 2016).

Drawing from preliminary survey of Canadian police officers \(n = 421\) in a large municipal organization in Ontario, Heffren and Hausdorf (2016) found that after the experience of trauma, many officers fail to seek help from their organizations. Specifically, few respondents indicated that they had sought organizational support, including help from a direct supervisor (10.8%), professional help at work (5.0%), or help from someone else at work (2.0%). Reasons for low levels of formal help-seeking behaviours among first responders may include perceived stigma, low levels of perceived organizational support, or fear of negative repercussions (Corrigan, 2004; Fox et al., 2012; Regehr, 2001).

**Stigma.** In particular, mental illness has historically carried a social stigma, which can deter individuals from seeking or maintaining treatment (Corrigan, 2004; Heffren & Hausdorf, 2016). To demonstrate, Fox and colleagues (2012) found that individual concerns regarding a lack of confidentiality, negative career impact, and perceived stigma were among the most commonly cited barriers encountered by police officers in the United States in accessing formal mental health services through their organization.
This is particularly noteworthy in male-dominated occupational contexts, as socialized gender roles (i.e., masculine ideologies that emphasize strength and assertiveness; see Ricciardelli, Clow, & White, 2010) make men particularly resistant to seeking help for mental health issues (Addis & Mahalik, 2003; Berger, Addis, Green, Mackowiak, & Goldberg, 2013). Specifically, individuals within these occupations may attempt to suppress emotional reactions to occupational stressors in line with social norms and expectations (Amaranto, Steinberg, Castellano, & Mitchell, 2003; Farnsworth & Sewell, 2011; Koch, 2010). These normative pressures may limit help-seeking behaviour (Anshel, 2000) for all first responders regardless of their gender identity. Such findings are similar to the concept of ‘rugged individualism’, an individual coping strategy reflecting the desire to manage or control a situation that is commonly seen in policing occupations (Beehr, Johnson, & Nieva, 1995).

**Peer support.** To normalize support seeking and promote well-being, many organizations have begun implementing peer support programs to supplement formal psychological services, emphasizing the value of shared work experiences in the provision of mental-health informed social support (Hohner, 2017). Such programs aim to minimize stigma by enhancing confidential internal support networks, which is thought to support help-seeking behaviour (Dowling, Genet, & Moynihan, 2005). For example, the Ottawa Police Association in Ontario, Canada, is currently developing a Resiliency and Performance Group (RPG), a peer support program directed towards member mental health (Ottawa Citizen, 2015). This program attempts to address concerns stemming from the Ontario Ombudsman’s (2012) report on occupational stress injuries, including work stress and PTSD, as well as members’ concerns about the adequacy and confidentiality of other internal service providers (e.g., internal health practitioners; Ottawa Citizen, 2015).
Such concerns highlight the need for alternative approaches to supplement current organizational mental health initiatives, such as formal crisis debriefing and psychological supports, to promote help-seeking behaviour. However, there remains limited research supporting the efficacy of these initiatives over time, with many organizations choosing instead to adopt their own unique approach to peer support and crisis intervention (Beshai et al., 2016). As a result, there is little consistency across current practices, reflecting a need for further research to standardize peer support and crisis intervention programs and to implement best practices across first responder organizations (Beshai et al., 2016).

**Role of Personal Support Networks**

Compared to the limited number of individuals seeking formal supports, Heffren and Hausdorf (2016) found that police officers in Ontario were more likely to deal with the issues themselves (44.1%) or to seek help from friends (42.1% at work; 37.2% outside of work) or family members (56.9%). Thus, although some individuals utilize formal organizational supports, the majority try to manage stress experiences themselves or seek help outside of the work domain through various personal support networks. Those who seek support from others are likely to fare better than those who attempt to deal with stressors themselves (Jackson, 1992; Walen & Lachmen, 2000).

Over the past four decades, significant evidence demonstrating the positive effects of social support on adjustment to both work and life stressors has come to light (see Thoits, 2011 and Turner & Brown, 2010 for a review). In particular, personal support networks, including support from friends, family, and spouses/partners, are considered to be most effective in reducing emotional distress (Thoits, 2011). In support of this concept, Jackson (1992) found that spousal support and friend support demonstrated a negative relationship with depression, $r = -.39$
and $r = -0.31$, respectively, using cross-sectional data from a sample of 267 married, employed parents from the U.S. These findings are consistent with research on the effect of perceived social support on mental health, with higher levels of perceived support being associated with lower levels of depression (e.g., Turner & Brown, 2010). However, researchers have demonstrated differential effects based on the source of support, with spousal support significantly predicting individual health and well-being outcomes, whereas support from friends and family members have been found to demonstrate weaker or indirect effects (Jackson, 1992; Walen & Lachmen, 2000).

**Role of spousal support.** To demonstrate the importance of spousal support for first responders, in the recent survey of Canadian Public Safety Personnel (PSP; $n = 5813$), including first responders, participants who reported being single or separated/divorced were significantly more likely to report symptoms associated with a mental disorder than those who were married or in common law relationships (OR 1.37 [95% CI 1.13 to 1.66], OR 1.74 [95% CI 1.43 to 2.11], respectively; Carleton et al., 2018). Although there is some support for the argument that individuals with mental health disorders are more likely to become separated or divorced over time (e.g., Wade & Pevalin, 2004), these findings also suggest that spouses or partners may serve as a buffer against the negative impact of work-related stressors (Carleton et al., 2018), under the assumption that partners will attempt to help their spouse before they feel that the relationship is over. In particular, the provision of social support is argued to be a key feature of intimate relationships (Collins, Ford, Guichard, Kane, & Feeney, 2010) and, as such, is associated with individual well-being and relationship functioning over time (Feeney & Collins, 2003).

As asserted in attachment theory, individuals are motivated to support and meet the needs of their partners in order to maintain a healthy and secure relationship (Bowlby, 2005). Within
intimate relationships, individuals may actively seek support from their partners based on their needs; alternatively, spouses may be required to observe or recognize signals that their partner is in need before providing a response (Collins et al., 2010). Based on the importance of spousal support for individual well-being, there may be an opportunity for researchers and organizations to enhance family supports for first responders (Carleton et al., 2018), especially given that individuals in male-dominated organizations are less likely to seek support from formal organizational networks. However, there is currently little understanding of the support process for first responder families, including the challenges or barriers faced by spouses when providing support to their partner following a traumatic event.

**Quality of support in intimate relationships.** Compared to studies involving helping behaviour from strangers, researchers have suggested that the quality of support interactions in intimate relationships is more important than the frequency of interactions (Collins et al., 2010). Moreover, for support efforts to be effective, it is argued that the behaviour must be sensitive to the partner’s unique needs and presented in a way that allows the individual to feel cared for and validated (Collins et al., 2010). As with other sources, this support may be instrumental (e.g., booking an appointment), informational (e.g., giving advice), emotional (e.g., validating feelings), or self-esteem based (e.g., affirming abilities) in nature and may help the individual perceive that support is available if needed, as well as the provision of support (Haber, Cohen, Lucas, & Baltes, 2007). Although there is need for additional research within the context of first responder relationships, researchers associated with the general support literature have suggested that high quality social support that targets the specific nature of the stressor experienced will be most effective (Nurullah, 2012).
For example, during times of stress it is argued that emotional support (e.g., reassurance, comforting) from a partner is most important for individual well-being and adjustment (Collins et al., 2010). Interestingly, previous research suggests that instrumental support from friends and family, compared to other sources, is often interpreted as being emotional in nature, reflecting a genuine concern or care for one’s well-being (Semmer et al., 2008). Furthermore, researchers have emphasized the importance of emotional support in mitigating PTSD symptomology (Ozer et al., 2003) and in supporting individual coping following a personal crisis (e.g., severe illness; Revenson, Kayser, & Bodenmann, 2005). When this support comes from a spouse or intimate partner, DeLongis, Capreol, Holtzman, O’Brien, and Campbell (2004) argued that it plays a more important role in partner outcomes, including well-being, compared to support from other sources, particularly during times of need. Thus, emotional support may be particularly important for first responders following exposure to a traumatic event.

**Role of emotional support.** Emotional support from significant others includes actions that reflect love, care, and empathy for a partner, such as expressing concern, having a sympathetic ear, or simply being present (Thoits, 2011). According to Feeney and Collins (2003), partners in intimate relationships can provide ‘safe haven support’ during times of adversity or strain by responding to a partner’s need for help, closeness, or reassurance. The support provided under these circumstances must be tailored to the unique stressor, but may include encouraging a partner to share thoughts or feelings, showing interest, validating concerns, communicating confidence in their abilities, reaffirming worth, love, or value, providing tangible resources, and/or reassuring availability for continued support (Collins et al., 2010). Emotional support sends a signal to the receiver that their partner understands the significance of the stressor they experienced (Thoits, 2011). Rather than providing tangible
support, such as advice, providing emotional support allows partners to communicate their feelings and concerns about a work stressor to someone they feel understands their emotional response and its associated significance (Thoits, 2011). Thus, even though a partner may have minimal experience with the occupational demands experienced by their partner, there is still an opportunity to provide effective social support. This provides promise for first responder families, particularly for spouses with different occupational backgrounds.

**Social support in first responder relationships.** Although there is currently limited understanding of the role of social support from partners within the specific context of first responders, empirical support for the value of non-work sources in adjustment to traumatic stress is growing. Consistent with the results from Chapter 1, findings from a recent survey of police officers ($N = 266$, of whom 76 had experienced a traumatic event within the previous 12 months) in Ontario, Canada, indicated that the spouse/partner was the most commonly sought source of support following a traumatic event (73.7%; $n = 56$; Hausdorf, Heffren, & Klauninger, 2014). Moreover, officers were asked which type(s) of support (i.e., self-esteem, emotional, informational, instrumental) were sought from each source. Of the individuals who sought support, the majority (57.1%; $n = 32$) reported seeking emotional support from their spouse/partner, reflecting the need to express feelings without any comments, just care and empathy (Hausdorf et al., 2014). Although this information suggests that spousal support plays an important role in individual coping efforts, there is a need to explore whether the support provided was effective at reducing the stress experienced.

**Perceived barriers to seeking and providing support.** Despite the potential value of receiving social support, first responders facing stressors must first be willing to seek or receive support from the sources available in their network to obtain these benefits. As described earlier,
Heffren and Hausdorf’s (2016) study indicated that a large proportion of participants (44.1%) attempted to manage the stress experience alone, reflecting the gendered and individualistic culture of policing that emphasizes the importance of inhibiting emotional reactions to work-related events (Beehr et al., 1995; Koch, 2010; Moad, 2011; Pogrebin & Poole, 1991). Over time, this can become an ingrained approach to managing work demands that limits help-seeking behaviours for fear of appearing weak or inadequate (Kirschman, 2007; Pogrebin & Poole, 1991). Given these pressures, many first responders attempt to manage traumatic stress experiences alone, often using suppression or dissociation as coping strategies (Koch, 2010).

**Crossover effects and secondary trauma.** Despite efforts to separate work and family, previous researchers have demonstrated the crossover effects of traumatic stress experiences on partners. In particular, PTSD symptoms, such as emotional numbing, are argued to limit the individual’s ability to express their feelings and relate to others, which negatively impacts attachment relationships (Dekel & Monson, 2010). To demonstrate, a recent meta-analysis of military and civilian research, including veterans or active duty soldiers and female trauma survivors, investigated the crossover effects of PTSD symptoms on intimate relationships (Lambert, Engh, Hasbun, & Holzer, 2012). Results across studies demonstrated a small negative effect size between PTSD and relationship quality (\( r = -.24 \ [95\% \ CI \ -.29 \ to \ -.19], k = 22, n = 3421 \)) and a moderate effect size with partner psychological distress (\( r = .30 \ [95\% \ CI \ .23 \ to \ .36], k = 25, n = 3417 \)), reflecting general distress, secondary trauma (i.e., distress stemming from indirect exposure to trauma), and caregiver burden (Lambert et al., 2012).

Within the PTSD literature, there has been a strong focus on secondary trauma in partners and families due to the direct contact with those affected by trauma (e.g., veterans with combat-related PTSD; Renshaw & Campbell, 2011). To explore the impact of critical events and PTSD
symptoms on partners of first responders, Hirschfeld (2005) examined secondary trauma symptoms in spouses of newly recruited police officers ($N = 33$ couples) in the U.S. over a period of 12 months. Interestingly, there was a discrepancy between officer-reported critical incident exposure and PTSD symptoms and spousal perceptions of trauma exposure and PTSD symptomology, with a maximum agreement of 9% between partners. These findings suggest that officers reported higher levels of critical incident exposure and PTSD symptomology than what their spouses perceived. Hirschfeld (2005) argues that the discrepancy between partners may reflect officers’ attempts to protect family members from secondary trauma, limited communication between partners, or the internalization and denial of emotional reactions to traumatic events. Moreover, officer-reported PTSD symptoms and critical incident exposure were not related to spousal distress. Rather, crossover only happened when the spouse perceived partner distress, as these spousal perceptions (and not officers’ survey reports) were associated with higher levels of distress, including secondary trauma ($r = .33$), general psychiatric distress ($r = .41$), depression ($r = .36$), and alcohol consumption ($r = .36$). This suggests that higher levels of perceived trauma exposure and partner distress were associated with negative implications for partners.

In a related U.S. study of partners of urban police recruits ($N = 71$), Meffert et al. (2014) found that spouses’ perceptions of partner PTSD symptomology, and not the actual sharing of those symptoms with spouses, predicted secondary traumatic stress (i.e., the expression of PTSD symptoms, including avoidance, arousal, and intrusive thoughts in close contacts) at 12 months ($\beta = .45, p < .001$, 95% CI [.22, .67]). Together, these results highlight the phenomenon of stress crossover to spouses from partner’s distress levels without direct exposure to stressful content. This finding is consistent with those of researchers from the general occupational stress literature.
who argue that job stress can transfer (i.e., crossover) to the family domain, thereby negatively impacting family members (Bakker, Westman, & van Emmerik, 2009; Crossfield, Kinman, & Jones, 2005). For example, in a cross-sectional study of U. S. police officers and their spouses, Jackson and Maslach (1982) found that spouses of officers experiencing higher levels of job stress reported higher levels of distress and lower levels of relationship satisfaction compared to those who reported lower levels of job stress. Such reactions are thought to reflect an empathetic response to partner distress (Pavett, 1986).

Although there is little research exploring the reasons for these crossover experiences within first responder families, research on spouses caring for partners with critical illnesses highlights the difficulty associated with feelings of powerlessness while attempting to provide comfort and support for a loved one during times of suffering (e.g., spouses of women with breast cancer; Petrie, Logan, & DeGrasse, 2001). Thus, it is possible that similar feelings of powerlessness may occur for partners of first responders when witnessing a loved one attempt to manage traumatic stress experiences alone. Attempting to provide support during times of crisis is often difficult, but it can be further complicated if first responders are not fully communicating their needs or struggles. In these situations, spouses are left to infer or draw conclusions about their partner’s needs in addition to managing their own distress, which limits their ability to provide effective support.

**Challenges providing effective support.** In addition to the barriers preventing individuals from seeking or providing support initially, there are challenges in providing effective social support, as the support provided may not always be beneficial for recipient, which can impact future help-seeking behaviour. Heaney and Israel (2008) argue that previous experiences can influence individual help-seeking behaviours and perceptions of caregiving
efficacy over time. For example, a recent theoretical review of PTSD literature in clinical psychology by Wagner and colleagues (2016) suggests that negative reactions, including minimizing a person’s feelings or victim blaming, are associated with higher levels of PTSD symptoms. Although this literature primarily focused on victims of sexual assault, theorists within the PTSD literature also acknowledge the importance of home environments in individual recovery, citing hostile intimate relationships as exacerbating PTSD symptoms (Monson, Taft, & Fredman, 2009). More specifically, support providers who are unresponsive, react negatively, or provide the wrong support, stemming from a lack of knowledge, skill, resources, or motivation, can exacerbate symptoms and limit subsequent help-seeking behaviour (Collins et al., 2010). Thus, without realizing the implications of such behaviour, personal supports may inadvertently exacerbate stress experiences.

Consistent with this, previous research examining social support in intimate relationships suggest the presence of a prototypical support interaction (see Figure 5; Collins & Ford, 2010). Within this model, the support provided by a partner impacts various outcomes for the receiver, including their well-being and stress levels (Collins & Ford, 2010). However, the efficacy of the support provided depends on the ability of the support provider to meet the needs of the receiver (Collins et al., 2010). More specifically, the behaviours employed by the support provider are moderated by their skills or abilities, available resources, and individual motives or goals, which can influence the outcomes of the support interaction (Collins & Ford, 2010). Thus, if an individual lacks the understanding, time, or motivation to support their partner, any efforts provided can be perceived as ineffective by the recipient (Collins & Ford, 2010).

Given the importance of emotional support during times of adversity or strain (Collins et al., 2010; Thoits, 2011), such as showing interest, reaffirming worth, and validating concerns,
Figure 5. Process model of the prototypical caregiving interaction.
there may be a gap between the support required in the situation and what is provided. Thus, there may be a training opportunity to increase emotional support between first responders and their spouse or partner, both in terms of how individuals communicate their support needs, as well as how spouses or partners provide support after a traumatic work-related event.

Together, this research suggests that effective social support begins with first responders being willing to share their experiences with their partner, and with spouses providing emotional support, including listening and validating their partners’ feelings. From here, conversations and support interactions can develop based on the situation and both partners’ needs; but the underlying feature of effective support is open and honest communication. Based on this concept, Monson and colleagues (2009) have identified relationship variables, including relationship conflict or stressors, as a key direction for future research to support the development of PTSD interventions. Interventions targeted towards communication and improving support interactions with personal networks provide promise for future research to help sever the relationship between trauma exposure and the development of trauma-related disorders, including PTSD.

**Research Aims for the Present Study**

To address current limitations within the literature and support the design of future skills-based interventions for first responder families, the present research aimed to understand the social support process from the perspective of the support provider. Although the job demands faced by first responders differ by profession, the experiences for spouses and implications for social support are argued to be similar across occupations. Specifically, the present study explored the perceived pressures associated with first responder couples, relationship dynamics, successful support strategies, and challenges or barriers faced within emergency first responder
families. By gaining insight into the subtle nuances of perceived help-seeking behaviour and support provision, the present research provides insight into key stressors within support relationships, which can inform the development of future intervention research.

Based on the identified research aims, a qualitative approach was deemed most appropriate for the present study. Compared to quantitative research, qualitative techniques provide researchers with an opportunity to explore the ‘why’ and ‘how’ questions associated with complex psychological phenomena (Ehigie & Ehigie, 2005). Specifically, qualitative research takes a pragmatic, individualized approach to the understanding of psychological processes (Elliott, Fischer, & Rennie, 1999; Pistrang & Barker, 2012). In this way, qualitative research aims to reduce researcher biases by allowing participants to express their thoughts, feelings, and experiences in an authentic way; thereby balancing objectivity and relativity (Elliott et al., 1999; Pistrang & Barker, 2012). In particular, a semi-structured interview provided an opportunity to explore participant’s experiences and perspectives in detail using research questions based on theory and previous research as a general guide (Ehigie & Ehigie, 2005; Elliot et al., 1999; Lee, Mitchell & Sablynski, 1999). Unlike structured interviews, semi-structured interviews provide an opportunity for interviewees to actively participate and direct the conversation (Ehigie & Ehigie, 2005; Lee et al., 1999). Thus, a semi-structured interview provided an opportunity to explore the nuanced nature of the support process from the perspective of the support provider within the context of first responder families. Specifically, the following research questions were explored:

1) What are the unique relationship stressors or pressures perceived by spouses in first responder relationships?
2) What signals or cues do spouses of first responders recognize that indicate when their partner requires support?

3) What are the challenges or barriers faced by spouses during the social support process?

4) a) What support strategies have spouses used that have been successful?
   b) What support strategies have spouses used that have been unsuccessful?

5) Have there been changes in the support process (in how partners seek support or how spouses provide support) over time?

6) Do spouses perceive that their partners are able to reciprocate and provide social support for them?

7) What do spouses perceive as their strengths in providing support to their partners?

8) a) In what ways do spouses think they can improve how they provide support to their partners?
   b) Are there resources that spouses feel would help improve their ability to provide support?

**Reflexivity**

As part of the qualitative research process, researchers must clearly outline their social position and perspectives in order to accurately frame the research process (Elliott et al., 1999; Köhler, 2016; Palaganas, Sanchez, Molintas, & Caricativo, 2017). For the present research, I acknowledge my experiences as a third generation Canadian, cis-gender female from a middle-class policing family. As the daughter of a police officer, I have a strong empathetic approach to this research which shapes my engagement in the data collection and analyses processes. Further, given my experiences with the field of policing, I acknowledge my perceptions of policing, and
by extension, other first responder occupations, as male-dominated fields, as well as my feminized view of social support and caregiving within this context. Given the nature of trauma, and the emotional impact it can have on individuals and families, I recognize the potential vulnerability of spouses and the impact these discussions may have on them. In this way, my empathetic connection to the research is an asset in terms of supporting participants throughout the data collection process, as well as ensuring the findings are properly disseminated.

As a researcher, I value applied, community-based research aimed at improving practice. Additionally, I take a contextualized approach to the study of psychological phenomena and aim to understand individual lived experiences within the broader social, political, and environmental context. Based on this, I have engaged with the first responder community in a number of contexts, both professional and personal, including academic conferences (e.g., PTSD Multidisciplinary Conference), community-based conferences (e.g., Tema Conter Memorial Trust Common Threads Educational Symposium), and training sessions (e.g., Road to Mental Readiness [R2MR]), in order to increase my understanding and awareness of the challenges faced by first responders and their families. Additionally, I acknowledge the influence of my background in work-family research, which shapes my approach to organizational research. Specifically, I emphasize the importance of both work and family domains in individual experiences. Lastly, as a trained researcher and academic, I acknowledge my formal training as a PhD Candidate in Industrial-Organizational Psychology, which shapes my approach to psychological research. Specifically, based on my training, I take a less medical approach to the study of work-related trauma.
Methods

Sample Description and Recruitment Process

Spouses of emergency first responders were recruited through online networks, as well as traditional and social media channels (see Appendix P). Initially, first responder organizations and associations were contacted through the research team’s personal networks and asked to disseminate the study advertisement internally. However, there was concern as this recruitment strategy did not connect with spouses directly. To broaden the reach of the study, community and support groups for families of first responders (e.g., Badge of Life Canada; First Responder Family Resiliency Support Group) were contacted and asked if they would be willing to share the study invitation with their members. Interested participants were asked to complete a preliminary questionnaire before indicating their willingness to participate in a one-on-one Skype audio or phone interview with the primary researcher. To participate, participants were required to: 1) be over 18 years of age, 2) be currently in a committed relationship, 3) be currently living with their partner, and 4) their partner must be employed full-time as an emergency responder (i.e., police officer, firefighter, or paramedic).

Participants accessed the information and consent form (see Appendix Q) and the preliminary questionnaire via a Qualtrics link in the study advertisement. Participants were encouraged to create a separate email for the study to protect their anonymity. This email was used for all communication with the researchers at each stage of the study. A total of 225 participants provided data for the preliminary questionnaire; 62 participants were removed due to
missing or incomplete data resulting in a final sample size of 163 (see Table 10 for demographic characteristics).

Table 10

*Demographic Characteristics (n = 163)*

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**Preliminary Questionnaire Measures**

**Demographics.** Demographic information was collected using single-item questions regarding sex, age, relationship status, partner’s occupation (police, fire, or paramedic) and tenure, and relationship length.

**Motivations for providing support.** The *Motivations for Caregiving* measure (Feeney & Collins, 2003) was used to examine individual motivations for providing care or support in

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21 Data were deemed incomplete if participants completed less than 50% of the survey. See Appendix R for available demographic information from the missing data group. There was insufficient power to allow for between group comparisons on either the motivation for caregiving or motivation for not caregiving subscales.
intimate relationships based on seven dimensions: feels love, concern, and interdependence (7 items), enjoys helping (6 items), self-benefit (8 items), relationship purposes (4 items), feels obligated (6 items), needy (incapable) partner (3 items), and capable caregiver (3 items; see Appendix S). Each item was rated on a 7-point scale from (1) *Strongly Disagree* to (7) *Strongly Agree*, with higher scores indicating higher motivation for caregiving or support provision. This scale has demonstrated good internal consistency with subscales ranging from $\alpha = .67$ to .89 (Feeney & Collins, 2003).

Subscales have been found to differentially relate to various relationship outcomes, including satisfaction, conflict and trust. For example, higher levels of self-benefit as motivation for helping related to lower levels of relationship satisfaction ($r = -.19, p < .01$) and trust ($r = -.16, p < .05$), and higher levels of conflict ($r = .26, p < .001$). Conversely, higher levels of enjoyment as motivation for helping relates to higher levels of satisfaction ($r = .36, p < .001$) and trust ($r = .18, p < .05$), with no link to conflict ($r = -.08, ns$; Feeney & Collins, 2003).

**Motivations for not providing support.** The *Motivations for Not Caregiving* measure (Feeney & Collins, 2003) was used to examine individual motivations for not providing care or support to one’s partner based on seven dimensions: caregiver lacks skills (5 items), caregiver dislikes distress (5 items), caregiver lacks resources – time (2 items), caregiver lacks concern/responsibility (6 items), partner is difficult and unappreciative (8 items), partner is too dependent (4 items), and partner is capable (5 items; see Appendix T). Each item was rated on a 7-point scale from (1) *Strongly Disagree* to (7) *Strongly Agree*, with higher scores indicating higher motivations for not providing care or support. This scale has demonstrated good internal consistency with subscales ranging from $\alpha = .69$ to .90 (Feeney & Collins, 2003).
Similar to the Motivations for Caregiving measure, subscales from the Motivations for Not Caregiving measure have been found to relate to various relationship outcomes, including satisfaction, conflict and trust; however, each of the subscales has demonstrated a similar pattern with partners reporting low levels of satisfaction and trust, and moderate to high levels of conflict (Feeney & Collins, 2003). For example, higher levels of lacking skills relate to lower levels of satisfaction ($r = -.28, p < .001$) and trust ($r = -.25, p < .001$), and higher levels of conflict ($r = .24, p < .001$; Feeney & Collins, 2003).

**Relationship satisfaction.** The Relationship Assessment Scale (RAS; Hendrick, 1988) was used as a global measure of relationship satisfaction. The measure consists of seven items, each of which uses a 5-point scale from (1) *Not at all* to (5) *A great deal*, with two reverse coded items (see Appendix U). Two scales have been adjusted to improve participant comprehension, item three “How good is your relationship compared to most?” was measured from (1) *Not at all good* to (5) *Very good*, and item seven, “How many problems are there in your relationship” was measured from (1) *None* to (5) *A great deal*. This measure has been found to demonstrate good internal consistency with values from $\alpha = .86$ (Hendrick, 1988) and $\alpha = .91$ (Vaughn & Baier, 1999), and discriminated between couples who stayed together from those who separated ($F[1, 29] = 28.41, p < .001$), with a 91% accuracy rate in terms of predicting couples that stayed together and a 57% accuracy rate for those who were predicted to separate (Hendrick, 1988). Moreover, the RAS was found to be highly correlated ($r = .84, p < .01$) with the Dyadic Adjustment Scale (Spanier, 1976), a longer criterion measure of relationship satisfaction, thereby providing evidence for convergent validity (Vaughn & Baier, 1999).

**Social support.** The social support measure utilized for the present study was developed by Klauninger and colleagues (2014) based on House’s (1981) categories of social support (i.e.,
emotional, instrumental, information, and self-esteem). This measure uses a matrix for participants to indicate the type(s) of support their partners have sought from them, and which type(s) of support they have provided to their spouse within the last year. Participants were asked to report the social support sought or provided as a percentage (totaling 100 across categories). Additionally, two open-ended questions were included to provide additional context to participant responses, including “If your partner did not ask for support directly, were you able to recognize that they needed support? If so, how? Please explain.” and “In these situations, did you feel as though you were able to provide the support that your partner needed? Please explain.” (see Appendix V).

**Preliminary Questionnaire Results**

**Preliminary Analyses**

**Missing data.** The pattern of missing data occurred randomly throughout the dataset. Given this pattern and the small amount of missing data (i.e., less than 4%), mean substitution was used as a conservative approach to estimate the missing data points while preserving power (Tabachnick & Fidell, 2013).

**Outliers.** Data was screened for univariate outliers using z-scores (i.e., values exceeding ± 3.29 reflect extreme scores; Tabachnick & Fidell, 2013). Four univariate outliers were detected, including two outliers on the Motivation for Caregiving subscales (enjoys helping: \( n = 1 \); capable caregiver: \( n = 1 \)), one on the Motivations for Not Caregiving subscales (lacks concern: \( n = 1 \)), and one on the Relationship Satisfaction measure. Subsequent analyses were performed with and without outlier modifications to allow for comparison.22 For the modified dataset,

22 Results from the correlational analyses with outlier modifications were compared to those conducted without outlier modifications, no meaningful differences were found.
identified outliers were recoded to the next highest value and their z-scores were recalculated until the z-scores fell within the acceptable range (i.e., < ± 3.29; Tabachnick & Fidell, 2013).

**Sample descriptives and correlations.** The means, standard errors, and reliability estimates for each variable are presented in Table 11. The overall reliability for the Motivations for Caregiving (\( \alpha = .85 \)) and Motivations for Not Caregiving (\( \alpha = .90 \)) measures fell above the desired threshold (i.e., \( \alpha > .70 \); Hogan, 2015), demonstrating high internal consistency. However, the reliability of several subscales for each measure fell below the desired level of .70 (Motivations for Caregiving: feels love, concern, and interdependence, enjoys helping, self-benefit, relationship purposes, and capable caregiver; Motivations for Not Caregiving: partner is capable); as a result, these scales were only used for descriptive purposes to provide additional insight into drivers of social support beyond aggregate measures of motivation.

**Exploration of Social Support Provision**

To better understand the experiences of support providers, participants indicated the type of support sought by their first responder partner in the past year, as well as the type of support provided in return (see Table 12). Overall, there was a high degree of alignment between the type of support sought by partners and the type of support provided, with emotional support being most common. Additionally, 50.9% (\( n = 83 \)) of the sample reported a complete match for each type of support (i.e., the type of support sought = the type of support provided). Interestingly, participants reported that their spouse/partner was more likely to not seek support (\( M = 19.27, \ SE = 2.35 \)) than they were to not provide support (\( M = 5.29, \ SE = 1.30 \)), which may reflect the culture of first responder occupations (i.e., low levels of distress disclosure and help-seeking; Brown & Campbell, 1990; Hirschfeld, 2005).
Table 11

*Descriptive Statistics and Correlations Between Study Variables (n = 163)*

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*Note.* *p* < .05, **p** < .01, ***p*** < .001. RelSat = relationship satisfaction; MC = motivations for caregiving; MNC = motivations for not caregiving; LCI = feels love, concern, and interdependence; EH = enjoys helping; SB = self-benefit; RP = relationship purposes; FO = feels obligated; NP = needy partner; CC = capable caregiver; CLS = caregiver lacks skills; CDD = caregiver dislikes distress; CLRT = caregiver lacks resources - time; CLCR = caregiver lacks concern/responsibility; PDU = partner is difficult and unappreciative; PD = partner is too dependent; PC = partner is capable.
Table 12

*Type of Social Support Sought by First Responders and Type of Support Provided by Spouses*

<table>
<thead>
<tr>
<th>Support Sought by First Responder</th>
<th>Did not seek</th>
<th>Self-Esteem</th>
<th>Emotional</th>
<th>Informational</th>
<th>Instrumental</th>
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<td>M (SE)</td>
<td>M (SE)</td>
<td>M (SE)</td>
<td>M (SE)</td>
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<td>12.42 (1.12)</td>
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<table>
<thead>
<tr>
<th>Support Provided by Spouse</th>
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<th>Emotional</th>
<th>Informational</th>
<th>Instrumental</th>
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<tbody>
<tr>
<td></td>
<td>M (SE)</td>
<td>M (SE)</td>
<td>M (SE)</td>
<td>M (SE)</td>
<td>M (SE)</td>
</tr>
<tr>
<td>Did not provide</td>
<td>5.29 (1.30)</td>
<td>20.69 (1.29)</td>
<td>37.34 (1.89)</td>
<td>22.83 (1.05)</td>
<td>13.92 (1.17)</td>
</tr>
</tbody>
</table>

Note. Participants reported the support sought by their partner and the type of support they provided as a percentage with responses across categories adding to 100. Estimates were based on the previous year.

**Social support cues.** In addition to the quantitative social support data, participants were asked several open-ended questions regarding their spouse/partner’s social support needs. Specifically, participants were asked to describe the cues that their partner exhibits when they are in need of support. For those who were able to recognize their partners’ social support cues, participants described verbal (e.g., changes in conversation) and non-verbal cues (e.g., body language), as well as changes in behaviour (e.g., anger, sleep disturbances) and mood, attitude, or personality. Sample responses include:
“Often my partner does not ask for direct support. We often ask about each other’s day. I can often tell based on his tone and response if there is something ‘up’. From there, I will ask if something happened or if he needs anything. We go from there.”

“My partner gets very moody and withdrawn when he is dealing with issues. I have learned to give him the space he needs until he is ready to work through his problems and will come to me at that point.”

“You can tell based on how they act, if they are irritable or avoiding questions.”

“Huge changes in personality and ability to deal with day to day things.”

“Sometimes I can recognize that he is off; just not his cheerful self. [It] is almost like he is distracted or cannot focus as well as usual.”

**Ability to meet partner’s support needs.** In addition to recognizing social support cues, participants were asked if they felt that they were able to provide their partner with the support they felt they needed. Of the participants who felt they were able to provide effective support, responses highlighted the importance of emotional support, including letting their partners express their emotions. Sample responses include:

“She generally just needs someone to listen to her vent or air out the problem.”
“Sometimes just listening is the best thing.”

“In most cases my partner needs to vent his feelings and feel as though he’s been heard. Once this has been done we can often carry on normally…”

“Being able to talk openly and honestly with my partner is crucial. I try my best to offer support in any way I can. Even if it’s just listening.”

For participants who felt that the support they provided was ineffective, participant responses highlighted a lack of experience with work stressors, as well as perceived resistance from their partner or a disconnect between the support they were providing and what their partner wanted or needed. Sample responses include:

“My partner deals with extremely complicated feelings/situations that I have no expertise or experience in helping with. I don’t often try to offer advice, I mainly listen and try to remove other life stressors so he can focus on himself.”

“I felt that the assistance was unwelcome.”

“He would not accept advice or help. He will/would not look for professional help.”

“I never feel like I am giving him enough. He sees such terrible situations and police morale is at an all-time low. I want to fix everything for him and for him to leave this profession.”
“He seemed to be bothered by my opinion. That I didn’t perceive the situation the way he did.”

“I feel like I did my best but it is hard for me to understand what to say to help with situations that I have never experienced before.”

Additionally, several participants described being able to provide effective support some of the time, but highlighted the difficulty associated with consistently providing effective support (e.g., due to external stressors, lack of knowledge, skill, or ability, etc.) Sample responses include:

“Most of the time. Sometimes I feel like he needs me to just listen but instead I give unwanted advice.”

“Yes and no – yes in the fact that most times all I can do is just be there to listen [and] validate their response and their emotions. And no in the fact that it is hard to know that this is all I can do to support them, but still know that it may not help.”

“When it is a direct situation and she needs my support, it is much easier to support her. However, in situations where she is venting and emotional about a situation, I am not always sure how to help her. I am always a listening ear, even if it means that my own well-being is affected.”
“For the most part – sometimes [I] had issues dealing with my own problems on top of stressors.”

“Generally, although it is occasionally hard to know where the balance is between listening empathetically and providing advice.”

Together, these findings situate the sample by providing insight into participant experiences and life circumstances, which help frame the research and inform the generalizability of findings (Elliott et al., 1999). Additionally, these findings can be used for triangulation, which enhances the validity and credibility of the research process by allowing for the comparison of perspectives from multiple sources (Carter, Bryant-Lukosius, DiCenso, Blythe, & Neville, 2014; Jick, 1979; Thurmond, 2001). It is important to note that the sample was predominantly female (n = 132), most likely reflecting the male-dominated contexts associated with first responder occupations (e.g., 78.6% of Canadian police officers in 2017 were men; Statistics Canada, 2019). Additionally, the sample included mostly partners of police officers (n = 56) and paramedics (n = 76), with relatively low participation of partners of firefighters (n = 18). Despite attempts to recruit spouses of firefighters through social media and profession-specific channels (e.g., through Canadian firefighting associations), participation remained low. As a result, it is unclear if there are unique stressors or environmental pressures that may have influenced the participation of this group.

23 In 2017, there were 69,027 police officers in Canada, 54,275 of which were men (Statistics Canada, 2019).
Summary. Overall, the sample reported high levels of relationship satisfaction ($M = 4.26, SE = .06$) and being motivated to provide support or care for their partner out of love, concern, and interdependence ($M = 6.11, SE = .05$). Participants also reported higher levels of enjoying helping ($M = 5.82, SE = .05$) and feeling as though they are capable caregivers ($M = 5.34, SE = .07$). Consistent with previous research (e.g., Feeney & Collins, 2003), enjoying helping was positively associated with relationship satisfaction ($r = .26, p < .01$). Similarly, feelings of love, concern, and interdependence were associated with higher levels of relationship satisfaction ($r = .48, p < .001$); however, feeling capable was not associated with relationship satisfaction ($r = .07, ns$).

Additionally, consistent with previous research (e.g., Feeney & Collins, 2003), six of the Motivations for Not Caregiving subscales were negatively associated with relationship satisfaction, including lacking skills ($r = -.35, p < .001$), lacking time ($r = -.34, p < .001$), and lacking concern or responsibility ($r = -.56, p < .001$), with partner being difficult or unappreciative demonstrating the strongest negative relationship with relationship satisfaction ($r = -.78, p < .001$). In terms of social support, participant responses to both quantitative and qualitative questions highlighted the importance of emotional support, as well as providing insight into potential barriers to providing effective support, such as lacking knowledge or experience with work demands. Each of these areas was explored further in the analysis of the qualitative interview data.

Interview Data Collection & Analysis Procedure

After completing the preliminary questionnaire, participants were given the option to participate in a one-on-one Skype audio or phone interview with the primary researcher. Of the participants who completed the preliminary questionnaire, 101 participants (62%) indicated
interest in an interview. If participants selected no, they were directed to the debriefing form (see Appendix W). If participants selected yes, they were instructed to select potential days and times for their interview from a calendar provided, and asked to provide an email address that they could be reached at. Potential interview times were then selected and the participant was contacted to confirm their availability. Once a date and time were confirmed, participants were sent a Qualtrics link with the information and consent form for the interview (see Appendix X) and given access to a participant Skype account (a unique password was generated for each participant to access one of six participant Skype accounts) or a phone number to call for the interview.

Of the participants contacted, 38 semi-structured interviews were conducted (police: \(n = 13\); fire: \(n = 3\); paramedic: \(n = 22\)), reaching saturation (i.e., no new themes or data emerged in later interviews) and providing a sufficient number of observations for analysis\(^{24}\). Interview participants received a $20 Amazon.ca gift card as compensation for their time. Each interview took approximately thirty minutes to one hour to complete (\(M_{\text{Interview Time}} = 28\) minutes; see Appendix Y) and was audio recorded for later transcription\(^{25}\). In addition to the audio recordings, the primary researcher took notes during the interviews and wrote a summary immediately following the conclusion of each interview as a form of supplemental data collection (Muswazi & Nhamo, 2013). Specifically, notetaking provides an opportunity for the interviewer to focus on

\(^{24}\) In an examination of sample sizes in PhD research using qualitative interviews \((n = 560)\), the most commonly reported sample sizes were 20 and 30, with an average of 31 interviews being conducted across studies (Mason, 2010). Further, Sandelowski (1995) argues that sample size in qualitative research relies on researcher judgement regarding the quality of responses obtained rather than the quantity of responses.

\(^{25}\) During the consent process, participants gave permission for select verbatim quotations to be used for the final analysis and future training materials for first responders and their families. Participants were informed that no identifying information would be attached to the quotations, and none would be used that posed any risk of identifying the participant.
and internalize participant experiences, which builds rapport and provides an opportunity for more in-depth questioning (Roller & Lavrakas, 2015). After the interview, participants were sent the debriefing form via a Qualtrics link as an email attachment (see Appendix W), in addition to their $20 Amazon.ca gift card.

**Transcription and Approach to Qualitative Analysis**

Interviews were transcribed by the primary researcher and a research assistant and saved on a password-protected folder on a secure server. In total, 18 hours of interview data was transcribed into 325 pages ($M_{PageLength} = 8.55$) or 155,725 words ($M_{WordLength} = 4,098$). The transcribed interviews were analyzed using MAXQDA software (VERBI Software, 2016). As several of the research questions were more positivist in nature (i.e., relating to the occurrence of specific behaviours, stressors, or strategies), while others required interpretation (i.e., analyzing reflections, processes, or reactions), a combination of content analysis (Elo & Kyngäs, 2008; Mayring, 2000; 2014) and thematic analysis (Braun & Clark, 2006) was used to analyze the interview data (Pistrang & Barker, 2012).

Although both content and thematic analysis are descriptive in nature, each method produces different inferences (Vaismoradi, Turunen, & Bondas, 2013). Specifically, content analysis emphasizes the quantification of data, while thematic analysis aims to explore general themes within the data (Crowe, Inder, & Porter, 2015; Pistrang & Barker, 2012; Vaismoradi et al., 2013). Using a combination of qualitative data analysis techniques tailored the analyses to the associated research question(s) while maintaining methodological rigor (Guest, MacQueen, & Namey, 2012; Pistrang & Barker, 2012). Specifically, research questions 1, 2, 4a-b, and 8b were analyzed using content analysis, and research questions 3, 5-7, 8a were analyzed using thematic analysis.
**Coding procedure.** Both content and thematic analysis utilize a systematic coding procedure, often resulting in these techniques being used interchangeably (Vaismoradi et al., 2013). Thus, the same coding procedure was applied to all interview data. Specifically, the primary researcher used both inductive (i.e., creating codes based on the data) and deductive coding (i.e., using pre-determined codes) techniques, emphasizing the importance of participant experiences, as well as previous research and theory in the generation of codes (Hsieh & Shannon, 2005). Additionally, this approach utilized both manifest (i.e., verbal data, including words and phrases) and latent content (i.e., context of the interview and the embedded meanings), reflecting both the implicit and explicit interview data (Crowe et al., 2015; Mayring, 2000; 2014). Rather than analyzing specific interview questions, the coding procedure was applied to the full interview to ensure all relevant data was captured in the analysis.

Codes were generated following Braun and Clark’s (2006) process recommendations, including familiarizing oneself with the data (i.e., transcription, several readings of the data, and noting initial ideas) and generating initial codes (i.e., identifying key data features, grouping relevant data) before generating more detailed codes and performing subsequent thematic or frequency analyses. Coding was done in a recursive and iterative fashion, with the researchers meeting at regular intervals to discuss complex codes to ensure transparency and consistency (see Figure 6 for the detailed coding procedure; Guest et al., 2012; Morse, Barrett, Mayan, Olson, & Spiers, 2002; Weston, Gandell, Beauchamp, McAlpine, Wiseman, & Beauchamp, 2001). In total, 187 detailed codes were merged into 50 final codes based on the 10 research questions. Additionally, several contextual codes were generated (e.g., related to job stressors, relationship satisfaction, spouse’s motivation) to support later thematic analyses (see Appendix Z.
for the coding guide). In addition to the main coding procedure, powerful or impactful quotations were identified using a unique code.

**Figure 6.** Interview data coding procedure.
Interview Results

The interview results provide a deeper and more holistic understanding of the complex nature of the social support provided by spouses of first responder to their partners. This section provides quotations and themes to facilitate this more nuanced perspective (prototypical examples of each code [e.g., partner’s schedule] are presented in Appendix Z). Given this focus, each research question is discussed in relation to one aspect of the social support experience, including: the support context, process, outcomes, or directions for future supports. The sections and the associated research questions are presented in Table 13.

Table 13

Interview Results Sections and Associated Research Questions

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<td>Support process</td>
<td>Features of support interactions that shape help-seeking behaviours and support provision</td>
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<td>Support outcomes</td>
<td>Results of support interactions (i.e., whether strategies were successful or unsuccessful)</td>
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<td>Future supports</td>
<td>Opportunities to improve social support for first responders and their families</td>
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</tbody>
</table>

Support Context

The commitment to support another person is influenced by many aspects of the relationship context (e.g., relationship history, family and job dynamics, financial situation; 26 A summary of results for participants is presented in Appendix AA.)
Rhoades, Stanley, & Markman, 2010; Stanley & Markman, 1992); therefore, this is an important starting point for understanding social support. To address this, the first interview question asked spouses to describe the stressors or pressures that they perceived to be unique to first responder relationships (Research Question 1). Beyond the typical family unit stressors (e.g., finances, pressure from extended family) and individual differences between partners (e.g., difference in perspectives or opinions), interviewees described five stressors unique to first responder occupations: partner’s schedule, impact, home demands, separating work from home, and work identity (see Table 14).

Table 14

Relationship Stressor Code Frequencies (n = 38)

<table>
<thead>
<tr>
<th>Code</th>
<th>Example</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Partner’s schedule</td>
<td>Navigating partner’s schedule; coordinating childcare, family events</td>
<td>28</td>
<td>73.7</td>
</tr>
<tr>
<td>Impact</td>
<td>Fear of missing distress signals; not wanting to add to partner’s stress</td>
<td>21</td>
<td>55.3</td>
</tr>
<tr>
<td>Individual differences</td>
<td>Differing perspectives; partner seeing things in ‘black and white’</td>
<td>20</td>
<td>52.6</td>
</tr>
<tr>
<td>Home demands</td>
<td>Childcare or home demands falling primarily on spouse</td>
<td>20</td>
<td>52.6</td>
</tr>
<tr>
<td>Separating work from home</td>
<td>Partner’s perceived need to leave stressful calls at work</td>
<td>12</td>
<td>31.6</td>
</tr>
<tr>
<td>Work identity</td>
<td>Family comes second to work</td>
<td>8</td>
<td>21.1</td>
</tr>
<tr>
<td>Family unit issues</td>
<td>Finances; stress from extended family</td>
<td>5</td>
<td>13.2</td>
</tr>
</tbody>
</table>

*Note.* Frequency and percentages were calculated using the total sample size (n = 38) as the denominator.
Partner’s schedule and home demands. The most commonly reported relationship stressor was a partner’s schedule. Specifically, 74.7% \((n = 28)\) of the sample described difficulties associated with navigating shift work or from their partner being on call. Although some participants described shift work as having potential benefits for the relationship (e.g., for a spouse to identify personal goals and meet their own work demands), reported difficulties included scheduling family events or activities, coordinating childcare, and managing the physical impact of shift work on their partner (e.g., irritability due to a lack of sleep, need for recovery on days off). Additionally, scheduling was frequently discussed in combination with home or family demands, such as childcare, which were described as falling primarily on spouses. In addition to managing their partner’s schedule, 52.6% of participants \((n = 20)\) described the added pressure faced by spouses of first responders to ensure home demands are met while their partner is at work.

“But since having children, it’s just the household help. You know, I’m a single mother some days and yet I’m married and have a loving relationship. So, there’s a lot of pressures just on me to upkeep the household as well as the children.” (Interviewee 37)

“… because he wasn’t in law enforcement and then he was, there’s a very distinct difference in how our relationship worked, how our parenting worked, how our home and lifestyle worked. And it all went to a place where a hundred-- maybe ninety percent of that burden then fell on me.” (Interviewee 3)

In addition to the logistical challenges associated with managing shift work and home demands, interviewees also described feelings of anger, loneliness, resentment, and frustration when discussing their partner’s schedule. For some spouses, feelings of resentment and
frustration were closely tied to the number of home demands they face due to their partner’s absence. Despite the common occurrence of these emotions, several spouses acknowledged their attempts to dismiss or minimize these reactions. Additionally, one spouse described the difficulty of finding an outlet to express feelings of frustration or anger. Attempts to regulate their own emotions were mentioned to protect a partner from additional stress at home. Together, these quotes highlight spouses’ emotional labour efforts, both in terms of their own internal state, as well as that of their partner.

“There’s many times that I can get into a fight and say, “I hate what he does for a living” because I’m lonely a lot. There is a loneliness to his job that is really difficult-- that I never expected.” (Interviewee 37)

“All [the kids’] activities, and laundry, and the chores, and the dishes, and the groceries, and my demanding job, and my work when I get home and all of that. So, unlike other people whose partners are at home in the evening to help with these things, I’m alone. So, for me, there can be a lot of resentment that builds up even though I know it’s because he’s at work…” (Interviewee 24)

“I think the things that I do well are… I try not to make him feel guilty for being away for multiple days in a row. I know some friends of ours, their husbands are also in emergency services, like police officers or firefighters, and they really struggle with not being resentful to their partner directly when their partner comes off their shift work. So, that’s something that I’ve really worked hard for myself to do.” (Interviewee 17)

“And that’s where I get so frustrated but I can’t say that frustration to him because he’s living the frustration, right? It’s his job, he understands. But as a partner, where do we put our frustrations out?” (Interviewee 37)
For many spouses, emotional reactions to their partner’s work demands were described as unexpected. As a result, several participants referenced the difficult nature of shift work for relationships, and the importance of dealing with issues as they come up to avoid long-term negative consequences. Additionally, several spouses described the importance of establishing a clear understanding of these stressors early; communicating a need for both partners to be prepared for the challenges ahead before a significant other enters the profession.

“Being in a shift-work environment, and then marrying to a shift-work environment, [it] is very difficult to maintain a good relationship unless you have support, because you're not always going to be there for your wife or your kids for long extended periods of time; sometimes fourteen to sixteen hours away from your family and they don't have any help. It's-it's difficult. So, I would say if someone was going to get into this profession, that they know that ahead of time that... you know, you're not going to be able to see your family a lot. Like, that's just the way that it is, it's not a normal job.” (Interviewee 38)

“I recently had a girlfriend that married a police officer and my number one advice to her was, “when your husband is on night shift, do not bring up anything that could be controversial.” You know, any decisions about the kids, anything going on that could cause any kind of emotional distress or cause an argument, never bring that up when they’re on night shift. And then you have to wait for who days after they’re on night shift to actually approach any subject… your timing has to be almost perfect.” (Interviewee 29)

“… it’s been a bit of a challenge trying to figure out how to raise a family with a shift worker. The children constantly miss their dad and it’s hard being a single parent to them most of the time… You have to be very strong and you have to be very supportive of one another or it’s not going to work. We’ve seen lots of people in his profession where the relationships just explode. Because it is very challenging, and you have to be ready for it,
and you have to know how to handle it and deal with it, which, nobody told me this. So, it’s been something we’ve had to figure out as we go along.” (Interviewee 24)

In addition to spouses managing their own reactions to their partner’s work demands, several interviewees described the unique stress associated with having to explain the nature of their partner’s schedule and job demands to family or friends with limited experience. These descriptions highlight the added pressure spouses face in terms of managing others’ understanding or perceptions of their partner’s demands, in addition to the direct impact their absence has on the home domain (e.g., partner being absent for major life events, etc.). Thus, navigating a partner’s schedule requires unique individual and interpersonal efforts on behalf of the spouse.

“Yeah, it’s not abnormal for me to be having Christmas dinner here and be left with the whole family because he’s gone off to help another family. But sometimes, if we have friends over here, they’ll kind of look at me odd, like he’s being rude or something because they’re not really understanding where he’s going.” (Interviewee 11)

**Impact, work identity, and separating work from home.** The second most common stressor reported by spouses was seeing their partner negatively impacted by work. Specifically, 55.3% of spouses ($n = 21$) described concern for their partner’s well-being, referencing the emotional toll associated with their partner’s chosen occupation. Moreover, several interviewees discussed how this impact can transfer to the home domain, including the strain experienced in their relationships.
“It’s very stressful to bring that home with you and there’s a lot of— a lot more coming out now in terms of PTSD. And it’s just a job that stays with you [crying]. It can affect your parenting and your relationships in terms of what you have to see. And seeing people lose family members, or lose their children, it’s very different from working in an office or something like that.” (Interviewee 21)

“We’ve been together a really long time, since before he was a paramedic. So, he would always tell me back when we were much younger and dating that he was going to be emotionally damaged throughout his life because of his career and I was going to have to deal with that…” (Interviewee 20)

Given first responders frequent exposure to traumatic work stressors, several interviewees described a fear of missing distress signals, as well as concern for the negative impact distress can have on first responders, including concerns surrounding suicidality. Given this, spouses frequently described a need to minimize their own stress experiences for fear of adding to their partner’s distress; reflecting an attempt to prioritize their partner’s well-being over their own.

“That’s what worries me… they do this ‘tough man’ exterior and they’re dying inside. And everyone would have loved to have helped if they could have recognized it. And my fear is that something’s happening that I don’t see. That I haven’t recognized. That I don’t realize is as serious as it might be. And that it’ll end up being too late.” (Interviewee 10)

“There’s been a lot more media coverage and discussion among just paramedics themselves about first responders committing suicide. So, I think that’s always a concern in the back of my head because I know that it does happen, and it happens to people who
no one would ever expect. So, I try to be more aware and openly discuss the stressors he’s facing at work.” (Interviewee 21)

“I think on the other hand, I struggle with the guilt side a little bit. Because I know that his job requires a lot of him and I don’t want to sort of add to the pile.” (Interviewee 27)

“I think about it a lot that he could have these potentially horrible days where perhaps several people have died on him and I come home and complain about a little, “oh, I got in a little tiff with my co-worker”, or something like that. So, I think that’s another barrier too, just that you, kind of, almost diminish your own problems, which seem significant to you, because they work in such a stressful field.” (Interviewee 20)

Concerns about impact were closely tied to discussion of a partner’s work identity. To demonstrate, 21.2% of spouses (n = 8) described their partners as strongly identifying with and finding value in their work. For some, this identity was described as coming at the expense of the relationship or the family. As a result, spouses often reported feeling that their needs come second to their partner’s given the nature of their partner’s work. Together, these quotes highlight the difficulty spouses face balancing concern for their partner’s well-being with their own support needs.

“He’s like, “okay, well I’ll get there when I can but we’re about to take a call” … his sense of what an emergency was, or when his family needed him really dwindled to a place where it didn’t matter.” (Interviewee 03)

“Sometimes I need support, and I feel like that comes, kind of, second place to—‘cus [sic] the nature of his work his more acute and more intense, and so, I feel like that’s a priority over my needs sometimes.” (Interviewee 01)
Together, these quotes highlight a strong distinction between the work and home domains for both first responders and their spouses. Thus, it is not surprising that several spouses noted their partner’s attempts to separate work from home. Specifically, 31.6% of spouses \( (n = 12) \) described their partner’s attempts to compartmentalize work stressors (e.g., leaving difficult calls at work) before engaging with the family. Although some spouses were unsure of the impact this detachment had on their partners, others referenced concern that this strategy resulted in isolation and minimized help-seeking behaviours. Thus, first responders’ attempts to protect the family domain by isolating work stressors may not be effective in terms of their well-being or in reducing spouses’ levels of concern.

“… instead of bringing it home and dwelling on it, some of the calls he is able to just leave it there now. Some he brings home but some he can just say, “that’s the job that I chose, I’m gonna [sic] leave it here and I’m gonna [sic] go home to my family.”” (Interviewee 37)

“I think most couples, if they’ve had a bad day at work, for the most part they can discuss it all in detail, where he can’t always share the full details with me because that could jeopardize whatever the case is, or he doesn’t want me to be involved, he doesn’t want to stress me. But at the same time, I know he needs to talk and he’s [sort of] locked in because he doesn’t want to add that stressor in our relationship. He doesn’t want me to have concern for him. So, I guess it’s his way of protecting me from it, and in essence, it kind of isolates him.” (Interviewee 15)

**Summary of support context.** Together the results from the content analysis and associated quotations demonstrate the complex nature of the support context for first responder relationships. Spouses of first responders reported facing a number of challenges in terms of
navigating their partner’s schedule and ensuring home demands are met, over and above their own work or life stressors. In addition to these pressures, spouses reported having to manage their emotional reactions, including feelings of anger, frustration, and resentment, while being concerned for their partner’s well-being. As a result, many spouses attempted to suppress or mitigate their own social support needs as a protective mechanism to minimize the stress faced by their partners at home.

It is well understood that first responders, including police officers, firefighters, and paramedics, experience high levels of stress as a result of their job demands. However, these results suggest that stress experiences are not limited to first responders and the work domain; spouses too face high levels of stress due to their partner’s occupation (i.e., negative spillover; Edwards & Rothbard, 2000; Frone, 2003). The extra domestic and emotional labour that spouses deal with, in combination with first responder work being a priority, are likely to shape the nature of subsequent support interactions, as well as the outcomes for both partners.

Support Process

To better understand the factors that shape the support process in first responder relationships, this section explores the features that influence the recognition and provision of social support. Specifically, spouses were asked about their partner’s support signals, challenges or barriers to providing support, changes in the support process over time, and reciprocity within their relationships. These factors provide insight into the influences that shape help-seeking behaviours in first responders, as well as areas for future intervention research.

Support signals. To explore the recognition component of the support process, spouses were asked to describe how they know when their partner requires support (Research Question 2). Moreover, spouses were probed as to whether their partner asks for help directly or if there
are certain signals or cues that they observe, which allow them to infer that their partner requires support. Almost half of participants indicated that their partner does not ask for help \( (n = 17; 44.7\%) \). Here, spouses reported that they are required to recognize specific signals or cues in order to infer when their partner requires support. Interestingly, of those participants who said their partner openly discusses or seeks support from them \( (n = 21; 55.3\%) \), many noted that their partner would not ask for help directly but will openly discuss their experiences with difficult calls. Many of these spouses also referenced the importance of recognizing cues to support their communication efforts. Together, participants identified four support signals or cues, including: isolation/withdrawal, mood, behavioural cues, and maladaptive coping behaviours (see Table 15).

Table 15

Support Signal Code Frequencies \( (n = 38) \)

<table>
<thead>
<tr>
<th>Code</th>
<th>Example</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isolation/withdrawal</td>
<td>Withdrawing to watch TV, play on the computer</td>
<td>24</td>
<td>63.2</td>
</tr>
<tr>
<td>Mood</td>
<td>Agitated, angry, or irritable</td>
<td>23</td>
<td>60.5</td>
</tr>
<tr>
<td>Behavioural cues</td>
<td>Difficulty concentrating, sleeplessness</td>
<td>18</td>
<td>47.4</td>
</tr>
<tr>
<td>Maladaptive coping</td>
<td>Using alcohol or food as a coping mechanism</td>
<td>9</td>
<td>23.7</td>
</tr>
</tbody>
</table>

Note. Frequency and percentages were calculated using the total sample size \( (n = 38) \) as the denominator.

**Isolation/withdrawal.** The most frequently reported support signal or cue was isolation or withdrawal behaviours. Specifically, 63.2\% of spouses \( (n = 24) \) referenced their partner isolating themselves at home or at work. For some participants, isolation or withdrawal included being
quieter or more reserved than usual; reflecting cognitive or emotional withdrawal behaviours. For others, isolation and withdrawal were discussed in terms of physical presence, with spouses describing their partners as engaging in activities by themselves (e.g., watching TV, spending time on the computer). Often these behaviours were described as attempts to process difficult calls or to detach from work; reflecting coping strategies used in the moment. However, several spouses described isolation or withdrawal behaviours as being more persistent. Here, spouses often described a deeper level of disconnect between the first responder and their family or friends.

“I know that when he’s really quiet and he comes home from work and he doesn’t say anything that he needs his space.” (Interviewee 04)

“I think a huge, huge part of things that is important to relay is that he really isolated himself often and did not reach out for help. If he was talking about it, I felt like that was the best sign in the world. But that was pretty rare.” (Interviewee 03)

“He admitted the other day that he had suicidal ideation [previously], but I had no idea other than he was more withdrawn, more depressed, more irritable for sure. And not really communicating with the family or enjoying anything outside of the home.” (Interviewee 35)

Mood. The second most common support signal or cue was a partner’s mood, with 60.5% of spouses ($n = 23$) describing their partner as being more irritable, short-tempered, or angry in response to work stressors. Specifically, spouses described mood in terms of tone, choice of wording (e.g., short responses), body language, and overall energy (e.g., being negative). While
most spouses described the impact of their partner’s work on their mood in general, several interviewees referenced these actions as specifically directed towards them.

“Sometimes he’ll just be testy and kind of snappy and things like that, which normally, he’s not like that at all. So, there’s kind of subtle cues, and then there’s some big ones sometimes.” (Interviewee 20)

“I noticed a big change in his personality, like, becoming more-- more than usual, overly protective, paranoid, constant negativity coming out of his mouth, whether it would be about himself or somebody else.” (Interviewee 15)

“I think when he becomes agitated and irritable it’s challenging ‘cus [sic] sometimes he takes it out on me… obviously not in an aggressive or abusive way, but he’s just not pleasant to be around and so… I feel like sometimes I’m walking on eggshells a little bit.” (Interviewee 01)

**Behavioural cues and maladaptive coping.** Although less frequent, spouses also reported their partners exhibiting behavioural cues, such as difficulty sleeping or concentrating ($n = 18; 47.4\%$), or using maladaptive coping techniques, including alcohol consumption ($n = 9; 23.7\%$). Several spouses noted these behaviours occurring after difficult calls, such as ones involving children. Thus, many of these cues directly stemmed from or reflected a partner’s attempt to manage their response to work stressors.

“So, the day after she was just like a zombie in the sense that she couldn’t do much around the house. She was just… not there.” (Interviewee 30)
“I didn’t always understand when she would come home and sort of drop the bags and let’s say, crack a beer. I didn’t always understand that. I think that is a way of them coping.” (Interviewee 32)

“There have been a few calls, especially with kids, where he’ll get home and I’ll find him sitting in our kids’ rooms looking at them sleeping. And so, that’s a cue to me that something’s affected him.” (Interviewee 12)

**Challenges or barriers to providing support.** Following first responders’ vocalization, or spouses’ recognition of their partner’s needs, spouses can then employ various support strategies for their partners. However, challenges or barriers may be present during this process, which can limit the efficacy of the support provided. To explore these influences, spouses were asked about the specific challenges or barriers they face when attempting to provide support to their partners (Research Question 3). Thematic analysis of responses highlighted two themes. The first theme reflects spouse’s perceived capability to provide support, including limited personal resources (e.g., time, energy), knowledge, skill, or ability. The second theme surrounds the occupational barriers that exist within first responder occupations, including the need for confidentiality, fear of traumatizing others, and mental health stigma, which constrain first responders’ willingness to seek support.

**Spouse’s perceived capability.** Spouses reported a range of personal challenges or limitations related to their resources, knowledge, skills, and abilities, which they perceived as negatively impacting their ability to provide support to their partners. For many spouses, personal resources, including time and energy, presented a major challenge. To demonstrate, several interviewees acknowledged the difficulty associated with finding time to connect as a couple and discuss a partner’s support needs due to their work and family obligations. Similarly,
several spouses described the difficulty associated with providing support as a result of the number of demands they face at home and at work, which deplete their energy and motivation.

“… I guess my barrier would be feeling like I have the time and capacity to work through some of these things.” (Interviewee 23)

“… there are, I guess personal barriers for myself, in feeling exhausted and not wanting to listen (laughing)…. those are my own personal barriers, I guess, in trying to relate and understand and constantly be empathetic as best I can.” (Interviewee 32)

For several spouses, the nature of their partner’s work stressors limited their ability to be supportive. Here, spouses described discomfort with certain types of subject matter; most frequently including calls involving children. To demonstrate the impact of these discussions, one interviewee described experiencing symptoms of secondary trauma as a result of events their partner had witnessed at work and sought support for at home. For another spouse, feelings of concern associated with the potential impact of their partner’s work-related stressors were described as overwhelming. Both responses highlight spouses genuine concern for their partners’ well-being, and a fear of their personal discomfort limiting their partner’s help-seeking behaviour. Thus, spouses’ personal challenges when providing support extend beyond finite resources, including time and energy. In addition to managing personal demands, they must also process and regulate their own emotional reactions to a partner’s work stressors while attempting to provide support to their partner.

“… what ends up happening is now there’s calls that he did that I was not there for, obviously, and they haunt me… I’ve got to do my best to keep a stiff upper lip, I guess,
because the last thing I would want him to think is that he can’t tell me something because I’ll get upset.” (Interviewee 28)

“… it’s just understanding and not letting my worry overtake that moment. So, when he is able to open up, it’s hard for me to not get emotional because I worry about what he’s seen and how that’s affected him… So, my barrier is to be the strength that he needs in that moment because I am not used to seeing what he’s seeing…” (Interviewee 37)

In addition to having the time, energy, and capacity to provide support, spouses must also have the necessary knowledge, skills, and abilities for the support provided to be effective. Interestingly, for spouses with a background in mental health, perceived challenges frequently included an inability to objectively evaluate a partner’s well-being due to the nature of the relationship. These responses emphasized perceived bias and a limited ability for spouses to provide tangible support to their partners (i.e., regarding the recognition of mental health needs and recommendations for next steps). Whereas, for spouses from different occupational backgrounds, perceived challenges largely centered on their limited knowledge or understanding of their partner’s job demands. These challenges were frequently discussed in relation to their limited ability to provide advice or suggestions to their partner (i.e., informational or instrumental support).

“… obviously because I’m biased. I’m his wife. So, to say that I can full assess him would be-- I’d be ignorant to say that because I’m too close to the situation… we always do a better job at work than [with] the people we love and care for (laughing).” (Interviewee 05)
“A lot of calls that my husband has, or days after work, we don’t talk about necessarily the different calls that he’s gone to, especially the more difficult ones. Just because I can’t really relate. You try to listen, but I don’t work in the medical field, so it’s hard to understand some of the things that he goes through.” (Interviewee 17)

“I think the odd time that he does go through an incredibly stressful event at work, I don’t necessarily know how to help him. I mean, I can listen, I can do the best I can that way, but there’s not much I can really provide in terms of support because I wasn’t there in the situation…” (Interviewee 20)

“… it frustrates him when I keep asking questions to clarify things. But, for me, I need to know as much information as I can in order to help him, which is sometimes frustrating for him. But I don’t know other ways to help him if I don’t have all of the information.” (Interviewee 07)

Over and above the challenges associated with having a limited understanding of their partner’s job demands, spouses frequently discussed a lack of understanding of their partner’s support needs, as well as being unsure if the strategies they used were helpful for their partners. Responses highlight an underlying tension for many spouses between a strong motivation to provide support and a fear of being intrusive or overstepping boundaries.

“As far as being supportive and even understanding how to support her, absolutely. I’ve slipped up many times on that one (laughing) and I’m still learning how to be supportive as far as her job. Other jobs are fairly dry cut, but this one is kind of different.” (Interviewee 13)

“I think a challenge is I never know if I’m doing enough. And there’s the fine line between, ‘am I asking too much?’ And ‘am I not helping enough?’ So, I always have that
in the back of my head, which I guess you could call a barrier… I guess it’s always on my mind. Like, ‘is he okay?’ and ‘am I doing enough?’” (Interviewee 20)

“… and then not knowing what we can do to help support them through what they’re going through. ‘Cus [sic] you feel the need to help, and you want to help, but you’re limited to what you can do. I think that’s probably the biggest barrier, is just you’re kind of in the dark.” (Interviewee 15)

In addition to the challenges associated with recognizing a partner’s support needs, several spouses described difficulty matching the type of support they provide to their partner’s needs (e.g., listening vs. providing advice). For some spouses, this lack of clarity was associated with relationship conflict.

“… for me, sometimes I have to recognize when I should be supportive and when I should almost just let him do his own thing for a while until maybe he really needs to recognize that the does need support even if he doesn’t necessarily want it.” (Interviewee 02)

“Challenges [sic] is active listening. So, active listening and not being judgmental. So, actually listening to what the issue is, and then being able to draw out what the actual trigger is that’s causing the stress.” (Interviewee 14)

“My partner isn’t always very-- like, they’re a very chatty person but they’re not always great at communicating exactly when they need help, or what they need, or how they’re feeling. So, sometimes you kind of have to work in the middle ground… meet them where you think they need help, but you can’t be entirely sure that you’re doing all the right things to help them.” (Interviewee 19)
“At the beginning of the relationship… I wasn’t understanding exactly what he was going through and that was causing issues. He’d get upset at me, I’d get upset at him. Because he was having a hard time, I couldn’t offer the proper support, and then we’d just get into arguments and it would make his situation-- his mood even worse because I wasn’t providing the appropriate support.” (Interviewee 18)

In summary, responses highlight the difficulty spouses face when attempting to provide support to their partners. Specifically, spouses must manage their own time demands and energy levels to ensure they are available to provide support. In addition to being present, they must conduct emotional labour by managing their personal reactions and discomfort with a partner’s work stressors while attempting to recognize and meet a partner’s support needs (i.e., interpersonal emotional regulation). Together, these results highlight the importance of ongoing communication between partners, both in terms of first responders expressing their needs, and couples discussing and evaluating the support provided to ensure individual needs are met.

**Occupational barriers.** In addition to spouses’ perceived challenges associated with their ability to provide support, interviewees also discussed occupational barriers that can limit first responders’ help-seeking behaviour. Here, spouses discussed barriers with respect to occupational requirements, highlighting the importance of confidentiality, as well as social barriers, including first responders’ fear of traumatizing others, and the presence of mental health stigma in first responder occupations.

Specifically, several spouses described the importance of confidentiality in their partner’s profession (e.g., with respect to patient care or an ongoing investigation). Interestingly, several spouses referenced the importance of support seeking and how this can be accomplished without compromising confidentiality. For example, one spouse described the possibility for their partner to seek support without disclosing confidential details (e.g., names and locations).
“I think there are unique stressors. I mean, some of them are just the simple… you’re dealing with the file that’s very confidential or of a covert nature. Some of the files [they] deal with, they even say, “don’t let your spouse know about this” or “you need to keep it close to the chest”, and I don’t think you’d feel that in other employment.” (Interviewee 06)

“When he has ongoing cases that he’s limited to what he would normally be able to vent to me, so. I think most couples—like, if they had a bad day at work, for the most part they can discuss it all in detail, where he can’t always share the full details with me because that could jeopardize whatever the case is…” (Interviewee 15)

“I think that is a learned way of coping. That he never really thought about talking about it, and because confidentiality is so important with his job, you can’t really ever fully disclose. So, as much as he could tell me, there’s just as much [that] he can’t tell me.” (Interviewee 05)

“… when he was younger, he used to say, “nope, confidential, I can’t talk about it. Confidential, I can’t talk about it”, but as long as he’s not telling me names and locations and things like that, there’s nothing really too confidential about it…..” (Interviewee 20)

In addition to first responders’ concerns about privacy and confidentiality, several spouses also described their partner’s attempts to protect them and their family from secondary trauma. For couples with children, spouses frequently noted that partners avoid discussing work-related stressors in front of children; suggesting that help-seeking behaviours are delayed until couples are alone (e.g., once the children are in bed). Additionally, several spouses described their partners’ attempts to shelter them from the trauma and stress they experience at work.
Interestingly, one spouse described these attempts as unsuccessful; referencing her ability to recognize her partner’s distress. Thus, despite attempts to protect others from secondary trauma, spouses may still recognize their partner’s need for support.

“And I know he does try to shelter me from ninety-percent of what goes on at work so that I don’t have to bear the stress of it as well.” (Interviewee 20)

“… she might dial it back a little bit if she knows that it’s too much for me to handle. Or in some cases-- and she’s said this in the past, she doesn’t share all of the nitty gritty details at times, because I think in some way she’s trying to protect me.” (Interviewee 32)

“… I think he doesn’t want to upset me or get me worried. He jokes that I’m very sheltered in terms of what he sees… I think he wants to keep me that way, kind of oblivious to the reality of what he sees, I don’t think he wants to-- me to have the realization of what he sees everyday ‘cus [sic] I will wear that stress and that worry.” (Interviewee 37)

“… he does his best to protect me from it-- or he thinks he is hiding it and he’s not (laughing).” (Interviewee 28)

Outside of fears of breeching confidentiality and wanting to protect loved ones from secondary trauma, spouses also reported stigma surrounding mental health as a barrier to help-seeking for their partners. Specifically, spouses described negative reactions from peers and leaders towards mental health, and fear of demonstrating weakness or being ‘found out’. Interestingly, one spouse described the link between career choice and the inevitability of trauma exposure; suggesting the belief that individuals self-select into their profession, and the misconception that individuals should be able to cope with trauma as a result. Despite recognized
attempts to reduce stigma within organizations, spouses noted the pervasive nature of stigma and the negative implications for first responders.

“… the stigma obviously exists and everyone is doing their best to break that down, but in the meantime, you look at the rates of alcoholism, rates of divorce, rates of suicide, rates of everything is significantly higher for law enforcement. So, we’re not doing a very good job at getting them what they need… We’re not helping the people who are supposed to be helping us, you know? We’re not helping our helpers, we’re destroying them.” (Interviewee 03)

“… there’s still such a big stigma about it in police officers ‘cus [sic] they’re supposed to be strong and they’re there to protect us and any sign of weakness, it’s like smelling blood in the water…” (Interviewee 15)

“Again, it’s the whole stigma around… supposed to be a ‘tough guy’, you can’t let people know that you found your husband crying or he was having a physical reaction to something he’s seen… I think it’s that whole that they’re invincible, that nothing can hurt them. I think that’s still very much embedded in them.” (Interviewee 15)

“… there’s an expectation that it’s just part of the job, which, I mean, no one shouldn’t deal with what they’re seeing, especially if they’re seeing terrible things on a daily basis… the expectation is that ‘I deal with it on my own’ or that ‘I don’t talk about it’, or that ‘it’s just part of the job, it’s expected’. Getting over that can be a barrier at times.” (Interview 21)

As part of the discussion surrounding confidentiality, secondary trauma, and stigma, many spouses also described the impact of these barriers on their partners’ help-seeking behaviour. Specifically, spouses frequently referenced their partners’ attempts to cope alone with
work-related stressors. For some spouses, their partners vocalized these attempts, citing feelings of isolation and limited support from their network as reasons for enacting this strategy. For others, spouses were left to infer that their partners were attempting to cope alone, with responses highlighting spouses’ concern for missing distress signals.

“The things he would tell me is, like, “No one can relate to what’s going on. I just have to power through this” …” (Interviewee 03)

“… I don’t really know exactly how best to help him and he’s good at hiding it… well, maybe he isn’t hiding it, maybe he just genuinely isn’t too affected by things. But, I don’t see how that’s possible.” (Interviewee 20)

“… I would love it if he opened up more-- my big worry is that he’s feeling things that he’s still keeping bottled up and that I haven’t recognized are bothering him.” (Interviewee 10)

Interestingly, several spouses, including those in the same profession, described efforts to cope alone as a conditioned response, associated with professional expectations and training. Similarly, several interviewees described suppressing emotion as necessary for job performance; highlighting this strategy as an effort to limit the cumulative effects of trauma exposure (i.e., fear of a snowball effect).

“… in our training and career… we’re basically conditioned not to ask for help. Not to put up our hands (laughing). We’re conditioned very well to hide our emotions, especially on calls. And so, that becomes a way of life and carriers over into our family life.” (Interviewee 35)
“… he has to bury it if he’s going to get back up and go to work tomorrow.” (Interviewee 05)

“But I think it’s just so awful that if you bring up one situation, that it just rolls into another situation and another situation. And I don’t think they can handle it…” (Interviewee 05)

Although spouses often reported that their partners were trying to cope on their own, interviewees frequently described their continued attempts to provide support in these situations. Often these efforts were met with resistance from partners. Responses highlight spouses’ concern for their partners’ well-being, feelings of helplessness, in addition to the potential for tension or conflict in the relationship. For example, one spouse described herself as the ‘nagging wife’; highlighting the perception that her partner resented her continued support efforts.

“… there’s nothing I can do to help him even though I know he needs to talk to somebody… and I wish that he had somebody outside of me that he could feel comfortable talking to about things… he’s just not listening or in a place where he can take my support.” (Interviewee 01)

“… when he would just shut down, he didn’t want to talk to anyone; not friends, not family, not me, not anyone. So, that is difficult, ‘cus [sic] even when you’re reaching out and trying to help, saying, “I’m here”, he didn’t want to talk to his family. So, whether that was he didn’t want to expose anyone to whatever he was going through or he didn’t feel open enough to talk, I don’t know.” (Interviewee 03)
“I spent months expressing my concern for him and asking him to get help, to seek help, and he became pretty resentful towards me and I didn’t know what to do… I always look back to that and essentially, I was his nagging wife, right?” (Interviewee 09)

Together, responses highlight the difficulty associated with professional barriers for both first responders and spouses. For first responders, confidentiality, fear of traumatizing others, and stigma can result in efforts to isolate and cope alone. Moreover, emotional suppression is often reinforced as a necessary strategy for job performance, which can transfer to the home domain. For spouses, professional barriers can create distance between partners; thereby, limiting communication and understanding. As a result, many spouses reported feelings of helplessness, distress, or concern for a partner’s well-being. These findings highlight the negative impact of systemic factors on both first responders and their families. In particular, stigma and professional culture are often associated with perceived lack of support from the organization and feelings of isolation for both partners. Thus, there is a need for first responder organizations to address these issues, in addition to exploring opportunities to extend supports to first responders and their families.

**Changes in support over time.** To explore the stability of support interactions, spouses were asked if there had been any changes in the support process over time (i.e., Research Question 5). Spouses were probed to explore changes both in terms of how their partner seeks support from them and how they provide support in return. Thematic analysis revealed two themes, reflecting both positive and negative changes in the support process.

**Positive change.** The first, and most common theme, that emerged reflected positive changes in the support process for both spouses and their partners over time. For spouses, changes included fewer stressors or demands (e.g., changes in partner’s schedule, fewer demands
associated with childcare), and improved understanding of their partner’s stressors and support needs. Specifically, spouses described not taking things personally, learning which strategies are most effective for their partner, and how to enact different strategies based on their partner’s support signals (e.g., mood).

“… his changing job demands have made it easier because he—although his schedule is not all that flexible, it is more flexible than it used to be, so it makes it easier for him to be available. And… just our kids getting older, maybe nothing inherent to us, but [it] just makes life easier in terms of childcare and that down the road.” (Interviewee 08)

“I think I’m more patient with his bad moods. Before I used to take [it] really personally, but… it became clear that it was completely contingent on the work. So, once I took myself out of it and realized what was happening, I think I was able to actually be more supportive.” (Interviewee 01)

“I think as time went on, and I understood this whole shift schedule and how things worked, and his job, then I would let him come to me and then it’s just become much easier where he can tell me things… and I can tell when he wants to talk.” (Interviewee 34)

“… it’s smoother when I provide support, whether just to comfort him by holding him against me, or just trying to talk about things… there was a big change because I learned exactly what he’s willing to talk about right away when he’s upset, and when it’s better to just wait and let him calm down and then talk about it later.” (Interviewee 18)

In addition to spouses feeling more capable and confident when providing support, interviewees also frequently reported changes in their partner’s help-seeking behaviour over
time. Specifically, spouses described their partners as being more willing to seek support, including seeking support more frequently and sharing emotions with others. This included seeking support from spouses, co-workers, and mental health professionals. For several spouses, changes reflected repeated attempts to actively work through emotional reactions with their partners. Responses highlight perceived changes in first responders’ willingness to demonstrate vulnerability, as well as increased awareness and general understanding of mental health.

“… over time we started to talk about, not specific situations, but specific emotions with calls, and so, I’ve been able to get him now to talk about things that really, really bother him.” (Interviewee 05)

“He’s much quicker to talk to me about things. Initially, it was always ‘deny at all costs’ and ‘keep things bottled up’. And I find now, he’ll approach me with a bad call or he’ll come to me with [family stressors] more quickly. And sometimes on his own before I had to recognize it and push him at it. He still doesn’t open up deeply about things, but at least I’m starting to get the skimmed surface stuff without having to dig, so that’s pretty good.” (Interviewee 10)

“She’s a lot more open with situations. From what I know anyways. From my experiences with her… she’s willing to be emotional with me now. So, I think it’s a lot more successful in terms of that ability that she has to now vent and open up and just fully discuss issues… I think she looks to me actually for a lot of those things now.” (Interviewee 32)

**Negative change.** Although less frequent, several spouses reported negative changes in the support process, including partners facing different organizational stressors as they move into leadership roles (e.g., more chronic bureaucratic stress compared to acute traumatic stressors),
and demonstrating more distance or resistance to support seeking. Additionally, several spouses described changes in their partner’s personality as a result of desensitization to work stressors, including partners becoming more withdrawn or cynical.

“I think that as time goes on and the more you see, the less it fazes you. So, what may have been very shocking for him at the beginning, and might have been something that he needed to talk about, is now so run-of-the-mill, he might not even mention it.” (Interviewee 24)

“… I think a lot of the first responders become very… and I don’t want to use the word ‘dark’, but they can become very emotionally distant. They have a wall, and they don’t let anyone penetrate that wall…. They see the darker side of people, the darker side of life.” (Interviewee 29)

“I think what I found most challenging is that he totally shut down and he was not like that before at all. And so, that was really, really hard for me. I’m very communicative, I’m very chatty, I just want things to get better. And I think he found himself in a place where that was not possible anymore-- to be communicative, he was too guarded. So, that was unfortunate. I think that was the hardest part.” (Interviewee 03)

Responses suggest that for many spouses, changes over time can include improved understanding and ability to provide support to their partners, as well as partners becoming more willing to seek support. However, for some spouses, changes may also include partners becoming more resistant, cynical, and withdrawn. These results suggest that there may be an opportunity to help facilitate communication between partners to support positive changes in the support process over time.
Reciprocity. In addition to exploring changes in the support process, it is also important to examine the bi-directional nature of social support to ensure that both partners’ needs are met. This is particularly important given spouses reported feelings of coming second to their partner’s work, as well as the number of domestic and emotional demands faced by spouses due to their partner’s occupation. To explore this, spouses were asked whether their partners are able to reciprocate and provide support to them (Research Question 6). Although some spouses reported seeking support primarily from outside sources (e.g., family members, friends), responses highlighted a general theme that spouses must vocalize their needs in order to receive support from their first responder partners. For those who described their partner as able to recognize support signals, many described these signals as obvious, which may reflect another form of vocalization.

“… it’s funny ‘cus [sic] he’s a very highly empathetic and compassionate person with his patients, but I find his emotional intelligence with me isn’t always there. So, he doesn’t pick up on cues sometimes.” (Interviewee 01)

“I’m pretty obvious. I have it written all over me. So, recognize that I need support? Yes. Knows what to do about it? No (laughing).” (Interviewee 10).

“He’s very perceptive about that, and I’m also vocal about asking for help (laughing). I don’t shy away from it. If I need something, I ask for it.” (Interviewee 24)

“Definitely not. And I sort of deal with things the same way, I don’t really speak up until I’m ready to. And when I’m ready to, I’ll usually say something.” (Interviewee 33)
For spouses who reported vocalizing their needs, many reported that their partners were able to provide effective support. However, for some spouses, the support provided did not align with their needs, such as receiving advice (i.e., informational support) when they wanted to vent or express their feelings (i.e., emotional support). Several spouses noted that matching the support provided to their needs was a learned process, and that their partner has improved in their ability to provide support over time.

“… he is very good and gives me a lot of support but it’s not necessarily what I need at the time. But he’s very good about listening and trying to help me work through, and trying to figure out ways to resolve any issues I’m having or anything like that.” (Interviewee 21)

“I think that he feels more responsibility in coming up with a solution as to what needs to be done, whereas most of the time, I just want to get the stress off of my chest. I’m not looking for a list of, ‘oh maybe try A, B, or C’.” (Interviewee 06)

“If I seek out support from him, he’ll always be there for me. So, it’s more his ability to recognize if I need support changes [when he’s working], but he’s always there for me if I need support, if I initiate that.” (Interviewee 01)

“Yes, thirty years in, yes. At ten years in, maybe. At twenty years in, definitely we were growing. But again, we’ve [sought help] to make sure we can be that supportive for each other.” (Interviewee 14)

Together, these responses highlight the importance of communication between partners. Specifically, recognizing personal support needs and communicating these to a partner is critical for receiving effective social support. Additionally, as support is a bi-directional process, it is
important that both partners engage in support recognition and provision to maintain individual and relationship functioning over time.

Summary of support process. Analysis of the support process highlighted the difficult nature of support provision for spouses of first responders. In addition to managing the environmental demands associated with the support context (e.g., partner’s schedule, home and work demands), spouses must also be attentive to a partner’s support signals. Moreover, spouses must navigate the challenges or barriers associated with providing support. Specifically, spouses may feel limited in their capacity to provide support as a result of personal resources, knowledge, skills, or abilities. As well, spouses frequently reported the presence of professional barriers, which can limit first responders help-seeking behaviour. Given these barriers, spouses often reported being concerned for their partner’s well-being, feelings of helplessness, and fear of missing a partner’s distress signals. Thus, support provision requires significant effort on behalf of spouses. Specifically, for support to be effective, spouses must regulate their own emotions and reactions, recognize their partner’s needs, and enact the appropriate support strategies for their partner.

Despite these challenges, many spouses reported positive changes over time for both partners. Perceived changes in support efficacy were associated with improved knowledge and skill, and a partner’s willingness to seek support. Underlying both the successful enactment and provision of support is effective communication between partners. However, for some spouses, resistant partners, limited reciprocity, and negative changes over time (e.g., partner becoming more withdrawn, cynical) were associated with relationship conflict and distress. These findings suggest that there may be an opportunity to support communication with respect to both help-seeking behaviours and support provision through education and training. By emphasizing both
aspects of the support process, there may be an opportunity to improve the efficacy of social support between partners.

**Support Outcomes**

To explore the outcome of support interactions, spouses were asked to describe the specific strategies they use to support their partners, as well as their perceived efficacy. Specifically, spouses were asked to describe strategies that they have found to be successful (Research Question 4a), as well as those that were unsuccessful (Research Question 4b). For strategies that were identified as unsuccessful, spouses were probed as to why they believed the strategies did not work as expected. Responses provided insight into the alignment between first responders needs and the support provided by their partners.

**Successful strategies.** Content analysis of responses revealed eight strategies that spouses perceived as effective, including providing a partner with emotional support, giving their partner space, and scheduling time to connect, among others (see Table 16).

<table>
<thead>
<tr>
<th>Code</th>
<th>Example</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional support</td>
<td>Listening, providing reassurance, validating feelings</td>
<td>23</td>
<td>60.5</td>
</tr>
<tr>
<td>Space</td>
<td>Providing space; letting partner initiate/guide support</td>
<td>13</td>
<td>34.2</td>
</tr>
<tr>
<td>Connect</td>
<td>Scheduling one-on-one time to reconnect or detach</td>
<td>11</td>
<td>28.9</td>
</tr>
<tr>
<td>Push</td>
<td>Probing partner about support needs</td>
<td>9</td>
<td>23.7</td>
</tr>
<tr>
<td>Third party</td>
<td>Support from a professional help, friend, colleague</td>
<td>7</td>
<td>18.4</td>
</tr>
<tr>
<td>-------------</td>
<td>---------------------------------------------------</td>
<td>----</td>
<td>------</td>
</tr>
<tr>
<td>Instrumental support</td>
<td>Ensuring home demands are met</td>
<td>4</td>
<td>10.5</td>
</tr>
<tr>
<td>Informational support</td>
<td>Giving advice, brainstorming, or reframing a situation</td>
<td>3</td>
<td>7.9</td>
</tr>
<tr>
<td>Self-esteem</td>
<td>Validating partner’s abilities; confirming they did the right thing</td>
<td>3</td>
<td>7.9</td>
</tr>
</tbody>
</table>

Note. Frequency and percentages were calculated using the total sample size \((n = 38)\) as the denominator.

**Emotional support.** The strategy spouses most frequently reported as successful was providing a partner with emotional support. Specifically, 60.5% of spouses \((n = 23)\) referenced listening to or validating their partner’s feelings, and providing reassurance, care, or empathy as the most effective support strategy. Responses highlight the importance of letting a partner guide the conversation (e.g., knowing when to actively listen versus ask questions). By letting partners dictate the amount of information they share, spouses create a safe space, which allows partners to disclose feelings or experiences without violating confidentiality or compromising their comfort. Additionally, spouses described the specific ways in which they facilitate emotional support, including active listening, asking open-ended questions, and paraphrasing a partner’s feelings or experiences back to them.

“… I’ll just let him air what he can… and it doesn’t matter what the whole story is or who it involves. Even with the pieces missing, I’m able to pull out his emotions from that. So then, that’s what we talk about…”  (Interviewee 05)
“Being that person who at the end of the day is ready to listen to the stressful thing that happened. And just offering any sort of words of encouragement, like, “yeah, that sounds like a really awful day” and, “hopefully, tomorrow’s better” …” (Interviewee 24)

“… I just try to be the best listener that I can be and paraphrase back what I’m hearing… I don’t necessarily offer solutions, but it’s just being there to listen when need be.” (Interviewee 06)

“I try to ask more open-ended questions so that he can answer as little or [as much] as he wants to. Sometimes just saying, “I can tell something’s up and here’s what’s telling me that something’s up, and when you’re ready to talk about it, I’m here.” So, not trying to provide too much pressure for him to share more than what he personally is ready or comfortable sharing.” (Interviewee 12)

**Space.** Along with providing emotional support, 34.2% of spouses (n = 13) also recognized the importance of providing a partner with space, thereby allowing them to seek support on their own terms. This strategy was often described in combination with emotional support, with spouses describing the value of having partners process their feelings and reactions before seeking support. Although several spouses described this process as difficult, many interviewees noted the importance of trust and allowing their partner time to decompress before working through stressors, with several spouses describing this as a learned strategy obtained through trial and error.

“I think that sometimes you just don’t want to talk about it. Sometimes you just need time to digest it and think about it, and people react different ways. Some people want to talk about it right away, and spill their beans, and other people just want to push it aside and
deal with it by themselves for a little bit, and then they’ll talk about it when they’re ready.” (Interviewee 33)

“We’ve tried the ‘time-out’ method… it’s like, if he’s come home and he’s obviously feeling something but he can’t figure out what it is yet, to just take the time. Whether it’s go outside, go to the gym, go out with a buddy… if he needs some time to kind of decompress, then take it. And then come back and try to be part of the family.” (Interviewee 37)

“… sometimes just allowing her just to have a break when she absolutely needs it. Just walking away from the situation. I’m not very good at that (laughing). I like to talk about things and have that reflective time. But, I think sometimes even just allowing the situation to settle, the dust to settle, and not to talk about it is also really helpful.” (Interviewee 32)

**Connect.** Several spouses (28.9%; n =11) noted the importance of scheduling one-on-one quality time (e.g., date nights, vacations, favourite activities) to check-in with one another and reconnect. For some spouses, scheduling time with their partners was described as a distraction technique to help alleviate a partner’s stress. For others, scheduling quality time was described as creating an opportunity to engage in support conversations. One spouse highlighted the importance of scheduling time to connect so that issues don’t build over time. For couples where both partners work as first responders, taking time to check in with one another was described as more important because of competing schedules. In addition to this strategy being helpful for first responders, many spouses also described quality time as a shared value that both partners recognize as beneficial for the relationship.
“… just spending time with him I think can make a difference too. Sometimes it might even just be doing something totally unrelated. So, if he’s really stressed out about something, maybe we’ll go for a bike ride, we’ll go do something outside, just to do something that takes his mind off of it.” (Interviewee 02)

“I’ll often try to make an effort for us to go out on a date night, or to spend some time alone as well, because I know that helps a little bit. And if he wants to talk about things, he knows that I’m there.” (Interviewee 17)

“… taking the time out to make sure that you’ve dealt with something… It’s better to deal with it sooner than later because it just keeps building until it blows. And then, you end up having these stressor events that take days to get over because feelings are hurt on both sides, right?” (Interviewee 14)

“We make sure that we have time to be together. And we make sure that we don’t take each other for granted. That’s really, really important to both of us… we’re very connected and very open and very fortunate to have that type of relationship because I know a lot aren’t like that… but we work very hard at it.” (Interviewee 11)

**Push and third party.** Although providing a partner with space was frequently described as beneficial, several spouses noted the importance of pushing their partner to communicate under certain conditions. Specifically, 23.7% (n = 9) of spouses described having to encourage their partner to communicate their needs. For some spouses, these communication efforts were described as being subtle, such as asking indirect questions. For others, these efforts reflected more direct forms of communication (e.g., confronting a partner). For spouses who reported using this technique, responses were largely driven by spouses’ care and concern for their
partners, with several interviewees describing their partner’s limited support network as a primary driver of pushing their partner to communicate.

“Forcing him to at least talk about things. I mean, I hate doing that, but because he doesn’t have-- if I knew he had someone he went to with [his] problems, I’d feel a lot more comfortable about it, but he doesn’t have any close friends or close family. So I know it’s me or nobody.” (Interviewee 10)

“So, being able to call him out on it and in an appropriate setting; not in front of people, but maybe later on that night, saying, “Okay, you know what? Let’s hear it, get it you’re your chest because something’s bothering you and you just need to spill your guts.” So, I’d poke a little bit that way sometimes, I guess you could say. When you say nothing is bugging you and I can tell there is, I’m going to call you out on it.” (Interviewee 36)

Along with pushing a partner to communicate, several spouses described the value of having a third party (e.g., coworker, family member, psychologist) assist with support efforts. For many spouses, encouraging their partner to seek support from others was described in relation to their limited knowledge of the field, or lack of confidence in their ability to provide the right type of support. However, encouraging a partner to seek support from external sources was often seen as a supplement to the support provided at home. Interestingly, one spouse who also worked as a first responder described the benefit of having friends who work in different fields so that she and her partner could escape from their work-related stressors. Thus, third party supports can be beneficial both in terms of sharing similar experiences, as well as helping first responders disassociate from work stress.
“But I know he tends to talk to a lot of people at work that are in the similar field, just because they have similar experiences. So, they can talk about what they’re going through a little bit better. Luckily, he has some family members that are also in the field, so he does talk to them occasionally when needed.” (Interviewee 17)

“… encouraging him to talk to someone with more knowledge and tools to help him professionally, but not pressuring him to do it was helpful for him.” (Interviewee 21)

“Yeah, you definitely need a network of friends inside the field, as well as outside the field because sometimes you just need to talk to people who have no idea what it is that you do… So, I find a little bit of both helps.” (Interviewee 38)

Instrumental, informational, and self-esteem support. Additionally, several spouses reported using strategies related to instrumental (10.5%; n = 4), informational (7.9%; n = 3), or self-esteem support (7.9%; n = 3). Such strategies include tangible supports (e.g., making dinner, cleaning the house), information (e.g., providing alternate perspectives), and validation (e.g., affirming a partner’s capability, reassuring that they did the right thing in a situation). Together, responses highlight the range of strategies that spouses use to support their partners, which were often described as supplemental, or used in combination with other strategies (e.g., emotional support).

“I think for me, what I do is anticipate his needs. So, I get a sense of his schedule at the beginning of each week and I can tell… this is the day when he’s not going to be feeling well. So, what can I do? So, I’ll make him dinner or I’ll make sure I’m on alert or I’m in a good state of mind. So, more like planning and anticipating based on his work schedule.” (Interviewee 01)
“Sometimes I try to draw upon my own experiences in my workplace even though I don’t do the same job, I know of other things that have gone on that might be similar to what the situations he’s in, and try and draw on that knowledge to help provide some support.” (Interviewee 08)

“… sometimes I ask him questions I already know the answer to… like, as far as a procedure, right?… So he can tell me about it. And the idea is that I just want him to say it out loud so that he [understands he] knows [it]. Because every once in a while when these things don’t go well, even if it’s just stressful and rationally he feels like he wasn’t—he’s not good enough or he’s not good at his job, and sort of encourage him to go through the steps. So that he can hear how capable he is, I guess.” (Interviewee 28)

Unsuccessful strategies. In addition to the effective strategies identified by spouses, interviewees described eight support strategies they perceived as unsuccessful, including pushing their partner to communicate and providing unwanted advice or opinions, among others (see Table 17).

Table 17

Unsuccessful Support Strategy Code Frequencies (n = 38)

<table>
<thead>
<tr>
<th>Code</th>
<th>Example</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Push</td>
<td>Pushing partner to communicate or seek support</td>
<td>19</td>
<td>50.0</td>
</tr>
<tr>
<td>Opinion</td>
<td>Unwanted advice or opinion</td>
<td>8</td>
<td>21.1</td>
</tr>
<tr>
<td>Third party</td>
<td>Unwanted support from an external source (e.g., professional, friend, colleague)</td>
<td>3</td>
<td>7.9</td>
</tr>
<tr>
<td>Mirror</td>
<td>Reflecting a partner’s actions back to them</td>
<td>2</td>
<td>5.3</td>
</tr>
</tbody>
</table>
Ignore  Ignoring or staying silent about an issue  2  5.3
Burden  Taking on demands or attempt to resolve issues alone  2  5.3
Space  Providing space; letting partner initiate/guide support  1  2.6
Intimacy  Attempts at physical or emotional intimacy with partner  1  2.6

Note. Frequency and percentages were calculated using the total sample size (n = 38) as the denominator.

**Push.** Although several spouses described pushing their partners to communicate as a necessary support strategy, this approach was more frequently described as unsuccessful. To demonstrate, 50% of interviewees (n = 19) described pushing their partner to communicate or seek support as ineffective. Moreover, several spouses described the negative outcomes associated with these efforts, including constrained communication between partners and relationship conflict.

“I guess just pushing. If you’re like, “I want to be supportive, tell me what you need” and pushing, “Well, what happened? Well, what’s bothering you?” And just pushing at the wrong time, just doesn’t work.” (Interviewee 33)

“. I’ve learned to just back off a bit for a little while. Until he’s ready to approach. If I push it too much, that he closes off a little bit more. And then there’s no room for conversation later.” (Interviewee 11)

“I think the main difficulty I’ve had is trying to pull stuff out of him when he’s not quite ready to talk. So, if the stress that he’s felt is still kind of raw with him… if I try to get
some stuff, or information out of him right when he gets home from work, that’s probably the worst thing I could do (laughing).” (Interviewee 17)

“… pressuring didn’t work. That ended in fights of, you know, “I can’t” or “I don’t want to” or “It’s none of your business.” …” (Interviewee 12)

**Opinion.** Similar to pushing partners to communicate, spouses reported providing opinions or advice as an unsuccessful support strategy. Specifically, 21.1% of spouses (n = 8) described this strategy as ineffective, referencing the unwanted nature of these efforts. These responses highlight a misalignment between a partner’s needs (e.g., emotional support) and what was provided in the situation (i.e., informational support). Interestingly, several spouses reflected on this misalignment, suggesting that providing effective support is a learned process. In particular, these responses highlight the importance of letting the receiver dictate what support would be most effective for them at that time.

“… [voicing] my own opinion when he’s just looking for a sounding board… just being mindful that-- not that he doesn’t want my opinion, but he’s just looking to vent at the time instead of looking for concrete strategies to use.” (Interview 08)

“I don’t challenge him on his thoughts (laughing) or his perceived ideas on certain things because we just get into an argument over it (laughing).” (Interviewee 05)

“So, whether it’s your spouse or a friend that’s going through depression or whatever it is, everybody wants to offer advice sometimes (laughing). But, that isn’t always helpful because it’s not the right answer for the person. And my husband and I have come to see that everybody’s journey is their own… so, respecting that, I guess.” (Interviewee 35)
*Miscellaneous support strategies.* Although less frequent, spouses reported using various other support strategies, including bringing in a third party (e.g., family members; 7.9%; n = 3), mirroring a partner’s actions (5.3%; n = 2), ignoring issues (5.3%; n = 2), shouldering the burden (5.3%; n = 2), providing space (2.6%; n = 1), and attempts at emotional or physical intimacy (2.6%; n = 1). As with providing unwanted opinions, these strategies often highlighted a misalignment between the provider’s efforts and the receiver’s needs. Together, these strategies reinforce the importance of communication between partners, whereby both individuals recognize and vocalize their personal support needs and discuss the nature of the support provided.

“When I am silent, and don’t say anything, it kind of ends up being like a Pandora’s box. Like, if he doesn’t come to me first then I blow up usually saying like, “Okay, enough. I don’t have to deal with this. Either tell me what’s the matter or get over it” kind of thing, which is not the most welcoming.” (Interviewee 37)

“But I feel like I literally tried to give him all the space he needed. That didn’t really work, it just allowed him to kind of go into this crazy hole.” (Interviewee 03)

“… any extra effort putting to being extra loving or kind or any of that sort of stuff is lost because they can’t deal with that right at the moment… they can’t go to that spot where they feel loved or feel any sort of physical attraction.” (Interviewee 14)

**Summary of support outcomes.** Content analysis of support outcomes highlighted the range of support strategies used by spouses to support their partners. These strategies included both direct (e.g., emotional support, push, informational support, self-esteem) and indirect supports (e.g., connect, space, third party). Together, descriptions of successful and unsuccessful
strategies reinforced spouses’ perceived challenges providing effective support (e.g., in relation to ability or capacity) and the importance of alignment between the support provided and the receiver’s needs in support outcomes. Specifically, using strategies that match a partner’s needs are more likely to be effective in the long-term.

Ultimately, emotional support was described as most effective, particularly when initiated by the partner after taking time to process a work-related stressor. Although spouses frequently reported wanting to push their partners to communicate out of care and concern for their well-being, this was often seen as an ineffective strategy and was frequently associated with relationship conflict. Together, these results suggest that there may be an opportunity for couples to build communication boundaries within their relationships to help establish norms and expectations around communicating individual needs and evaluating support provision. Examples of communication strategies employed by spouses include the use of code words (i.e., to check-in with one another) and developing relationship rules regarding help-seeking behaviours (e.g., partners must seek support within three days of experiencing a stressor).

Future Supports

To assist first responder relationships, spouses were asked to describe their strengths, potential areas of improvement, and desired resources for themselves and their families to help guide future supports. Together, these responses provide insight into future research, and the organizational and community-based resources that would be most effective for first responders and their families.

Strengths. To explore the areas that spouses perceive to be their strengths, interviewees were asked to describe what they do particularly well in terms of supporting their partners (Research Question 7). Thematic analysis of responses revealed two themes including spouses’
personal qualities (e.g., being understanding and responsive), and their knowledge and experience (e.g., formal training, knowledge of the profession).

**Personal qualities.** The first theme that emerged centered on spouses’ personal qualities, including perceiving themselves as understanding and responsive to their partner’s needs. Here, spouses reiterated the importance of alignment, with responses emphasizing the value of emotional support and open communication. However, underlying the efficacy of support efforts was the spouse’s personal traits or qualities. Here, responses highlighted the importance of patience, trust, and openness in recognizing and responding to a partner’s needs. Together, these qualities shape the home environment, thereby creating a safe space for partners to seek support.

“I’d like to think I’m open and understanding to what they want to say… I want to make sure I try and give them a non-judgmental open environment where they don’t feel uncomfortable coming to me when they are upset. So, if we are going to be emotional, it’s okay to be emotional. If we’re not going to be emotional, it’s okay not to do that… I want to make it a safe place if there is something they need to talk about, no matter what it is.” (Interviewee 19)

“… I would say just being accommodating of the stressors associated with the job. That’s what I try to do. I may not be successful all the time, but I think I’ve gotten better at it as time goes on.” (Interviewee 08)

“You just need to make sure that they know that if they need you, that you’ll drop everything for them. And not pretend it, you actually have to do it, you can’t just say you’re going to do it.” (Interviewee 11)
“I guess the biggest thing is just believing him. If he says he needs help then I’ll do whatever I can to make sure that happens. And I don’t put stuff off when it comes to his health like that.” (Interviewee 36)

Knowledge and experience. In addition to their personal qualities, spouses acknowledged the value of their knowledge and experience, including formal training or education (e.g., surrounding mental health), and knowledge of their partner’s profession. Here, spouses with similar or overlapping occupational backgrounds emphasized the value of a common language, with responses focusing on their ability to understand their partner’s job demands and provide advice or suggestions. In particular, spouses who were also first responders emphasized the value that comes from a shared understanding of work-related stressors. Interestingly, responses emphasized informational support, which may fail to address the emotional nature of work-related stressors. Interestingly, one spouse noted the difficulty of recognizing a partner’s needs at home despite their background formal training. Thus, although knowledge and experience can be an asset, it can be difficult for some spouses to transfer these skills to the home domain.

“Coming from a healthcare field myself, I think it allows us to be more open in terms of talking about our day because I understand what’s being said. I don’t need the medical terminology explained. When he talks about a patient, I understand what he’s saying.” (Interviewee 21)

“But I think being in the same line of work, it’s probably easier for me to understand and not ask so many questions, like, “why did you do that?” “why did you do this?” I just know where he’s coming from.” (Interviewee 06)
“I mean, because we do the same job—if he’s got any issues, he’s able to come home and talk to me about it ‘cus [sic] I understand the job and things that happen, where not many people can understand our job.” (Interviewee 16)

“I have a [background in mental health] and I almost never saw this coming… And I have all the education and experience in the world, right?” (Interviewee 03)

**Areas of improvement.** To explore potential areas for future research and educational-based initiatives for spouses, interviewees were asked to whether there is anything they think they can improve on in order to better support their partners (Research Question 8a). Thematic analysis of responses revealed two themes, including spouses approach to support provision (e.g., demonstrating patience and responsiveness), and managing their own support needs.

**Approach to support provision.** Although spouses frequently reported patience and understanding as a strength, many also felt that this was an area that could be further improved. Here, interviewees described patience in terms of providing ongoing support (e.g., when providing similar suggestions or advice over time), and in understanding the impact of their partner’s job demands on their behaviour (i.e., not taking things personally).

“But I think there’s always [room for] improvement, no matter what you’re doing. You just have to reflect on what you’re doing and if it’s working; keep letting it grow. If it’s not working, figure out a way to make it work – problem solve.” (Interviewee 11)

“And know that how he’s acting is not a reflection of me because I will take it personally, like, “what did I do?” And then I’ll start getting defensive, because to me, I’ve been at home taking care of the kids. Why are you coming home and yelling at me, you know?
So, it’s taken a while for me to understand, it’s not a complex against me, it’s what he does for a living.” (Interviewee 37)

As part of improving their approach to support provision, spouses also described the importance of being more responsive to their partner’s needs. For several spouses, this discussion surrounding sacrificing their personal resources (e.g., time, energy) to anticipate a spouse’s future needs. For example, several spouses described an opportunity to provide additional instrumental support to their partners to alleviate future stress experiences (e.g., doing more around the house). Interestingly, several spouses referenced a desire to be more responsive to their partner’s needs but described a lack of knowledge or understanding of how to do so.

“… being able to provide the time when he needs it. Being able to give more of myself to him when he needs it.” (Interviewee 14)

“So, with my schedule, because I do so much work at home, sometimes I just need to designate time for myself to get work done. So, I could probably be using that time to do other things around the house. But sometimes, I think it’s just a matter of balance and seeing what’s actually realistic to do.” (Interviewee 02)

“Well, absolutely, you can always improve on things. What can I improve on? I don’t really know, because I don’t really know exactly how best to help him and he’s good at hiding it. Well, maybe he isn’t hiding it, maybe he just genuinely isn’t too affected by things. But, I don’t see how that’s possible. They’ve got to carry a lot of weight on their shoulders. So, I would love tips on how to better help them.” (Interviewee 20)
“Maybe getting to know his cues a little bit better, sometimes. Like, where he might be dealing with something versus when he just wants to have alone time. I always take it to be the same thing.” (Interviewee 22)

**Personal support needs.** In addition to improving their approach to support provision, spouses also described a desire to modify their own support needs in order to minimize their partner’s stress experiences. Although one spouse vocalized a desire for their partner to provide more instrumental support around the house to help reduce her stress, spouses more frequently described an opportunity to reduce or internalize their own stress experiences as a protective mechanism for their partners. Interestingly, several spouses described the importance of self-care in support provision, such as seeking counselling or taking time for themselves outside of the relationship in order to be a more effective support provider. This strategy reflects a more active approach to modifying personal support needs, which was described as positively influencing the relationship and home domain.

“… probably just maybe not taking it out on him so much… it’s not that I criticize but he might come home after the fourth shift in a row and I’ve had it with the kids. Like, it’s been really, really hard and sometimes it’s a bit of an unleash… But I feel bad because I can see the look on his face is like, it’s not what he wants to hear when he comes home. And I get it. But sometimes it’s just [that] I need to vent and there’s no one else to vent to.” (Interviewee 24)

“… when I’m upset or whatever about a call, or had a bad day, instead of venting towards her or taking it out on her, I could definitely take a deep break and not let her be my punching bag or whatever. ‘Cus [sic] I do that sometimes.” (Interviewee 38)
“Yeah, definitely self-care is number one. Whether you have a diagnosis or not in the relationship. I think the spouse needs to focus on self-care and finding that time to stay balanced, as much as possible... I think when you can’t improve on your [partner’s] situation, you need to always remember that you can improve on yourself and if you do that, it will have an impact on your relationship together and on your family.”
(Interviewee 35)

**Desired resources.** To explore opportunities to enhance organizational and community-based resources for first responders and their families, spouses were asked if there were any resources that would be helpful for them, as well as those that would be beneficial for their families (Research Question 8b). Interviewees described six potential resources, including organizational and provincial supports, as well as training, education, and peer support for both themselves and their partners (see Table 18).

**Table 18**

*Desired Resources Code Frequencies (n = 38)*

<table>
<thead>
<tr>
<th>Code</th>
<th>Example</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizational supports</td>
<td>Employee Assistance program (EAP), benefits, family-friendly policies</td>
<td>32</td>
<td>84.2</td>
</tr>
<tr>
<td>Training/education</td>
<td>Education on partner’s job demands, available supports, recognizing</td>
<td>25</td>
<td>65.8</td>
</tr>
<tr>
<td>(spouse/families)</td>
<td>distress signals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peer support (spouse)</td>
<td>Opportunities to seek support from other families of first responders</td>
<td>18</td>
<td>47.4</td>
</tr>
<tr>
<td>Training/education</td>
<td>Education on mental health</td>
<td>11</td>
<td>28.9</td>
</tr>
<tr>
<td>(first responders)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peer support (first</td>
<td>Opportunities to seek support from other first responders</td>
<td>11</td>
<td>28.9</td>
</tr>
<tr>
<td>responders)</td>
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Organizational supports. The most frequently mentioned resource was organizational supports, with 84.2% of spouses (n = 32) describing the importance of internal programs and supports for first responders and their families. Despite a recognized increase in available organizational programs, spouses expressed a need for enhanced supports for themselves and their partners. These responses reinforced earlier themes associated with a perceived lack of support from the organization for both first responders and their families. Specifically, spouses described the importance of improving Employee Assistance Programs and benefits packages, including access to counselling for themselves and their partners, and the development of mental health directives and family-friendly policies (e.g., related to scheduling) to support first responder families. Responses emphasize the importance of accessible, ongoing, and proactive supports for first responders and their families.

“Well, I wish that we had more EAP counselling. For him to be a paramedic and have [minimal] counselling sessions… That’s quite disgusting in the sense of what he has to deal with. And that we don’t have anybody really trained specifically for first responders in our area, or PTSD… we don’t want our first responders getting diagnosed in the later stages when they go off on workman’s comp [sic]. Or when they drink themselves to death. Or they kill themselves. Or their marriages are crumbling and they have nothing left.” (Interviewee 05)

“So, we were doing [couples counselling] for a while… Just to better us and learn to communicate better because that was something that was really difficult… his resources
were diminishing because we as a couple were getting [counselling], which I found really disappointing… I said, “we have to stop taking out of yours because if god forbid something happened, we need that available for you”, you know?” (Interviewee 37)

“… definitely family support… my husband’s getting counselling through a psychologist and nobody else is… I think it’s very disjointed because he’s doing work on himself, which he needs to do, but the rest of us are trying to figure out how to support him, how to move the new normal and there’s nobody helping us do that… if individuals are working on themselves, that’s great. But somehow we need to come together and learn how to work together as a family unit.” (Interviewee 35)

“it should start by reviews of their stress policies, and exactly what causes it, and not just give the first responder a day before going back to work. Some first responders will need weeks after a traumatic event before going back to work. Right now, … they’ll give you the end of the day off, and then, next day come back to work.” (Interviewee 18)

Additionally, several spouses described not knowing what supports were available in their partner’s organization or who they could turn to for help. Interestingly, delivering information to spouses was identified as a challenge for first responder organizations by one interviewee. Thus, there may be an opportunity to explore specific mechanisms to effectively communicate program availability to first responder families. For example, several spouses noted that there may be an opportunity for organizations to connect and share information with spouses when first responders are first hired (e.g., hosting a family information day). However, it is important that such initiatives be presented in an inclusive way as one spouse reported having a negative experience during a family education event run by a group affiliated with her partner’s organization.
“… most paramedic services do have psychologists or a team that [you could] call, but I don’t know how to get in contact with them if I notice he’s struggling. So, having that information given to them, like, “here is [sic] some numbers to call if you feel like your partner is struggling”; that kind of thing would be helpful.” (Interviewee 17)

“… the biggest issue that we’re finding [in the organization] is getting information to a secondary market when the first market isn’t willing to share this information.” (Interviewee 09)

“… there was a little family day. They pull all the families aside… and give them this lecture on how your spouse is going to change and things are going to be different… and there [was] an underlying message of like, “just tolerate that, and just deal with it”, you know, “no matter what the needs of your family are, that need is move going to have to come first.” So, if your kid needs to go to soccer practice, well Mom, you’re going to have to pick up all the slack because they have to deal with whatever they’ve just seen.” (Interviewee 03)

**Training, education, and peer support for spouses and families.** In addition to organizational supports, many spouses described the potential benefit of training and education for first responder families (65.8%; n = 25), and peer support for spouses to connect with one another (47.4%; n = 18). Specifically, spouses described a desire to learn about their partner’s job demands, how to effectively communicate information about their partner’s occupation to their children, and learn about techniques and strategies (e.g., related to support recognition and provision) to better support their partners.

“I feel that maybe those who are spouses or partners of first responders could benefit from something that’s more specific to how to support your loved one that is a first
responder because they go through something completely different to what every other
day people go through… I think that those supports would [be] beneficial, because how
do you know what they’re going through unless somebody’s helping you who’s been
there themselves, right? You’re kind of blindly walking through it and hoping that you
don’t say or do the wrong thing.” (Interviewee 15)

“I can’t stress enough that there is not anything out there at this point in time that tells
you when you marry a first responder of some sort, or get into a relationship with a first
responder, that you’re going to be able to deal with every stressor that they see. There’s
absolutely nothing that says, “I love this person, but I don’t know the person that they’re
going to become when they become stressed.” (Interviewee 14)

“… I do think too that a more first responder-specific, either support group or education,
whatever the case may be, would be beneficial as well. Because I think it’s easier to talk
with people and get support from people who can really empathize and really understand
what you’re going through.” (Interviewee 21)

**Training, education, and peer support for first responders.** Similarly, spouses
acknowledged the opportunity for organizations and community-based organizations to provide
first responders with additional training and education (28.9%; n = 11), and peer support (28.9%;
n = 11). Responses highlight the importance of educating first responders on mental health to
reduce stigma and increase help-seeking behaviours. Additionally, spouses emphasized the value
of partners seeking support from those with similar work experiences. With respect to formal
peer support programs, several spouses noted the importance of creating a safe environment for
first responders to seek peer support at work, emphasizing the importance of trust in peer
relationships (e.g., member chosen peers versus organizationally appointed representatives).
“I don’t think they get enough training in that sense to educate themselves to see what happens when one of their partners or fellow coworkers is going through something. I don’t think they get it enough because I think—they’re seeing it tainted because when they’re on the road and they deal with what they call the ‘crazies’ all the time, I think it’s very hard for them to see it in themselves or somebody they know. So, they just brush it off, make fun of it because… I think it’s too hard for them to deal with that it’s happening to them.” (Interviewee 15)

“… just anything that would allow him to have some buy-in [for] external support. I don’t feel like I need resources for myself in supporting him, but I’d like him to understand and buy into the values of a peer support group or therapy or counselling, and I feel a little bit tapped in that respect.” (Interviewee 01)

“… a free support group or peer support group that you can go talk to about the challenges that you’re having or any stress that you’re having. Just knowing that there’s a support team there whether it’s from your employer or in the community, just knowing somewhere that you can go and be safe and know that someone has your back other than your friends or whatever.” (Interviewee 38)

“And people who don’t have that outlet at home, they need to have that outlet somewhere. And I think that peer support needs to come from the bottom-up not top-down.” (Interviewee 10)

_Provincial and federal supports_. With respect to broader supports, 15.8% of spouses ($n = 6$) acknowledged the changes occurring at the provincial and federal levels (e.g., PTSD legislation), but suggested that there is more work to be done surrounding the recognition, diagnosis, and treatment of trauma-related disorders for first responders. In particular, one spouse described the mismatch between current practices regarding treatment coverage and the
cumulative effects of trauma for first responders. Thus, there remains an opportunity to enhance the supports available for first responders and their families at the organizational, professional, and societal levels.

“.. the way WSIB is set up… say you had PTSD as a result of a traffic accident. A single, fairly simple motor vehicle traffic accident. Then they deem that in twelve treatments you should be back to work and back doing what you did before. But they don’t take into account… 30 years, 10 years, 15 years of cumulative trauma. And to sort that out, I visualize it as a ball of wool that’s been all tangled and snarled up. So, you can’t just pull the strand and get the strand away from the ball of wool, it’s all entangled. And to try and sort that out, there’s no way you can do that in twelve sessions.” (Interviewee 35)

**Summary of future supports.** Despite spouses’ self-reported strengths surrounding their ability to provide support, including their understanding and responsive nature, and relevant knowledge and experience, many spouses reported a desire for self-improvement. Specifically, spouses emphasized the importance of continuing to hone their approach to support provision, and managing their personal support needs, in order to better support their partners. Responses reinforced spouses’ underlying motivation to provide support out of genuine love and concern for their partner’s well-being. At times, this desire may come at the expense of spouses’ own support needs and personal resources.

To inform future directions, spouses identified organizational, professional, and community-based initiatives that would benefit themselves and their families. Responses emphasized education, peer support, and skills-based training for both partners; highlighting opportunities for organizations to enhance supports internally (e.g., through EAP and benefits for first responders and their families, mental health directives, family information sessions, etc.), as
well as partner with third party resources or community groups to extend support outside of the organization (e.g., access to skill-based trainings, community-based peer supports, etc.). In combination with the continued development of provincial and federal programs, there is an opportunity to create a network of resources to support both first responders and their families.

**Discussion**

Social support has been widely recognized within the occupational health literature as a potential buffer that can mitigate the negative impact of work-related stressors on individual functioning (Cohen & Wills, 1985; Jacobson, 1986). The majority of research on social support has used aggregate measures of perceived support which limits our understanding of the underlying support process and/or the nature of the support received (Thoits, 2011; Walen & Lachmen, 2000). This limitation is particularly problematic for high stress occupations, including police, fire, and paramedics, as little is known about the contextual factors associated with these professions and how they shape support interactions. Moreover, given the nature of demands faced by first responders, including high call volume and frequent trauma exposure (Alexander & Klein, 2009; Corneil, 1995; Reynolds & Wagner, 2007), there is a need to ensure the support received by first responders is effective at reducing associated distress experiences.

Building on the findings from Chapter 1, the present study addressed previous limitations by exploring the support process from the perspective of support providers. Despite seeking support from others, results from the PLS-SEM analyses in Chapter 1 demonstrated no relationship between the support enacted by officers and their level of impairment. The non-significant relationship between enacted social support and impairment suggested that there may be contextual factors present that influenced the efficacy of the support provided. Although individuals reported seeking support from various sources, exploratory findings from Chapter 1
highlighted the importance of spousal support, as spouses were identified as the most commonly sought source of support, as well as the most frequently reported source of effective support for officers. Given this, spousal support was deemed the most appropriate starting point for exploring the contextual factors that shape support provision. Consequently, the present study used a mixed-methods approach with spouses of first responders to explore the nature of support interactions within first responder relationships.

Overall, quantitative findings demonstrated that spouses were highly motivated to provide support for their partners out of love, concern, and interdependence, as well as the enjoying the satisfaction of helping and feeling as though they were capable. Consistent with previous literature, these motivations were associated with higher levels of relationship satisfaction (Feeney & Collins, 2003). However, for some spouses, lower levels of relationship satisfaction were associated with motivations to avoid providing care or support. Consistent with previous research, such motivations included spouses feeling as though they lacked the skills, time, or concern to provide support to their partners (Feeney & Collins, 2003). Thus, while many spouses were highly motivated to provide support to their partners; for some, there may be challenges or barriers present that influence their ability or desire to provide support. To explore these nuances, qualitative interviews were conducted to examine the support context, process, and outcomes, as well as directions for future initiatives. This discussion will focus primarily on the qualitative results related to each aspect of support interactions; limitations and implications will be discussed further in Chapter 3.

Qualitative responses regarding the support context reiterated the stressful nature of first responder occupations. Although previous research has focused on the strain faced directly by first responders, findings from the qualitative interviews suggest that stress experiences extend to
spouses and the home domain. Consistent with the literature on spillover and crossover (Bolger, DeLongis, Kessler, & Wethington, 1989; Westman, 2001), spouses’ responses reinforced the findings about the negative impact of scheduling demands (e.g., being on call, shiftwork) and work-related stressors (e.g., impact, work identity) on both their partners and themselves. In addition to experiencing the crossover effects of strain, findings demonstrated the compounding nature of first responders’ occupational stressors on their spouses. Specifically, in addition to routine family stressors and their own occupational demands, spouses reported facing added pressure to manage household demands (e.g., childcare) while regulating feelings of concern and emotional reactions to a partner’s occupational demands (i.e., emotional labour). On top of these unique pressures, interviewees noted that they are often required to be vigilant to their partner’s support signals or cues, even in cases where their partner openly discusses or seeks support for work-related stressors. These findings suggest that spouses face immense pressure to meet demands in both the work and home domains, in addition to recognizing and responding to their partner’s support needs.

In addition to the complexity associated with the support context, spouses reported challenges associated with their personal capacity to provide support, as well as occupational barriers that constrain first responders’ willingness to seek support. For spouses, such challenges included their personal resources (e.g., time, energy), as well as their knowledge, skills, abilities, and motivation. Spouses’ concern regarding their ability to provide support is consistent with the caregiving interaction proposed by Collins and Ford (2010). According to this model, individual variables (e.g., skills/abilities, resources, motives/goals) moderate a caregiver’s behaviour, which subsequently shapes the efficacy of the support received. Although the model is framed from the perspective of the support receiver, results from the present study demonstrated that these
moderators are salient for support providers as well. Thus, there may be an opportunity to target these variables in future intervention research to enhance the support provided by spouses to first responders.

Complementary to spouses’ ability to provide support, interviewees also discussed the barriers preventing their partners from seeking help. Consistent with previous research (e.g., Corrigan, 2004; Fox et al., 2012; Hirschfeld, 2005), stigma, confidentiality, and fear of traumatizing others were examples of these impediments. These barriers were often associated with first responders attempts to cope alone (e.g., by suppressing emotional reactions). Interestingly, despite first responders attempts to separate the work and home domains, findings demonstrated that these attempts to cope alone were often associated with spouses reported experiences of distress, including feelings of helplessness, fear of missing distress signals, and concern for their partner’s well-being. Thus, first responders’ attempts to protect their spouses from work-related stressors may inadvertently result in distress experiences for spouses. Together, these responses reinforced the negative impact of stigma and professional culture on first responders and their families. First responder organizations must focus on addressing these systemic issues in order to create a working environment in which individuals feel comfortable disclosing distress and seeking support when needed.

Despite the reported challenges associated with providing support, some spouses reported positive changes in the support process over time, including feeling more comfortable providing support and their partner being more willing to seek support. Additionally, spouses frequently reported their partners as capable of reciprocating and providing support for them. However, there may be an opportunity to enhance the alignment between the support provided by first responders and the spouses’ needs. These results are promising as they suggest that
communication and support efforts reflect learned processes in many relationships. Thus, there may be an opportunity for future intervention research to focus on developing communication strategies and norms with first responder couples to enhance the quality of support provision and promote long-term functioning and relationship quality.

Consistent with the quantitative survey results and findings from Chapter 1, emotional support was most frequently reported as a successful support strategy. Specifically, spouses highlighted the importance of active listening, and demonstrating care and empathy to their partners. Emotional support was described as particularly effective when paired with providing a partner with space. Specifically, combining these two strategies allows first responders to dictate both the type and timing of support most appropriate for their needs. The importance of emotional support is consistent with previous social support research (e.g., Collins et al., 2010; House, 1981; Kaufmann & Beehr, 1989); emphasizing the emotional nature of work-related stressors for first responders.

Despite the recognized importance of emotional support, many spouses emphasized a desire to provide advice to their partners, reflecting more tangible support aimed at addressing the work stressor. Although stereotypes imply that this approach is more common with men, results from the present data suggest that this strategy is frequently used by both men and women. Spouses’ emphasis on their ability to provide their partner with tangible rather than emotional supports is a particularly interesting as alignment between the support provided and a receiver’s needs is crucial for support to be effective (Cohen & McKay, 1984; Kaufmann & Beehr, 1986, 1989; Viswesvaran et al., 1999). Moreover, in addition to providing the right type of support, previous research has suggested that support must be communicated in the right way in order to be interpreted as helpful by the receiver. For example, Semmer and colleagues (2008)
found that instrumental support (i.e., tangible supports, advice) was more likely to be perceived as helpful when communicated in a caring and understanding way. Specifically, communicating care signals the emotional meaning behind instrumental support; reflecting the provider’s genuine concern for the receiver’s well-being. These findings emphasize the importance of both alignment and communication in support provision; providing promising areas for future intervention research using education and skills-based training to enhance the efficacy of support interactions within first responder relationships.

Additionally, findings provided insight into the strategies that are frequently ineffective, including pushing a partner to communicate or seek support, providing unwanted opinions or advice, and bringing in unwanted support from external sources, among others. These strategies may reflect attempts to combat the occupational barriers that limit partners’ help-seeking behaviour. Despite this, these results highlight the importance of allowing first responders to dictate the nature of the support received. However, there may be an opportunity to build communication strategies and norms or expectations within relationships to encourage help-seeking behaviour and limit the problems associated with individuals attempting to cope by themselves.

With respect to future initiatives, spouses expressed a desire for resources for themselves and their families, including additional organizational supports targeting mental health for first responders, and educational or skills-based programs for both partners. Specifically, spouses described a desire to better understand the nature of demands faced by first responders, as well as available resources within their partner’s organization and the broader community. For first responders, spouses expressed a desire for more standardized approaches to mental health education and training, and for such programs to be formally reinforced within organizations.
(e.g., through paid incentives). By increasing the number of first responders participating in such programs, there may be an opportunity to help reduce stigma and normalize help-seeking behaviours across first responder professions. On a broader scale, spouses reinforced the importance of continuing to refine approaches regarding the identification, diagnosis, and treatment of trauma-related disorders. These responses highlight the importance of creating a network of resources including first responder organizations, community-based programs, and provincial and federal legislation to support the well-being of both first responders and their families.

Together with findings from Chapter 1, these results provide deep-level insights into first responders’ help-seeking behaviour and the challenges faced by spouses when attempting to provide support. Additionally, these findings highlight the support strategies that are most frequently effective, and the importance of aligning the support provided to a partner’s needs. Together, these results can inform future skills-based intervention research for first responders and their families. These implications and opportunities for future research will be explored in Chapter 3.
References


doi:10.1177/001872678904200205

doi:10.1002/da.22169


doi:10.1007/s11896-010-9070-y

doi:10.5465/amle.2016.0275

doi:10.1037/a0029341
doi:10.1006/jvbe.1999.1707

doi:10.1108/13639510210429446

doi:10.1196/annals.1364.001


doi:10.1371/journal.pone.0100663


Appendix P

Study Advertisement

Are you currently in a committed relationship with an emergency first responder? If so, we invite you to participate in an anonymous one-on-one phone interview conducted by researchers from the University of Guelph. This research will help establish a clearer picture of the unique challenges faced by spouses of emergency first responders, and their experiences providing support to their partners. Findings from this research will support future training programs for emergency first responders and their families.

Your participation in the interview is completely anonymous; there is no opportunity for your identity to be known to the research team. As compensation for your participation in the interview, you will receive a $20 Amazon.ca gift card.

In order to participate, you must: 1) be over 18 years of age, 2) be currently in a committed relationship, and 3) the partner must be employed as an emergency responder (i.e., police, fire, or ambulance).

For more information, please access the research consent form at:

URL:

After completing the consent form you will be able to access the preliminary questionnaire, which takes approximately 10 minutes to complete. After completing the questionnaire, you will have an opportunity to indicate your interest and availability for a one-on-one phone interview. In order to protect anonymity, once you start the survey you will be unable to save and continue later on – please start the survey when you have time to fully complete the preliminary questionnaire.

Thank you very much for your support!

Sincerely,

Grace Ewles,
University of Guelph

Dr. Peter Hausdorf,
University of Guelph
Appendix Q

Information & Consent Form

Consent to Participate in Research

Title of Project: A Qualitative Investigation of Couple-Based Interactions in Emergency First Responder Families – Preliminary Questionnaire

My name is Grace Ewles, I am a PhD candidate Industrial-Organizational Psychology at the University of Guelph working with Dr. Peter Hausdorf. You are invited to participate in a preliminary questionnaire, which will help establish a clearer picture of the interactions between emergency first responders and their spouses. Findings from this research will support future training programs for emergency first responders and their families.

Procedures

Participation will take approximately 10 minutes to complete the online questionnaire, which involves responding to questions about your relationship. Upon completion of the questionnaire, you will have an opportunity to indicate your interest and availability for a one-on-one phone interview with the primary researcher. The interview will take approximately one hour, and will include a $20 Amazon.ca gift card as compensation, sent via email.

Confidentiality

Your participation in this survey is completely anonymous. At no point during data collection process will you be asked to provide identifying information about yourself; additionally, IP addresses will not be collected. Should you wish to participate in the interview, we encourage participants to create a separate study email that has no identifying information in the email address (e.g., using Gmail) to protect your anonymity. If you indicate your interest and availability in this research, this email is the only way researchers will contact you. Additionally, you will be provided with the phone number for your scheduled interview so that we will not have access to your contact information. For information on creating a separate Gmail account, please visit https://support.google.com/mail/answer/56256?hl=en

Due to the anonymous nature of the preliminary survey, your responses cannot be removed once submitted. All data will be stored electronically for seven years without identifying information, accessible only by the project director – Dr. Peter Hausdorf. The results will be combined and summarized across participants.

Participation and Withdrawal

Your participation in this study is completely voluntary. If you volunteer to be in this study, you may withdraw at any time. Should you wish to withdraw, we recommend you delete your study email, which will indicate to us that you no longer wish to participate in the interview. If you choose to withdraw from the study during your interview, your data will be deleted from the database. You may skip any questions that you do not want to answer and still remain in the study. There are no consequences if you choose not to participate or to withdraw from the study.
Risks and Benefits
As some of the questions focus on your relationship, the primary risk of participating in the survey is that potential stressors may become salient to you. As the interview is anonymous, please do not use these tools as a way of communicating that you are in need of help as we will be unable to provide support directly. If participating in the interview makes you aware of stress that you are feeling and you require support to deal with this, please contact your local crisis centre for your province through the Canadian Association for Suicide Prevention at http://suicideprevention.ca/

One benefit of participating in the survey is that you may gain insight into the potential needs of your partner, as well as of your own coping and social support needs. Your responses to the questions themselves can create this insight. Additionally, this research will help inform the design of a training program for emergency first responders and their families. This line of research is incredibly important to the development of mental health initiatives and organizational programs designed to support emergency first responders and their families across Canada.

Rights of Research Participants
You are not waiving any legal claims, rights or remedies because of your participation in this research study. This study has been reviewed and received ethics clearance through the University of Guelph Research Ethics Board. If you have any questions or concerns about your rights as a research participant, please contact: Director, Research Ethics; 519-824-4120, ext. 56606: reb@uoguelph.ca. If you have any questions or concerns about this study, or for a summary of the results contact either of the researchers listed below.

<table>
<thead>
<tr>
<th>Project Director:</th>
<th>Primary Researcher:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. Peter Hausdorf</td>
<td>Grace Ewles</td>
</tr>
<tr>
<td>519-824-4120 ext. 53976</td>
<td>XXX-XXX-XXXX</td>
</tr>
<tr>
<td><a href="mailto:phausdor@uoguelph.ca">phausdor@uoguelph.ca</a></td>
<td><a href="mailto:gewles@uoguelph.ca">gewles@uoguelph.ca</a></td>
</tr>
</tbody>
</table>

I agree to participate in the preliminary questionnaire. I understand that I can withdraw this consent at any time without penalty. Click Yes to continue to the preliminary questionnaire. Click No to exit from the preliminary questionnaire.

We invite you to print a copy of this consent form for your personal records.
In addition to the present study, we will be designing a training program for emergency first responders and their families. As such, we invite you to keep your study email so that we can contact you about future research opportunities.

I agree to being contacted about future research opportunities using the email I provide below. I understand that I can withdraw this consent at any time without penalty. Click **Yes** to continue to the survey. Click **No** to exit from the preliminary questionnaire.

We invite you to print a copy of this consent form for your personal records.
Appendix R

Table 19

*Missing Data Demographic Characteristics (n = 22)*

<p>| | | | |</p>
<table>
<thead>
<tr>
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<td>n</td>
</tr>
<tr>
<td>Sex</td>
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<td></td>
</tr>
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<td></td>
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</tr>
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<td>Female</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>38.05</td>
<td>2.01</td>
<td>20</td>
</tr>
<tr>
<td>Relationship Length (Years)</td>
<td>11.79</td>
<td>1.89</td>
<td>19</td>
</tr>
<tr>
<td>Relationship Status</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Separated or divorced</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Married or cohabitating</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Partner’s Occupation</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Police</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fire</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paramedic</td>
<td>9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partner’s Tenure (Years)</td>
<td>10.43</td>
<td>2.15</td>
<td>7</td>
</tr>
</tbody>
</table>

*Note.* 62 participants had missing data with 40 of these failing to provide demographic or survey information.
Appendix S
Motivations for Caregiving

Please answer each of the following questions by selecting the appropriate response corresponding to the following scale.

```
1  2  3   4   5   6   7

Strongly Disagree  Neither Agree nor Disagree  Strongly Agree
```

To what extent do you agree with each of the following statements:

**Feels love, concern, and interdependence**
1. I want my partner to be happy.
2. I can’t stand to see my partner hurting.
3. I love my partner and am concerned about my partner’s well-being.
4. I feel bad when my partner feels bad; his or her problem is my problem.
5. I feel responsibility for my partner’s well-being.
6. I get a great deal of happiness and pleasure from making my partner happy.
7. He or she also helps and cares for me.

**Enjoys helping**
8. I enjoy helping people solve their problems.
9. Just knowing that I’ve done a good thing makes me feel good.
10. I can easily empathize with other people and identify with their problems.
11. It makes me feel good about myself to know that I’ve helped my partner.
12. I truly enjoy helping my partner.
13. It makes me feel good about myself when I help my partner.

**Self-benefit**
14. My partner can be very annoying when he or she is stressed, so I help so that I can get some peace.
15. I want to reduce my own anxiety and escape a distressing situation.
16. I don’t want my partner to reflect negatively on me, so I help him or her so that he or she doesn’t make me look bad.
17. It makes me feel in control when I help my partner.
18. I expect some form of payment in return later.
19. It makes me look good to others when I help my partner.
20. My partner will be more likely to help me if I help him or her.
21. I will be rewarded (e.g., praised, thanked, honored, etc.) for helping my partner.
Relationship purposes
  22. I want to develop a closer relationship with my partner.
  23. I want my partner to need me and to depend on me.
  24. I sometimes feel that I don’t deserve my partner (e.g., because he or she is more intelligent, attractive, etc., than me), so I try to make our relationship more equitable or balanced by helping my partner.
  25. My partner will be more likely to remain in the relationship if I provide care for him or her.

Feels obligated
  26. I feel guilty if I don’t help my partner.
  27. I feel obligated to help my partner; it’s expected of me.
  28. I want to avoid negative consequences from my partner (e.g., my partner would get angry).
  29. I have to help in order for my partner to accept and love me.
  30. My partner is very bossy and demanding; he or she makes me help.
  31. I’m trying to make up for a past transgression or offense.

Needy (incapable) partner
  32. My partner really needs my help.
  33. My partner sometimes finds it difficult to handle things on his or her own.
  34. My partner might not handle the situation correctly without me.

Capable caregiver
  35. I’m pretty good at handling distress.
  36. I’m very good at figuring out what people want/need.
  37. I’m very good at solving problems.
Appendix T

Motivations for Not Caregiving

Please answer each of the following questions by selecting the appropriate response corresponding to the following scale.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Disagree</td>
<td>Neither Agree nor Disagree</td>
<td>Strongly Agree</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

To what extent do you agree with each of the following statements:

**Caregiver lacks skills**

1. I'm not good at figuring out what kind of help people want or need.
2. I don’t know how to help my partner.
3. I never know what kind of help my partner really wants.
4. I typically don’t respond well to stress – mine or anyone else’s.
5. I don’t have any expertise in that particular problem area.

**Caregiver dislikes distress**

6. I prefer to maintain some distance; I’d rather not get involved.
7. I don’t like to be around people who are distressed.
8. It's too distressing to get involved in other people’s problems.
9. It’s too stressful for me to try and help people with their problems.
10. I don't like to hear about problems.

**Caregiver lacks resources -- time**

11. I don’t have the time.
12. I’m too busy with my own problems.

**Caregiver lacks concern/responsibility**

13. I don’t feel concerned about my partner’s well-being.
14. I don’t feel sympathetic toward my partner; he or she typically deserves what he or she gets.
15. My partner is often the cause of the problem.
16. It’s not really my responsibility to help him or her.
17. My partner gets too emotional about things that aren’t important.
18. The problem is not very important.

**Partner is difficult and unappreciative**

19. My partner never takes my advice anyway.
20. My partner doesn’t like my help.
21. My partner doesn't really want my help.
22. My partner doesn’t appreciate my helping efforts.
23. My helping efforts never work, so there’s no point in trying.
24. We always get in a fight when I try to help him or her.
25. My partner is too bossy and demanding, so I don’t like (or want) to help.
26. My partner is impossible to help; I can never please him or her.

**Partner is too dependent**
27. I think my partner should try to handle his or her own problems.
28. My partner expects me to do everything and doesn’t do enough for himself or herself.
29. My partner is too dependent on me.
30. My partner always has a problem, so I get tired of helping.

**Partner is capable**
31. My partner is good at handling problems on his or her own.
32. My partner is able to effectively handle problem situations as they arise.
33. My partner is better at solving his or her own problems.
34. My partner doesn’t really need my help.
35. My partner prefers to handle problems on his or her own.
Appendix U

Relationship Satisfaction

Please answer each of the following questions by selecting the appropriate response based on the corresponding scale.

1. How well does your partner meet your needs?

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not at all</td>
<td>Very little</td>
<td>Somewhat</td>
<td>A fair bit</td>
<td>A great deal</td>
</tr>
</tbody>
</table>

2. In general, how satisfied are you with your relationship?

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<tr>
<th></th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not at all</td>
<td>Somewhat</td>
<td>A great deal</td>
<td></td>
<td></td>
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</tbody>
</table>

3. How good is your relationship compared to most?

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Not at all good</td>
<td>Somewhat good</td>
<td>Very good</td>
<td></td>
<td></td>
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</tbody>
</table>

4. How often do you wish you hadn’t gotten into this relationship?

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<tr>
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<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not at all</td>
<td>Somewhat</td>
<td>A great deal</td>
<td></td>
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</table>

5. To what extent has your relationship met your original expectations?

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<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not at all</td>
<td>Somewhat</td>
<td>A great deal</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
6. How much do you love your partner?

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not at all</td>
<td>Somewhat</td>
<td>A great deal</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

7. How many problems are there in your relationship?

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>None</td>
<td>Some</td>
<td>A great deal</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix V

Social Support

1. Please indicate which of the following type(s) of support your partner has sought from you within the past year (please provide percentages for all that apply, responses must add to 100).

<table>
<thead>
<tr>
<th>My partner asked for confirmation that they did the right thing or that they were strong enough to get through a situation.</th>
<th>My partner asked to vent or express their feelings without any comments, just care and empathy.</th>
<th>My partner asked for advice or information to help them with a situation.</th>
<th>My partner asked for direct help dealing with a situation.</th>
<th>My partner did not ask for support.</th>
</tr>
</thead>
</table>

2. If your partner did not ask for support directly, were you able to recognize that they needed support? If so, how? Please explain.

3. Please indicate which type(s) of support you have provided for your partner within the past year (please provide percentages for all that apply, responses must add to 100).

<table>
<thead>
<tr>
<th>I confirmed that they did the right thing or that they were strong enough to get through a situation.</th>
<th>I allowed them to vent or express their feelings without any comments, just care and empathy.</th>
<th>I provided advice or information to help them with a situation.</th>
<th>I provided them with direct help dealing with a situation.</th>
</tr>
</thead>
</table>

4. In these situations, did you feel as though you were able to provide the support that your partner needed? Please explain.
Appendix W

Debriefing Form

A Qualitative Investigation of Couple-Based Interactions in Emergency First Responder Families

Thank you for your participation in this study. The main goal of this current project is to establish a clearer picture of the unique challenges faced by spouses of emergency first responders, and their experiences providing support to their partners. Findings from this research will support future training programs for emergency first responders and their families.

There are a number of implications to this study. This research will add to our understanding of the unique barriers spouses face in supporting their partners, as well as highlighting potential resources to help improve the support provided. This research will be used to develop couple-based training programs that will increase help-seeking behaviours, as well as communication and support skills, with the goal of improving relationship satisfaction and the well-being of both partners.

Some of the questions from the interview focused on stress and your relationship, if you or your partner are feeling stressed and you require support to deal with this, please contact your partner’s EAP program, your family doctor, or a local crisis centre for your province through the Canadian Association for Suicide Prevention at http://suicideprevention.ca/

If you have consented to being contacted for future research, please continue to monitor your study email. Should you wish to withdraw from this process, please delete the email, which will indicate to the researchers that you no longer wish to participate. For more information on how to delete a Gmail account, please visit https://support.google.com/accounts/answer/61177?hl=en

This study has been reviewed and received ethics clearance through the University of Guelph Research Ethics Board. If you have any questions or concerns about your rights as a research participant, please contact: Director, Research Ethics; 519-824-4120, ext. 56606: reb@uoguelph.ca. If you have any questions or concerns about this study, or for a summary of the results contact either of the researchers listed below.

Project Director: Dr. Peter Hausdorf
phausdor@uoguelph.ca
Department of Psychology
University of Guelph
519-824-4120 x.53976

Primary Researcher: Grace Ewles
gewles@uoguelph.ca
Department of Psychology
University of Guelph
XXX-XXX-XXXX
Appendix X

Information & Consent Form

Consent to Participate in Research
Title of Project: A Qualitative Investigation of Couple-Based Interactions in Emergency First Responder Families – Interview

My name is Grace Ewles, I am a PhD candidate Industrial-Organizational Psychology at the University of Guelph working with Dr. Peter Hausdorf. You are invited to participate in an anonymous one-on-one phone interview, which will help establish a clearer picture of the unique challenges faced by spouses of emergency first responders, and their experiences providing support to their partners. Findings from this research will support future training programs for emergency first responders and their families.

Procedures
Participation will take approximately one hour. As compensation for your participation, you will be sent a $20 Amazon.ca gift card via email.

Confidentiality
Your participation in this interview is completely anonymous. At no point during data collection process will you be asked to provide identifying information about yourself; additionally, IP addresses will not be collected. To protect anonymity, we encourage participants to create a separate study email that has no identifying information in the email address (e.g., using Gmail). This email is the only way researchers will contact you. Additionally, you will be provided with the phone number for your scheduled interview so that we will not have access to your contact information. For information on creating a separate Gmail account, please visit https://support.google.com/mail/answer/56256?hl=en

All data will be stored electronically for seven years without identifying information, accessible only by the project director – Dr. Peter Hausdorf. The results will be combined and summarized across participants. Selected verbatim quotations may be used in the final analysis and for training materials for first responders and their families; however, no identifying information will be attached to the quotations, and none will be used that pose any risk of identifying the participant.

Participation and Withdrawal
Your participation in this study is completely voluntary. If you volunteer to be in this study, you may withdraw at any time. Should you wish to withdraw, we recommend you delete your study email, which will indicate to us that you no longer wish to participate in the interview. If you choose to withdraw from the study during your interview, your data will be deleted from the database. You may skip any questions that you do not want to answer and still remain in the study. There are no consequences if you choose not to participate or to withdraw from the study.

Risks and Benefits
As some of the questions focus on your relationship, the primary risk of participating in the
survey is that potential stressors may become salient to you. As the interview is anonymous, please do not use these tools as a way of communicating that you are in need of help as we will be unable to provide support directly. If participating in the interview makes you aware of stress that you are feeling and you require support to deal with this, please contact your local crisis centre for your province through the Canadian Association for Suicide Prevention at http://suicideprevention.ca/

One benefit of participating in the interview is that you may gain insight into the potential needs of your partner, as well as of your own coping and social support needs. Your responses to the questions themselves can create this insight. Additionally, this research will help inform future the design of a training program for emergency first responders and their families. This line of research is incredibly important to the development of mental health initiatives and organizational programs designed to support emergency first responders and their families across Canada.

**Rights of Research Participants**

You are not waiving any legal claims, rights or remedies because of your participation in this research study. This study has been reviewed and received ethics clearance through the University of Guelph Research Ethics Board. If you have any questions or concerns about your rights as a research participant, please contact: Director, Research Ethics; 519-824-4120, ext. 56606: reb@uoguelph.ca. If you have any questions or concerns about this study, or for a summary of the results contact either of the researchers listed below.

<table>
<thead>
<tr>
<th>Project Director: Dr. Peter Hausdorf</th>
<th>Primary Researcher: Grace Ewles</th>
</tr>
</thead>
<tbody>
<tr>
<td>519-824-4120 ext. 53976 <a href="mailto:phausdor@uoguelph.ca">phausdor@uoguelph.ca</a></td>
<td>XXX-XXX-XXXX <a href="mailto:gewles@uoguelph.ca">gewles@uoguelph.ca</a></td>
</tr>
</tbody>
</table>

I agree to participate in the preliminary questionnaire. I understand that I can withdraw this consent at any time without penalty. Click Yes to continue to the preliminary questionnaire. Click No to exit from the preliminary questionnaire.

We invite you to print a copy of this consent form for your personal records.

In addition to the present study, we will be designing a training program for emergency first responders and their families. As such, we invite you to keep your study email so that we can contact you about future research opportunities.

I agree to being contacted about future research opportunities using the email I provide below. I understand that I can withdraw this consent at any time without penalty. Click Yes to continue to the survey. Click No to exit from the preliminary questionnaire.

We invite you to print a copy of this consent form for your personal records.
Appendix Y

Interview Guide/Script

Hello, my name is Grace Ewles. I am a PhD candidate in the Industrial-Organizational Psychology program at the University of Guelph. In this interview I’m going to ask you questions about your relationship with your partner and your experiences providing support to them. The purpose of this research is to better understand the unique experiences of couples where at least one partner is an emergency response worker.

The interview will last approximately forty-five minutes to an hour. Participation in the interview is completely voluntary. You may withdraw from the study at any time. If you withdraw from the study, your data will be deleted, including any audio recordings or transcriptions of our conversation.

With your permission, the interview will be audio-recorded. All information that you provide will be kept confidential. The audiotapes and interview schedules will be identified by a number only and will be stored in a locked cabinet at the University of Guelph. Only myself (Principal Investigator), Dr. Peter Hausdorf (Associate Professor at the University of Guelph) will have access to the data.

Participating in this research will provide you with the opportunity to reflect on your relationship, including the unique stressors you feel, as well as various supports that believe would be helpful. For some people, discussing stressors in their relationship may cause discomfort or anxiety. You may refuse to answer any questions that you are not comfortable with.

The results will be combined and summarized across participants. Selected verbatim quotations may be used in the final analysis and for training materials for first responders and their families; however, no identifying information will be attached to the quotations, and none will be used that pose any risk of identifying the participant. We encourage you to avoid using any potential identifying information when answering the questions in the interview.

All of the information you provide will be kept strictly confidential. No one outside of the research team will have access to individual data. All results will be presented in aggregate form only with all identifying information removed.

Before we proceed, do you have any questions or is any part of the process unclear?

Partner’s Occupation
Can you please describe your partner’s occupation? What kind of stressors do they face at work? Are you in the same field?

Probe for policing, firefighting, or ambulance, length of occupation (new position vs. seasoned professional), and whether or not spouse has experience with same work stressors.
Unique Pressures

Compared to other relationships, do you feel that there are unique pressures that you face in your relationship as a result of your partner’s occupation?

Partner in Need

How do you know when your partner is in need of support? What signals do they use, or that you observe, that indicate they need help?

_Probe for whether or not the partner seeks support, or if the spouse has to witness the partner struggling and offer help._

Can you describe a time where your partner needed support? Please walk me through that experience.

Challenges or Barriers

Are there any challenges or barriers you face when assessing and discussing your partner’s need for support? If so, please describe them.

Are there any challenges or barriers you face when providing support to your spouse? If so, please describe them.

Does this ever cause conflict between you and your partner?

_Probe for strain, whether or not the barriers/challenges have changed over time. Why partner thinks these barriers exist (e.g., partner does not want to traumatize me)._  

Success Strategies

Are there any strategies that you have used in the past that have worked well? If so, can you describe them?

Are there any strategies that you have tried that did not work well? If so, can you describe them? Why do you think they didn’t work out as expected?

Changes Over Time

Have you noticed any changes in how your partner seeks support or how you provide support over time?

If yes, _probe for potential reasons (e.g., work-related, skill development)._
Reciprocity

Is your partner able to recognize when you need support? Do you feel they have the ability to provide you with what you need?

*If partner suggests spouse is incapable, probe for potential reasons (e.g., burnout, exhaustion).*

Relationship Satisfaction

How do you feel about your relationship? What aspects do like most? What aspects do you find challenging?

Areas of Success and Need for Improvement

What do you think you do well in supporting your partner? Is there anything you think you can improve on in order to better support your partner?

Resources

Are there any resources, skills, or information that you feel would help improve your ability to provide support to your partner?

Are there any resources that you feel would help support you and your family?

Final Thoughts/Comments

Is there anything else that you would like to share about the areas or topics we’ve discussed today?

Thank you for taking the time to participate in our research. We greatly appreciate you sharing your experiences with us. This research will help inform future the design of a training program for emergency first responders and their families. This line of research is incredibly important to the development of mental health initiatives and organizational programs designed to support emergency first responders and their families across Canada.

I would also like to remind you that it is normal to experience stressors in your relationship, if you, or your partner, are struggling with relationship stress, please contact your local distress center. I will send you a debriefing form via email shortly with links to these resources. If you have any questions following our interview, please feel free to contact me.

Thank you again.
Appendix Z

Coding Guide

Research Question 1: What are the unique relationship stressors or pressures perceived by spouses in first responder relationships?

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<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Example</th>
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<tbody>
<tr>
<td>Partner’s schedule</td>
<td>Spouse refers to navigating partner’s schedule (e.g., planning family functions or childcare around shift work) or managing the negative outcomes associated with partner’s schedule (e.g., partner’s lack of sleep).</td>
<td>“But, um, always having to plan your life without your spouse in it ‘cus [sic] you never knew if he was going to be– overtime, called out, um, too tired or not wanting to deal with people. I almost had to live my life without him in it initially and you couldn’t plan things ahead of time or, you know, birthdays or family functions were never done on the actual event-- like, on the actual days ‘cus [sic] we had to always work around schedules”</td>
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<tr>
<td>Impact</td>
<td>Spouse refers to or expresses concern regarding the impact of their partner’s occupation on their partner’s well-being (e.g., fear of missing distress signals, not wanting to add to partner’s stress, negative spillover to the home domain).</td>
<td>“And then as well, obviously, you know, they face life and death situations and there’s a lot of stress in terms of responsibility of their profession, in terms of saving lives or the expectation of. So, that’s something that doesn’t affect most other people’s relationships, they don’t bring work home in the same way necessarily”</td>
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<tr>
<td>Home demands</td>
<td>Spouse refers to family or home demands falling primarily on themselves (e.g., childcare); may negatively impact the relationship (e.g., feelings of resentment).</td>
<td>“But since having children, it’s just the household help. I’m a single mother some days and yet I’m married and have a loving relationship. So, there’s a lot of pressure just on me to upkeep the household, as well as the children”</td>
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<tr>
<td>Work identity</td>
<td>Spouse refers to partner’s identity revolving around work (e.g., perception that family comes second); may be associated with professional norms or expectations.</td>
<td>“A lot of officers have that mentality that their profession comes first and everything else has to fall into place after that. So, that caused a lot of stressors in the marriage”</td>
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<tr>
<td>Individual differences</td>
<td>Spouse refers to differences in how their partner views the world or approaches situations (e.g., first responders’ tendency to see things in ‘black and white’).</td>
<td>“I guess the thing that bothers me the most with my husband is that he’s so ‘black and white’, ‘right and wrong’, and it’s just not that clear cut. And nothing’s that clear cut. Sometimes I wish it was, but it’s not. It’s always a little bit murky”</td>
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<tr>
<td>Separating work from home</td>
<td>Spouse refers to partner’s perceived need to separate work from home (e.g., leaving stressful calls at work).</td>
<td>“Instead of bringing it home and dwelling on it, some of the calls he is able to just leave there now. Some he brings home, but some he can just say ‘that’s the job I chose, I’m gonna [sic] leave it here and I’m gonna [sic] go home to my family’”</td>
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<tr>
<td>Family unit issues</td>
<td>Spouse refers to family strains (e.g., finances, stress from extended family).</td>
<td>“Um, difficulties in our relationship… mostly it’s always—everything always revolves around finances to a degree. Um… boundaries with his family, so the in-laws”</td>
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Research Question 2: What signals or cues do spouses of first responders recognize that indicate when their partner requires support?

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<th>Parent Code: Signal/Cue</th>
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<th>Example</th>
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<tr>
<td>Isolation/withdrawal</td>
<td>Spouse refers to partner isolating themselves or withdrawing at home (e.g., watching TV, playing on the computer) or at work (e.g., calling in sick).</td>
<td>“I know that when he’s really quiet and he comes home from work and he doesn’t say anything that he needs his space”</td>
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<tr>
<td>Mood</td>
<td>Spouse refers to partner being agitated, angry, or irritable.</td>
<td>“Things like if he’s irritated or very short. So, if I ask him a question, he’s just very short with his answer, kind of on edge. Things like that I would pick up when he’s stressed or not normally himself”</td>
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<tr>
<td>Maladaptive coping</td>
<td>Spouse refers to partner using substances (e.g., alcohol, food) as a coping mechanism.</td>
<td>“My husband is not a drinker. He—maybe he’ll have a beer once a month or something like that if we have people over, like, we’re just not big drinkers. But, there’ll be the odd time where I’ll come downstairs if I’ve been sleeping and he’s been working nights and he’ll come home in the morning, and he’ll be, like, sitting there at eight-o-clock in the morning drinking a beer. I know he’s just trying to relax some way”</td>
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<tr>
<td>Behaviour</td>
<td>Spouse describes changes in behaviour (e.g., difficulty concentrating, repetitive communication, sleeplessness, nightmares).</td>
<td>“He will never directly ask for help, he’s never asked for help. Um… he will almost, like, be on repeat, like a broken record, constantly talking about something and just going over and over again, and I know that it’s bothering him he just—he can’t let it go”</td>
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<tr>
<td>Partner openly discusses/seeks support</td>
<td>Spouse refers to partner openly seeking support and communicating their needs.</td>
<td>“So, he volunteered that it was difficult, and that he needed support. And I talked to him about it, we kind of processed it”</td>
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Research Question 3: What are the challenges or barriers faced by spouses during the social support process?

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<tr>
<td>Stigma</td>
<td>Spouse describes partner’s experiences of social or self-stigma (e.g., fear of appearing weak or showing vulnerability), or the consequences of stigma (e.g., negative repercussions at work).</td>
<td>“The other thing I think would be really helpful would be a change in culture, which I know is not easy to do, but, um—and I know his [organization] is not alone, um, in that culture. That it’s a ‘suck it up, buttercup’ type of culture where they don’t talk about the effects of the service on their mental health”</td>
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<tr>
<td>Confidentiality</td>
<td>Spouse describes partner’s need to keep work-related information confidential.</td>
<td>“Oh definitely, yeah, I think that there are unique stressors. I mean, some of them are just the simple… you’re dealing with the file that’s very confidential or of a covert nature. Some of the files [they] deal with, they even say, “don’t let your spouse know about this” or “you need to keep it close to the chest”, and I don’t think you’d feel that in other employment”</td>
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<tr>
<td>Personal resources</td>
<td>Spouse refers to their personal resources (e.g., time, energy, motivation) or boundaries (e.g., certain topics being off limits), which impacts their ability to provide support.</td>
<td>“It’s just hard to find the time in a busy household I find. So, it’s difficult to set aside time without having distractions or disruptions”</td>
</tr>
<tr>
<td>Knowledge, skills, abilities</td>
<td>Spouse refers to their knowledge, skills, or abilities regarding support recognition (e.g., picking up on cues) and provision (e.g., matching support to partner’s needs).</td>
<td>“I think my skill set or knowledge would be a barrier, um, because I don’t feel like I’m well enough versed to support him as effectively as I could”</td>
</tr>
<tr>
<td>Resistance</td>
<td>Spouse refers to partner being resistant to seeking or receiving help from others (e.g., spouse, professional</td>
<td>“When he would just shut down, he didn’t want to talk to anyone; not friends, not family, not me, not anyone. “</td>
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</table>
help, supervisor); may be associated with perceptions of resentment (e.g., partner taking out feelings on spouse, ‘nagging wife’).

So, that is difficult. ‘Cus [sic] even when you’re reaching out and trying to help, saying, “I’m here”, he didn’t want to talk to his family”

| Copes alone | Spouse refers to partner’s attempts to cope alone (e.g., burying feelings, convincing themselves that they have it under control). | “So, he has to shut it-- he has to bury it if he’s going to get back up and go to work tomorrow” |
| Limited network | Spouse describes partner’s limited support network; may be associated with feelings of isolation. | “Because he doesn’t have-- if I knew he had someone he went to with the problems, I’d feel a lot more comfortable about it, but he doesn’t have any close friends or close family. So, I know it’s me or nobody” |
| Secondary trauma | Spouse describes partner’s concern about exposing others to stressful or traumatic material (e.g., children, spouse). | “But he does his best to protect me from it—or he thinks he is hiding it and he’s not” |

Research Question 4a: What support strategies have spouses used that have been successful?

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<th>Code</th>
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<tr>
<td>Self-esteem</td>
<td>Spouse refers to validating partner’s abilities or providing confirmation that they did the right thing.</td>
<td>“Because every once in a while when these things don’t go well, even if it’s just stressful and rationally he feels like he wasn’t-- he doesn’t-- he isn’t good enough or he’s not good at his job. And [I] sort of encourage him to go through the steps, so that he can hear how capable he is, I guess”</td>
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<tr>
<td>Role</td>
<td>Description</td>
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<tr>
<td>Informational support</td>
<td>Spouse refers to giving advice to their partner, brainstorming, or reframing a situation.</td>
<td>“We have the ability to talk to each other and work things out and brainstorm ideas and things of that nature”</td>
</tr>
<tr>
<td>Emotional support</td>
<td>Spouse refers to listening to partner, demonstrating care and compassion, providing reassurance, or validating feelings.</td>
<td>“Well, I would say just listening. Being that person who at the end of the day is ready to listen to the stressful thing that happened. Um, and just offering any sort of words of encouragement, like, “yeah, that sounds like a really awful day” and, you know “hopefully tomorrow’s better” …”</td>
</tr>
<tr>
<td>Instrumental support</td>
<td>Spouse refers to providing tangible support to their partner (e.g., related to home demands).</td>
<td>“I try to make time for him to go to the gym, or go out for a run, just to, you know, let exercise help a little bit”</td>
</tr>
<tr>
<td>Third party</td>
<td>Spouse refers to a third party providing support for their partner or themselves (e.g., professional help, friend, colleague).</td>
<td>“If there’s something that he is unable to talk to me about because it’s going to breach confidentiality, then he’ll reach out to one of his coworkers that is [a] real good support and confidant, but he’ll let me know that, “I’m reaching out to so-and-so because I can’t get over that last call” …”</td>
</tr>
<tr>
<td>Space</td>
<td>Spouse describes providing partner with space or letting their partner initiate/guide support.</td>
<td>“And there’s certain times when I know I need to just back off and let him deal with it himself”</td>
</tr>
<tr>
<td>Push</td>
<td>Spouse describes attempts to communicate or push partner to seek support (e.g., probing).</td>
<td>“I just kind of probe him along and ask little bits here and there, but I never try to get into specifics. And I just let him tell me what he wants to tell me”</td>
</tr>
<tr>
<td>Connect</td>
<td>Spouse describes scheduling one-on-one time with partner (e.g., to reconnect, detach) or checking in on one another.</td>
<td>“Sometimes we schedule in date nights. So that we can actually converse about things that are going on and then go and do something together”</td>
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### Research Question 4b: What support strategies have spouses used that have been unsuccessful?

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<th>Code</th>
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<tr>
<td>Ignore</td>
<td>Spouse refers to ignoring or staying silent about an issue, which can result in tension building over time.</td>
<td>“Um, when I am silent and don’t say anything, it kind of ends up being like a Pandora’s box. Like, if he doesn’t come to me first then I blow up usually saying like, “Okay enough. I don’t have to deal with this. Either tell me what’s the matter or get over it”, kind of thing, which is not the most welcoming.”</td>
</tr>
<tr>
<td>Opinion</td>
<td>Spouse refers to providing partner with unwanted advice or opinions.</td>
<td>“And you’re just trying to give advice and maybe even be a little bit more directive and that does not work”</td>
</tr>
<tr>
<td>Third party</td>
<td>Spouse refers to seeking support from a third party for their partner or themselves (e.g., professional help, friend, colleague).</td>
<td>“But, like, when I feel like I’m hitting a wall with how to help him, I would seek out advice from others and I guess he felt that, that was an overstep, so. I think not consulting with him to make sure that he’s okay with me talking to other people prior”</td>
</tr>
<tr>
<td>Space</td>
<td>Spouse describes providing partner with space or letting their partner initiate/guide support.</td>
<td>“But I feel like I literally tried to give him all the space he needed. That didn’t really work, it just allowed him to kind of go into this crazy hole”</td>
</tr>
<tr>
<td>Push</td>
<td>Spouse describes attempts to communicate or push partner to seek support (e.g., probing).</td>
<td>“When he’s not ready to talk or he’s not able, trying to get him to talk is... it’s not good. It’s not good at all because then it’s just anger”</td>
</tr>
<tr>
<td>Intimacy</td>
<td>Spouse describes attempts at physical or emotional intimacy with partner.</td>
<td>“And so, you know, any extra effort putting to being extra loving or kind or any of that sort of stuff is lost”</td>
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</table>
because um… they can’t deal with that right at that moment”

“I tried to shoulder one hundred percent of the load myself, that was probably a mistake.”

“I’ve tried mirroring his actions, which-- that didn’t work ‘cus [sic] that just created a bigger fight because now I’m being short to him and then, you know, that just created more of a conflict”

Research Question 5: Have there been changes in the support process (in how partners seek support or how spouses provide support) over time?

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<tr>
<td>Understanding</td>
<td>Spouse refers to their improved understanding based on experience (e.g., related to partner’s needs, job stressors, successful strategies), which is associated with improved ability to provide support.</td>
<td>“Yeah, I guess I’m more used to it now. So, it’s smoother when I provide support, whether just to comfort him by holding him against me, or just trying to talk about things… there was a big change because I learned exactly what he’s willing to talk about right away when he’s upset, and when it’s better to just wait and let him calm down and then talk about it later”</td>
</tr>
<tr>
<td>Willingness</td>
<td>Spouse refers to their partner’s willingness or comfort seeking support from others (e.g., with spouse, colleagues).</td>
<td>“I guess there’s more trust between us, so he is more open to let his feelings show and let me know exactly how he’s feeling and that he needs support”</td>
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</tbody>
</table>
Stressors/demands
Spouse describes changes in stressors or demands.

“His changing job demands have made it easier because he-- although his schedule is not all that flexible, it is more flexible than it used to be so it makes it easier for him to be available”

Negative impacts
Spouse describes negative changes in partner (e.g., partner is more withdrawn or cynical, more affected by job stressors).

“I think what I found most challenging is that he totally shut down and he was not like that before at all. And so, that was really, really hard for me”

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<tr>
<th>Research Question 6: Do spouses perceive that their partners are able to reciprocate and provide social support for them?</th>
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<th>Code</th>
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<tbody>
<tr>
<td>Efficacy</td>
<td>Spouse refers to partner’s ability to meet support needs (e.g., based on work schedule).</td>
<td>“I think sometimes. Again, the shift work is very difficult. If he’s working, you know, anywhere from three to five shifts in a row… and if I’m going through a stressful time during those days that he is working, I find that there’s very little support, I’m really on my own. When he’s not working, he tends to be a lot more supportive”</td>
</tr>
<tr>
<td>Network</td>
<td>Spouse refers to seeking support from other sources in their network (e.g., mother, friend).</td>
<td>“Yeah, my mom’s amazing. So, for me, she’s my source of support for sure”</td>
</tr>
<tr>
<td>Recognition</td>
<td>Spouse describes partner’s ability to recognize when they require support.</td>
<td>“If I seek out support from him, he’ll always be there for me. So, it’s more his ability to recognize if I need support changes, but he’s always there for me if I need support, if I initiate that”</td>
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Research Question 7: What do spouses perceive as their strengths in providing support to their partners?

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<th>Code</th>
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<tr>
<td>Knowledge of profession</td>
<td>Spouse describes understanding or experience with partner’s job stressors.</td>
<td>“I mean, because we do the same job, so if he’s got any issues, he could-- he’s able to come home and talk to me about it ‘cus [sic] I understand the job and things that happen, where not people can understand our job”</td>
</tr>
<tr>
<td>Responsive</td>
<td>Spouse refers to ability to meet partner’s support needs.</td>
<td>“… just being present, and being willing to have that conversation. So, if he starts to talk about a call that you hear it and you’re like, “okay, that’s not normal”, right? That’s not normal to just be okay with what happened there. Just being present to have that conversation and talk about it and just check-in. Like, with how he’s feeling and what’s going on”</td>
</tr>
<tr>
<td>Formal education/training</td>
<td>Spouse describes unique skills based on their education, training, or experience (e.g., related to mental health).</td>
<td>“I think this comes from my background. I use a lot of just communication strategies. So, a lot of probing, a lot of-- I guess I’m lucky in a way, I’m trained in different [interviewing] techniques and such, so I find sometimes just asking those kind of open-ended questions”</td>
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<tr>
<td>Understanding</td>
<td>Spouse refers to being trusting, understanding, or empathetic (e.g., not taking things personally).</td>
<td>“I think just that awareness of the contextual factors and his mood and taking-- not taking things personally”</td>
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Research Question 8a: In what ways do spouses think they can improve how they provide support to their partners?

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<th>Code</th>
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<tr>
<td>Needs</td>
<td>Spouse refers to modifying own support needs or expectations, or taking time for self-care.</td>
<td>“I think if I was a little less emotional, that would give him less stress”</td>
</tr>
<tr>
<td>Responsive</td>
<td>Spouse refers to being more responsive to partner’s needs (e.g., intimacy) or providing more effective support (e.g., checking in more frequently, reducing home demands).</td>
<td>“Sometimes timing. Timing, so that, you know-- being able to provide the time when he needs it. Being able to give more of myself to him when he needs it”</td>
</tr>
<tr>
<td>Patience</td>
<td>Spouse refers to being more understanding (e.g., not taking things personally) and willing to listen (i.e., being less argumentative).</td>
<td>“And know that how he’s acting is not a reflection of me because I will take it personally. Like, “What did I do?” And then I’ll start getting defensive, because to me, I’ve been at home taking care of the kids. Like, why are you coming home and yelling at me, you know? Um, so it’s taken a while for me to understand, it’s not a complex against me, it’s what he does for a living”</td>
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Research Question 8b: Are there resources that spouses feel would help improve their ability to provide support?

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<th>Code</th>
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<tr>
<td>Organizational supports</td>
<td>Spouse refers to organization-specific supports (e.g., Employee Assistance Program [EAP], benefits, family-friendly policies).</td>
<td>“I’d say, maybe just quick guides to-- because a lot of families aren’t necessarily aware of the support that’s available to those first responders either-- the psychological support and things like that-- families of</td>
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<tr>
<td>Support Type</td>
<td>Description</td>
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<td>First responders aren’t necessarily aware that they have their Employee Assistance Programs and things like that</td>
<td>“Provincial and federal supports refer to provincial supports for first responders and families (e.g., through the Workplace Safety and Insurance Board [WSIB]).” Up until the point where you can actually get it acknowledged by WSIB. And there is some good legislation that’s come in that’s made PTSD presumptuous for [the] field, but it’s also, like, how do you get there when you don’t have coverage for assessments even right now?”</td>
<td></td>
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<tr>
<td>Training/education (first responders)</td>
<td>Spouse refers to training and educational programs for first responders (e.g., related to mental-health).</td>
<td>“Training/education (first responders) Spouse refers to training and educational programs for first responders (e.g., related to mental-health).” Just anything that would allow him to have some buy-in for external support. I don’t feel like I need resources but-- for myself in supporting him, but I need-- I’d like him to understand and buy into the values of a peer support group or therapy or counselling, and I feel a bit tapped in that respect.”</td>
</tr>
<tr>
<td>Training/education (spouses and families)</td>
<td>Spouse refers to training and educational programs for spouses and/or families (e.g., related to partner’s job demands, available supports, recognizing distress signals).</td>
<td>“Training/education (spouses and families) Spouse refers to training and educational programs for spouses and/or families (e.g., related to partner’s job demands, available supports, recognizing distress signals).” I feel that maybe those who are spouses or partners of first responders could benefit from something that’s more specific to how to support your loved one that is a first responder because they go through something completely different to what every other day people go through. Especially if it’s something that’s triggered them, a situation that’s specific-- I think that those supports would come-- beneficial because how do you know what they’re going through unless somebody’s helping you who’s been there themselves, right? Like, you’re blindly walking through it and hoping that you don’t say or do the wrong thing. Um… yeah, I think something that’s more geared to specific training specifically to-- or educational things specifically towards that.”</td>
</tr>
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</table>
Peer support (first responders)  | Spouse refers to opportunities for first responders to seek support from peers. | “A non-counselling type person, just in a friend-- a friend type relationship and being able to talk back and forth, and validating the things that you’re doing are okay, that you’re not off in a different tangent than where you should be dealing with something”

Peer support (spouses and families) | Spouse refers to opportunities for spouses and/or families of first responders to seek support from peers. | “So, I don’t have a lot of close friends that are partners of these workers. So, it would be nice to kind of see what everyone else is thinking; if they’re kind of along the same lines as me”

**Contextual Codes**

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<th>Code</th>
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<tbody>
<tr>
<td>Stressful/traumatic calls</td>
<td>Spouse refers to partner experiencing stressful or traumatic calls.</td>
<td>“Obviously, his job is the fact that he could leave and not come home because he’s putting himself in a vulnerable and dangerous situation. That definitely adds more stress”</td>
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<tr>
<td>Demands</td>
<td>Spouse refers to the volume of job stressors for partner (e.g., number of calls, limited resources) and high performance expectations (e.g., pressure associated with life or death decisions).</td>
<td>“Um, if anything, I think the thing that stresses him out more is just the high call volume. They’re constantly on the go, they rarely get a lunch break… things like that. And of course, as the partner, you feel that stress for them when you know that they’ve not had a chance to wish their own children goodnight because they’ve been so busy on the job. You feel for them as well. So, um… yeah I would say, just in general, the mental health calls,</td>
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<td>Parent Code: Job Resources</td>
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<td>Code</td>
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<tr>
<td>Pride</td>
<td>Spouse refers to partner experiencing professional pride.</td>
<td>“I think he really loves his job and likes what he does, and likes helping people”</td>
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<td>Code</td>
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<tr>
<td>Loyalty</td>
<td>Spouse describes dedication to the relationship and ability to rely on partner.</td>
<td>“Um, things that I like best is that I can depend on him. If I need him for anything, I know he would be right there, he’d do anything for me”</td>
</tr>
<tr>
<td>Connection</td>
<td>Spouse describes feelings of compatibility (e.g., based on partner’s qualities or traits, shared values, etc.)</td>
<td>“We’re very connected and very open and very fortunate to have that type of relationship because I know a lot aren’t like that. And we—but we work very hard at it”</td>
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<tr>
<td>Concern</td>
<td>Spouse expresses concern for their partner and a desire to help.</td>
<td>“I think he was resentful towards me when I would make those comments but now I think he understands its-- I’m not trying to be ignorant but his well-being is what’s number one to me, right?”</td>
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Appendix AA

Summary of Study Results for Participants

Thank you for taking the time to participate in our study, *A Qualitative Investigation of Couple-Based Interactions in Emergency First Responder Families* during the fall of 2017. The goal of this study was to establish a clearer picture of the unique challenges faced by spouses of emergency first responders, and their experiences providing support to their partners.

**Study Background**

The study consisted of two parts, 1) an online questionnaire and 2) a one-on-one interview with the primary researcher. We received a total of 225 responses to the online questionnaire. Participants reported their partners working in a range of occupations, including policing (56), firefighting (18), and paramedicine (76), among others (13; e.g., a combination of professions).

Following the questionnaire, 101 participants (62%) were interested in participating in an interview. Of those contacted, 38 interviews were conducted (34 women, 4 men). Similar to the online questionnaire, interviews were conducted with spouses of police officers (13), firefighters (3), and paramedics (22). We also had a mix of spouses from different occupational backgrounds, including those who also work as a first responder, spouses who work in mental health, and spouses who work in an unrelated field. Together, the interviews provided a wide range of experiences and insights.

**Summary of Questionnaire Results**

The online questionnaire was designed to better understand the motivation for providing support to a partner, the type of social support sought by partners, as well as what was provided in return, and how these relate to relationship satisfaction. Overall, respondents reported high levels of relationship satisfaction and being motivated to support their partner out of love and concern for their well-being. Additionally, half of respondents (50.9%) reported providing the type of support sought by their partners, with emotional support (e.g., being a listening ear) being most common. However, almost 20% of respondents indicated that their partner did not seek support from them.
Summary of Interview Results

The purpose of the interview was to gain a better understanding of the unique stressors faced by spouses of first responders, as well as the support process for first responder couples. Specifically, we asked about signs or cues that indicate when a partner requires support, what strategies are most (or least) helpful, and what challenges or barriers are faced by spouses when they provide support.

The most frequently reported stressor was a partner’s schedule (73.7%), including difficulty coordinating childcare, family or social events, as well as managing the negative outcomes associated with shift work (e.g., partner’s lack of sleep). Additionally, spouses reported concerns about the impact of the job on their partner (55.3%), home demands falling primarily on themselves because of their partner’s occupation (52.6%), and differences in how their partner views the world (e.g., seeing things in ‘black and white’; 52.6%) as stressors.

Next, interviewees were asked about support signals or cues. The most common cues include their partner isolating or withdrawing at home (63.2%), changes in mood (e.g., irritability; 60.5%), and other behavioural cues (e.g., difficulty sleeping or concentrating; 47.4%).

Overall, the most helpful support strategy reported by spouses was emotional support (60.5%), including listening, demonstrating care and compassion, providing reassurance, and validating their partner’s feelings. Interviewees also reported providing their partner with space (28.9%), making time to connect one-on-one (28.9%), and pushing their partner to communicate (23.7%) as other potentially helpful strategies. However, spouses frequently noted the importance of knowing when to push their partner, as this was also the most commonly reported unhelpful strategy (50%), followed by giving unwanted opinions or advice (23.7%).

Spouses acknowledged the difficulty associated with providing support to their partners for several reasons. For example, some spouses reported that their partners are resistant to seeking support or that their partners often attempt to cope by themselves. This may be associated with the stigma surrounding mental health within first responder occupations. Additionally, first
responders may be concerned about breeching confidentiality or exposing partners to secondary trauma, which may limit how much support they seek. For spouses, reported challenges when providing support include feeling as though they may not have the skills or ability to provide effective support (e.g., lack of knowledge about the job or the demands faced by their partner), or lacking personal resources (e.g., time, energy).

Together, these results highlight the stress experienced by both first responders and their families. Policing, firefighting, and paramedicine are high stress occupations, and providing support at home can be challenging. Overall, the strategy that is most frequently reported as helpful is emotional support, including listening, validating feelings, and providing comfort. This strategy was reported across interviewees, supporting the idea that all spouses can provide effective support no matter their occupational background. It is also important to note that support is bi-directional, and it is important for spouses to recognize their own support needs and seek help from others when necessary.

**Next Steps**

To help share the findings of our research and support first responders and their families, we have created a website, *Safe Place to Turn* (http://….) This website includes detailed information about our research, including access to our findings, as well as links to resources and community supports that first responders and families have found helpful.

To help others connect, we have created a private Facebook group, *Safe Place to Turn: A Community for First Responders and Their Families*. This group is a confidential space for first responders and their families to connect, provide support, and share advice. Please feel free to share these resources with your networks to help continue building a community of support.

Lastly, we would like to extend our deepest gratitude to you for participating in this research. Thank you for sharing your stories, experiences, and insights with us. This project would not have been possible without your support. Together, we are working towards creating a network of supports across organizations, professions, and communities for first responders and their families across Canada.
Thank you,

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Dr. Peter Hausdorf
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CHAPTER III

Discussion and Future Directions for Intervention Research

Recent estimates of PTSD and suicidality within Canadian first responders have resulted in public concern regarding the treatment of mental health within these professions (e.g., Abedi, 2017; Canadian Broadcasting Company, 2019). While some first responders develop trauma-related disorders (e.g., PTSD) following exposure to a critical event, many fail to meet diagnostic criteria (e.g., Benedek, Fullerton, & Ursano, 2007; Creamer, Burgess, & McFarlane, 2001; Wagner, Monson, & Hart, 2016). Despite this, results from Chapter 1 indicate that these events impact individuals’ health and well-being, resulting in a range of functional impairments. This is problematic from a practical perspective, as there is currently little understanding of the needs of first responders falling within this range, which limits the ability to design effective programs or mental health initiatives for these individuals.

Although many first responder organizations have attempted to address concerns surrounding mental health through internal programming, these efforts have often been reactive, resulting in inconsistency across organizations and little understanding of program efficacy over time (e.g., peer support; Beshai et al., 2016). Moreover, despite their good intentions, many of these organizational initiatives fail to address systemic-level issues surrounding stigma and professional culture, as well as the comprehensive nature of stress experiences, including the compounding effect of role-specific demands (traumatic and non-traumatic) and routine organizational stressors (i.e., bureaucratic demands; Reynolds & Wagner, 2007). As a result, current initiatives may fail to capture the range of needs present within organizations.

Given the multidimensionality of stress experiences for first responders, researchers have argued that organizations must take a more holistic approach to stress management in order to
support the well-being of all employees (e.g., Reynolds & Wagner, 2007). Such programs use a multipronged approach to mitigate stress experiences, including building individual capacity prior to stress exposure (e.g., training or education), supporting those currently affected (e.g., psychological counselling), and addressing broader organizational influences that shape stress reactions (e.g., culture, stigma; Reynolds & Wagner, 2007). Ideally, such approaches to stress management would limit the compounding effect of occupational stressors; thereby reducing the number of individuals experiencing the negative impact of stress over time (Carlson, 2001; Suliman et al., 2009).

Despite reflecting a more holistic view of stress, many of these efforts continue to emphasize the role of the organization as the main provider of support. This approach is challenging as previous research has found that despite the availability of formal organizational supports, many individuals seek help outside of their organizations from their personal support networks (Heffren & Hausdorf, 2016). To better support first responders and promote help-seeking behaviours internally, organizations must focus on addressing systemic barriers, including stigma and professional culture, in addition to exploring opportunities to enhance the support provided to first responders outside of the organization. According to the social support literature, individuals are most likely to benefit by receiving different types of support from a range of sources (e.g., emotional support from loved ones, informational support from coworkers; Cohen & McKay, 1984). Thus, there is a need to explore social support from multiple providers, both internal and external to the organization, to facilitate the development of a comprehensive approach mental health and well-being.

As identified in Chapter 1, a spouse or partner was the most commonly sought source of support by officers, and the most frequent source of effective support. Compared to support from
friends and family, previous research has emphasized the importance of spousal support in predicting individual health and well-being outcomes over time (Jackson, 1992; Walen & Lachmen, 2000). Despite this acknowledgement, little is known about the nuances of this process, including the various factors that influence the efficacy of the support provided by spouses. To address these limitations, the purpose of this dissertation was to explore the role of personal support networks in first responders’ adjustment to critical events, as well as the challenges or barriers faced by spouses when providing support to their partners. Findings contribute to a more holistic view of social support; creating an opportunity to improve the quality of social support and establish connections between support providers. Together, this information informs the development of a network of resources for both first responders and their families.

Summary of Key Findings

Results from Chapter 1 provided insight into the coping strategies and social support enacted by police officers after experiencing a critical event at work. Consistent with previous research in policing (e.g., Klauninger, Hausdorf, & Heffren, 2014), officers reported enacting a range of coping strategies, including problem-focused, active emotion-focused, and avoidant emotion-focused coping. Despite enacting multiple strategies, problem-focused and avoidant emotion-focused coping strategies were associated with higher levels of impairment. Although, previous research has demonstrated the benefits of problem-focused coping for first responders dealing with critical events in the moment (e.g., LeBlanc, Regehr, Jelley, & Barath, 2008; Anshel, 2000), these strategies often fail to address the emotional nature of traumatic stressors over time (Anderson, Litzenberger, & Plecas, 2002; Wastell, 2002). Additionally, little is known
about the impact of these coping strategies (e.g., emotional suppression) on other forms of help-seeking, including social support.

With respect to social support, officers reported seeking support from others; however, there was no relationship between enacted social support and impairment in the structural model. These results suggested that there may be contextual factors present that impact the efficacy of the support received. To examine these factors, results from the exploratory analyses in Chapter 1 provided insight into the specific sources of support sought by officers, as well as the quality of the support received. Here, officers reported seeking support from a range of sources with spouses being most frequent. Moreover, spouses were identified as the most common source of effective support, with open-ended responses highlighting the importance of emotional support (e.g., listening, comforting). This finding is consistent with Cutrona and Russell’s (1990) model of optimal matching, which suggests that emotional support is most effective for events in which there is little opportunity for control, such as the critical events frequently experienced by first responders. For those who identified spouses as least helpful, responses suggested that spouses lacked the capacity to provide effective support, including the necessary knowledge, skills, or abilities (e.g., recognizing a partner’s needs, providing the right type of support).

Building on these findings, Chapter 2 explored the support process from the perspective of support providers. Findings from the qualitative data highlighted the complex nature of the support context, with spouses facing numerous demands in the home domain related to domestic (e.g., childcare, home demands) and emotional labour (i.e., managing personal emotional reactions, minimizing own stress experiences), which influenced their ability to provide support to their partners. Additionally, spouses’ responses provided insight into the barriers that constrain
first responders’ help-seeking behaviour, as well as the challenges that impacted spouses’ ability to provide support.

For first responders, reported barriers included confidentiality, stigma, and fear of traumatizing others, which influenced attempts to cope with work stressors alone. Specifically, several spouses highlighted the link between professional training (e.g., emotional suppression) and the coping strategies used at home; highlighting the negative impact of stigma and professional culture on both first responders and their families. Thus, there may be an opportunity to incorporate a multi-stage approach to coping in formal training programs for first responders; reinforcing the importance of using different coping strategies to target the various stages of a stressor (i.e., contextual model of coping; Folkman & Moskowitz, 2004).

For spouses, reported challenges were associated with personal resources (e.g., time, energy) and their capacity to provide support, including limited knowledge of their partners’ work stressors and support needs, as well as the skills or abilities required to provide effective support (e.g., which type of support would be most helpful for their partner). Consistent with previous research on social support (e.g., Cohen & McKay, 1984; Kaufmann & Beehr, 1986, 1989; Viswesvaran, Sanchez, & Fisher, 1999), discussion of support outcomes reinforced the importance of matching the support provided to a partner’s needs. Despite emotional support being frequently recognized as an effective strategy by spouses, many interviewees reinforced a desire to provide tangible supports (e.g., advice) to address their partner’s work-related stressors. This misalignment may reflect the care and concern behind instrumental acts (Semmer et al., 2008); highlighting spouses desire to mitigate work stressors for their partners.

Rather than focusing on the nature of the stressor, Goldsmith (2004) argues that it is important for individuals in close relationships to respond to a receivers’ needs as
communicated; suggesting that if needs are not clearly communicated, there may be room for misinterpretation. This is particularly important, as previous research has demonstrated the implications of support alignment for long-term relationship outcomes, including perceived partner sensitivity and marital satisfaction (e.g., Cutrona, Shaffer, Wesner, & Gardner, 2007). Moreover, research has suggested that support alignment is an important factor in partners’ future help-seeking behaviour (e.g., Collins, Ford, Guichard, Kane, & Feeney, 2010).

Together with findings from Chapter 1, results discussed in Chapter 2 emphasized the importance of communication, both in terms of first responders help-seeking behaviour (i.e., vocalizing needs), and in support provision. Given this, there is an opportunity for future research to target communication efforts in relationships to enhance the efficacy of social support (Goldsmith, 2004). By ensuring both partners have the appropriate understanding of social support and the communication skills to correctly identify and vocalize their needs, and evaluate the support provided, there is an opportunity to increase alignment and ensure support efforts are effective at reducing distress experiences. Moreover, as social support reflects a learned process, there is an opportunity to build in norms and expectations surrounding communication within relationships to facilitate this learning (e.g., how to respond when your partner doesn’t understand your needs).

Additionally, as support is a reciprocal and interactive process, it is important that both partners’ needs are met to encourage health and well-being for both individuals over the long-term. Given that spouses are often the primary source of support sought by first responders, it is critical that spouses have the capacity to provide effective support to their partners. However, our findings suggest that spouses face considerable demands in the home domain and often suppress their personal support needs in order to prioritize their partners’ well-being. Moreover, spouses
overwhelmingly reported feeling disconnected from their partners’ organization. Thus, there is an opportunity for first responder organizations to enhance the support provided to spouses by extending their occupational health efforts to the home domain. Specifically, by ensuring spouses have access to organizational resources, including health benefits and employee assistance programs, organizations can take proactive measures to support the mental health and well-being of first responders by ensuring their families have the capacity to provide effective support when needed.

**Limitations**

Although the findings from this dissertation make valuable contributions to the social support literature, the present research is limited in several ways. Firstly, the cross-sectional nature of the data obtained in Chapter 1 and the use of PLS-SEM limited the ability to determine causality between variables (Hair, Ringle, & Sarstedt, 2011). Specifically, causal loops or cyclical relationships may be present between variables (e.g., between impairment, appraisal, and enacted coping), which were not captured in the present study. Additionally, it is possible that impairment may precede coping efforts. Although a cross-sectional design with self-report data was necessary for the present research given the importance of anonymity for our sample (i.e., due to the challenges associated with policing culture; Tuckey, Winwood, & Dollard, 2012), there is an opportunity for future research to explore longitudinal and reciprocal relationships amongst these variables. This information would provide a deeper level of insight into adjustment and cumulative stress experiences over time.

Moreover, the use of aggregate measures of self-reported coping and enacted social support in Chapter 1 provided limited understanding of these constructs in practice. For example, critics of the coping literature emphasize the limitations associated with retrospective reporting
of specific copingbehaviours (Folkman & Moskowitz, 2004), suggesting that these methods yield different information compared to experience-based methods (e.g., momentary assessment techniques; Stone et al., 1998). While experience-based methods can provide insight into discrete events, Folkman and Moskowitz (2004) argue that they provide limited understanding of broader patterns of behaviour. Additionally, the measure of social support used for the main analysis in Chapter 1 did not capture the quality of the support received. Although open-ended responses provided insight into the importance of alignment, there is an opportunity for future research to explore the support process (i.e., type of support sought, type of support received, and perceived quality) in more detail. Based on these limitations, future research would benefit from the use of experience sampling methods (e.g., daily diary studies; Iida, Shrout, Laurenceau, & Bolger, 2012) to enhance the current understanding of coping and social support in first responder populations. Specifically, this approach to the study of traumatic stress would provide a more complete understanding of coping based on specific critical events to supplement current findings based on broader patterns of behaviour.

Moreover, although the findings in Chapter 1 are similar to that of other research involving Canadian policing samples (e.g., Boyle, Campbell, & Meagher, 2019; Klauninger et al., 2014), there is an opportunity to explore the generalizability of relationships to other first responder samples. Given the contextual nature of coping (Folkman & Moskowitz, 2004), it is important to explore the unique context associated with other first responder occupations (e.g., organizational culture) and how these influences shape the relationships between coping, social support, and impairment. This insight can inform the development of mental health initiatives and organizational programs tailored to the unique needs of these populations.
With respect to Chapter 2, spouses reported high levels of relationship satisfaction and being motivated to support their partners out of love and concern, as well as feeling capable of providing support. Together, these factors likely influenced spouses’ desire to participate in the study. Despite attempts to recruit spouses using various media and a range of networks and listservs, the data may be limited in that there is little representation from spouses with alternative motivations or varying degrees of relationship satisfaction. Despite this, qualitative responses highlighted a range of factors that influence support provision, which would seemingly apply to all spouses. However, the likelihood of spouses seeking support or enacting change would arguably vary depending on spouses’ motivation and commitment to the relationship. Thus, there may be an opportunity for future research to explore the themes associated with support provision with spouses from other relationship categories (e.g., those who have gone through separation or divorce) to help validate the conclusions drawn from this study. Moreover, this research would provide further insight into the support strategies that were ineffective, as well as resources that would have been helpful for couples prior to separation or divorce.

Additionally, as support is a bi-directional, dynamic process, the present research is limited in that only one perspective was captured in both Chapter 1 and 2. Although these studies represent important starting points for this line of research, future research should explore the social support process utilizing data from both partners. This avenue is particularly important for evaluating future intervention research, as the efficacy of programs can be assessed using pre- and post- measures to explore changes in communication and the support process within relationships. Moreover, this research would provide insight into the interactive nature of relationships by capturing the nuances associated with communication and social support in practice.
Despite these limitations, findings from this dissertation emphasized the range of needs present within first responder populations and the importance of personal support networks following work-related stressors. However, the support provided by others was not always effective at reducing officers’ distress experiences. This finding suggested the presence of contextual factors, which may have influenced the efficacy of the support received. For spouses, such factors included the unique pressures associated with first responder relationships (e.g., family demands, partner’s schedule), personal challenges (e.g., time, energy), and occupational barriers (e.g., stigma) that limited partners’ help-seeking behaviours. Together, these factors impacted spouses’ ability to provide the right type of support to meet their partner’s needs. Ultimately, these results emphasized the importance of communication between partners; reinforcing the notion that social support is a learned process. Together, these key findings provide deep-level insights that inform future directions for intervention research. This research can be used to supplement current organizational initiatives to ensure desired resources are extended to the home domain. By strengthening the support provided at home, organizations move towards a more proactive approach to first responder mental health and well-being.

**Future Directions for Intervention Research**

Previous research has demonstrated the benefits of social support for individual health and well-being outcomes, including reduced mortality rates, lower levels of depression, and improved immune functioning (Hogan, Linden, & Najarian, 2002 for a review). As a result, social support interventions have addressed a range of needs spanning multiple fields, including healthcare, psychology, and social work (Hogan et al., 2002). Within this literature, research supports the general efficacy of social support interventions; however, given the breadth of
programs available, it has been argued that additional research is required to help tailor interventions to individual or group needs (Hogan et al., 2002).

Based on the available literature, social support interventions reflect five general types: 1) enhancing available social connections, 2) developing new connections, 3) employing community health workers, 4) building community-level supports, and 5) multi-strategy approaches (Heaney & Israel, 2008). Previous research has suggested that social support interventions with currently available connections offer the most potential (Heaney & Israel, 2008). Specifically, these interventions emphasize the skills or abilities of currently available supports as the foundation for enhancing the provision, receipt, and mobilization of social support for both providers and recipients (Heaney & Israel, 2008).

Gottlieb (2000) outlined a general framework for the design and evaluation of social support interventions, highlighting the importance of tailoring programs to the needs of the support provider (e.g., source of support) and recipient (e.g., receptiveness) based on the associated context (e.g., acute versus chronic stressor, program goals, etc.) In support of this, Cutrona and Cole (2000) proposed the use of multiple methods to enhance social support within currently existing networks, including educational programs to increase understanding, behavioural skill development to improve interactions, and problem-solving to improve communication efforts. Together, these elements address a range of needs for providers and recipients within a given context (Cutrona & Cole, 2000). This approach offers the most promise for future research with first responders and their partners by emphasizing the use of multiple strategies to enhance communication and improve the efficacy of social support efforts within pre-existing relationships.
**Future directions for social support interventions in first responder relationships.**

Based on the nature of support interactions, there are several requirements for social support to be effective, including aligning the type, timing, and quality of the support to the receiver’s needs. In order to benefit from social support, first responders must first be willing to seek out support and accept help from others. In terms of the support received, individuals not only need the “right” support, but it must be delivered in the right way at the right time in order to be effective. Thus, several scenarios are possible when examining the dimensions of support-based interactions between partners (see Table 20).

**Table 20**

*Social Support Dimensions*

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Description</th>
<th>Less Effective</th>
<th>More Effective</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alignment</td>
<td>The social support provided does not align with the needs of the support seeker. For example, providing informational support (e.g., advice) when emotional support is needed (e.g., validating someone’s feelings).</td>
<td>The social support provided (e.g., emotional, information, instrumental, self-esteem) matches the needs of the support seeker.</td>
<td>Support providers have the necessary knowledge, skills, resources (e.g., time), and motivation to meet the needs of the support seeker.</td>
</tr>
<tr>
<td>Quality</td>
<td>Support providers are unable to meet the needs of the support seeker based on a lack of knowledge, skills, resources, or motivation, and may have negative reactions to partner distress, such as minimizing the person’s feelings or blaming.</td>
<td>Support providers have the capacity and resources to provide support. Social support is readily available and provided in a timely manner to the support seeker.</td>
<td>Support providers have the necessary knowledge, skills, resources (e.g., time), and motivation to meet the needs of the support seeker.</td>
</tr>
<tr>
<td>Availability</td>
<td>No social support is provided to the support seeker. Support providers may be unaware of partner’s distress levels.</td>
<td>Support providers have the capacity and resources to provide support. Social support is readily available and provided in a timely manner to the support seeker.</td>
<td>Support providers have the capacity and resources to provide support. Social support is readily available and provided in a timely manner to the support seeker.</td>
</tr>
</tbody>
</table>
Based on these identified dimensions, interventions that focus on education, communication, and skills-based training within personal support networks provide promise for supporting first responders after the experience of a critical event. Specifically, by educating both partners on the different aspects of social support, individuals will be more likely to effectively recognize their own support needs and evaluate the support provided or received (Goldsmith, 2004). By building communication skills, both partners will be more likely to effectively describe their needs and discuss how their mutual needs are being met, as well as any challenges or barriers that are present. Lastly, skills-based training (e.g., testing different strategies through role-playing, scenarios) can enhance individual skills and abilities when providing support. Although interactions between partners are unique and will be shaped by individual (e.g., personality), couple (e.g., relationship dynamics, previous experiences), and cultural (e.g., masculinity; Hofstede et al., 2010) influences, these components create the foundation to support the ongoing alignment, quality, and availability of social support in intimate relationships. By increasing the efficacy of the support provided, it is argued that first responders will have the appropriate social resources to combat work-related stressors, resulting in fewer individuals experiencing the negative impact of strain over time.

**Couple-based interventions for PTSD.** Given the lack of research on couple-based interventions in first responder populations, previous research with couples in the military provides valuable insight to support the development of future initiatives. Available research suggests that efforts to strengthen supportive relationships within intimate relationships can reduce PTSD symptoms for military members (e.g., Monson, Schnurr, Stevens, & Guthrie, 2004). For example, Erbes, Polusny, MacDermid, and Compton (2008) developed an approach to Integrative Behavioral Couple Therapy (IBCT; originally developed by Jacobson and
Christensen, 1996) to promote social support, and decrease avoidance behaviours (e.g.,
distraction, withdrawal) and interpersonal conflict between U.S. military veterans and their
partners. Specifically, IBCT aims to enhance communication between partners through education
(e.g., regarding PTSD symptoms and avoidance behaviours) and talk therapy.

By discussing recurring themes within the relationship related to distress, conflict, and
PTSD-specific issues (e.g., how symptoms impact the relationship), IBCT aims to validate the
experiences of both partners and examine the cyclical nature between PTSD symptoms,
withdrawal, and relationship distress. By exploring these links, IBCT promotes acceptance
between partners (e.g., understanding motivations behind a behaviour) and redresses avoidance
behaviours, which in turn, increases intimacy and emotional support (Erbes et al., 2008).
Preliminary results associated with IBCT highlight improvements in relationship satisfaction,
including qualitative reports of decreased conflict and increased positive interaction as a result of
participation (Erbes et al., 2008). Although this research is preliminary, it provides a promising
avenue for future research focused on couple-based therapy to provide targeted support for
couples following traumatic stress experiences.

The success of interventions such as IBCT reflect the importance of examining the
interactive nature of social support by incorporating the experiences of both partners. In
particular, these interventions highlight the contextualized nature of the stressors and the
importance of tailoring learning and skill development to participant needs. For example, Erbes
and colleagues (2008) emphasized the importance of understanding the stressors unique to each
relationship, in order to provide targeted skills-based training and education. This approach can
increase effective social support for first responders experiencing sub-clinical trauma. By doing
so, such training programs can improve the alignment, quality, and availability of social support
between spouses and promote help-seeking behaviour. Failure in any of these areas (i.e., alignment, quality, availability) can reduce the effectiveness of social support as a way of coping with trauma.

Although IBCT reflects a specialized approach to spousal support for military couples coping with PTSD, the underlying features associated with education, communication, and skill development are generalizable to other programs and populations. Specifically, focusing on improving individuals’ understanding of social support (i.e., related to support seeking and support provision), developing communication strategies or tools within relationships, and building individual capacity to provide support will help ensure the success of future initiatives. Moreover, programs that address these components within the context of first responder relationships will allow couples to develop strategies and tools to effectively support one another while managing the unique challenges and stressors associated with first responder occupations.

**Future Directions for Organizational and Community Supports**

Due to the prevalence of PTSD within first responders, and the increased awareness surrounding mental health, various countries now recognize the impact of work-related traumatic stress on individual health and well-being. Within Canada, Ontario and Manitoba recently passed legislation that classified PTSD as a presumptive work-related illness for first responders; thereby presuming that PTSD results from occupational demands (Government of Manitoba, 2015; Ontario Ministry of Labour, 2016). Movements such as this reflect concerns regarding the ability for first responders to cope with work-related trauma and the need for earlier access to care. Moreover, Canada is currently developing a national framework for the diagnosis and treatment of PTSD (Bill C-211; Parliament of Canada, 2018). This action reflects a national effort to address mental health needs of those professionals who are exposed to traumatic events;
thereby attempting to reduce stigma and normalize help-seeking behaviours within vulnerable populations.

Given this national recognition and available research on the impact of work-related stressors on individual health and well-being, there is a need for first responder organizations to take a holistic, pre-emptive approach to mental health. By improving the availability of resources prior to stress exposure, first responders will be better equipped to manage work-related stressors; resulting in fewer individuals experiencing the negative effects of work stress over time (Carlson, 2001; Suliman et al., 2009). Within organizations, approaches to mental health should include a range of resources to target the multidimensional nature of stress experiences (Reynolds & Wagner, 2007). Such programs include proactive (e.g., mental health training and education) and responsive (e.g., psychological counselling; peer support) resources, as well as organizational-level initiatives aimed at creating a supportive culture (Reynolds & Wagner, 2007).

In addition to the supports provided to first responders, organizations have an opportunity to extend resources to the home domain by incorporating spouses and families in internal programming efforts. Based on spouses’ suggestions in Chapter 2, such resources could include pamphlets (e.g., outlining benefits, internal programs, and contact information), information sessions (e.g., when first responders are first hired on to the organization), and education-based initiatives (e.g., Mental Health First Aid training; MHCC, 2019). These suggestions reflect cost-effective resources that build connections between organizations and families, and can enhance the quality of support provided at home.

Although there is an opportunity for organizations to improve the support provided to first responders, some individuals may still fear backlash internally (i.e., negative career impact,
stigma; Fox et al., 2012). Thus, it is important to build a network of supports both internal and external to organizations to ensure first responders have access to a range of resources to meet their needs. To help promote social support outside of traditional boundaries, first responder organizations could consider partnering with community organizations or third-party support groups to provide first responders and families with additional resources, education, and programs. Within Canada, there are several organizations available to support first responders and their families, including: Badge of Life Canada (https://badgeoflifecanada.org/), Canada Beyond the Blue (https://www.canadabeyondblu.com), Boots on the Ground (https://www.bootsontheground.ca/), and Wounded Warriors Canada (https://www.woundedwarriors.ca), among others. Although many of the resources currently available focus primarily on first responders, there is an opportunity for these groups to continue integrating spouses and families in the discussion of first responder mental health and well-being. Community organizations such as these provide promise for building an integrated support network involving first responders, families, organizations, and the community.

What Can Individuals and Families Do?

Based on available data and literature, there are several recommendations for improving social support interactions between first responders and their personal support networks.

For support seekers, it is important to recognize the value in seeking support from others. Attempts to cope alone are often not effective and may fail support long-term health and well-being. When attempting to seek support, it is important to identify and understand personal support needs in order to effectively communicate this to others. It is also important to note that some sources may be more effective at providing certain types of support compared to others (e.g., receiving work-related advice from a coworker versus a family member). Although
multiple types of support (i.e., emotional, instrumental, informational, self-esteem) can be sought from each source, it is unlikely for a single person to fulfill all social support needs. Thus, it is important for individuals to note which sources are most effective at providing the type of support they are seeking in the moment, and recognize that they may need to seek help from multiple sources in their network, including coworkers, supervisors, partners or spouses, and trained professionals.

*For support providers*, it is important to recognize the value of the support provided by loved ones to first responders. In particular, emotional support (e.g., comforting, listening) was reported as most helpful by officers in Chapter 1, and the most successful strategy reported by spouses in Chapter 2. Contrary to popular belief, not all support is helpful; providing the wrong type, or ineffective support, can be detrimental to the receiver and limit subsequent help-seeking behaviour (e.g., Beehr, Bowling, & Bennett, 2010; Kaufman & Beehr, 1986, 1989; Viswesvaran et al., 1999). For support to be effective, it is important to recognize and respond to a partner’s needs as communicated, and recognize personal limitations. Additionally, it is important for spouses to be aware of their personal support needs. Although the research reviewed in this dissertation emphasizes first responders as receivers of support, it is important to recognize that social support is bidirectional. It is equally as important for support providers to reflect on their own support needs and seek help from others when necessary.

*For both partners*, it is important to recognize that social support in relationships is a learned process; providing effective support takes time and practice. Based on this, there may be an opportunity for couples to incorporate norms and expectations surrounding the communication of individual needs and the evaluation of support provided to facilitate learning for both partners. For example, establishing expectations and boundaries around seeking support
(e.g., how long partners can take space before seeking support from one another), communicating individual needs (e.g., medium [in person, written communication]; words or phrases that help facilitate communication; words or phrases to avoid), and providing feedback (e.g., tone of voice; when to have a ‘cool off’ period and for how long). Such practices help ensure both partners have a shared understanding of the support process, as well as the necessary tools to support their communication efforts.

**Implications**

The present research makes several important contributions to both research and practice. Firstly, this dissertation contributes to the literature on social support by addressing limitations associated with previous research, including the predominant use of aggregate measures of perceived social support which provide minimal understanding of the support process in practice (Thoits, 2011; Walen & Lachmen, 2000). Specifically, by exploring enacted social support in Chapter 1 and using qualitative methods to examine the social support from the perspective of providers in Chapter 2, the present research provides insight into the most commonly sought sources and types of support, as well as their perceived efficacy within the context of first responder relationships. By examining the alignment between the support sought by first responders, and the support provided by spouses, researchers and practitioners are better equipped to strengthen support relationships by addressing discrepancies and promoting skill development through evidence-based training. By doing so, this dissertation aims to supplement current organizational initiatives with the hope of increasing help-seeking behaviours for first responders, and improving the ability for providers to effectively support their partners both before they encounter stressful incidents and after as they cope.
Secondly, by studying the effects of traumatic stress within the present Canadian context, researchers and practitioners are better able to understand both the unique stressors experienced, as well as the resources currently available. This information can then be used by organizations to assess current programming and support the development of effective initiatives. Moreover, this information can be used to inform best practices across professions. The long-term sustainability of stress management programs is particularly relevant given the cost associated with mental health and the human resource challenges present for first responder occupations (see Kleim & Westphal, 2011 and Wilson, Guliani, & Boichev, 2016 for reviews). Based on this, it is critical that organizations and research institutions work together to design effective resources and programs to equip first responders with the appropriate skills, training, and supports needed to manage work-related stressors and promote health and well-being both before and after they enter the profession. Ultimately, such programs address current employee needs and support the long-term success of first responder organizations.

Additionally, by focusing on the stressors unique to first responder relationships, researchers and practitioners are better equipped to provide couples with practical strategies and tools that directly relate to their personal experiences (Heaney & Israel, 2008). By doing so, it is more likely that the support provided by spouses will be effective at addressing the distress experienced by their partners, which in turn supports long-term health and well-being (Collins & Ford, 2010). Additionally, by strengthening individual knowledge, skills, and abilities related to social support, first responders and their families are more likely to be equipped with the necessary tools to manage work-related traumatic stress experiences; thereby limiting the negative impact of multiple stressors on officer mental health and well-being over time.
Lastly, by extending the conversation of mental health and well-being outside of formal structures (e.g., including spouses and families in internal programming efforts, collaborating with community-based resources), organizations take a more holistic approach to stress management. Additionally, by incorporating a range of internal and external supports, organizations can extend occupational health initiatives to both first responders and their families. Due to the diversity of individual needs and presence of systemic barriers, such approaches allow individuals and their families to seek a variety of supports to help manage occupational stress experiences. This may be particularly important for individuals with smaller support networks, including first responders who are single, separated, or divorced, and those smaller organizations with limited resources and fewer employees. Although such efforts require additional resources in the short-term, multidimensional approaches to occupational stress for first responders can reduce the cost to organizations (e.g., disability leave; absenteeism) and public services (e.g., medical expenses) over the long-term (Reynolds & Wagner, 2007). Moreover, as a community, embracing these types of conversations will help reduce stigma and create a more inclusive environment to promote health and well-being for first responders and their families.

Conclusions

Given the estimated number of first responders experiencing mental health disorders within Canada (see Carleton et al., 2018), there is a need to reevaluate current approaches to mental health to support the long-term functioning of individuals within these occupations. Specifically, personal support networks offer promise for extending support outside of traditional organizational boundaries. By incorporating spouses and families in the discussion of mental health, first responder organizations and professions take a proactive and holistic approach to
mental health and well-being; emphasizing the importance of developing a network of resources to support first responders. Only through collaborative efforts between researchers, practitioners, organizations, and first responder communities can these professions move towards an effective battery of mental health programs to support the long-term health and well-being of first responders and their families across Canada.
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