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## Original Research

# Examining the Association Between Psychiatric Illness and Suicidal Ideation in a Sample of Treatment-Seeking Canadian Peacekeeping and Combat Veterans With Posttraumatic Stress Disorder

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**Key Words:** military, posttraumatic stress disorder, psychiatric comorbidities, suicidal ideation

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**Objective:** Our study examines the association between suicidal ideation and self-reported symptoms of posttraumatic stress disorder (PTSD), major depressive disorder (MDD), generalized anxiety disorder (GAD), and alcohol use disorder (AUD) in a sample of treatment-seeking Canadian combat and peacekeeping veterans; and identifies potential predictors of suicidal ideation.

**Methods:** Actively serving Canadian Forces and Royal Canadian Mounted Police members and veterans seeking treatment at the Parkwood Hospital Operational Stress Injury Clinic ( $n = 250$ ) completed measures including the Primary Care Evaluation of Mental Disorders Patient Health Questionnaire, the Alcohol Use Disorder Identification Test, and the PTSD Checklist—Military Version (PCL-M) between January 2002 and December 2010. Regression analyses were used to determine the respective impact of PTSD, and self-reported symptoms of MDD, GAD, AUD, and anxiety on suicidal ideation.

**Results:** Most people met PCL-M screening criteria for PTSD (73.6%,  $n = 184$ ), while 70.8% ( $n = 177$ ) screened positively for a probable major depressive episode. PTSD symptom was significantly associated with suicidal ideation ( $\beta = 0.412$ ,  $P < 0.001$ ). After controlling for self-reported depressive symptom severity, AUD severity, and generalized anxiety, PTSD severity was no longer significantly associated with suicidal ideation ( $\beta = 0.043$ ,  $P = 0.58$ ).

**Conclusions:** Although PTSD alone is associated with suicidal ideation, after controlling for common comorbid psychiatric illnesses, self-reported depressive symptom severity emerged as the most significant predictor of suicidal ideation. These findings support the importance of screening for comorbidities, particularly an MDD, as potentially modifiable conditions that are strongly related to suicidal ideation in military personnel's endorsing criteria for PTSD.



**Objectif :** Notre étude examine l'association entre l'idéation suicidaire et les symptômes auto-déclarés du trouble de stress post-traumatique (TSPT), le trouble dépressif majeur (TDM), le trouble d'anxiété généralisée (TAG), et le trouble d'utilisation d'alcool (TUA) dans un échantillon d'anciens combattants canadiens de maintien de la paix et de combat suivant un traitement, et identifie les prédicteurs potentiels de l'idéation suicidaire.

**Méthodes :** Des membres actifs et des anciens combattants des Forces canadiennes et de la Gendarmerie royale en traitement à la clinique *Operational Stress Injury* de l'hôpital Parkwood ( $n = 250$ ) ont répondu à des instruments de mesure, notamment le questionnaire

sur la santé du patient et l'évaluation des troubles mentaux dans les soins de première ligne, le test d'identification du trouble d'utilisation d'alcool, et la liste de vérification du TSPT — version militaire (PCL-M) entre janvier 2002 et décembre 2010. Des analyses de régression ont servi à déterminer l'effet respectif du TSPT, des symptômes auto-déclarés du TDM, TAG, TUA, et de l'anxiété sur l'idéation suicidaire.

**Résultats :** La plupart des personnes ont satisfait aux critères de dépistage du PCL-M pour le TSPT (73,6 %,  $n = 184$ ), tandis que 70,8 % ( $n = 177$ ) avaient un résultat positif d'un épisode dépressif majeur probable. Les symptômes du TSPT étaient significativement associés à l'idéation suicidaire ( $\beta = 0,412$ ,  $P < 0,001$ ). Après un contrôle de la gravité des symptômes dépressifs auto-déclarés, de la gravité du TUA, et de l'anxiété généralisée, la gravité du TSPT n'était plus significativement associée à l'idéation suicidaire ( $\beta = 0,043$ ,  $P = 0,58$ ).

**Conclusions :** Bien que le TSPT à lui seul soit associé à l'idéation suicidaire, après un contrôle des maladies psychiatriques communément comorbides, la gravité des symptômes dépressifs auto-déclarés ressortait comme étant le prédicteur le plus significatif de l'idéation suicidaire. Ces résultats soulignent l'importance de dépister les comorbidités, particulièrement un TDM, comme conditions possiblement modifiables qui sont fortement liées à l'idéation suicidaire chez le personnel militaire qui satisfait aux critères du TSPT.

Peacekeeping and combat exposure is associated with an increased risk of developing a psychiatric disorder such as PTSD, depression, and (or) other anxiety disorders.<sup>1-3</sup> Lifetime prevalence of PTSD in military populations ranges between 9% and 30%.<sup>4-9</sup> Commonly, PTSD co-occurs with other psychiatric disorders; in particular, MDD and AUD.<sup>10-13</sup> In veterans with a diagnosis of chronic military-related PTSD, about 50% also experience symptoms of comorbid MDD at some point in their lives.<sup>14</sup> The endorsement of PTSD symptoms has been found to increase the risk of suicidal ideation and suicide attempts,<sup>15-20</sup> while comorbid depression may further increase the risk for suicidal thoughts in veterans.<sup>21</sup> Conversely, several studies have reported comorbid diagnoses of PTSD and depression are associated with lower completed suicide rates.<sup>22,23</sup> In spite of these discrepant findings, understanding the relative influence of comorbid conditions on suicidal ideation in veterans with PTSD could ultimately contribute to decreased mortality and morbidity.

Research on suicidal ideation among military personnel suggests that currently serving military members and

## Abbreviations

AUD	alcohol use disorder
AUDIT	Alcohol Use Disorder Identification Test
CAPS	Clinician-Administered PTSD Scale
CF	Canadian Forces
DSM	Diagnostic and Statistical Manual of Mental Disorders
GAD	generalized anxiety disorder
MDD	major depressive disorder
OEF	Operation Iraqi Freedom
OIF	Operation Enduring Freedom
PCL-M	PTSD Checklist—Military Version
PHQ	Patient Health Questionnaire
PSS-I	PTSD Symptom Scale—Interview Version
PTSD	posttraumatic stress disorder
RCMP	Royal Canadian Mounted Police
SCID	Structured Clinical Interview for DSM-IV
VAC	Veterans Affairs Canada

## Clinical Implications

- Military personnel and veterans being assessed for treatment should be assessed for common comorbid psychiatric conditions that may complicate the treatment process.
- The concurrent treatment of comorbid illnesses, such as MDD, may improve responses to treatment for PTSD.

## Limitations

- Our study was limited to treatment-seeking military personnel and veterans, and may not be generalizable to broader military populations.
- Our study relied on the use of self-report measures, which may differ from clinician-made diagnoses.

veterans with a psychiatric disorder may be at a greater risk of having suicidal ideation or behaviours when compared with their civilian counterparts or veterans without any psychiatric diagnoses.<sup>24-28</sup> Previous research demonstrates that exposure to traumatic events increases the risk of engaging in suicidal behaviours,<sup>29-31</sup> and that number of lifetime traumatic events experienced is associated with suicidal behaviours.<sup>32</sup> Studies of American military populations have demonstrated that suicide rates among active duty US military members deployed to OIF and OEF increased almost 2-fold from the beginning of 2001.<sup>33</sup> These American military veterans are more than twice as likely to die by suicide than members of the general population.<sup>34</sup> A recent report from the Center for a New American Security indicated a record number of suicides had occurred among active US Army members and reservists in July 2011, and that an estimated 18 US veterans die daily from completed suicide.<sup>35</sup> Another study found that members of the Australian Defence Force were significantly more likely to experience suicidal ideation than members of the Australian general population (3.9% and 1.7%, respectively).<sup>36</sup>

PTSD is associated with decreased quality of life, increased medical comorbidity, and increased psychosocial impairment,<sup>37-40</sup> and military members with PTSD often experience a greater need for health care services.<sup>41</sup> The presence of comorbid psychiatric diagnoses may exacerbate impaired psychosocial functioning and quality of life, with

further increase in the cost of PTSD for both the person and society.<sup>42</sup> To alleviate this burden, timely and accurate mental health assessments and treatment are a necessity.

The clinical task of predicting which people may be at an increased risk of completing suicide is a complex and challenging care issue. Identifying risk factors for suicidal ideation, an established correlate with suicide completion, has the potential to help clinicians identify people who may require further screening and focused interventions. Given the importance of early identification and management of suicidal ideation in veterans with PTSD, the objectives of our study are: to examine the association between self-reported suicidal ideation and PTSD, self-reported symptoms of depression, alcohol misuse, and GAD in a sample of treatment-seeking veterans; and to identify potential predictors of suicidal ideation.

## Methods

### *Participants and Procedure*

Participants consisted of a convenience sample of 250 currently serving CF and RCMP members and veterans referred by their primary care physician, VAC—Area Counsellor, or RCMP Case Manager, to the Parkwood Hospital Operational Stress Injury outpatient clinic for a voluntary comprehensive assessment between January 2002 and December 2010. The Parkwood Operational Stress Injury Clinic is 1 of 10 specialized clinics funded by VAC to treat veterans with psychiatric disorders, such as PTSD resulting from military operation.

The clinic follows a standardized assessment screening protocol which includes the PHQ,<sup>43</sup> the PCL-M,<sup>44</sup> the AUDIT,<sup>45</sup> the Short-Form Health Survey-36,<sup>46</sup> and the Brief Traumatic Brain Injury Screen.<sup>47</sup> At intake to the Operational Stress Injury Clinic, participants provided informed consent for information collected from psychological measures administered during their initial assessment to be used for clinical review, education, and outcome measurement. The data from intake assessments are de-identified and stored in an electronic database. Our study obtained its data from this previously collected dataset and received approval for its use from both the Office of Research Ethics of The University of Western Ontario and the relevant hospital ethics review board.

### *Measures*

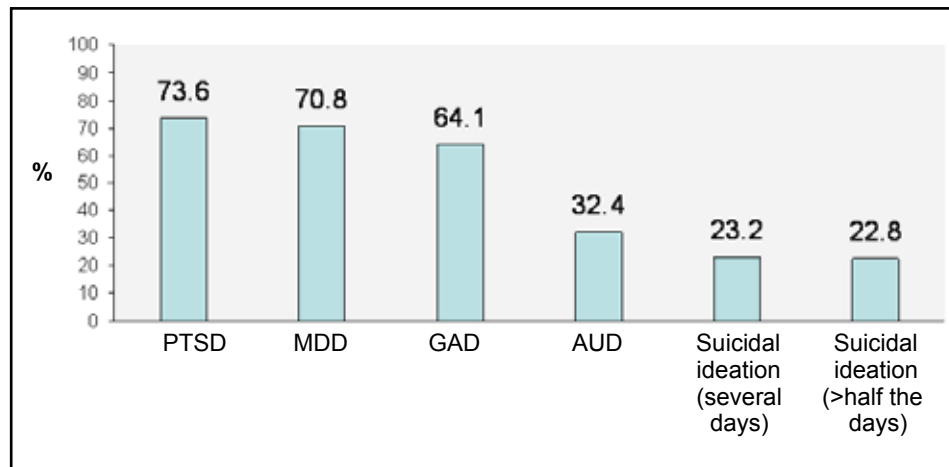
The AUDIT<sup>45</sup> is a 10-item, self-administered measure that may be used to identify people at an increased risk for hazardous or harmful patterns of alcohol consumption, including alcohol dependence. Eight items are scored using a Likert-type scale from 0 to 4, while the final 2 items pertain to alcohol-related problems, with more recent problems receiving greater weight than problems earlier in life. Items are summed to derive a total score (range = 0 to 40). Greater AUDIT scores indicate greater risk for problem drinking, with a score of 8 or higher considered indicative of hazardous alcohol consumption. Greater AUDIT scores

indicate greater risk for problem drinking, with a score of 8 or higher considered indicative of hazardous alcohol consumption and probable AUD.<sup>45</sup>

The PHQ<sup>43</sup> is a self-administered version of the Primary Care Evaluation of Mental Disorders. This measure screens for threshold and subthreshold mood, anxiety, and somatoform disorders.<sup>43</sup> The PHQ also includes a brief measure known as the PHQ-9 that was used to screen for the presence or absence of MDD, as well as depressive symptom severity and suicidal ideation in our study. The PHQ-9 assesses 3 depressive symptom clusters: mood, physical, and cognitive; the role of symptom severity of each of these clusters was also assessed in our study. The PHQ-9 diagnostic scoring algorithm corresponds to DSM-IV MDD requirements, wherein 5 or more items must be experienced “in the past 2 weeks” at least “more than half the days” with at least 1 of these symptoms being depressed mood or diminished interest or anhedonia.<sup>48</sup> The PHQ-9 has demonstrated good internal reliability (Cronbach  $\alpha = 0.89$ ) and test–retest reliability ( $r = 0.84$ ).<sup>48</sup> For our study, suicidality on the PHQ-9 was defined as an endorsement of “several days” or more to the PHQ-9 item (“Thoughts that you would be better off dead or of hurting yourself in some way”). The PHQ-9 suicidality item was removed from total PHQ-9 scores to reduce artificial inflation of the association between MDD and suicidal ideation, and was instead used as an independent measure of suicidal ideation. Used alone, the PHQ-9 suicide screening item has a demonstrated specificity of 0.84 and sensitivity of 0.69.<sup>10</sup>

The PCL-M<sup>44</sup> is a self-administered, 17-item scale that is used to assess self-reported PTSD symptom severity related to a military-specific traumatic experience. Respondents rate how affected they have been by each of 17 symptoms belonging to the 3 DSM-IV symptom clusters (that is, re-experiencing, avoidance and numbing, and hyperarousal) during the past month using a 5-point Likert-type scale. Total scores are tabulated by summing all 17-item responses, with higher scores representing greater symptom severity (range = 17 to 85). A score of 50 or greater is typically considered a positive screen for PTSD in populations similar to participants in our study.<sup>44,49–52</sup>

Diagnoses of PTSD were confirmed in a clinical assessment using an empirically supported PTSD interview<sup>53,54</sup>: either the CAPS,<sup>55</sup> the SCID Axis I Disorders PTSD module,<sup>56</sup> or the PSS-I.<sup>57</sup> The CAPS is a 30-item structured interview that can be used to assess both current (past month) and lifetime PTSD. In addition to assessing the 17 symptoms measured in the PCL-M, the CAPS also evaluates the impact of these symptoms on social and occupational functioning, as well as PTSD symptom severity and improvement, if any, since a previous CAPS administration.<sup>58</sup> The SCID is a semi-structured clinical interview tool that uses diagnostic criteria from the DSM-IV along with a categorical system for rating the frequency and severity of symptoms and a scoring algorithm to determine the absence or presence (either full or subthreshold) of an Axis I diagnosis such as PTSD.<sup>59</sup> The PSS-I is a 17-item, semi-structured interview

**Figure 1** Frequencies of self-reported probable psychiatric disorders and suicidal ideation

that assesses the presence, frequency, and severity of PTSD symptoms related to a single identified traumatic event. Foa and Tolin<sup>60</sup> have used all 3 of these assessment tools to demonstrate that the PSS-I and CAPS have comparable internal consistency coefficients (Cronbach  $\alpha = 0.65$ – $0.86$  for the PSS-I and  $0.71$ – $0.85$  for the CAPS) and that the total scores of all 3 measures are highly correlated with one another (Spearman correlation coefficient  $\rho = 0.73$ – $0.83$ ,  $P < 0.01$ ).

### Data Analysis

Data for our study was analyzed using SPSS 17.0 statistical package (PASW, Chicago, IL). Descriptive statistics were used to determine the frequency of 4 self-reported psychiatric illnesses: PTSD, MDD, GAD, alcohol misuse, and associated suicidal ideation. PTSD was measured using the PCL-M and confirmed using the CAPS, SCID, or PSS-I, while probable MDD, GAD, and suicidal ideation were measured using the PHQ. Alcohol misuse was measured using the AUDIT. In model 1, linear regression analyses were conducted to determine if total PCL-M scores were significantly associated with suicidal ideation. In model 2, both PTSD symptom severity (total PCL-M scores) and absence or presence of probable GAD were entered. In model 3, PTSD symptom severity and alcohol misuse severity (AUDIT scores) were entered. In model 4, PTSD symptom severity and depressive symptom severity (PHQ-9 scores) were entered. In the final model, PTSD symptom severity, absence or presence of GAD, alcohol misuse severity, and depressive symptom severity were entered. Other variables, such as depression, as well as deployment to Afghanistan, were included in regression analyses. The 5 regression models were then repeated using only participants who had been deployed to Afghanistan. Another set of linear regression analyses were conducted to determine whether individual items on the PCL-M were predictive of suicidal ideation. In this analysis, all 17 PCL-M items were entered into the model in a single

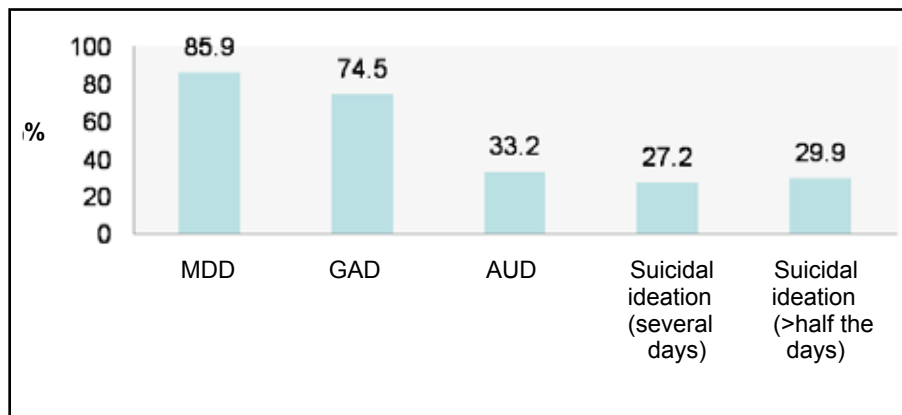
block. This analysis was then repeated controlling for depressive symptom severity. Finally, PHQ-9 depressive symptom clusters (that is, mood, physical, and cognitive) were entered into a final linear regression analysis in a single block. Missing values were imputed using the item mean for all participants, as this method is computationally simple and using listwise deletion may have compromised the statistical power of the study.

## Results

### Demographics

The vast majority of participants ( $n = 193$ ; 77.2%) were veterans released from the CF, while 55 (22.0%) were actively serving in the CF. Only 2 participants (0.8%) were RCMP members. Participants had served an average of 15.0 years (SD 9.0) in the CF or RCMP, and had been deployed an average of 3 times (SD 6.87). About one-quarter of the sample ( $n = 65$ , 26.0%) had been deployed to Afghanistan at least once. The majority of participants ( $n = 231$ ; 92.4%) were male. The mean age of participants included in the final sample was 41.75 years (SD 10.29). Participant ages ranged from 20 to 65 years.

The prevalence of self-reported probable psychiatric condition is depicted in Figure 1. The majority ( $n = 184$ , 73.6%) of the sample met PCL-M criteria for probable PTSD, and almost three-quarters ( $n = 177$ , 70.8%) screened positive for probable MDD on the PHQ. About two-thirds of the sample also screened positive for probable GAD on the PHQ. One-third had an AUDIT score of at least 8, indicating a significantly increased risk for hazardous alcohol consumption. Among the participants who met PCL-M criteria for probable PTSD, only 4.4% ( $n = 8$ ) did not screen positive for another psychiatric disorder. The percentage of participants who screened positive for probable comorbid MDD, GAD, AUD, and suicidal ideation is provided in Figure 2. Among the total sample, slightly more than one-half of participants reported that they

**Figure 2** Frequency of comorbid self-reported MDD, GAD, AUD, and suicidal ideation**Table 1** Effect of PTSD symptom severity, absence or presence of GAD, AUD severity, and depressive symptom severity on suicidal ideation among entire cohort of CF members and veterans

Model		$\beta$	<i>t</i>	<i>df</i>	<i>P</i>
1	Total PCL-M score	0.412	7.117	247	<0.001
2	Total PCL-M score	0.373	5.961	246	<0.001
	GAD	0.101	1.606		0.11
3	Total PCL-M score	0.404	6.903	244	<0.001
	AUD severity	0.031	0.527		0.60
4	Total PCL-M score	0.064	0.850	224	0.40
	Depressive symptom severity	0.528	6.964		<0.001
5	Total PCL-M score	0.043	0.552	221	0.58
	GAD	-0.001	0.020		0.98
	AUD severity	0.105	1.903		0.06
	Depressive symptom severity	0.541	7.003		<0.001

experienced no thoughts of self-harm or that they would be better off dead during the past 2 weeks ( $n = 135$ ; 54.0%), while about one-quarter reported experiencing these kinds of thoughts for several days ( $n = 58$ ; 23.2%). Another 16.8% ( $n = 42$ ) reported experiencing thoughts of self-harm more than one-half of the days of the past 2 weeks, while 6.0% ( $n = 15$ ) reported feeling this way nearly every day during the previous 2 weeks.

### Imputation of Missing Data

Missing values were imputed for total AUDIT scores in 2 instances and PHQ-9 total score in an additional 20 instances.

### Predictors of Suicidal Ideation

In regression analyses, total PCL-M scores were significantly associated with suicidal ideation ( $\beta = 0.412$ ,  $P < 0.001$ ). After controlling for probable GAD and alcohol misuse severity, the association between total PCL-M score and suicidal ideation remained significant ( $P < 0.001$ ). However, after controlling for self-reported depressive symptom severity, total PCL-M scores were no longer significantly associated

with suicidal ideation ( $\beta = 0.064$ ,  $P = 0.4$ ). Instead, self-reported depressive symptom severity emerged as the most significant predictor of suicidal ideation ( $P < 0.001$ ; Table 1).

Additional analyses were conducted on a subsample of people who had been deployed to Afghanistan ( $n = 65$ ) to determine whether any differences existed between those who had been deployed on a recent combat mission and the sample as a whole. Similar to the rest of the sample, total PCL-M scores were significantly associated with suicidal ideation and remained significant after controlling for probable GAD ( $\beta = 0.366$ ,  $P = 0.01$ ) and alcohol misuse severity ( $\beta = 0.425$ ,  $P = 0.001$ ), but not after controlling for self-reported depressive symptom severity ( $\beta = 0.240$ ,  $P = 0.21$ ). After examining all potential predictors, self-reported depressive symptom severity emerged as the strongest predictor of suicidal ideation in the Afghanistan-only subsample (Table 2). Independent variables were identified as statistically significant predictors in the final step, when all diagnoses were included in the model.



**Table 2 Effect of PTSD symptom severity, absence or presence of GAD, AUD severity, and depressive symptom severity on suicidal ideation among CF members and veterans deployed to Afghanistan**

Model		$\beta$	$t$	$df$	$P$
1	Total PCL-M score	0.436	3.840	62	<0.001
2	Total PCL-M score	0.366	2.546	61	0.01
	GAD	0.115	0.798		0.43
3	Total PCL-M score	0.425	3.674	61	0.001
	AUD severity	0.060	0.518		0.61
4	Total PCL-M score	0.240	1.271	61	0.21
	Depressive symptom severity	0.243	1.285		0.20
5	Total PCL-M score	0.186	0.920	59	0.36
	GAD	0.068	0.460		0.65
	AUD severity	0.080	0.680		0.50
	Depressive symptom severity	0.242	1.215		0.23

**Table 3 Regression analyses of individual PCL-M items, PHQ-9 symptom clusters, and depressive symptom severity**

Model		$\beta$	$t$	$df$	$P$
1	PCL-M item 3 (suddenly acting or feeling as if a stressful military experience were happening again)	0.192	2.133	205	0.03
	PCL-M item 11 (feeling emotionally numb or being unable to have loving feelings for those close to you)	0.182	2.225		0.03
	PCL-M item 12 (feeling as if future will be cut short)	0.327	4.221		<0.001
2	PCL-M item 3 (suddenly acting or feeling as if a stressful military experience were happening again)	0.149	1.713	204	0.09
	PCL-M item 11 (feeling emotionally numb or being unable to have loving feelings for those close to you)	0.158	2.000		0.047
	PCL-M item 12 (feeling as if future will be cut short)	0.231	2.982		0.003
	Depressive symptom severity	0.393	4.324		<0.001
3	PHQ-9 mood symptom cluster	0.434	4.676	220	<0.001
	PHQ-9 physical symptom cluster	0.095	1.037		0.30
	PHQ-9 cognitive symptom cluster	0.099	1.272		0.20

To determine whether numerous individual items from the PCL-M were reliable predictors of suicidal ideation, supplemental regression analyses were conducted (Table 3). The PCL-M items 11 (that is, "Feeling emotionally numb or being unable to have loving feelings for those close to you") and 12 (that is, "Feeling as if your future will somehow be cut short") were strongly associated with suicidal ideation and remained statistically significant even after controlling for self-reported depressive symptom severity ( $P = 0.47$  and  $0.003$ , respectively). The PCL-M item 3 ("Suddenly acting or feeling as if a stressful military experience were happening again") was also significantly associated with suicidal ideation. Controlling for self-reported depressive symptom severity, the association was no longer statistically

significant at the  $P < 0.5$  level. PHQ-9 symptom clusters (that is, mood, cognitive, and physical) were also explored as predictors of suicidal ideation. Only the PHQ-9 mood cluster was significant at the  $P < 0.05$  level (Table 3).

## Discussion

Consistent with previous reported research findings,<sup>24,61</sup> PTSD severity was associated with increased suicidal ideation among treatment-seeking veterans in our study. Despite the well-documented relation between PTSD and suicidal ideation,<sup>24,61</sup> significant controversy persists in the literature regarding the relative contribution of PTSD and its associated comorbidities to the occurrence of

concomitant suicidal ideation. Our results were similar to those reported by Marshall et al,<sup>15</sup> who reported that the number of PTSD symptoms was associated with suicidal ideation. This is clinically important as it demonstrates that even participants who may not meet the full diagnostic criteria for PTSD may also be at a higher risk of having suicidal ideation. Additionally, patients whose symptoms do not meet full diagnostic criteria for PTSD may still experience significant functional impairment.<sup>15</sup>

Most participants screened positive for more than one probable psychiatric condition in the current treatment-seeking sample. Among participants who screened positive for PTSD on the PCL-M, 85.9% screened positive for probable MDD on the PHQ-9. This finding is consistent with another recent study<sup>24</sup> on PTSD and associated suicidal ideation in a military population that reported about 50% of a sample of Ohio Army National Guard soldiers with a diagnosis of PTSD in the past year were also diagnosed with MDD. The higher rate of comorbid MDD observed in our study may be related to the treatment-seeking nature of our sample.

When controlling for self-reported depressive symptom severity as the most common comorbid condition, PTSD was no longer associated with suicidal ideation. This finding is consistent with a recent meta-analysis<sup>62</sup> that also concluded, when controlling for comorbid conditions such as major depression, it attenuated the association between PTSD and suicidal ideation. However, the findings of our study are in contrast to a recent study of US military veterans deployed during OEF and (or) OIF,<sup>63</sup> as well as a treatment-seeking OIF and OEF veteran population,<sup>64</sup> that reported PTSD was associated with increased suicidal ideation despite controlling for comorbid MDD. This discrepancy in findings between studies may be explained by the differences in the strictly combat sample of the OIF and OEF studies, compared with the mixed combat and peacekeeping sample of our study.

The findings of our study emphasize the importance of assessing for comorbidity, especially MDD, and to screen for suicidal ideations when assessing veterans for PTSD. Both MDD and subsyndromal depressive symptoms are significant components of suicidal risk features for which potentially effective interventions are available that may mitigate against this risk.<sup>65,66</sup> As psychotherapy and pharmacotherapy have demonstrated poor response in military-related PTSD when compared with civilian PTSD,<sup>67-70</sup> treating comorbidity, especially MDD, may improve patients' responses to psychotherapy.<sup>32,71</sup>

Although our study adds to the dearth of literature on the relation between self-reported psychiatric illness and suicidal ideation in treatment-seeking Canadian peacekeeping and combat veterans with PTSD, there are numerous limitations. Our study examined veterans seeking treatment at a single site and at a specialized tertiary care clinic. The uniqueness of our study's treatment setting may limit the generalizability of these findings being applied to

veterans seeking care from a more general mental health care service. Further, the design of our study does not allow for causal relations to be evaluated. Additionally, even though self-rating measures such as the PCL-M and PHQ have been extensively used in research to identify cases of PTSD and other psychiatric conditions,<sup>72-75</sup> discrepancies between the outcomes of self-report measures and clinician-made diagnoses may exist.

## Conclusions

In this sample of actively serving CF and RCMP members and veterans seeking treatment, PTSD alone appeared to be closely associated with suicidal ideation. However, when controlling for the most common comorbid psychiatric illness, probable MDD and self-reported depressive symptom severity emerged as the most significant predictor of suicidal ideation. Our study emphasizes the importance of considering comorbidity, especially depression, when evaluating for military-related PTSD.

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