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Exploring the Roles and Function of Police Search and Rescue (SAR) Teams in Canadian Agencies

Lorna Ferguson, Janne E Gaub, Laura Huey

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ABSTRACT

Police Search and Rescue (SAR) teams play a vital part in the successful location of lost and missing persons; however, they remain an understudied policing component. Therefore, the purpose of this study is to improve and deepen scholarly knowledge of the police SAR aspects of missing persons cases. Specifically, this paper aims to provide first insights into the roles and function of SAR teams in Canadian police services. With this research, we can begin to formulate a better understanding of their utility in police missing persons work. Through a thematic analysis of 34 in-depth, qualitative interviews with police SAR team members from 13 police services across Canada, we explore how SAR teams operate within police services and outline the varying roles police personnel comprise in these teams. Results reveal that police SAR teams operate with several distinct roles that have different functions within the larger police hierarchy. Further, findings show that police SAR personnel are fulfilling a host of responsibilities in these teams while operating as a secondary duty, yet are called upon at any time and are required to respond immediately. These findings and their implications for police missing persons work are then discussed.

Keywords:

Missing Persons; Search and Rescue; Policing; SAR Teams; Specialty Units

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Introduction

Police Search and Rescue (SAR) teams play a significant part in the successful location and resolution of lost and missing persons (hereafter LMP) cases (Denver, Perez, & Aguirre, 2007; Pfeifer, 2006). Despite their importance, these teams have been regarded as ‘invisible’ due to a lack of recognition and/or support at the national level, as well as an absence of public, media, and scholarly attention (Denver et al., 2007; author cite; Lois, 2001; Pfeifer, 2006). With the increased attention to LMP cases

occurring across Canada more broadly—particularly from policymakers and researchers—comes an elevated interest in the modes of police investigation, response, search, and rescue (author cite; author cite). However, little is known about the police response to LMP cases, and even less is understood about police SAR efforts and teams. Of what has been examined in this field, the focus remains on studying the tools and techniques that are used for SAR, particularly for non-police SAR teams (i.e., community organizations like Search and Rescue Volunteer Association of Canada), and the technologies that could be employed to enhance their operations (e.g., Denver et al., 2007; Ribeiro, Ferworn, Denko, Tran, & Mawson, 2008; Visser & Campbell, 2014).

While research on these components can be important for developing effective practices for the location and resolution of LMP cases, a significant gap exists in the current scholarship from a policing perspective. This is problematic since police are the first to be called upon when a LMP case requires services such as ground search and rescues (i.e., land or inland operations). Thus, police are relied on for these services but are operating on information that may not be tailored to the use, function, and role of police personnel in SAR and missing persons work. The absence of comparable Canadian data on this topic has led to several adverse outcomes. First, Canadian SAR teams utilize texts, case studies, and research originating out of the United States (U.S.) and United Kingdom (U.K.) to develop and train on search and rescue (author cite). Second, these non-specific practices are not empirically validated; relying on them as training and operational best practices can result in missing persons reports to be overlooked and/or mismanaged (author cite). Lastly, the lack of a Canadian evidence base on police SAR teams ultimately results in confusion related to logistics, police policy and practice, and liability in missing persons cases (Pfeifer, 2006).

Given that it has been acknowledged across the existing scholarship that police SAR efforts and teams contribute appreciably to missing persons work, it is crucial to examine this policing service to understand the roles, use, and function of police SAR personnel in locating or recovering missing persons. To offer a starting point for understanding police SAR teams, this exploratory study uses data from 34 in-depth interviews with police SAR personnel from across three Canadian provinces to shed light on police SAR teams' roles and function in the Canadian context.

Literature Review

Defining Lost and Missing Persons

The terms *lost* and *missing person* are frequently used interchangeably but are actually separate and distinct concepts. Foo (2012) notes that a lost person is “a person who is temporarily disorientated and would wish to be found, e.g., someone who has gone walking and does not know where they are (and how to return)” (p. 173). This is different from a missing person case in that those who go missing tend to choose to do so and do not wish to be found (Foo, 2012). But while there are technical differences, there is often substantial overlap between the two in practicality. For example, those living with dementia or Alzheimer’s who wander away from their location and experience confusion over their whereabouts tend to wander until they can go no further (Koester, 2008). Thus they are technically *lost* but often referred to as *missing* because they require a more urgent police response, thus necessitating the frontloading of resources and assigning a greater amount of police personnel to attend to the call for service.

Similarly, differences between lost and missing people are not offered in police report case classifications or across statistics on missing persons (Pfeifer, 2006). As such, *lost* cases blend into the category of *missing person* within police records and figures. Further complicating matters, there are various definitions of who is considered a *missing person* globally and across disciplines, such as between law enforcement, health and social care, and academia (Taylor et al., 2019). This study uses the Royal Canadian Mounted Police (RCMP) and Government of Canada’s definition of a missing person (which encompasses lost cases) as it is the definition police use when handling these reports:

Anyone reported to police or by police as someone whose whereabouts are unknown, whatever the circumstances of their disappearance and they are considered missing until located. (Government of Canada, 2014).

The Scope of Missing Persons Cases

The National Centre for Missing Persons and Unidentified Remains (NCMPUR) provides nationwide statistics on all police missing persons reports by year, province, age, sex, and probable cause. The 2019 data reveals that there were 73,184 missing person reports in 2019, of which 40,425 were children, and 32,759 were adults (Canada's Missing, 2019). Just under 60% of reports were for adult males, and child/youth females (57% of each respective age group), and slightly over 60% of cases for both age groups were resolved within 24 hours. While these statistics provide fundamental insights into the number of missing persons reports police handle annually across Canada, existing literature acknowledges that missing persons are

considerably underreported (Canadian Centre for Information on Missing Adults [CCIMA], 2012). Given this, it is estimated that there are actually over 100,000 missing persons incidents occurring each year (CCIMA, 2012; author cite).

This trend is similar across the globe. For instance, in the U.K., police receive over 300,000 missing persons reports annually, bringing about an estimated policing cost of around £750,000,000 year-over-year (U.K. Missing Persons Bureau, 2017; Shalev Greene & Pakes, 2014; Taylor, Woolnough, & Dickens, 2019). In Australia, around 100 missing person police reports are generated each hour, and the rate of reports increased by approximately 30% from 2018 to 2019 (from 30,000 per year to almost 40,000) (author cite). In the U.S., the Federal Bureau of Investigation (FBI) National Crime Information Center highlights that in 2019, American law enforcement agencies reported over 609,000 missing persons (FBI, 2020). Thus, locating lost or missing people, by way of SAR or otherwise, is an international issue impacting policing that requires scholarly attention.

Search and Rescue

The literature on SAR can be divided into three broad categories: Technological advancements in SAR; descriptive studies of policy, protocol, and training, including discussion of 'best practices'; and health impacts for SAR personnel. First, a handful of studies, primarily published in engineering journals or conference proceedings, addresses various technology forms to assist SAR personnel. Importantly, this literature focuses on the technical capability of the technology in question, not necessarily its practical utility or an empirical assessment of its viability in improving outcomes of interest for police and other SAR personnel. These studies also center on the technology used primarily in urban SAR (USAR), such as the use of underdogs (a bag strapped to the underside of a SAR canine), accelerometers, and unmanned aerial vehicles (or Remote Piloted Systems; Ferworn et al., 2008, 2006; Półka, Ptak, & Kuziora, 2017; Ribeiro et al., 2008).

Second, some studies describe SAR teams themselves, explaining how SAR teams and/or SAR personnel use and develop “best practices” related to SAR policy or practice, and how they respond in large-scale crises. A working group organized by the U.S. Federal Emergency Management Administration (FEMA) about SAR operations reported that ‘many of the functional requirements and technology needs identified would indeed benefit both the USAR and law enforcement communities’ (Wong & Robinson, 2004, p. 5). The group also identified several high priority needs, including:

Improved real-time data access; the ability to accurately and non-invasively locate survivors following structural collapse; the ability to communicate through/around obstacles; lighter, more efficient power sources; improved monitoring systems; improved personal protective equipment; integration/consolidation of functions found in multiple pieces of equipment into a single piece of equipment; improved breaching, shoring, and debris removal systems; reliable non-human, non-canine search and rescue systems [i.e., robots]; [and] standardization of equipment. (Wong & Robinson, 2004, p. 4-5).

Perhaps the most comprehensive descriptive study was a 2006 census of American SAR teams, conducted by Denver and colleagues (2007). They found that of the 1150 U.S. SAR teams in 2006, most are composed of EMS, fire, police, and sheriff employees who volunteer with SAR teams in their spare time. This is vastly different from a specially-trained and organized group functioning within a law enforcement agency. Additionally, SAR teams generally form regional and national networks unaffiliated with any government regulation or support. This community not only 'share[s] training standards, but they also influence (whether directly or not) each other in terms of technical tasks, equipment, organizational strategies, coordination, and support' (Denver et al., 2007, p. 508). Canine rescue and water rescue (including floods and swift water) were the most common capabilities of SAR teams (33% and 25%, respectively), with USAR one of the least common (12%). Finally, Denver and colleagues (2007) note that local SAR teams respond more quickly than teams or task forces from FEMA and are more technically capable than untrained volunteers.

Search and rescue occurs in various settings, but its use in the wilderness is one of the oldest capabilities. In fact, 'many [local SAR] teams attribute their establishment to a local missing person or persons in mountainous or wilderness settings' (Denver et al., 2007, p. 509). Wilderness or mountainous searches can be quite complex, requiring numerous SAR teams with a variety of capabilities (e.g., trained canines) as well as dozens of other Searchers (Denver et al., 2007). In a study of SAR work during forest fires, Karma and colleagues (2015) note that SAR is 'usually applied in a broad area, under foggy or smoky conditions; it mostly involves location of entrapped fire crew or people in between fire fronts and safely removing them aware from the dangerous zone' (p. 307). The use of unmanned vehicles (both aerial and ground) are particularly useful in these operations. For police personnel assigned to remote wilderness areas, cross-training in many emergency management tasks, including SAR, is essential (Wood & Trostle, 1997).

Large-scale crises often require SAR assistance or create unique challenges for SAR personnel. A qualitative assessment of FEMA's use of USAR task forces to coordinate and interact with volunteers in the wake of disasters found USAR personnel triage volunteers to ensure the best use of individuals' strengths and mitigation of weaknesses (Barsky, Trainor, Torres, & Aguirre, 2007). While not a natural disaster, the recent COVID-19 pandemic found SAR teams adapting to new regulations. Koester and Greatbatch (2020) found that 'SAR organizations should continue to plan for approximately the same level of response even during a pandemic and should prepare appropriate response guidelines' (p. 190). A case study of the Bay Area (California, USA) SAR network discussed changes to SAR preparation and deployment plans in the wake of COVID-19. One key finding was the importance of maintaining community virtually through training and group chats or texts (Young, 2020).

Finally, a small subset of research has addressed physical and mental health concerns related to SAR, both for SAR personnel and the people for whom they are searching. A study of New Zealand Police land-based SAR operations found that:

Search and rescue personnel are exposed to a broad range of medical and traumatic conditions [including] pre-existing cognitive impairment that results in persons lost in urban environments. Notwithstanding this, many subjects will also need to be managed in remote, resource-limited environments for extended periods. First aid training and field equipment should reflect these demands. (Visser & Campbell, 2014, p. 401)

This research is unique because it is the only SAR-related study to specify a sample of police SAR personnel. Two other articles address the health impacts of 9/11 SAR efforts on canines and their handlers, finding that canines deployed to the World Trade Center and handlers dispatched to 9/11 rescue operations experienced significantly more physical (canine) and mental (handler) health problems (Alvarez & Hunt, 2005; Slensky, Drobatz, Downend, & Otto, 2004). It is unclear whether these studies included police SAR personnel, though it is likely given the context of 9/11. Conversely, among Dutch SAR personnel deployed to Haiti in response to the 2010 earthquake, very few workers experienced mental health issues or PTSD symptoms. This was attributed mainly to the fact that 'protective factors such as good team functioning, recognition and job satisfaction were clearly present, while risk factors such as sustained injuries or death of a co-worker were absent' (van der Velden, van Loon, Benight, & Eckhardt, 2012, p. 100).

Current Study

A fundamental limitation of many SAR studies is that, in many cases, it is unclear whether the sample includes police SAR teams; some studies imply this is the case, though the findings make little to no differentiation between police and non-police SAR teams. As such, there is no research explicitly dedicated to exploring or understanding the mission, tactics, and outcomes of police SAR teams. The current exploratory study brings together these seemingly disparate research areas to formulate first insights into police SAR teams. Using qualitative data from 34 interviews with SAR personnel from 13 police services across Canada, we investigate police SAR teams' roles and functions as they work to solve missing persons cases. Specifically, we focus on three research questions:

- (1) How do SAR teams/personnel fit into the organizational hierarchy of their police services?;
- (2) What are the various roles that make up police SAR teams?; and
- (3) What are the respective functions of the roles within police SAR teams?

Data and Methods

Data Collection

This study is part of a larger project launched in January 2019 investigating police responses to missing persons cases in Canada¹. The project used a combination of requests for police participation through social media (primarily Twitter and LinkedIn) and snow-ball sampling. We conducted in-depth, semi-structured interviews with all (n=97) participants, either in-person or via telephone, which lasted approximately 1-2 hours and were audio-recorded and transcribed. The interviews covered a range of topics related to police responses to missing persons cases, including roles and duties of assigned officers, training received, allocated resources, and any challenges experienced as part of missing persons investigations. The current study focuses on the interview data for the 34 participants who spoke specifically to the nexus of SAR teams and missing persons investigations. These 34 participants operate within 13 police services across British Columbia (n=12), Ontario (n=17), and Manitoba (n=5) and fulfill the following police SAR roles: Searchers (n=20), Search Coordinators (n=5), Search Managers (n=7), and Missing Person Coordinators (n=2). We focused recruitment on police services in British Columbia and Ontario as these two provinces typically account for roughly 65% of missing persons reports in Canada per annum (Canada's Missing, 2015, 2016, 2017, 2018, 2019, 2020).

Coding and Analysis

Analysis of interview data for the current study was conducted using inductive thematic coding. This was undertaken as an inductive approach is more flexible and themes identified by researchers are directly related to the data (Braun & Clarke, 2006). To do so, the last author initially conducted focused coding of the data files. In line with thematic analysis, candidate themes were first drawn out, and, through continued coding and constant revision, overarching themes were developed and refined (Braun & Clarke, 2006). To ensure reliability, these preliminary coding results were then sent to the interviewer—the first author—to review the coding while reflecting on what was recorded during the interviews and either verify or dispute the coded results. At this time, the intention was to collectively assess the overarching themes and address any disagreements on codes; however, this did not occur as no conflicts emerged. For further verification purposes, the research team also sought the expert opinion of a highly-experienced police Search Manager, who reviewed the anonymized manuscript in full and ultimately corroborated the findings².

Results

Participants consistently indicated that SAR operations within police organizations comprise specific roles, each with a dedicated function (see Table 1). This structure aligns with the overall hierarchy of police agencies more generally (Maguire, 2003). However, the nature of SAR operations means that police personnel must respond to rapidly evolving situations; thus, these roles and functions are also somewhat pliant. The consistency with which participants explained the general structure and role identities is somewhat surprising, though, given the lack of uniform standards in Canada related to SAR organization and training, as well as police responses to missing persons more generally. For example, Ontario provides training for all police services in the province, designed and implemented by the Ontario Provincial Police, whereas B.C. and Manitoba have no such cohesion in their SAR training, which is left to individual services. Thus, understanding the roles and functions across Canadian regions allows for a better picture of how SAR personnel are situated both within SAR operations (as a subunit of the police service) and also the agency as a whole.

Table 1. Overview of Police SAR Teams Roles and Functions in Missing Persons Work

Role	Use and Function
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Frontline Response (Patrol)	<ul style="list-style-type: none"> · Responds to calls for service. · Conducts initial inquiries. · Carries out preliminary risk assessment. <p>> <i>Function: Gather information.</i></p>
Searcher	<ul style="list-style-type: none"> · Physical presence. · Boots-on-the-ground searching. <p>> <i>Function: Carry out physical search.</i></p>
Search Coordinator	<ul style="list-style-type: none"> · Team leader. · Runs training. <p>> <i>Function: Develop and coordinate training.</i></p>
Search Manager	<ul style="list-style-type: none"> · Supervising and overseeing team and operations. · Managing SAR team. · Managing SAR operations. <p>> <i>Function: Ground supervision.</i></p>
Incident Commander	<ul style="list-style-type: none"> · Determine and decide upon resources and services used in SAR operations. <p>> <i>Function: Executive operational decision-making.</i></p>

Missing Persons Coordinator	<ul style="list-style-type: none"> • Review SAR and missing person file. • Determine new/different leads. • Formulate next steps for the case. <p>> <i>Function: Administrative and operational support.</i></p>
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Situating SAR Within Organizations

Each police agency had dedicated SAR-certified personnel attending to several other roles and duties until called upon for SAR work. For instance, all of the 20 Searchers also operated as Constables (frontline patrol officers). In fact, all SAR personnel operated in several roles and units, such as Staff Sergeant, Community Foot Patrol, Public Order Unit, and/or Emergency Response Unit. To highlight the diversity of roles and units outside of SAR, we quote Officer 2001 (Search Manager), who is ‘a part of the Emergency Planning Office, and from there, became part of the Public Safety Unit as a Search Manager. I’m also designated as a Community Emergency Management Coordinator and a Hostage Negotiator or Crisis Negotiator.’ This means that no police service had a dedicated SAR unit focused on this work as a primary duty. This dual-role is similar to other specialized roles in policing, such as Special Weapons and Tactics (SWAT). Many departments (especially small agencies) do not have a dedicated SWAT unit, but rather, multiple officers who are SWAT-certified and respond to SWAT calls as needed.

Police SAR Personnel

Gatekeeping SAR Operations: Frontline Patrol Officers

The bulk of missing persons calls are initially dispatched to *frontline patrol officers*, beginning a fairly standard initial response to missing persons calls: Attending the call, collecting information (e.g., by way of a Missing Person Questionnaire form), and conducting a preliminary risk assessment determining further response. Overall, frontline patrol officers’ function in SAR operations and missing persons cases more broadly emerged as gatherers of information. Should a case be deemed “low risk,” dispatched patrol officers have primary responsibility for tasks like conducting inquiries with family and friends, looking for an individual and flagging them as a missing person in any relevant systems. Should their initial risk assessment warrant a

search, the unit or personnel tasked with conducting searches is then notified, as noted by this police officer in Ontario:

That checklist [the risk assessment form] is brought to a supervisor. Most of the time he's a Staff Sergeant who is the leader of the squad ... if they score a total of a certain number after it's added up, that person then needs to consult with the search manager and/or the duty officer. The duty officer is kind of like the supervisor above that person. And they're going to decide whether or not they should call in a search manager for advice. So, we're talking frontline to a supervisor ... our training is always call a Search Manager. You're not going to have any problem calling me on my cell phone somewhere (Officer 13001, Searcher).

In this way, frontline patrol officers serve as a crucial decision point for determining which cases receive SAR attention. Cases that are flagged for SAR engagement generally involve vulnerability or elevated risk of harm, such as those involving missing children and youth, individuals with potential suicidal ideation or severe mental or physical health conditions, and/or those with cognitive impairments. Put another way, police SAR teams are commonly called into the investigation when cases overlap with vulnerability and increased chances of harm. Other risk factors include weather conditions or potentially dangerous locations. Officer 1002 (Search Manager) explains the utility of police SAR personnel in high-risk missing persons cases:

[If] you have a situation where you have what we categorize as a level one emergency search [high-risk], that's where we have to have a search manager initiated. We have to have an incident commander involved. We have to have search trained personnel, which could include a canine unit, which is something we go to all the time. Because if we have the right situation, we can throw the canine unit out there, and we can get some success with that in locating the person that's missing.

Supervising and Conducting SAR Operations: Searchers, Search Coordinators, Search

Managers, and Incident Commanders

Search team members typically include Searchers, Search Coordinators, and Search Managers. These personnel are often frontline patrol officers who signed up as a part of the SAR team, and, therefore, are pulled away from patrol duties. *Searchers* are

officers – typically within Public Order Unit or other non-patrol units – who have received specialized training, beyond that of frontline patrol officers, in search and rescue activities in variable conditions. This role was described as ‘personnel that are stomping around looking for people’ (Officer 1005, Search Coordinator) and ‘ground pounders’ (Officer 12001, Search Manager). Overall, Searchers function as the physical, boots-on-the-ground presence for searching for, locating, and/or rescuing people reported as missing.

Next, a *Search Coordinator* (also referred to as a “team leader”) is typically the individual in charge of the search team and developing and coordinating training for Searchers. Therefore, by proxy, they procure the agency’s ‘best practices’ for missing persons cases. This is “usually somebody who has search management experience and is then responsible for training search managers and keeping best practices going, and collaborating with partners in search and rescue and making sure we’re doing best practices and their training’s up-to-date” (Officer 1005, Search Coordinator). Other responsibilities Search Coordinators emerged as fulfilling are logging and tracking previous SAR operations (i.e., data collection and storing), coordinating volunteer or civilian Searchers assisting from the community/community organizations when they are called upon by an Incident Commander and/or Search Manager(s), debriefing Searchers and Search Managers, and fulfilling the role of Searcher and/or Search Manager if and when necessary (i.e., in times of resource issues or large-scale operations).

The *Search Manager* functions as the overall ground supervision for SAR operations and oversees the SAR team. However, it was often discussed that Search Managers can be involved in any part of the search process: Reviewing risk assessments, participating in searches, requesting and connecting with volunteer Searchers, and coordinating and managing the search are all essential functions for Search Managers. In other words, Search Managers can, and do, fulfill the Search and Search Coordinator roles as well. Each Search Manager’s responsibilities in a missing person case are often determined by the most senior officer on scene and is based on the individual’s level of experience and training. For example, Officer 1002 (Search Manager) remarks that “we don’t have different levels of Search Managers, but we have newer Search Managers doing searches, and then we have people who have a ton of experience doing [...] tasks like supervising.” Notable is that Search Managers duties vary because “the goal in any search is to find the missing person as quickly as possible, but also in the best possible condition” (Officer 1002). Ergo, the Search Manager role in any given case adjusts to meet efficiency and resource demands, just

as with the Search Coordinator (albeit with more supposed responsibilities). One dedicated main function of Search Managers emerged as the operation of new SAR technology, especially those used for mapping and controlling search grids and radii like the QuoVadis 7 (QV7) search management software, which allows searches to be conducted more efficiently.

Although not a part of the unit's overall structure, emergency situations that entail higher levels of search response (i.e., those regarded as 'high-risk' and 'emergency') require the involvement of an *Incident Commander*. The Incident Commander is typically a Staff Sergeant or Inspector with specialized training and experience in responding to and coordinating responsibilities for critical situations. Importantly, this individual may not have missing persons or SAR-specific training; for example, one agency had six Incident Commanders, three of whom had SAR experience. Primarily, the Incident Commander role in police SAR teams does not involve immediate response or direct supervision regarding missing persons incidents; instead, they make executive-level operational decisions regarding resources, budgets, and service provision (e.g., the deployment of K9 units or involvement of volunteer and/or civilian Searchers) in large-scale or otherwise higher-level SAR operations. As Officer 1003 (Searcher) remarks, Incident Commanders often have "tons of experience" and "they understand, like, 'This is priority, make it happen.'"

Back-End Review and Support: Missing Persons Coordinator

Lastly, in situations in which either a) a full-scale SAR response does not appear warranted but there are concerns with the case, as determined by the initial investigative response (i.e., suspicion that a crime may have occurred or high-risk), or b) the case remains unresolved, the missing person report will be referred to agency investigators. This transfer occurs to either a dedicated *Missing Persons Coordinator* or other investigative units (e.g., homicide or major crimes). Upon further investigation by these personnel, SAR members may still be deployed to search for and locate the missing person. This deployment is often advocated for or determined by the Missing Persons Coordinator, who provides administrative reviews and operational support for cases both in real-time and after completed-yet-unsuccessful searches. Officer 1010 (Searcher) explains that Missing Persons Coordinators,

Get the [missing person and SAR] files, and then they will continue with follow-ups relating to the missing person until they're located, or allocate someone from the investigations side like Major Crimes Unit that would be tasked with that file if the individual has not been located and there's some suspect issues like high-risk

lifestyle, evidence [...] to suggest that potentially they were abducted or could be in a relationship where there's potential they've been harm.

That is, once the file is with them, Missing Persons Coordinators “essentially assume the [role of] lead investigator on that file” (Officer 4001, Missing Persons Coordinator). Ultimately, these personnel serve a back-end, in-office role to revise plans, identify new or different leads, and formulate next steps to ensure “nobody falls through the cracks” (Officer 5002, Missing Persons Coordinator). Notably, this role is not firmly established in policing: Of the 31 services included in the larger project, only two had a dedicated Missing Persons Coordinator role. This creates a gap in the SAR process. After a SAR operation or when a SAR operation is not deemed necessary, the LMP case is transferred to other personnel/units that end up working on the case alongside, or “off the side of someone’s desk,” (Officer 4006, Search Manager) any other pressing duties.

Discussion

Police are frequently asked to respond to situations involving lost or missing persons that require SAR efforts to swiftly locate individuals in the best possible condition. However, extant research largely ignores the police-specific context of SAR operations; thus, little is known about SAR teams' composition or their function within the larger police organization. Therefore, we examined police SAR personnel's roles and functions by interviewing 34 police SAR team members from 13 police services across Canada. From our results, we offer several key contributions to the existing literature that begin to formulate a basis of knowledge to advance our current understanding of police SAR work.

Our findings highlight that police SAR teams are composed of several roles with specific functions and tasks. For example, the Searcher role emerged as the most clear-cut in that they have a uniformed set of duties; their manifest function is the boots-on-the-ground searching presence. They also report to Search Managers and are trained by Search Coordinators. Conversely, Search Managers have the most extensive role in that they fulfill several latent functions; they can be Searchers, Search Coordinators, investigators, supervisors or team leads, and teachers/mentors, and also are the liaisons between a) frontline patrol and the SAR team, b) Incident Command and the SAR team, and c) the Missing Persons Coordinator and all related happenings with the missing person file. However, the exigency of missing persons cases requires that SAR personnel are also highly adaptive, sometimes taking on tasks delegated to other roles. For example, Search Managers and Coordinators often take on the tasks of Searchers

or conduct frontline investigative work. Similarly, frontline patrol officers may also be SAR personnel, leading to their later reassignment to the case for SAR operations. Additionally, it was revealed that police SAR personnel do more than simply physically search for individuals; there is a notable investigative component involved.

Our findings have important implications for both police practice and future research. For example, the roles and functions of police SAR personnel are generally determined by available resources. Since police SAR teams are primarily used in missing persons cases involving vulnerable people at great risk of harm and so constitute an emergency (e.g., cases involving minors, individuals with potential suicidal ideation or severe mental, cognitive, or physical health conditions or impairments), it is possible that police SAR work could better function as a dedicated unit rather than as a peripheral police duty given the highly-volatile and rapidly evolving nature of these cases. This is especially true in larger police services with a high call-volume related to lost and missing persons. Therefore, future research should explore if the nature of police SAR work warrants dedicated/specialized resources and personnel.

Additionally, our findings show there is relative consistency in the existence and use of SAR for missing persons cases *within* provinces, but variation *between* provinces. This is important to note as recent calls for standardizing police responses to missing persons nationally (i.e., by nationwide inquiries³), including legislation like the Missing Persons Act, may present concern if such practices and policies starkly differ across the areas of Canada. Our findings alone cannot determine whether police SAR team operations fluctuating across Canada is beneficial (e.g., in response to different environments or social, economic, and political contexts) or if these differences generate uneven and unreliable police responses. Additional investigation into any regional variations is therefore justified, especially regarding the adequacy of training for all components of SAR (physical, logistic, and investigative). For example, uniformed patrol officers are used in the early stages of the SAR process, but it is unclear whether they receive standardized training in this capacity. Consequently, future research should explore whether a more universal or cohesive SAR training regimen would increase police efficiency throughout the SAR process of resolving missing persons cases.

As with any research, our study has limitations. Qualitative research is often criticized as being descriptive in nature, explaining *how* or *why* a relationship or phenomenon occurs, whereas quantitative research identifies correlations between variables and explains *what* is happening in a relationship. Yet both types of research are necessary,

particularly for social scientists interested in phenomena that are not as clearly defined. Qualitative research is especially useful for exploratory studies of unstudied or understudied issues. In a similar vein, snowball sampling can introduce sampling bias. This is minimized by conducting a sufficient number of interviews to achieve saturation, which has been accomplished here. However, this method does mean that our findings are not necessarily generalizable, particularly outside Canada. That said, Canadian policing is under-researched compared to police in the U.S. or U.K., thus our study fills another necessary gap in the literature, and this research offers prompts for several areas for further investigation that may be applicable to other places.

References

- Alvarez, J., & Hunt, M. (2005). Risk and resilience in canine search and rescue handlers after 9/11. *Journal of Traumatic Stress, 18*(5), 497-505.
- Barsky, L. E., Trainor, J. E., Torres, M. R., & Aguirre, B. E. (2007). Managing volunteers: FEMA's Urban Search and Rescue programme and interactions with unaffiliated responders in disaster response. *Disasters, 31*(4), 495-507.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77-101.
- Denver, M., Perez, J., & Aguirre, B. E. (2007). Local search and rescue teams in the United States. *Disaster Prevention and Management, 16*(4), 503-512.
- Ferworn, A., Ostrom, D., Barnum, K., Dallaire, M., Harkness, D., & Dolderman, M. (2008). Canine remote deployment system for urban search and rescue. *Journal of Homeland Security and Emergency Management, 5*(1), 1-8.
- Ferworn, A., Sadeghian, A., Barnum, K., Rahnema, H., Pham, H., Erickson, C., ... Dell'Agnese, L. (2006). Urban search and rescue with canine augmentation technology. *Proceedings 2006 IEEE/SMC International Conference, 334-338*.
- Karma, S., Zorba, E., Pallis, G. C., Statheropoulos, G., Balta, I., Mikedi, K., ... Statheropoulos, M. (2015). Use of unmanned vehicles in search and rescue operations in forest fires. *International Journal of Disaster Risk Reduction, 13*, 307-312.
- Koester, R. J., & Greatbatch, I. (2020). Comparing the impact of COVID-19 on Search and Rescue and fire emergency incident responses. *Journal of Search and Rescue,*

4(2), 190–199.

Lois, J. (2001). Managing emotions, intimacy, and relationships in a volunteer search and rescue group. *Journal of Contemporary Ethnography*, 30(2), 131–179.

Maguire, E. R. (2003). *Organizational structure in American police agencies: Context, complexity, and control*. Albany, NY: SUNY Press.

Morse, J. M., Barrett, M., Mayan, M., Olson, K., & Spiers, J. (2002). Verification strategies for establishing reliability and validity in qualitative research. *International Journal of Qualitative Methods*, 1(2), 13–22.

Pfeifer, J. (2006). *Missing persons in Saskatchewan: Police policy and practice*. Regina, Saskatchewan.

Półka, M., Ptak, S., & Kuziora, Ł. (2017). The use of UAV's for search and rescue operations. *Procedia Engineering*, 192, 748–752.

Ribeiro, C., Ferworn, A., Denko, M., Tran, J., & Mawson, C. (2008). Wireless estimation of canine pose for search and rescue. *2008 IEEE International Conference*, 1–6.

Slensky, K. A., Drobatz, K. J., Downend, A. B., & Otto, C. M. (2004). Deployment morbidity among search-and-rescue dogs used after the September 11, 2001, terrorist attacks. *Journal of the American Veterinary Medical Association*, 225(6), 868–873.

van der Velden, P. G., van Loon, P., Benight, C. C., & Eckhardt, T. (2012). Mental health problems among search and rescue workers deployed in the Haïti earthquake 2010. *Psychiatry Research*, 198(1), 100–105.

Visser, J. T., & Campbell, A. F. R. (2014). New Zealand land search and rescue operations. *Wilderness & Environmental Medicine*, 25(4), 401–408.

Wong, J., & Robinson, C. (2004). Urban search and rescue technology needs. *Federal Emergency Management Agency (FEMA) and the National Institute of Justice (NIJ)*, p. 73.

Wood, D. S., & Trostle, L. C. (1997). The nonenforcement role of police in Western Alaska and the Eastern Canadian arctic. *Journal of Criminal Justice*, 25(5), 367–379.

Young, C. S. (2020). The paradigm shift in search and rescue response during the COVID-19 pandemic in California. *Journal of Search and Rescue*, 4(2), 173–189.

Footnotes

1. Data collection and analysis were carried out with the approval of the [University redacted for peer-review] Research Ethics Board. [↵](#)
2. This was undertaken as it is a recognized method of verification in the process of establishing reliability and validity qualitative research (Morse et al., 2002). [↵](#)
3. Inquiries discussing standardized police responses include, for example, the Missing Women Commission of Inquiry (2013) and the National Inquiry into Missing and Murdered Indigenous Women and Girls (2019). [↵](#)