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Mental health training, attitudes toward support, and screening positive for mental disorders

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ABSTRACT

Public Safety Personnel (PSP; e.g. correctional workers, dispatchers, firefighters, paramedics, police) are frequently exposed to potentially traumatic events (PTEs). Several mental health training program categories (e.g. critical incident stress management (CISM), debriefing, peer support, psychoeducation, mental health first aid, Road to Mental Readiness [R2MR]) exist as efforts to minimize the impact of exposures, often using cognitive behavioral therapy model content, but with limited effectiveness research. The current study assessed PSP perceptions of access to professional (i.e. physicians, psychologists, psychiatrists, employee assistance programs, chaplains) and non-professional (i.e. spouse, friends, colleagues, leadership) support, and associations between training and mental health. Participants included 4,020 currently serving PSP participants. Data were analyzed using cross-tabulations and logistic regressions. Most PSP reported access to professional and non-professional support; nevertheless, most would first access a spouse (74%) and many would never, or only as a last resort, access professional support (43–60%) or PSP leaders (67%). Participation in any mental health training category was associated with lower ($p < .01$) rates for some, but not all, mental disorders, with no robust differences across categories. Revisions to training programs may improve willingness to access professional support; in the interim, training and support for PSP spouses and leaders may also be beneficial.

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Introduction

As a function of their occupations, Public Safety Personnel (PSP; e.g. correctional workers, dispatchers, firefighters, paramedics, police; Oliphant, 2016) are frequently exposed to a wide variety of potentially traumatic events (PTEs). An event is considered potentially traumatic when exposure includes direct or indirect experiences of actual or threatened death, serious injury, or sexual violence (American Psychiatric Association, 2013). Results from a recent survey with a large, Canadian PSP sample indicated the average number of different PTE types experienced was approximately 11 out of 16 different PTE types that were assessed, with each type experienced 11 or more times by up to 71.3% of respondents (Carleton, Afifi, et al., 2019). Relatedly, approximately 44.5% of PSP screened positive for one or more mental health disorders (Carleton, Afifi, Turner, Taillieu, Duranceau, et al., 2018) as well as high proportions reporting lifetime suicidal ideation (27.8%), planning (13.3%), and attempts (4.6%) (Carleton, Afifi, Turner, Taillieu, LeBouthillier, et al., 2018a). Indeed, there is growing evidence that PSP experience a diverse range of potentially problematic anxiety and depressive symptoms (Paulus, Gallagher, Bartlett, Tran, & Vujanovic, 2018). The reported mental health challenges among PSP may be related, at least in part, to frequent PTE exposures (Carleton, Afifi, et al., 2019). High exposure frequencies to PTEs led to the creation of a related category of events, called critical incidents. The critical incidents category distinguishes relatively common PTE exposures from exposures thought more likely to be problematic. Critical incidents are situations that cause PSP, “to experience unusually strong emotional reactions which have the potential to interfere with their ability to function either at the scene or later” (Mitchell, 1983, p. 36) and can include, “all physical custody (arrests), all vehicle and foot pursuits, all dispatched code responses (emergency), all motor vehicle accidents that require physical work and all calls which present an active threat to life and/or property” (Anderson, Plecas, & Segger, 2001, p. 18). More recent research suggests individual perceptions, rather than objectively identified PTEs, may be the defining factor for a PTE to be considered a critical incident (Carleton, Afifi, et al., 2019).

Irrespective of how a PTE is identified as critical, several strategies have been developed to minimize the impact of critical incidents—specifically, critical incident stress management (CISM) programs and critical incident stress debriefing (CISD) programs (Authors, 2016). The Mitchell Model was among the first of such programs (Authors, 2016; Mitchell, 1983; Mitchell & Bray, 1990; Mitchell & Everly, 1996). The CISM programs were intended to bolster mental health before, during, and after exposures to potentially traumatic critical incidents, by reducing barriers to treatment seeking and expediting access to support. CISD programs were originally intended to be components of CISM programs, delivered following a critical incident (Authors, 2016; Mitchell, 1983; Mitchell & Bray, 1990; Mitchell & Everly, 1996). The CISM and CISD content shares foci common to cognitive behavioral therapy programs; for example, the content encourages critical engagement with individual thoughts and emotional reactions, as well as evidence-informed psychoeducation about stress and coping (Authors, 2016; Shave, 2010).

In addition to the multitude of available programs for managing the impact of critical incidents on PSP, there are a growing number of programs to train PSP to

provide mental health support to their peers. Peer support refers to a wide range of approaches, wherein participants with shared roles or experiences provide structured assistance to their peers. The shared history before and after critical incident exposures has been thought to facilitate empathy and trust (Kemp & Henderson, 2012; Solomon, 2004). Peer support is different from friends providing informal assistance because the peers providing support are typically appropriately trained and potentially supervised in providing mental health support (Grenier, Darte, Heber, & Richardson, 2007; Mead, Hilton, & Curtis, 2001). Peer support also differs from professional mental health support because no power differential is intended between supporters and those supported (Greenstone, 2000). Peer support personnel typically receive special training to provide support services in addition to their usual duties, including critical incident management programs such as CISM, CISD, and mental health (or psychological) first aid (Heber, Grenier, Richardson, & Darte, 2006). In Canada, there are several agencies providing such training, in addition to diverse training provided by or within many PSP organizations. The peer support training programs can include content related to cognitive behavioral therapy models that overlaps with the critical incident programs as well as training for PSP peers to deliver one or more of the critical incident programs (Authors, 2016). Peer support training is also intended to reduce barriers to treatment seeking and expedite access to support, therein supporting better mental health.

Other popular training programs have been designed to provide evidence-based psychoeducation about stress, trauma, and coping in an effort to build resilience, reduce stigma, and minimize barriers to treatment seeking (Papazoglou & Andersen, 2014). The Road to Mental Readiness (R2MR) program may be the most recognized of such programs and was originally developed by the Canadian Department of National Defense. Their website describes R2MR as designed to, “improve short term performance and long-term mental health outcomes” through building a “solid foundation in the concept of resilience” (National Defence and the Canadian Armed Forces, 2017). The R2MR training includes cognitive behavioral therapy skills such as goal setting, mental rehearsal/visualization, adapted cognitive monitoring (i.e. awareness of self-talk), and arousal management through adapted breathing (i.e. tactical breathing). The Mental Health Commission of Canada (MHCC) was the first to adapt the R2MR material for use with PSP (Mental Health Commission of Canada 2017; Stuart et al., 2014; Szeto & Adair, 2016). In 2018, the Canadian Armed Forces provided an adaptation for PSP of their most recent version of R2MR (National Defence and the Canadian Armed Forces, 2017); however, to date, there is only one published peer-reviewed study evaluating the effectiveness of MHCC adaption of R2MR (Carleton, Korol, et al., *in press*). The study involved a sample ($n = 147$) of municipal police assessed longitudinally including pre-training, post-training, 6-month follow-up and 12-month follow-up assessments. The results were consistent with other single session interventions focused on improving various health behaviors (e.g. (Aveyard, Begh, Parsons, & West, 2012; Leppin et al., 2014; Robertson, Cooper, Sarkar, & Curran, 2015; Sagherian, Huedo-Medina, Pellowski, Eaton, & Johnson, 2016; Sullivan, Tetrault, Braithwaite, Turner, & Fiellin, 2011); specifically, there were small but insignificant ($ds < .20$; $ps > .05$) changes in mental health symptoms, resilience, and work engagement, and a small but significant ($d = .287$; $p < .05$) reduction in stigma at post-training.

There remains a great deal of debate about CISM, CISD, peer support, and other mental health support programs. The debate is fueled, in no small part, because of

diverse program proliferation since the Mitchell model, such that in Canada alone, there are at least 14 different programs (e.g. CISM, CISD, defusing, peer support, psychoeducation, mental health first aid, R2MR), each with variability in perceived intended use and delivery across agencies and provinces (Authors, 2016). Indeed, the available research suggests less than 25% of implementations maintain program fidelity (Authors, 2016). In addition, an investigation of skill decay following physical first aid training has demonstrated rapid deterioration within 90 days post-training (Anderson, Gaetz, Statz, & Kin, 2012) suggesting similar skill decay might potentially be expected for mental health training. There is a critical absence of sufficient peer-reviewed evidence of effectiveness for any of the current mental health training programs (Authors, 2016). The result is that Canadian PSP leaders, faced with evidence of substantial mental health challenges for their members (Carleton et al., 2018, 2018a, 2019), are now also faced with huge ambiguity regarding which critical incident management and peer support program(s) to implement with the available resources. Many of the current programs designed to mitigate the impact of psychological stress among PSP are not federally or provincially funded; as such, the programs incur costs for either the individual public safety services (e.g. a municipal fire service) or the individual PSP. Therefore, identifying and prioritizing effective programs have become crucial for supporting PSP and containing long-term health costs (Authors, 2016; Wilson, Guliani, & Boichev, 2016).

The present study was designed to help inform decisions about several categories of programs designed to support PSP mental health (i.e. CISM, CISD, mental health first aid, peer support, R2MR). Specifically, we designed the study to assess PSP willingness to access support from professional (i.e. physicians, psychologists, psychiatrists, employee assistance programs, chaplains) and non-professional sources (i.e. spouse, friends, colleagues, leadership) based on participation in different training programs. We also designed the study to measure associations between different training programs and PSP screening positive for one or more mental health disorders. We expected that training program participation would be associated with PSP being more aware of available support, more willing to access support, and less likely to screen positive for mental health disorders, but we had no specific hypotheses about differences between training programs.

Methods

Procedure

Data were collected through a web-based, self-report survey of PSP from 1 September 2016 to 31 January 2017. The survey was available in English and French, and the project was approved by the University of Regina Institutional Research Ethics Board (file no. 2016-107). The survey was collaboratively designed by researchers from the University of Regina as well as the Public Safety Steering Committee (PSSC) of the Canadian Institute for Public Safety Research and Treatment (CIPSRT). Members of the PSSC included representatives from the Canadian Association of Chiefs of Police (CACP); the Canadian Association of Fire Chiefs (CAFC); the Canadian Association for Police Governance (CAPG); the Canadian Police Association (CPA); Correctional Service of Canada (CSC); the

International Association of Firefighters (IAFF); the Paramedic Association of Canada (PAC); the Paramedic Chiefs of Canada (PCC); the Royal Canadian Mounted Police (RCMP; the federal police force in Canada); and the Union of Safety and Justice Employees (USJE). The survey link was distributed through e-mail to currently employed PSP by the PSSC and provincial and municipal PSP agencies. The federal Minister of Public Safety and Emergency Preparedness created a video to raise awareness of the survey and encourage participation. Participation was voluntary and anonymous, and each respondent was provided with a unique login number and password to facilitate being able to pause the survey and return at a later date to complete it. Further details of the survey procedure have been published elsewhere (Carleton, Afifi, et al., 2019, Carleton, Afifi, Turner, Taillieu, Duranceau, et al., 2018, Carleton et al., 2017, Carleton, Afifi, Turner, Taillieu, LeBouthillier, et al., 2018a; Ricciardelli, Carleton, Cramm, & Groll, *in press*; Ricciardelli, Carleton, Mooney, & Cramm, *in press*; Turner, Taillieu, Carleton, Sareen, & Afifi, 2018).

Data and sample

This survey employed convenience sampling; therefore, an exact response rate could not be determined. In total, 8,520 respondents began the survey and answered the first question that inquired about PSP role (i.e. “Please indicate which category of First Responders or other Public Safety Personnel you feel best describes your current occupation”). The respondents included in this analysis were limited to those who: progressed far enough in the survey to complete the sections on mental health training and attitudes toward mental health; were included in one of six broad PSP categories (i.e. Municipal/Provincial Police, RCMP, Corrections, Firefighters, Paramedics and Call Centre Operators/Dispatchers); and, correctly answered a control question that was inserted near the end of the survey to identify random responses. There were 4,020 respondents included in the current sample.

Measures

Mental health training

Respondents were asked to indicate all the different categories of mental health training they received in their PSP role. Response options included the following categories of mental health training program types: 1) CISM; 2) CISD; 3) mental health first aid; 4) peer support; 5) R2MR; and 6) other mental health training. Response options were not mutually exclusive and, as such, respondents could indicate all that apply. An “any mental health training” variable was created that was comprised of respondents who received one or more of the first five categories of mental health training. The “other mental health training” category had a small sample size and was not included as an additional individual training type category, but was included within the “any mental health training” variable.

Attitudes toward mental health support

Attitudes toward accessing both professional and non-professional mental health support were assessed with the following stem question: “Which of the following potential support resources do you feel you can access if you needed help managing your mental

health?” This question was created specifically for this survey by the survey developers indicated above and back-translated for use among French participants by fluently bilingual clinical doctoral students working in the area and then reviewed by a very experienced professional translator working with the researchers. Professional health supports included: 1) physician; 2) psychologist; 3) psychiatrist; 4) employee assistance program personnel; and 5) PSP chaplain. Non-professional mental health supports included: 1) spouse; 2) friend; 3) PSP colleague (that participants may have considered as having occurred informally or as part of a structured peer support program); and 4) PSP leadership. Response options included: 1) I can and would access as an early resource; 2) I can access, but only as a last resort; 3) I can access but would never; 4) I do not have access, but I would access as an early resource; 5) I do not have access but would access only as a last resort; 6) I do not have access but would never access; and 7) I do not know if I have access. Response options 2 and 3 were collapsed, and options 5 and 6 were collapsed to create a 5-point scale due to small n in each category, therein supporting robust solutions and protecting against potential confidentiality concerns.

Mental disorder screens

Several validated mental disorder screens were used to indicate the presence of post-traumatic stress disorder (PTSD), major depressive disorder (MDD), generalized anxiety disorder (GAD), social anxiety disorder (SAD), panic disorder (PD), and alcohol use disorder (AUD). Presence of past-month PTSD was assessed using the PTSD Check List 5 (PCL-5; (Ashbaugh, Houle-Johnson, Herbert, El-Hage, & Brunet, 2016; Blevins, Weathers, Davis, Witte, & Domino, 2015; Bovin et al., 2016; MacIntosh, Séguin, Abdul-Ramen, & Randy, 2015; Weathers et al., 2013); past 2-week MDD was assessed using the nine-item Patient Health Questionnaire (PHQ-9; Beard, Hsu, Rifkin, Busch, & Bjorgvinsson, 2016; Kroenke, Spitzer, & Williams, 2001; Kroenke, Spitzer, Williams, & Lowe, 2010; Lowe et al., 2004); past 2-week GAD was assessed using the seven-item GAD-7 (Beard & Bjorgvinsson, 2014; Kroenke et al., 2010; Spitzer, Kroenke, Williams, & Lowe, 2006); past-week PD was assessed using the PD Symptoms Severity Scale–Self-Report (PDSS-SR; Furukawa et al., 2009; Shear et al., 1997, 2001); current SAD was assessed using the Social Interaction Phobia scale (SIPS; Carleton et al., 2009, 2014; Duranceau, Peluso, Collimore, Asmundson, & Carleton, 2014; Menatti et al., 2015; Reilly, Carleton, & Weeks, 2012); and past-year AUD was assessed using the AUDs Identification Test (AUDIT; Gache et al., 2005; Saunders, Aasland, Babor, Delafuente, & Grant, 1993). Positive screens were indicated by the following established cut-off scores; the PHQ-9 required a score >9 (Manea, Gilbody, & McMillan, 2015); GAD-7 required a score >9 (Swinson, 2006); the PDSS-SR required a score >7 (Shear et al., 1997); SIPS required a score >20 (Carleton et al., 2009); the AUDIT required a score >15 (Gache et al., 2005); and the PCL-5 required a score >32 , plus meeting the minimum criteria for each PTSD cluster as described in the Diagnostic Statistical Manual-5 (DSM-5) (American Psychiatric Association, 2013; Weathers et al., 2013). For the PCL-5, the Life Events Checklist (LEC-5) of the DSM-5 (American Psychiatric Association, 2013) was used as a list of PTEs to identify index events indicative of possible PTSD as well as a category to describe an “other” experience. Two events were modified to distinguish between common

and more severe experiences for PSP: 1) “natural disaster” was revised to “a life-threatening natural disaster”; and 2) “transportation accident” was revised to “a serious transportation accident”. When participants indicated their worst trauma, they were then asked to rate their past-month symptoms using the PCL-5 based on that experience.

Statistical analysis

Cross-tabulations were used to determine the prevalence of attitudes toward each of the mental health supports (i.e. professional and non-professional) for each mental health training category as well as any training and no training. Results for the “other” mental health training category were not reported due to small sample size. Cross-tabulations were used to determine the frequency of positive screens for mental disorders for each mental health training category. Logistic regression was used to examine the association between mental health training categories and each mental disorder screen. Covariates included sex, age, marital status, provincial region, ethnicity, education, years of service, and PSP category. There were two adjusted models computed that adjusted for: 1) sex, age, marital status, provincial region, ethnicity, education, years of service, and PSP category; and 2) all variables mentioned in model one in addition to all other categories of mental health training.

Results

The results in [Table 1](#) describe participant attitudes toward professional mental health support (i.e. physician, psychologist, psychiatrist, employee assistance program, chaplain) for each mental health training category. For all training categories, physicians had the highest prevalence of respondents indicating that they “can and would access as an early resource” if they needed help managing their mental health (prevalence ranged from 51.81% to 55.64%), and chaplains had the lowest prevalence (prevalence ranged from 15.77% to 19.91%). A similar or higher prevalence of respondents indicated that they “can access but would never/only as a last resort” for all professional mental health supports compared to the “can and would access as an early resource” response option. Few respondents indicated “I don’t know if I have access” for physicians, psychologists, and employee assistance program (i.e. less than 5% in any training category), whereas between 5.74% and 11.05% indicated “I don’t know if I have access” for psychiatrists and chaplains. For all professional mental health support categories, a lower prevalence of indicating “I can and would access” was seen for the “no mental health training” group compared to the “any mental health training” group.

The results in [Table 2](#) describe participant attitudes toward non-professional mental health supports (i.e. spouse, friends, PSP colleagues, and PSP leadership) for each mental health training type. Spousal support was the most commonly endorsed option for “can and would access as an early resource” for all mental health training categories (prevalence ranged from 72.89% to 75.16%), followed by friends (prevalence ranged from 62.25% to 67.68%). PSP indicates low prevalence of going to leadership as an early resource. Very few respondents (less than 1.44% in any training category) indicated they “didn’t have access, but would access” for friend, PSP colleague, or PSP leadership

Table 1. Prevalence of mental health training categories and attitudes toward accessing professional mental health support.

	I can and would access as an early resource % (n)	I can access but would never/only as a last resort % (n)	I don't have access, but would access % (n)	I don't have access, but would never/only as a last resort % (n)	I don't know if I have access % (n)
Physician					
CISM	53.96 (784)	41.78 (607)	1.45 (21)	1.93 (28)	0.89 (13)
CISD	54.28 (723)	41.37 (551)	1.58 (21)	1.95 (26)	0.83 (11)
Mental Health First Aid	55.64 (355)	40.75 (260)	1.57 (10)	0.94 (6)	1.10 (7)
Peer Support	54.77 (511)	40.62 (379)	1.39 (13)	1.82 (17)	1.39 (13)
R2MR	51.81 (614)	44.05 (522)	1.69 (20)	1.60 (19)	0.84 (10)
Any Training	52.68 (1,325)	42.78 (1,076)	1.63 (41)	1.75 (44)	1.15 (29)
No Training	47.53 (702)	46.65 (689)	1.42 (21)	2.71 (40)	1.69 (25)
Psychologist					
CISM	38.85 (561)	46.47 (671)	6.02 (87)	4.78 (69)	3.88 (56)
CISD	40.12 (530)	44.81 (592)	6.13 (81)	4.69 (62)	4.24 (56)
Mental Health First Aid	39.59 (251)	44.32 (281)	7.41 (47)	4.10 (26)	4.57 (29)
Peer Support	43.10 (400)	43.00 (399)	5.93 (55)	4.09 (38)	3.88 (36)
R2MR	41.86 (491)	45.78 (537)	5.46 (64)	4.18 (49)	2.73 (32)
Any Training	38.44 (961)	45.56 (1,139)	6.40 (160)	5.40 (135)	4.20 (105)
No Training	34.99 (513)	45.43 (666)	7.50 (110)	6.96 (102)	5.12 (75)
Psychiatrist					
CISM	24.70 (353)	54.09 (773)	7.91 (113)	7.56 (108)	5.74 (82)
CISD	25.38 (332)	51.91 (679)	7.95 (104)	7.87 (103)	6.88 (90)
Mental Health First Aid	26.39 (166)	50.72 (319)	8.90 (56)	7.00 (44)	7.00 (44)
Peer Support	28.06 (257)	50.66 (464)	7.31 (67)	8.08 (74)	5.90 (54)
R2MR	25.60 (298)	53.44 (622)	8.25 (96)	6.87 (80)	5.84 (68)
Any Training	24.54 (608)	52.26 (1,295)	8.39 (208)	8.31 (206)	6.50 (161)
No Training	21.59 (315)	49.69 (725)	8.77 (128)	9.87 (144)	10.08 (147)
Employee Assistance Program					
CISM	39.13 (567)	55.14 (799)	1.73 (25)	2.62 (38)	1.38 (20)
CISD	38.76 (514)	55.35 (734)	1.81 (24)	2.41 (32)	1.66 (22)
Mental Health First Aid	39.40 (249)	55.70 (352)	1.42 (9)	2.69 (17)	0.79 (5)
Peer Support	40.73 (378)	53.34 (495)	1.51 (14)	2.69 (25)	1.72 (16)
R2MR	36.68 (431)	58.98 (693)	1.28 (15)	2.04 (24)	1.02 (12)
Any Training	36.33 (909)	57.43 (1,437)	1.76 (44)	2.76 (69)	1.72 (43)
No Training	26.58 (390)	63.74 (935)	2.66 (39)	4.16 (61)	2.86 (42)
Chaplain					
CISM	18.19 (263)	56.98 (824)	3.53 (51)	11.69 (169)	9.61 (139)
CISD	19.88 (263)	56.01 (741)	3.33 (44)	11.72 (155)	9.07 (120)
Mental Health First Aid	19.91 (126)	57.03 (361)	3.00 (19)	10.74 (68)	9.32 (59)
Peer Support	19.72 (182)	54.82 (506)	2.60 (24)	11.81 (109)	11.05 (102)
R2MR	15.87 (187)	66.64 (785)	1.87 (22)	9.25 (109)	6.37 (75)
Any Training	15.77 (394)	59.97 (1,498)	2.96 (74)	11.65 (291)	9.65 (241)
No Training	10.38 (152)	54.03 (791)	3.69 (54)	16.26 (238)	12.64 (229)

Training Categories are not mutually exclusive; CISM—Critical Incident Stress Management; CISD—Critical Incident Stress Debriefing; R2MR—Road to Mental Readiness.

support, whereas a higher percentage indicated they “didn’t have access, but would access” for spousal support (prevalence range from 4.18% to 5.21%).

The prevalence of screening positive for a mental disorder associated with having received each mental health training category is presented in Table 3. For all positive screens for mental disorders, participants who received any training category had a smaller prevalence of screening positive for all mental disorders when compared to participants who did not receive training (prevalence range from 5.8% to 24.0% for any training compared to 6.2% to 31.3% for no training). Table 4 presents the results examining the associations between mental health training categories and positive

Table 2. Prevalence of mental health training categories and attitudes toward accessing non-professional mental health support.

	I can and would access as an early resource % (n)	I can access but would never/only as a last resort % (n)	I don't have access, but would access % (n)	I don't have access, but would never/only as a last resort % (n)	I don't know if I have access % (n)
Spouse					
CISM	74.28 (1,054)	12.97 (184)	5.21 (74)	4.93 (70)	2.61 (37)
CISD	74.10 (964)	13.30 (173)	4.69 (61)	5.30 (69)	2.61 (34)
Mental Health First Aid	72.89 (457)	12.76 (80)	4.47 (28)	5.74 (36)	4.15 (26)
Peer Support	75.16 (684)	11.65 (106)	4.18 (38)	5.93 (54)	3.08 (28)
R2MR	73.70 (852)	13.93 (161)	4.58 (53)	5.80 (67)	1.99 (23)
Any Training	73.47 (1,800)	13.80 (545)	5.02 (123)	4.65 (114)	3.06 (75)
No Training	72.50 (1,044)	14.37 (207)	4.51 (65)	5.63 (81)	2.99 (43)
Friend					
CISM	63.62 (918)	32.36 (467)	1.04 (15)	2.15 (31)	0.83 (12)
CISD	64.05 (848)	31.80 (421)	0.98 (13)	2.04 (27)	1.13 (15)
Mental Health First Aid	64.20 (407)	31.39 (199)	1.10 (7)	2.80 (12)	1.42 (9)
Peer Support	67.68 (626)	28.86 (267)	0.65 (6)	1.95 (18)	0.86 (8)
R2MR	62.35 (737)	32.83 (388)	1.44 (17)	2.20 (26)	1.18 (14)
Any Training	62.25 (1,558)	33.32 (834)	1.16 (29)	2.20 (55)	1.08 (27)
No Training	52.70 (772)	39.59 (580)	1.30 (19)	3.82 (56)	2.59 (38)
PSP Colleague					
CISM	48.24 (700)	48.24 (700)	0.21 (3)	2.00 (29)	1.31 (19)
CISD	49.89 (665)	46.59 (621)	0.45 (6)	1.95 (26)	1.13 (15)
Mental Health First Aid	47.26 (302)	47.73 (305)	0.94 (6)	2.66 (17)	1.41 (9)
Peer Support	52.69 (489)	43.64 (405)	0.32 (3)	1.94 (18)	1.40 (13)
R2MR	42.37 (500)	53.73 (634)	0.51 (6)	1.69 (20)	1.69 (20)
Any Training	44.56 (1,119)	51.21 (1,286)	0.52 (13)	2.15 (54)	1.55 (39)
No Training	33.33 (489)	57.94 (850)	1.30 (19)	3.54 (52)	3.89 (57)
PSP Leadership					
CISM	26.55 (385)	65.31 (947)	0.28 (4)	4.48 (65)	3.38 (49)
CISD	28.09 (373)	63.63 (845)	0.45 (6)	4.44 (59)	3.39 (45)
Mental Health First Aid	28.21 (180)	61.76 (394)	1.10 (7)	4.70 (30)	4.23 (27)
Peer Support	28.05 (260)	63.32 (587)	0.43 (4)	5.07 (47)	3.13 (29)
R2MR	22.29 (263)	68.22 (805)	0.68 (8)	5.08 (60)	3.73 (44)
Any Training	23.63 (593)	66.80 (1,676)	0.68 (17)	4.90 (123)	3.99 (100)
No Training	15.11 (222)	68.35 (1,004)	1.43 (21)	8.10 (119)	7.01 (103)

Training Categories are not mutually exclusive; CISM—Critical Incident Stress Management; CISD—Critical Incident Stress Debriefing; R2MR—Road to Mental Readiness.

screens for mental health disorders. Virtually all categories of mental health training were associated with significantly decreased odds in positive screens for PTSD, MDD, GAD, and SAD (odds ratio [OR] range: 0.66–0.80). None of the mental health training categories were significantly related to changes in PD or AUD. After adjusting for sociodemographic variables (i.e. sex, age, marital status, province of residence, ethnicity, education, years of service, and PSP category) relationships were slightly attenuated, but many remained significant (adjusted odds ratio [AOR] range: 0.65–0.79).

After adjusting for other mental health training categories, very few significant results remained; specifically, CISM remained associated with decreased odds of screening positive for MDD (AOR = 0.81, 95% CI: 0.70–0.99), CISD was associated with decreased odds of screening positive for SAD (AOR = 0.77, 95% CI: 0.60–0.99) and with decreased odds of screening positive for any mental health disorder (AOR = 0.82, 95% CI: 0.70–0.99). Mental health first aid was associated with decreased odds of screening positive for GAD (AOR = 0.74, 95% CI: 0.60–0.97). R2MR was not significantly associated with decreased

Table 3. Prevalence of screening positive for mental disorders among PSP who have had different mental health training categories.

Training Category	PTSD % (n)	Major Depressive Disorder % (n)	Generalized Anxiety Disorder % (n)	Social Anxiety Disorder % (n)	Panic Disorder % (n)	Alcohol Use Disorder % (n)	Positive Screen for any mental disorder % (n)
CISM	20.1 (292)	22.3 (325)	15.1 (221)	13.1 (191)	8.0 (111)	5.3 (77)	38.6 (540)
CISD	19.7 (262)	22.2 (297)	15.0 (201)	12.2 (163)	7.8 (100)	5.6 (74)	38.10 (488)
Mental Health First Aid	19.2 (122)	22.6 (145)	13.8 (89)	13.4 (86)	7.4 (45)	6.3 (40)	39.03 (242)
Peer Support	19.0 (176)	22.5 (211)	15.6 (146)	12.3 (115)	8.7 (77)	5.9 (55)	38.04 (337)
R2MR	21.4 (252)	22.8 (272)	16.2 (193)	13.3 (159)	8.3 (93)	5.2 (61)	39.63 (451)
Any Training	20.7 (518)	24.0 (606)	16.6 (419)	13.6 (343)	8.4 (200)	5.8 (145)	41.02 (987)
No Training	26.8 (390)	31.3 (464)	21.8 (323)	19.0 (281)	10.1 (138)	6.2 (91)	50.07 (698)

Training Categories are not mutually exclusive; CISM—Critical Incident Stress Management; CISD—Critical Incident Stress Debriefing; R2MR—Road to Mental Readiness.

odds of screening positive for any specific disorder, but overall was associated with significantly decreased odds of screening positive for “any mental health disorder” (AOR = .80, 95% CI: 0.70–0.90).

Discussion

In the current study, we assessed PSP willingness to access support from professional (i.e. physicians, psychologists, psychiatrists, employee assistance programs, chaplains) and non-professional sources (i.e. spouse, friend, PSP colleagues, PSP leadership) based on participating in different training program categories (i.e. CISM, CISD, mental health first aid, peer support, R2MR). In examining associations between the different training program categories and PSP screening positive for one or more mental health disorders (i.e. PTSD, MDD, GAD, SAD, PD, AUD), we expected participation in a training program would be associated with higher willingness to access support and less likely to screen positive for mental health disorders, but we had no specific expectations about differences between training programs. Training programs were associated with more willingness to access support and decreased odds of screening positive for most mental disorders. There were few differences between the program training categories. None of the training programs were associated with lower levels of PD or AUD.

The current results indicate that, even without any mental health training, most participants believe they have access to professional mental health resources including physicians, psychologists, psychiatrists, employee assistance programs, and chaplains. Participants with training reported modestly higher levels of perceived access, indicating that any mental health training was associated with at least small increases in perceived access to support. Accordingly, perceived access to support appears fairly pervasive and stable. In contrast, participant willingness to access professional support varied based on the type of professional. Participants with no mental health training were most willing to access support from a physician as an early resource (47.53%), but a similar proportion reported never being willing to access support from a physician, or only as a last resort (46.65%). Participants without training reported their willingness to access support from other professions as even lower than for physicians (10.38% to

Table 4. Associations between screening positive for mental disorders among PSP who have had different mental health training categories.

Training Category	PTSD (PCL-5)	Major Depressive Disorder	Generalized Anxiety Disorder	Social Anxiety Disorder	Panic Disorder	Alcohol Use Disorder	Positive Screen for any mental disorder
CISM % (n)							
OR (95% CI)	0.78 (0.7, 0.9)***	0.69 (0.6, 0.8) ***	0.69 (0.6, 0.8) ***	0.73 (0.6, 0.9) ***	0.82 (0.6, 1.0)	0.84 (0.6, 1.1)	0.69 (0.6, 0.8) ***
AOR1 (95% CI)	0.79 (0.7, 0.9) **	0.69 (0.6, 0.8) ***	0.71 (0.6, 0.8) ***	0.78 (0.6, 0.9) **	0.87 (0.7, 1.1)	0.78 (0.6, 1.0)	0.72 (0.6, 0.8) ***
AOR2 (95% CI)	0.96 (0.8, 1.2)	0.81 (0.7, 0.99) *	0.85 (0.7, 1.1)	0.98 (0.8, 1.2)	0.97 (0.7, 1.3)	0.80 (0.6, 1.2)	0.88 (0.7, 1.1)
CISD							
OR (95% CI)	0.75 (0.6, 0.9) ***	0.70 (0.6, 0.8) ***	0.69 (0.6, 0.8) ***	0.66 (0.5, 0.8) ***	0.80 (0.6, 1.0)	0.90 (0.7, 1.2)	0.68 (0.6, 0.8) ***
AOR1 (95% CI)	0.76 (0.6, 0.9) **	0.70 (0.6, 0.8) ***	0.70 (0.6, 0.8) ***	0.69 (0.6, 0.9) ***	0.82 (0.6, 1.1)	0.83 (0.6, 1.1)	0.70 (0.6, 0.8) ***
AOR2 (95% CI)	0.86 (0.7, 1.1)	0.83 (0.7, 1.0)	0.83 (0.7, 1.1)	0.77 (0.6, 0.99) *	0.83 (0.6, 1.1)	0.92 (0.6, 1.3)	0.82 (0.7, 0.99) *
Mental Health First Aid							
OR (95% CI)	0.77 (0.6, 0.9) *	0.77 (0.6, 0.9) *	0.67 (0.5, 0.8) ***	0.81 (0.6, 1.0)	0.78 (0.6, 1.1)	1.07 (0.8, 1.5)	0.77 (0.6, 0.9) **
AOR1 (95% CI)	0.75 (0.6, 0.9) *	0.79 (0.6, 0.97) *	0.65 (0.5, 0.8) ***	0.84 (0.6, 1.1)	0.77 (0.5, 1.0)	1.02 (0.7, 1.5)	0.77 (0.6, 0.9) **
AOR2 (95% CI)	0.85 (0.7, 1.1)	0.93 (0.7, 1.2)	0.74 (0.6, 0.97) *	0.98 (0.7, 1.3)	0.79 (0.6, 1.1)	1.14 (0.8, 1.7)	0.91 (0.7, 1.1)
Peer Support							
OR (95% CI)	0.74 (0.6, 0.9) ***	0.75 (0.6, 0.9) ***	0.77 (0.6, 0.9) **	0.71 (0.6, 0.9) **	0.96 (0.7, 1.2)	1.0 (0.7, 1.4)	0.71 (0.6, 0.8) ***
AOR1 (95% CI)	0.78 (0.6, 0.9) **	0.78 (0.6, 0.9) **	0.79 (0.6, 0.97) *	0.73 (0.6, 0.9) **	0.98 (0.7, 1.3)	0.91 (0.7, 1.3)	0.74 (0.6, 0.9) ***
AOR2 (95% CI)	0.91 (0.7, 1.1)	0.98 (0.8, 1.2)	1.01 (0.8, 1.3)	0.86 (0.7, 1.1)	1.15 (0.8, 1.6)	1.04 (0.7, 1.5)	0.91 (0.8, 1.1)
R2MR							
OR (95% CI)	0.88 (0.7, 1.0)	0.75 (0.6, 0.9) ***	0.80 (0.7, 0.96) *	0.78 (0.6, 0.9) *	0.88 (0.7, 1.1)	0.81 (0.6, 1.1)	0.76 (0.7, 0.9) ***
AOR1 (95% CI)	0.78 (0.7, 0.9) **	0.76 (0.6, 0.9) **	0.78 (0.6, 0.95) *	0.79 (0.6, 0.99) *	0.91 (0.7, 1.2)	0.88 (0.6, 1.2)	0.73 (0.6, 0.9) ***
AOR2 (95% CI)	0.83 (0.7, 1.0)	0.84 (0.7, 1.0)	0.85 (0.7, 1.0)	0.85 (0.7, 1.1)	0.95 (0.7, 1.3)	0.93 (0.7, 1.3)	0.80 (0.7, 0.9) **
Any Training							
OR (95% CI)	0.71 (0.6, 0.8) ***	0.69 (0.6, 0.8) ***	0.71 (0.6, 0.8) ***	0.67 (0.6, 0.8) ***	0.82 (0.7, 1.0)	0.93 (0.7, 1.2)	0.69 (0.6, 0.8) ***
AOR1 (95% CI)	0.71 (0.6, 0.8) ***	0.71 (0.6, 0.8) ***	0.73 (0.6, 0.9) ***	0.71 (0.6, 0.9) ***	0.84 (0.7, 1.1)	0.87 (0.7, 1.2)	0.72 (0.6, 0.8) ***
AOR2 (95% CI)	—	—	—	—	—	—	—

Training Categories are not mutually exclusive; CISM—Critical Incident Stress Management; CISD—Critical Incident Stress Debriefing; R2MR—Road to Mental Readiness; OR—unadjusted odds ratio; AOR1—adjusted odds ratio for sex, age, marital status, province of residence, ethnicity, education, years of service, and PSP category; AOR2—adjusted odds ratio for the same variables as in AOR1 in addition to all other categories of mental health training, which cannot be computed for any mental health training; * $p < .05$, ** $p < .01$, *** $p < .001$.

34.99%). Many participants without training reported they would never access such support or only as a last resort (45.43% to 63.74%), with the largest proportion being associated with Employee Assistance Programs (63.74%). Participants with mental health training reported higher levels of willingness, with the largest difference being a 9.75% higher willingness to access Employee Assistance Programs. The proportion of participants who reported being willing to access each type of professional was comparable across the different training program categories, suggesting that the training categories provide similar core content or at least yield comparable results. Consistent with reports that PSP perceive substantial stigma in accessing support and therein barriers to support (Oliphant, 2016; Ricciardelli, Carleton, Cramm, et al., *in press*, Ricciardelli, Carleton, Mooney, et al., *in press*), the current results suggest that perceived access to support may be less important than willingness to access the support that is available. Even with training, half of participants reported being extremely unwilling to access professional support.

Most participants without mental health training also reported believing they have access to non-professional mental health resources including a spouse, a friend, a PSP colleague, or a PSP leader. Participants with training reported modestly higher levels of perceived access, indicating any mental health training was associated with at least small increases in perceived access to support. Accordingly, like perceived access to professional mental health support, perceived access to non-professional mental health support appears pervasive and stable, but participant willingness to access non-professional support varied based on the type of non-professional. Participants with no mental health training were most willing to access support from a spouse (72.50%) or a friend (52.7%) as an early resource, with very few reporting they would never or only as a last resort access a spouse (14.37%) or a friend (39.59%). Participants without training reported being less willing to access support from a PSP colleague (33.33%) or PSP leader (15.11%), with many reporting never, or only as a last resort, being willing to access a PSP colleague (57.94%) or PSP leader (68.35%). Participants with mental health training reported modestly higher levels of willingness to access a PSP colleague or PSP leader. The proportion of participants who reported being willing to access each type of non-professional support was comparable across the different training program categories, suggesting the training categories cover similar core content or at least yield comparable results. Accordingly, the results remained consistent with reports that PSP perceive substantial stigma and are unwilling to access support from PSP colleagues and leaders, but are willing to reach out to family and friends (Oliphant, 2016; Ricciardelli, Carleton, Cramm, et al., *in press*, Ricciardelli, Carleton, Mooney, et al., *in press*).

The current results indicated that any mental health training was associated with lower proportions of PSP screening positive for any mental health disorder (41.02% relative to 50.07%). The largest difference in screening proportions was for MDD (7.3%) and the smallest was for AUD (0.4%). The differences between training categories for screening positive on any mental health disorder was minimal, suggesting again that the training categories cover similar core content or at least yield comparable results. Indeed, most categories of mental health training were associated with significantly decreased odds in screening positive for PTSD, MDD, GAD, and SAD (OR range: 0.66–0.80), results that were largely maintained after adjusting for sociodemographic

variables; however, no specific mental health training category was significantly related to changes in PD or AUD. The apparent ineffectiveness for PD and AUD suggests something may be unique about either or both of these disorder categories. After adjusting for other mental health training categories, very few significant results remained, suggesting again that the different training categories yield comparable results. Indeed, consistent with prior conclusions (Authors, 2016), the current results do not suggest any one specific category of training is superior to any other category, but the results do suggest any mental health training may be beneficial for improving mental health; as such, right now, decision-making regarding program selection may be able to justify taking economic concerns into consideration.

Strengths and limitations

The current results represent the first large-scale comparative assessment of mental health training categories that includes several screening assessments for mental health disorders. The novel assessment evaluated perceptions of access to resources, both professional and non-professional, willingness to access those resources, association with mental health, and comparisons across mental health training categories. The results are based on a very large and diverse sample of PSP. Despite many strengths, there are also several limitations to the current study that offer important directions for future research. First, the sample was self-selected and, although demographically representative of PSP in Canada (Carleton, Afifi, Turner, Taillieu, Duranceau, et al., 2018, Carleton, Afifi, Turner, Taillieu, LeBouthillier, et al., 2018a), may not be entirely representative. Second, participant responses were based on anonymous online self-report, making the reliability and validity ambiguous (Bethlehem, 2010), even though a recent meta-analysis suggested comparable rates of identified mental disorders across self-report and interview assessments (Berger et al., 2012). A fully representative sample based on interview data would be beneficial, but extremely resource intensive and differentially impacted by stigma. Third, the current data are cross-sectional, therein precluding discussions of causation regarding the impact of any mental health category on perceptions of access to support, willingness to access support, or mental health. Participants who receive such training may be working in more supportive or more psychologically safe environments, which may influence the current results. Future research in line with the recent R2MR longitudinal study (Carleton, Korol, et al., [in press](#)) is required. Fourth, the data collection used broad categories for each of the training options, which means there may be important differences between training models that were overlooked. For example, there may be important differences in CISM models and delivery (Authors, 2016), or between the R2MR as delivered to PSP by the MHCC, and the original or recently updated R2MR as delivered to PSP by the Department of National Defense (Carleton, Korol, et al., [in press](#); National Defence and the Canadian Armed Forces, 2017). The overall comparability of results across diverse training categories suggests against massive differences, but without research assessing the shared and unique content across the growing number of training programs and direct comparisons remain impossible. Fifth, the items assessing prevalence of mental health training and attitudes toward accessing mental health support were created specifically for the current study. The items were translated by a highly

experienced professional English–French translator who worked closely with the research team. There was no reason to believe language influenced the responses, and comprehensive psychometric analyses are beyond the current project scope; nevertheless, future researchers could assess for such nuances among the psychometric properties of the items. Sixth, the small numbers of participants who endorsed some of the options for willingness to access mental health supports caused us to collapse categories we believed were effectively comparable to support a robust solution. There may yet be potentially meaningful nuanced distinctions between the categories, but such psychometric details are beyond the current project scope and could be explored by future researchers. Seventh, while the current results suggest that PSP perceptions of professionals and non-professionals may affect willingness to access as a mental health resource, the current results did not assess the specific rationale for willingness to access a type of professional or non-professional, which makes specific recommendations for change speculative. For example, insufficient mental health literacy, perceptions of stigma, and concerns about negative consequences may all be important factors underlying PSP unwillingness to seek mental health care. Future researchers should explore the rationale and therein inform how targeted improvements might be made to substantially improve PSP mental health.

Summary

Overall, the current results indicate that, irrespective of mental health training, PSP perceive substantial access to professional and non-professional options for mental health support, but their willingness to access that support varies substantially. The results suggest that PSP in need of mental health support are much more likely to reach out to spouses or friends than to any other resource. Participants in need of mental health support appear most unwilling to access Employee Assistance Programs and PSP leaders. The presence of training appears associated with very small changes in perceptions of access and relatively small changes in willingness to access support; however, the presence of any mental health training appears associated with significantly lower proportions of PSP screening positive for some (i.e. PTSD, MDD, GAD, SAD), but not all (i.e. PD, AUD), mental health disorders. Given the apparent comparability of impact from the current training categories, selecting or developing highly accessible, efficient, and economical delivery modalities might be important while PSP await more nuanced research support for mental health training.

The results indicate there may be areas for improvement associated with the current employee assistance programs to address the reasons PSP appear unwilling to access such resources, or only as a last resort; however, such changes would require additional research to understand the rationale PSP have for concern regarding employee assistance programs. Apparent reluctance to access PSP leaders suggests there may also be important opportunities to provide PSP leaders with new skills for reducing stigma and better supporting PSP mental health. Given PSP reports of selecting spouses as a first choice for mental health support, there may particularly significant benefits in providing mental health training for PSP spouses, such as evidence-based psychoeducation regarding symptoms, self-care, coping skills, and resources for escalating access to professional mental health support.

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