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Help-seeking for mental health issues in deployed Canadian Armed Forces personnel at risk for moral injury

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ABSTRACT

Objective: Potentially morally injurious experiences (PMIE) (events that transgress an individual's subjective moral standards) have been associated with psychologically distressing moral emotions such as shame and guilt. Military leaders and clinicians have feared that those with PMIEs may be less likely to seek help due to the withdrawing nature of shame/guilt; however, to date, help-seeking patterns of military personnel with PMIEs has not been explored. Our objective is to address this research gap.

Method: Data from a nationally-representative mental health survey of active Canadian military personnel were analysed. To assess the association between exposure to three PMIEs and past-year help-seeking across different provider categories (i.e. professionals, para-professionals (those delegated with mental health advisory tasks but are not licenced to practice as medical professionals), non-professionals), a series of logistic regressions were conducted, controlling for exposure to other deployment and non-deployment-related psychological trauma, psychiatric variables, military factors, and sociodemographic variables. Analytical data frame included only personnel with a history of Afghanistan deployment (N = 4854).

Results: Deployed members exposed to PMIEs were more likely to seek help from their family doctor/general practitioner (OR = 1.72; 95%CI = 1.25–2.36), paraprofessionals (OR = 1.72; 95% CI = 1.25–2.36), and non-professionals (OR = 1.44; 95%CI = 1.06–1.95) in comparison to members not exposed to PMIEs. Those exposed to PMIEs were also more likely to seek professional care from the civilian health care system (OR = 1.94; 95%CI = 1.27–2.96).

Conclusion: Contrary to long-held, but untested, assumptions regarding the impact of PMIEs on help-seeking, we found those with PMIEs are more likely to seek help from gatekeeper professionals (i.e. general practitioners), para-professionals, and non-professionals rather than specialized mental health professionals (e.g. psychologists). Increased utilization of civilian professionals raises concerns that active military members may be avoiding military health services. Clinically, this highlights the need to increase awareness of moral injury to ensure that actively serving military members are provided with appropriate advice and treatment.

Búsqueda de ayuda para problemas de salud mental en fuerzas armadas canadienses desplegadas en riesgo de sufrir daño moral

Objetivo: Las experiencias potencialmente dañinas para la moral (PMIE por sus siglas en inglés), definidas como eventos que transgreden los estándares morales subjetivos de un individuo, han sido asociadas con emociones angustiantes relacionadas con la moral, como la vergüenza y la culpa. Los líderes militares y los clínicos han temido que aquellos que experimentan PMIEs tienen menos probabilidades de buscar ayuda debido a la naturaleza aislante de la vergüenza y la culpa, sin embargo a la fecha, los patrones de búsqueda de ayuda del personal militar con PMIEs no han sido explorados. Nuestro objetivo es abordar esta brecha.

Método: se analizaron datos de una encuesta de salud mental para personal militar canadiense en servicio activo. La encuesta era representativa de todo el país y de corte transversal. Para evaluar la asociación entre exposición a tres PMIEs y búsqueda de ayuda durante el último año a través de diferentes categorías de proveedores (tales como no profesionales o aquellos militares delegados con tareas de salud mental), se realizó una serie de regresiones logísticas, controlando para exposición a otros despliegues y trauma no relacionado a los despliegues, variables psiquiátricas, factores militares y variables sociodemográficas. El marco de datos analítico incluyó solo personal CAF activo con una historia de despliegue en Afganistán (n=4854).

Resultados: Los sujetos en despliegue expuestos a PMIEs tenían más probabilidad de buscar ayuda de parte de su médico de familia/médico general (OR=1.72; 95% CI=1.25-2.36),

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Salud Mental; búsqueda de ayuda; daño moral; trastorno de estrés posttraumático; Psiquiatría Militar; búsqueda de tratamiento

关键词

心理健康; 求助; 道德损伤; 创伤后应激障碍; 军事精神病学; 寻求治疗

HIGHLIGHTS

- Military members exposed to potentially morally injurious experiences (PMIEs) were more likely to seek help from gatekeeper professionals and non-professionals rather than specialized mental health professionals.
- Exposure to "ill or injured women or children who they were unable to help" seemed to be driving the increased help-seeking among those with PMIEs.
- Compared to members not exposed to PMIEs, those with PMIEs were almost twice as likely to seek professional care from the civilian health care system.

paraprofesionales (OR=1.72; 95%CI=1.25-2.36), y no profesionales (OR=1.44; 95%CI=1.06-1.95) en comparación con aquellos sujetos no expuestos a PMIEs. Aquellos expuestos a PMIEs también tenían más probabilidad de buscar ayuda profesional en el sistema de salud civil (OR=1.94; 95%CI=1.27-2.96).

Conclusión: Al contrario de la creencia por largo tiempo sostenida, pero no probada en relación al impacto de las PMIEs en la búsqueda de ayuda, encontramos que aquellos con PMIEs tienen más probabilidades de buscar ayuda de profesionales de puerta de entrada (como médicos generales) y de no profesionales en vez de profesionales especializados en salud mental (como psicólogos). El aumento de la consulta en profesionales civiles plantea la preocupación de que militares activos puedan estar evitando los servicios de salud militares. Clínicamente, esto destaca la necesidad de aumentar la concientización sobre el daño moral para asegurar que los militares en servicio activo sean proveídos con apropiada consejería y tratamiento.

有道德创伤风险的加拿大经派遣军队中寻求心理健康问题的帮助

目标: 潜在道德创伤经历 (PMIE) (违反个人主观道德标准的事件) 与羞耻和内疚等道德情绪精神痛苦相关。军事领导人和临床医生担心, 由于羞耻/内疚的退缩性, 经历PMIE的人也许不太可能寻求帮助; 但是, 目前尚未探究过经历PMIE军事人员的求助模式。我们旨在解决这一研究空白。

方法: 分析了加拿大现役军人进行的全国代表性横断面心理健康调查的数据。为了评估三种PMIE暴露与过去一年求助的帮助者类别 (即专业人士, 准专业人士 (即具有心理健康咨询任务但未获医学专业执照的从业者), 非专业人士) 之间的关联, 进行了一系列逻辑回归分析, 并控制其他派遣和非派遣相关的创伤暴露, 精神病学变量, 军事因素和社会人口统计学变量。分析的数据框仅包括具有阿富汗派遣史的4854名现役CAF人员。

结果: 暴露于PMIE的派遣军人相较于未暴露者, 更有可能寻求其家庭医生/全科医生 (OR = 1.72; 95%CI = 1.25-2.36), 准专业人士 (OR = 1.72; 95%CI = 1.25-2.36) 和非专业人员 (OR = 1.44; 95%CI = 1.06-1.95)。那些PMIE暴露者也更有可能从民用医疗体系中寻求专业护理 (OR = 1.94; 95%CI = 1.27-2.96)。

结论: 就PMIE对求助的影响, 与长期持有但未经检验的假设相反, 我们发现经历PMIE的人更有可能从把关专业人员 (即全科医生) 和非专业人员, 而不是特定心理健康专业人员 (例如心理学家) 那里寻求帮助。对民用专业人员的增多利用, 加强了人们对现役军人可能回避使用军事保健服务的担忧。在临床上, 这强调了需要提高对MI的认识, 以确保向现役军人提供适当的建议和治疗。

1. Introduction

High-risk military deployment events, such as combat, are known to carry traumatogenic risk (Boulos & Zamorski, 2013; Fear et al., 2010; Hoge et al., 2004) and have been a major focus of military mental health research; however, the impact of other stressful deployment events is less well-understood. Certain events have come to increasingly characterize recent missions, in which the traditional separation of enemy combatants and civilians no longer holds (Thompson, 2015; Thompson & Jetly, 2014). Events that involve perpetrating, observing, and/or failing to prevent acts that transgress deeply-held moral standards (e.g. feeling responsible for the death of an ally, being unable to help injured women and children) are prevalent in contemporary deployments (Nazarov, Fikretoglu, Liu, Thompson, & Zamorski, 2018), lead to psychological distress (Zerach & Levi-Belz, 2018), and increase risk for developing posttraumatic stress disorder (PTSD) (Nazarov et al., 2018), major depressive disorder (MDD) (Nazarov et al., 2018), and suicidal ideation (Ames et al., 2018; Bryan, Bryan, Morrow, Etienne, & Ray-Sannerud, 2014) (see Nazarov et al. (2015) for review).

The term moral injury (MI) describes the psychological distress experienced in response to perpetrating, observing, and/or failing to prevent acts that transgress

deeply-held moral standards (Litz et al., 2009; Nash & Litz, 2013; Shay, 2003). Although many of the symptoms are similar, MI is thought to be distinguishable from PTSD via its association with feelings of shame, guilt, worthlessness, and self-blame (Dombo, Gray, & Early, 2013; Jordan, Eisen, Bolton, Nash, & Litz, 2017; Nash & Litz, 2013; Nazarov et al., 2015; Shay, 2014; Worthington & Langberg, 2012). As a result, there is concern among clinicians and researchers working with military and veteran populations that feelings of shame, guilt, worthlessness, and self-blame may prevent military members with MI exposure from seeking help for mental health conditions (to an even greater extent than those who experience fear-based PTSD). Possible legal ramifications such as disciplinary action or even court-martial may further prevent military personnel from disclosing MIs in the first place and engaging with the mental health care system. Furthermore, once they access care, members with MI may not engage fully with commonly used treatment modalities which require them to re-live MIs, and possibly to drop out of treatment prematurely as a result. Unfortunately, there are few empirical investigations of these long-held concerns in the literature.

In addition to the research gaps around whether MI exposure is associated with reduced help-seeking, there are also other gaps, such as the pathways of help-seeking. For military members, disclosure of MI exposure may be

easier with family (e.g. spouses), friends, military peers, and spiritual advisors such as chaplains (Morgan, Hourani, Lane, & Tueller, 2016); these individuals may facilitate subsequent, more formal help-seeking from mental health professionals; similarly, a family physician or general practitioner (GP) that a military member has known for years may be easier to disclose MI events and associated mental health symptoms to; in turn, family physicians or GPs may act as gatekeepers to more specialized mental health services with social workers, psychiatrists, and psychologists. Unfortunately, to date, there has been little research looking at distinctions in patterns across different sources of help.

Drawing from a nationally-representative cohort of Canadian Armed Forces (CAF) personnel, we aimed to: (i) identify the prevalence of help-seeking for mental health issues in deployed CAF personnel at risk for MI, controlling for sociodemographic, military, and clinical covariates; and (ii) explore help-seeking patterns across a wide range of sources and providers (e.g. family, friends, paraprofessionals (i.e. those delegated with mental health advisory tasks but are not licenced to practice as medical professionals) and professionals).

2. Methods

The methods used in this paper are partly based on previous work by our group which explored the prevalence and correlates of potentially morally injurious experiences (PMIEs) among personnel deployed to Afghanistan (Nazarov et al., 2018) and mental health service use among all Regular Force members irrespective of deployment status (Fikretoglu, Guay, Pedlar, & Brunet, 2008). As such, the sections below on participants, measures, and, to a lesser extent analytic methods, are partly drawn from those previous publications. For brevity, these sections are abridged; further details can be found in our earlier publication (Nazarov et al., 2018).

2.1. Participants

Data were drawn from a cross-sectional, population-based survey of CAF personnel collected by Statistics Canada between April and August of 2013 (i.e. 2013 Canadian Forces Mental Health Survey (CFMHS)) (Zamorski et al., 2016). The details of the sampling frame can be found in Nazarov et al. (2018). Considering that our primary objective was to understand the impact of potentially morally injurious deployment experiences on help-seeking patterns, our analysis was limited to Regular Force (RegF) and Primary Reserve Force personnel previously deployed in support of the mission in Afghanistan (unweighted sample size of 4854 representing 33,525 deployed personnel). All participants provided

informed consent; ethical aspects of the data collection and data access were approved by the relevant review bodies within Statistics Canada. The data are owned by Statistics Canada and can be accessed through Research Data Centres after appropriate approvals. More information on survey methodology and the characteristics of the CAF's mission in Afghanistan can be found in Zamorski et al. (2016).

2.2. Exposure and outcome measures

2.2.1. Clinical covariates

The World Health Organization's Composite International Diagnostic Interview (CIDI, Version 3.0) modules were used to assess the presence of mental disorders, following the definitions of the Diagnostic and Statistical Manual of Mental Disorders (DSM)-IV (American Psychiatric Association, 2000). The clinical covariate of interest was the presence of a mental disorder within the past year (i.e. MDD, generalized anxiety disorder, PTSD, alcohol abuse or dependence).

2.2.2. Potentially morally injurious experiences (PMIEs)

The Deployment Experiences (DEX) module of the 2013 CFMHS assessed exposure to eight stressful deployment experiences using dichotomous items sourced from the Combat Experiences Scale (CES) (Hoge et al., 2004, 2008). The original CES measure was shortened based on conceptual considerations and validation (Sudom, Watkins, Born, & Zamorski, 2016; Watkins, Sudom, & Zamorski, 2016), and adapted for Canadian context by Canada's Department of National Defence. Respondents were provided with a list of eight stressful deployment experiences and were asked to identify any items that they have experienced while on deployment (aligning the CIDI trauma inventory process) (Kessler & Üstün, 2004). Using an approach that was previously applied in Nazarov et al. (2018), the stressful deployment-related experiences that aligned well with the expanding theoretical framework (Currier et al., 2018; Currier, Holland, Drescher, & Foy, 2015; Nash & Litz, 2013) on the types of events that may cause a moral injury were identified from the list of DEX items. Specifically, the items that were identified to increase the risk for moral injury and included in the analysis were: DEX-4, 'seen ill or injured women or children who you were unable to help'; DEX-6, 'ever felt responsible for the death of Canadian or ally personnel'; DEX-8, 'had difficulty distinguishing between combatants and non-combatants.' These PMIEs have substantial moral-ethical connotations and exposure to such experiences may elicit conflict with deeply held personal moral standards. When analysing the impact of exposure to PMIEs on help-seeking, we first assessed each item separately, as each

may be associated with unique patterns of shame and guilt, worthlessness, and self-blame and also carry different degrees of legal ramifications (i.e. higher for perpetration events and lower for witnessing events). We then created an 'any PMIE' variable based on exposure to any of DEX-4, -6, and -8. A comprehensive assessment of MI (such as using specialized MI self-report scales) was not feasible in this large-scale population-wide survey and represents one of the limitations of this approach.

2.2.3. Other covariates

Sociodemographic factors (age, sex, primary language, marital status, the highest level of education, difficulty meeting basic expenses), military variables (rank, component, exposure to mental health education), history of childhood victimization, and deployment-related factors (e.g. cumulative duration of deployments, deployment location, time interval between last Afghanistan-related deployment and survey administration) were controlled for in our analyses. History of childhood victimization before the age of 16 was assessed using the Childhood Experiences of Violence Questionnaire (Walsh, MacMillan, Trocmé, Jamieson, & Boyle, 2008). Exposure to non-PMIE deployment-related experiences was assessed by the remaining items of the DEX module (e.g. 'ever been injured').

3. Past-year help-seeking

As part of a larger initiative to understand help-seeking in the CAF, participants were asked if they had 'seen, or talked on the telephone to, any of the following people about problems with your emotions, mental health or use of alcohol or drugs': 1) psychiatrist, 2) family doctor or GP, 3) psychologist, 4) nurse, 5) social worker, counsellor, or psychotherapist, 6) peer support coordinator from the Operational Stress Injury Social Support (OSISS) program (Canadian Forces, Welfare Services), 7) religious or spiritual advisor such as a priest, padre, chaplain, or rabbi, 8) family member, 9) friend, other than a co-worker, supervisor, or boss, 10) co-worker, supervisor, or boss, and 11) other. We first looked at each of these sources separately. We then used the following collapsed categories, using the survey's derived variables as a guide: Professionals [any use of sources 1–5 or additionally, any use of online therapy or past-year hospitalization], Para-Professionals [any use of sources 6–7 or additionally, any use of para-professional services through the Canadian Forces Member Assistance Programme (CFMAP) (Government of Canada), self-help groups, and telephone help-lines], and Non-Professionals [any use of sources 8–10 or internet (i.e. using the internet to gather information on symptoms

resources, or online community forums; excluding online therapy)].

3.1. Statistical methods

The prevalence of past-year help-seeking across a variety of sources was assessed between PMIE-exposed group and non-exposed group (i.e. no exposure to any of the PMIE DEX items) for comparison. Logistic regression models were employed to examine the association between PMIE exposures and help-seeking probability with the adjustment for sociodemographic, military, clinical (i.e. presence of disorders), and deployment-related variables (see Covariates). Past-month psychological distress (i.e. using the K10 (Kessler et al., 2002)) was used as a covariate in a separate sensitivity analysis. Adjusted odds ratios (AOR) were calculated from the models. Potential collinearity was assessed before and during model construction. Model and predictor significance were assessed using the Wald chi-square tests. To ensure our results would be representative of the entire CAF population deployed to Afghanistan, final survey weights calculated by Statistics Canada were used in all analyses. To account for complex survey design, variance calculations were conducted using replicate weights provided by Statistics Canada (Gagné, Roberts, & Keown, 2011). We used complete-case analysis through listwise deletion, yielding an exclusion of 1–5% of respondents, depending on the variables included in the models. All analyses were conducted with SAS® 9.4 (SAS Institute Inc., USA) statistical software with an alpha level set at 0.05 for defining statistical significance.

4. Results

Sociodemographic and military characteristics of the study sample were reported previously by Nazarov et al. (2018) See Table 1 for abbreviated sample characteristics and Tables 1–3 found in Nazarov et al. (2018) for a comprehensive collection of sample descriptives.

The prevalence of help-seeking was consistently higher in the PMIE exposed group than the non-exposed group across all help-seeking categories. Among military personnel who were exposed to at least one PMIE event, 27.67% had sought professional help, 14.75% sought para-professional help, and 31.43% sought non-professional help. In contrast, these prevalences were 18.25%, 8.35%, and 21.36% among personnel without exposure to any PMIE events, respectively.

Among military personnel with PMIE exposure, those who reported having 'ever felt responsible for the death of Canadian or ally personnel' reported a consistently higher prevalence of seeking help than personnel exposed to the other two PMIEs. The prevalence of seeking help was similar between

Table 1. Sociodemographic and PMIE characteristics of the study sample (sample size = 4854; Weighted N = 33525).

Variable	Weighted Estimate % of personnel (95% CI)
<i>Age</i>	
17–24	4.06 (3.43–4.69)
25–34	36.58 (35.23–37.92)
35–44	34.43 (33.11–35.74)
45–60	25.00 (23.80–26.20)
<i>Sex</i>	
Male	89.20 (88.20–90.20)
Female	10.80 (9.80–11.80)
<i>Primary language</i>	
English	76.73 (75.47–77.99)
French	23.33 (22.07–24.59)
<i>Marital status</i>	
Married	52.03 (50.54–53.52)
Common-law	20.70 (19.45–21.96)
Separated, widowed, or divorced	8.41 (7.54–9.28)
Single	18.85 (17.73–19.98)
<i>Highest education level</i>	
Secondary or lower	33.45 (31.99–34.91)
Post-secondary or higher	66.55 (65.09–68.01)
<i>Difficulty meeting basic expenses</i>	
	6.28 (5.55–7.02)
<i>History of childhood victimization</i>	
Physical	45.18 (43.61–46.76)
Sexual	7.37 (6.57–8.16)
Exposure to IPV	10.17 (9.27–11.06)
<i>PMIEs</i>	
Seen ill or injured women or children who you were unable to help	42.64 (41.06–44.23)
Ever felt responsible for the death of Canadian or ally personnel	7.42 (6.59–8.24)
Had difficulty distinguishing between combatants and non-combatants	38.40 (36.85–39.95)

Abbreviations. CI, confidence interval; IPV, intimate partner violence; PMIE, potentially morally injurious experience.

personnel exposed to the other two PMIEs. Detailed results are reported in Table 2.

The positive association between PMIE exposure and help-seeking was confirmed in logistic regression models with the adjustment for sociodemographic, military, clinical, and deployment-related variables (see Table 3). Across all omnibus help-seeking categories, the AORs for the association between any PMIE and help-seeking were greater than 1, indicating that exposure to at least one PMIE increased the probability of seeking help. Consistent results were observed for the three individual PMIEs; the point estimates of the AORs for their associations with omnibus help-seeking categories were all greater than 1, with only one exception. Members exposed to any PMIE were almost twice as likely to seek professional care from the civilian health care system in comparison to those not exposed to PMIEs (OR = 1.94; 95%CI = 1.27–2.96). Similar results were obtained when past-month psychological distress was adjusted for in assessing the associations between PMIE and help-seeking (available upon request).

5. Discussion

Access to mental health care by military personnel has been consistently improving in recent years (Fikretoglu, Liu, Zamorski, & Jetly, 2016; Fikretoglu, Liu, Zamorski, Rusu, & Jetly, 2018; Quartana et al., 2014), and while this is encouraging, concern remains that some military

groups (e.g. reservists, augmentees) may still be inadequately captured by the health care system. Here, we explored this hypothesis with one such group – those exposed to PMIEs during deployment.

Our findings indicate that compared to members not exposed to PMIEs during deployment, members exposed to PMIEs were more likely to seek help for mental health issues, particularly from their family doctor/GP, religious/spiritual advisor, and all non-professionals included in this survey (i.e. family member, friend, co-worker/boss, and internet use). Although trending in the direction of increased help-seeking among PMIE-exposed members, the use of psychiatrists and CFMAP did not reach statistical significance between PMIE-exposed and PMIE non-exposed members. Members exposed to PMIEs sought help from social workers, counsellors, psychotherapists, psychologists, nurses, self-help groups, and OSISS at statistically equal proportions as those without PMIE exposure.

A bias towards help-seeking from mostly para- and non-professionals may be because individuals are forgoing accessing professionals, particularly in the military health care system. Several reasons may factor into this pattern. For one, the pattern of help-seeking after a PMIE shows gravitation towards seeking support from sources that might be seen to provide a higher degree of privacy and anonymity. Previous research suggests that there is indeed a degree of mistrust by military personnel towards military mental health professionals (French, Rona,

Table 2. Prevalence and 95% confidence intervals^a of past-year mental health help-seeking by provider category and exposure to potentially morally injurious experiences during deployment.

Consultation/Services Used	DEX-4		DEX-6		DEX-8		Any PMIE	
	'seeing ill/injured ...'		'feeling responsible ...'		'difficulty distinguishing ...'		Yes	No
	Yes	No	Yes	No	Yes	No	Yes	No
<i>Professionals^b</i>	28.61 (26.43,30.79)	19.10 (17.40,20.80)	40.32 (34.95,45.70)	21.80 (20.37,23.22)	27.46 (25.19,29.73)	20.49 (18.77,22.21)	26.76 (24.94,28.59)	18.25 (16.24,20.25)
Psychiatrist	11.36 (9.83,12.89)	4.91 (3.99,5.82)	17.74 (13.31,22.17)	6.79 (5.93,7.65)	10.90 (9.37,12.44)	5.63 (4.65,6.61)	10.17 (8.94,11.40)	4.24 (3.22,5.26)
Family doctor or general practitioner	14.59 (12.95,16.22)	8.04 (6.84,9.24)	20.16 (15.77,24.55)	10.08 (9.04,11.13)	13.88 (12.18,15.58)	8.93 (7.76,10.10)	13.49 (12.10,14.87)	7.21 (5.89,8.54)
Psychologist	13.46 (11.81,15.12)	7.10 (6.00,8.19)	17.74 (13.60,21.88)	9.11 (8.13,10.10)	12.79 (11.08,14.50)	7.86 (6.79,8.93)	11.93 (10.57,13.29)	6.79 (5.55,8.03)
Nurse	8.56 (7.21,9.90)	4.28 (3.40,5.16)	10.48 (7.08,13.88)	5.75 (4.96,6.55)	8.89 (7.46,10.33)	4.47 (3.62,5.31)	7.79 (6.66,8.92)	3.82 (2.86,4.78)
Social worker, counsellor or psychotherapist	15.99 (14.19,17.79)	11.91 (10.51,13.31)	22.58 (17.65,27.51)	12.99 (11.84,14.14)	15.73 (13.84,17.63)	12.43 (11.00,13.85)	15.16 (13.64,16.68)	11.72 (10.09,13.35)
<i>Para-professional^c</i>	15.85 (14.04,17.66)	9.20 (8.00,10.39)	19.35 (15.03,23.68)	11.45 (10.38,12.52)	14.98 (13.21,16.75)	10.20 (8.98,11.43)	14.75 (13.27,16.22)	8.35 (6.97,9.72)
OSISS ^d	3.37 (2.45,4.28)	1.25 (0.79,1.71)	4.84 (2.44,7.23)	1.88 (1.39,2.36)	3.43 (2.49,4.36)	1.36 (0.87,1.85)	3.01 (2.28,3.74)	0.99 (0.48,1.50)
Religious/spiritual advisor ^e	5.47 (4.35,6.59)	3.13 (2.42,3.85)	8.06 (5.23,10.90)	3.88 (3.24,4.52)	5.62 (4.51,6.73)	3.3 (2.55,4.05)	5.19 (4.28,6.10)	2.69 (1.87,3.50)
CFMAP ^f	8.31 (6.89,9.73)	4.61 (3.73,5.48)	12.1 (8.24,15.95)	5.71 (4.9,6.52)	7.82 (6.48,9.17)	5.16 (4.26,6.06)	7.6 (6.47,8.74)	4.26 (3.29,5.22)
Self-help groups	3.65 (2.70,4.60)	1.67 (1.1,2.3)	5.65 (2.97,8.32)	2.26 (1.74,2.78)	3.27 (2.32,4.22)	2.04 (1.48,2.60)	3.32 (2.54,4.10)	1.55 (0.92,2.18)
<i>Non-professionals</i>	32.68 (30.38,34.98)	22.99 (21.32,24.65)	39.52 (33.98,45.05)	26.13 (24.74,27.53)	31.78 (29.44,34.11)	24.27 (22.61,25.94)	31.43 (29.46,33.41)	21.36 (19.37,23.35)
Family member	23.42 (21.35,25.49)	16.28 (14.84,17.72)	28 (22.83,33.17)	18.68 (17.39,19.97)	23.09 (20.93,25.25)	17.09 (15.55,18.62)	22.41 (20.63,24.19)	15.25 (13.51,17.00)
Friend	17.67 (15.87,19.47)	11.29 (10.07,12.50)	19.2 (14.88,23.52)	13.64 (12.58,14.7)	16.85 (14.96,18.74)	12.33 (11.10,13.56)	16.72 (15.19,18.25)	10.33 (8.94,11.71)
Co-worker/boss	13.74 (11.99,15.50)	8.66 (7.49,9.83)	14.52 (10.70,18.34)	10.48 (9.48,11.48)	12.95 (11.27,14.62)	9.43 (8.22,10.63)	12.76 (11.38,14.14)	8.19 (6.82,9.56)
Internet ^g	11.08 (9.61,12.55)	7.52 (6.45,8.58)	13.71 (10.01,17.41)	8.66 (7.78,9.54)	11.84 (10.24,13.43)	7.29 (6.28,8.29)	10.67 (9.43,11.92)	6.8 (5.59,8.00)
<i>Seeking civilian professional care</i>	5.61 (4.61,6.61)	2.82 (2.17,3.46)	6.45 (3.76,9.14)	3.81 (3.22,4.41)	5.61 (4.51,6.71)	3.11 (2.44,3.77)	5.19 (4.35,6.03)	2.40 (1.71,3.10)

^a95% confidence intervals were calculated using 500 bootstrapped weights^bThe composite category of professionals includes psychiatrist, family doctor or general practitioner, psychologist, nurse, social worker, counsellor or psychotherapist, online therapy, and hospitalization. Online therapy and hospitalizations were removed from the breakdown of the professional category due to insufficient sample size^cThe composite category of para-professionals includes OSISS, religious/spiritual advisor, CFMAP, self-help groups, telephone help-lines. Telephone help-lines were removed from the breakdown of the para-professional category due to insufficient sample size^dPeer Support Coordinator from the Operational Stress Injury Social Support programme^eReligious or spiritual advisor such as a priest, padre, chaplain, or rabbi^fServices through the Canadian Forces Member Assistance Programme^gUsed internet for information, help, or support (excluding online therapy)**Abbreviations:** CFMAP, Canadian Forces Member Assistance Programme; DEX-4, seen ill or injured women or children who you were unable to help; DEX-6, ever felt responsible for the death of Canadian or ally personnel; DEX-8, had difficulty distinguishing between combatants and non-combatants; OSISS, Operational Stress Injury Social Support; PMIE, potentially morally injurious experience.

Table 3. Association between exposure to potentially morally injurious deployment experiences and help-seeking for mental health in the past 12 months.

Consultation/Services Used	DEX-4 'seeing ill/injured ...'		DEX-6 'feeling responsible ...'		DEX-8 'difficulty distinguishing ...'		Any PMIE	
	AOR ^a	95% CI ^b	AOR ^a	95% CI ^b	AOR ^a	95% CI ^b	AOR ^a	95% CI ^b
<i>Professionals^c</i>	1.22 [§]	0.98–1.51	1.33 [§]	0.95–1.86	1.14	0.91–1.41	1.27*	1.00–1.60
Psychiatrist	1.42 [§]	1.00–2.01	1.11	0.69–1.79	1.10	0.78–1.56	1.46 [§]	0.99–2.15
Family doctor or general practitioner	1.40*	1.04–1.87	1.13	0.75–1.69	1.31 [§]	0.98–1.74	1.72***	1.25–2.36
Psychologist	1.20	0.89–1.62	0.94	0.63–1.42	1.15	0.85–1.54	1.06	0.76–1.48
Nurse	1.20	0.83–1.75	0.75	0.43–1.29	1.33	0.93–1.90	1.27	0.83–1.95
Social worker, counsellor or psychotherapist	1.09	0.85–1.40	1.22	0.82–1.82	0.99	0.78–1.27	1.06	0.82–1.38
<i>Para-professional^d</i>	1.36*	1.04–1.77	0.96	0.66–1.38	1.08	0.85–1.38	1.44*	1.06–1.95
OSISS ^e	1.24	0.66–2.32	0.92	0.43–1.99	1.04	0.57–1.90	1.43	0.60–3.42
Religious/spiritual advisor ^f	1.26	0.80–1.99	1.24	0.69–2.26	1.46 [§]	0.96–2.23	1.72*	1.02–2.88
CFMAP ^g	1.38 [§]	0.97–1.98	1.29	0.78–2.15	1.12	0.81–1.54	1.43 [§]	0.96–2.14
Self-help groups	1.35	0.81–2.27	1.16	0.58–2.30	0.88	0.54–1.44	1.29	0.71–2.32
<i>Non-professionals</i>	1.21 [§]	0.99–1.48	1.01	0.72–1.41	1.17	0.97–1.42	1.41**	1.14–1.73
Family member	1.17	0.95–1.45	0.95	0.67–1.35	1.16	0.93–1.44	1.29*	1.03–1.63
Friend	1.28*	1.01–1.62	0.78	0.54–1.13	1.20	0.95–1.53	1.52**	1.17–1.97
Co-worker/boss	1.40*	1.05–1.89	0.76	0.49–1.17	1.12	0.84–1.50	1.47*	1.07–2.01
Internet ^h	1.15	0.86–1.55	0.92	0.61–1.38	1.62***	1.23–2.13	1.48*	1.09–2.00
<i>Seeking civilian professional care</i>	1.58*	1.08–2.30	1.07	0.62–1.82	1.40	0.93–2.11	1.94**	1.27–2.96

^aMultiple logistic regressions; adjusted for sociodemographic variables, military factors, history of childhood victimization, presence of deployment-related mental health education, deployment-related variables (e.g. other stressful experiences), and past-year mental health diagnoses.

^b95% confidence intervals were calculated using 500 bootstrapped weights

^cThe composite category of professionals includes psychiatrist, family doctor or general practitioner, psychologist, nurse, social worker, counsellor or psychotherapist, online therapy, and hospitalization. Online therapy and hospitalizations were removed from the breakdown of the professional category due to insufficient sample size

^dThe composite category of para-professionals includes OSISS, Religious/spiritual advisor, CFMAP, self-help groups, and telephone help-lines. Telephone help-lines were removed from the breakdown of the para-professional category due to insufficient sample size

^ePeer Support Coordinator from the Operational Stress Injury Social Support programme

^fReligious or spiritual advisor such as a priest, padre, chaplain, or rabbi

^gServices through the Canadian Forces Member Assistance Programme

^hUsed internet for information, help, or support (excluding online therapy)

[§]0.05 < p ≤ 0.10

*0.01 < p ≤ 0.05

**0.001 < p ≤ 0.01

*** p ≤ 0.001

Abbreviations: AOR, adjusted odds ratios; CFMAP, Canadian Forces Member Assistance Programme; DEX-4, seen ill or injured women or children who you were unable to help; DEX-6, ever felt responsible for the death of Canadian or ally personnel; DEX-8, had difficulty distinguishing between combatants and non-combatants; OSISS, Operational Stress Injury Social Support; PMIE, potentially morally injurious experience.

Jones, & Wessely, 2004; Hoge et al., 2004), with some of the reasons being related general career harm, not wanting to link medical information to employment (i.e. military) records, and concerns that medical information will not remain confidential (Bonar, Bohnert, Walters, Ganoczy, & Valenstein, 2015; Gould et al., 2010; Hom, Stanley, Schneider, & Joiner, 2017; Rüsche et al., 2017). Some of these concerns are not unfounded, considering that there is substantial ambiguity surrounding medical confidentiality in military medical settings (Auster, 1985; Hoyt, 2013). Ambiguity with regard to the limitations to patient confidentiality also varies across different military mental health providers – unlike the strictly-protected communication with chaplaincy, patient-physician privilege has extensive limits in military settings (a clear example of the privacy ambiguity is highlighted by the dual role of a military practitioner (i.e. duties to organization and patient) where, at times, these roles may conflict). Research also suggests that some mental health professionals demonstrate inadequate knowledge and/or ignorance of confidentiality laws (Faustman, 1982; Jagim, Wittman, & Noll, 1978; Mengeling, Booth, Torner, & Sadler, 2014). To compound the issue, details of

morally injurious trauma may be particularly sensitive to disclosure, as they may be laden with ethical and legal ambiguity (i.e. there may be a fine line between what is perceived to be an ethical violation or a legal violation of civil or military law). As such, the fear of confidentiality breaches during help-seeking may be exacerbated for those with MI, particularly due to legal and career repercussions. Due to these issues, it may be that that members exposed to PMIEs may be seeking help primarily from professionals that they trust most and have known for the longest time (i.e. family doctor or GPs).

It is well-documented that religious advisors play an important role in the mental health of military personnel (Besterman-Dahan, Gibbons, Barnett, & Hickling, 2012; Nieuwsma et al., 2013; Seddon, Jones, & Greenberg, 2011). Military chaplains are considered to be a source of beneficial, multifaceted, and confidential guidance for military personnel, particularly for meaning-making of issues with moral, ethical, or spiritual implications. Our results align with this notion and demonstrate that members exposed to PMIEs show a greater tendency to seek help from religious/spiritual advisors. Considering that MI is frequently linked to spiritual distress

(Drescher & Foy, 2008; Koenig et al., 2017), it is not surprising that there are calls to further learn from chaplains' understanding of MI and integrate their services into the mental care provided to military members (Drescher et al., 2018; Worthington & Langberg, 2012).

We found that help-seeking among members with PMIE is greater primarily for what are traditionally seen as gatekeepers (for mental health care access) such as family doctors, religious advisors, and CFMAP. This highlights the need to increase awareness of MI among the service providers at these touchpoints (both within the military and civilian setting) and ensure members are provided with appropriate advice and referrals. Actionable and evidence-based policy decisions to improve access to care for those with MI can only be made when we comprehensively understand their perceptions of – and journey through – the unstructured social supports (e.g. family, co-workers, friends), para-professional services, and standardized health care systems (i.e. military and civilian); more research is critically needed to disentangle the numerous hypothesized motives behind the demonstrated help-seeking pattern. Until then, professionals and para-professionals should increase their awareness of MI and provide patients with clarity on the medical confidentiality policies of their institution or professional college.

We also demonstrated that help-seeking patterns vary depending on the nature of the MI experience – help-seeking was primarily reported by those who indicated that they had seen ill or injured women or children who they were unable to help. Indeed, we highlighted the differential impact of PMIE on adverse mental health outcomes in our previous work (Nazarov et al., 2018). Perhaps different MI events may possess distinct or multiple moral-ethical connotations and drive increased or unique psychological sequelae. This may create mental health needs that may differ in severity, onset, and symptom profile. More research is required to understand why some events cause certain types of help-seeking behaviours but not others.

Despite the inherent methodological strengths of this large nationally-representative mental health survey, there are also several limitations. First, we conceptualized risk for MI through a formative assessment of exposure to a limited selection of deployment events that had a high likelihood of carrying moral-ethical connotations; the subjective moral distress experienced by study respondents following exposure to these events is unknown (i.e. hence the *potential* to cause moral injury). Furthermore, it was impractical for a survey focusing primarily on the prevalence of mental health issues and services to also assess exposure to all events that could have possibly caused an MI; the collection of events included in the DEX module is

unlikely to capture the full range of PMIEs that military personnel may be confronted with. MI is an area of active development – research is currently underway to develop theoretically appropriate assessment tools that capture both MI exposure (i.e. experiencing specific traumatic events) and MI expression (i.e. psychological sequelae). Despite demonstrating differences in help-seeking, the reasons for help-seeking are unknown. The help-seeking avenues assessed here are not comprehensive and may not be specific for issues relating to MI. As pointed out by one of our reviewers, an important distinction that future research may consider in looking at service use among those with MI is the level of interpersonal interaction that may be required, especially given the common symptoms of shame and guilt surrounding such experiences. The confidence intervals of the provider-specific AOR are relatively wide, likely due to small cell sizes in the help-seeking/PMIE cross-tabulation. Future studies with large sample sizes are required to confirm the study findings.

6. Conclusion

Our findings contrast with long-held assumptions that the shame and guilt that underlie MI might prevent help-seeking in military populations: those exposed to PMIEs demonstrate *increased* help-seeking behaviours for mental health concerns. Importantly, however, the increase in help-seeking varied across providers/sources of help. Specifically, members with PMIEs were significantly more likely to seek help from their doctor/GP, para-professionals, and non-professionals (e.g. family/friends) rather than specialized mental health professionals (e.g. psychologists). Furthermore, exposure to PMIEs was associated with an almost two-fold increase in help-seeking from the civilian health care system. This is suggestive that military personnel may indeed be more reluctant to seek help from the military health care system where they may have to face legal or career ramifications. Overall, our results are not overly reassuring – while we see some increased help-seeking from para- and non-professionals among those with PMIEs, this is not accompanied by similarly increased help-seeking from professionals (with the exception of family doctor/GP); we need to better understand why this is the case. Should a major barrier be found to be a perceived lack of confidentiality, there needs to be a targeted push towards making patient-provider rights more transparent when MI is discussed.

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