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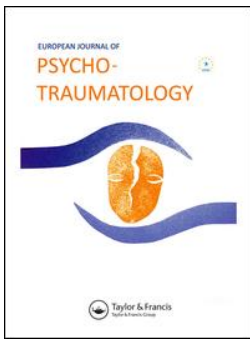
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## Do serving and ex-serving personnel of the UK armed forces seek help for perceived stress, emotional or mental health problems?

Sharon A. M. Stevelink, Norman Jones, Margaret Jones, Daniel Dyball, Charandeep K. Khera, David Pernet, Shirlee MacCrimmon, Dominic Murphy, Lisa Hull, Neil Greenberg, Deirdre MacManus, Laura Goodwin, Marie-Louise Sharp, Simon Wessely, Roberto J. Rona & Nicola T. Fear

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## Do serving and ex-serving personnel of the UK armed forces seek help for perceived stress, emotional or mental health problems?

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### ABSTRACT

**Background:** UK armed forces personnel are at risk of occupational psychological injury; they are often reluctant to seek help for such problems.

**Objective:** We aimed to examine and describe sources of support, prevalence and associates of help-seeking among UK serving and ex-serving personnel.

**Method:** A total of 1450 participants who self-reported a stress, emotional or mental health problem in the past 3 years were sampled from a health and wellbeing study and subsequently completed a telephone interview comprising measures of mental disorder symptoms, alcohol misuse and help-seeking behaviour.

**Results:** Seven per cent of participants had not sought any help, 55% had accessed medical sources of support (general practitioner or mental health specialist), 46% had received formal non-medical (welfare) support and 86% had used informal support. Gender, age, perceived health, functional impairment, social support, deployment, alcohol and comorbidity impacted upon the choice of help source.

**Conclusions:** This study found that the majority of those with perceived mental health problems sought some form of help, with over half using formal medical sources of support.

### ¿El personal de servicio y ex personal de servicio de las Fuerzas Armadas del Reino Unido busca ayuda para el estrés percibido, problemas emocionales o de salud mental?

**Antecedentes:** El personal de las Fuerzas Armadas del Reino Unido está en riesgo de sufrir alteraciones psicológicas ocupacionales; a menudo son reacios a buscar ayuda para tales problemas.

**Objetivo:** El objetivo fue examinar y describir las fuentes de apoyo, la prevalencia y los asociados de búsqueda de ayuda entre el personal de servicio y ex personal de servicio del Reino Unido.

**Método:** En un estudio de salud y bienestar se tomaron muestras de 1.450 participantes que informaron sobre un problema de estrés, de salud mental o emocional en los últimos tres años y posteriormente completaron una entrevista telefónica que incluía medidas de síntomas de trastornos mentales, abuso de alcohol y conductas de búsqueda de ayuda.

**Resultados:** El 7% de los participantes no había buscado ninguna ayuda. El 55% accedió a fuentes médicas de apoyo (médico general o especialista en salud mental), el 46% recibió apoyo formal no médico (servicio social) y el 86% utilizó apoyo informal. El sexo, la edad, la salud percibida, el deterioro funcional, el apoyo social, el despliegue, el alcohol y la comorbilidad se ven afectados por la elección de la fuente de ayuda.

**Conclusiones:** Este estudio encontró que la mayoría de las personas con problemas de salud mental percibidos buscaron algún tipo de ayuda, y más de la mitad usaron fuentes médicas formales de apoyo.

### 英国武装部队的服务人员和退役人员是否会在感知压力，情绪或心理健康方面寻求帮助？

**背景：**英国武装部队人员面临职业心理伤害的风险；他们通常不愿意为这些问题寻求帮助。

### ARTICLE HISTORY

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### KEYWORDS

Alcohol misuse; depression; military personnel; veteran; help-seeking; post-traumatic stress disorder; quantitative methods

### PALABRAS CLAVES

Abuso de alcohol; depresión; personal militar; veterano; búsqueda de ayuda; trastorno de estrés postraumático; métodos cuantitativos

### 关键词

酒精滥用; 抑郁; 军人; 退伍老兵; 求助; 创伤后应激障碍; 定量方法

### HIGHLIGHTS

- In contrast to previous studies of help-seeking in serving and ex-serving personnel, and the public perception, this study found that the majority of those with perceived mental health problems sought some form of help.
- Over half used formal medical sources of support.
- Younger males who reported lower levels of social support were less likely to seek support.

**目标：**我们的目的是考查和描述英国在职和退役人员的支持资源、求助行为的普遍性和有关因素。

**方法：**从一项身心健康研究中抽样1450名在过去三年中自我报告压力、情绪或心理健康问题的参与者，随后进行电话访谈测量其精神障碍症状、酒精滥用和求助行为。

**结果：**7%的参与者没有寻求任何帮助，55%获得医疗支持（全科医生或心理健康专家），46%获得正式的非医疗（福利）支持，86%使用非正式支持。性别、年龄、感知健康、功能障碍、社会支持、就职、酒精和合并症对选择帮助来源有影响。

**结论：**本研究发现，大多数有心理健康问题的人寻求某种形式的帮助，超过一半的人使用正式的医疗支持资源。

## 1. Introduction

UK armed forces personnel are at risk of occupational psychological injury, with levels of post-traumatic stress disorder (PTSD) and alcohol misuse found to be 6% and 10%, respectively (Stevellink et al., 2018). Some groups are at a heightened risk for poor mental health outcomes, for example reserves and personnel who have left the armed forces. Those who experienced deployment to Iraq and Afghanistan, and subsequently left the military, reported higher rates of PTSD, at 9% (Stevellink et al., 2018). These rates are higher than those in the UK general population, which has a prevalence of PTSD and alcohol misuse of around 4% (NHS, 2016).

Recognizing the presence of mental disorder symptoms is the first step towards help-seeking; however, research suggests that many people do not recognize such symptoms, and only a small proportion of those who might fulfil the diagnostic criteria for a mental disorder seek formal help from a mental health professional (Alonso et al., 2007; Jorm, 2000; Rickwood & Thomas, 2012).

Previous studies suggest that armed forces personnel conform to this pattern of help-seeking; research outcomes suggest that one in three serving or ex-serving personnel with mental health problems seek formal mental healthcare (Hoge et al., 2004; Hom, Stanley, Schneider, & Joiner, 2017; Iversen et al., 2010; Langston et al., 2010). Studies conducted between 2003 and 2015 among UK serving and ex-serving military personnel suggest that help-seeking is influenced by sociodemographic factors, military characteristics and symptoms of mental disorders, with females, those holding a lower rank and those with comorbid mental disorders being most likely to seek help (Hines et al., 2013; Iversen et al., 2010; Jones, Keeling, Thandi, & Greenberg, 2015). An international review of serving military personnel suggested that, overall, 29% of those with mental health problems had accessed mental health services in the past year (Hom et al., 2017). Factors influencing the individual choice of help sources are a propensity to favour informal over formal sources of help, preferring to deal with problems oneself or being reticent to seek help, fearing adverse occupational outcomes and stigma associated with mental ill-health (Henderson, Evans-Lacko, & Thornicroft, 2013; Iversen et al., 2010,

2011, Jones et al., 2015; Jones, Twardzicki, Fertout, Jackson, & Greenberg, 2013).

However, recognition of the importance of mental health in general, and more specifically its role in promoting operational effectiveness within the armed forces, has changed, as indeed have attitudes towards mental health both within the military and in the general population. So, it is important to periodically re-evaluate help-seeking patterns among UK armed forces personnel. This study assesses help-seeking behaviours, associated factors and the use of a range of potential sources of help among a large sample of UK personnel who reported a mental health, stress or emotional problem occurring during the past 3 years.

## 2. Methods

### 2.1. Study population

Royal Navy, Royal Marines, Army and Royal Air Force (RAF) personnel were selected from an existing cohort of serving regular, reserve and ex-service personnel who participated in phase 3 of a health and wellbeing study between 2014 and 2016 (Stevellink et al., 2018). The cohort was established in 2003 to examine the impact of deployment to Iraq upon the health and wellbeing of UK service personnel (phase 1;  $n = 10,272$ ) (Hotopf et al., 2006). A second phase of data collection, which incorporated both phase 1 respondents and new cohort members, took place from 2007 to 2009 (phase 2;  $n = 9990$ ) (Fear et al., 2010). New cohort members included a random sample of personnel deployed to Afghanistan between April 2006 and April 2007, along with a randomly selected replenishment sample of personnel who had joined service since April 2003. Data for phase 3 were collected among existing cohort members (phase 1 and/or phase 2 respondents) and a new random sample of personnel who joined between August 2009 and March 2013. Participants were asked to complete a written or online survey of their military and deployment experiences, lifestyle factors, and measures of health and wellbeing (phase 3;  $n = 8093$ ). Phase 3 participants who consented to future contact and answered 'yes' to the question, 'have you had a mental health, stress or emotional problem in the past three years?' were asked to participate in the current help-seeking study.

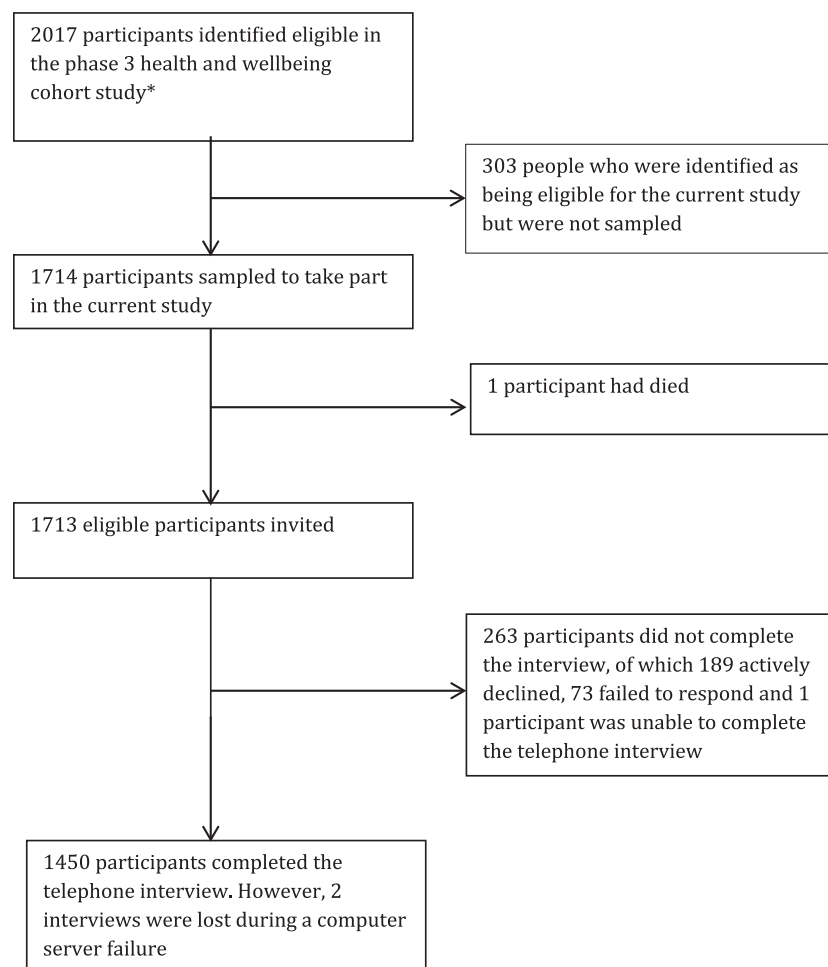
As responses to the health and wellbeing cohort study were received by the research team, participants were added to an ordered list based on the date and time of receipt. It was assumed that eligible participants would be distributed randomly across the larger cohort study responders over the period of data collection. Periodically, the list of responders was divided into batches of 100 and eligible participants within a batch, up to a maximum of 25, were selected at random. Once a batch had been processed it was removed from the list and was no longer available for selection. This approach ensured that eligible participants were selected from across the entire timespan of the cohort. Although 2017 potential participants were identified as eligible, 1713 were randomly selected for inclusion in the current study (Figure 1).

## 2.2. Procedure

Ethical approval for the study was granted by the UK Ministry of Defence Research Ethics Committee (ref.: 535/MODREC/14).

Invitations were sent to participants at their military unit (serving personnel and reserves) or home address (ex-service personnel). After two weeks, the research team attempted to make telephone contact to ensure the invitation had been received and to answer any questions.

A structured interview schedule was administered by telephone after verbal informed consent had been obtained and recorded. Interview responses were entered into an electronic study database. Most interviews were audio-recorded with consent from the participant to ensure accuracy of data capture; three participants did not agree to the recording of their interview but were still willing to participate in the study. Three members of the research team (SAMS, DD, CKK) conducted the interviews. Owing to the potentially distressing nature of elements of the interview and the risk implications of some questions, such as the deliberate self-harm and suicide component, procedures were in place for participants to receive a call-back from a clinician if requested by the participant. In total, 1450 interviews were conducted (response rate 84.6%); two interviews were lost during



**Figure 1.** Flow diagram for the interview study. \*These 2017 eligible participants were identified as eligible and identified by August 2016. However, the phase 3 health and wellbeing cohort study, from which these participants were derived, continued data collection until the first week of January 2017. An additional 451 eligible participants were identified after August 2016, but were not selected to take part in the interview study given constraints on the time available for finishing the study.

a computer server failure, so 1448 interviews were included in the analyses. Interviews lasted between 17 and 148 minutes [median (interquartile range) 38.5 (32.6–47.6) minutes]. Participants received £25 after completing the telephone interview. Data collection took place between February 2015 and December 2016.

### 2.3. Study materials

The interview schedule comprised the 9-item Patient Health Questionnaire (PHQ-9) to assess symptoms of depression. A score of 15 was used to identify case-positive status (scores range from 0 to 27) (Kroenke, Spitzer, & Williams, 2001). The Generalized Anxiety Disorder 7-item (GAD-7) scale, with a cut-off score of 10 or greater, was used to identify symptoms of anxiety (scores range from 0 to 21) (Spitzer, Kroenke, Williams, & Lowe, 2006). The 20-item PTSD Checklist for DSM-5 (PCL-5) was used to assess symptoms of PTSD (Blevins et al., 2015). A score of 38 or greater was used to identify probable PTSD (Hoge, Riviere, Wilk, Herrell, & Weathers, 2014). The 3-item Alcohol Use Disorders Identification Test (AUDIT-C) was used to assess alcohol consumption and misuse (Bush, Kivlahan, McDonell, Fihn, & Bradley, 1998). Given the extent of alcohol use among UK military personnel, an AUDIT-C score of 10 or more was used to indicate alcohol misuse (scores ranged from 0 to 12) (Sundin et al., 2014). The Cronbach scores for internal consistency found in this sample were: PHQ-9  $\alpha = 0.82$ , GAD-7  $\alpha = 0.88$  and PCL-5  $\alpha = 0.94$ . Internal consistency was not examined for the AUDIT-C as the measure consists of only three items.

In addition, participants were asked to rate their health using the health perception question from the 36-item Short Form Health Survey (SF-36) (McHorney, Ware, & Raczek, 1993). A question asking about any limitations on daily activities arising from long-term health problems or disability was used as a proxy for functional impairment (derived from the SF-36). Perceived social support was measured using the Multidimensional Scale of Perceived Social Support (MSPSS) (Zimet, Dahlem, Zimet, & Farley, 1988). The 12-item MSPSS measures perceptions of support from family, friends and a significant other; a higher score indicated greater perceived social support (scores range from 12 to 36).

### 2.4. Analyses

Descriptive analyses provided an overview of the characteristics of study participants, recognition (self-report) of mental health problems, the relationship between mental health disorder category and help source, and participants' reasons for seeking formal medical support. Logistic regression analyses

compared the characteristics of help-seekers and non-help-seekers. Multinomial logistic regression explored the association between type of help-seeking (dependent variable) and sociodemographic, military and other explanatory factors, including self-reported health, functional impairment, probable mental disorders categories, alcohol misuse and social support (Fear et al., 2010; Hines et al., 2013; Jones et al., 2015). Multivariable analyses were adjusted for age, gender, rank, engagement type and serving status.

For multinomial regression analysis, a three-category hierarchical help-seeking variable was created: informal help only, including formal non-medical support (trumped informal help) and including formal medical support (trumped formal non-medical support). Participants who did not seek help were dropped from this part of the analysis. Seeking informal support alone was used as the reference group in multinomial logistic regression as the majority of participants had used this help source. Informal help-seeking included having received support from a partner, family, friends, colleagues or helplines, and accessing the Big White Wall (a digital mental health support platform with a specific military component) (Harding & Chung, 2016). Formal non-medical support comprised the chain of command, Trauma Risk Management (TRiM) practitioner (a trained peer who provides basic support and can encourage referral to a healthcare professional following trauma) (Greenberg et al., 2010), military charities and other non-medical health specialists, such as a counsellor, padre, social worker or welfare officer. Formal medical support comprised the general practitioner (GP) or medical officer (MO), hospital doctor/nurse, mental health specialist (e.g. psychiatrist, psychologist or community psychiatric nurse), National Health Service (NHS) veterans' service or any formal therapy provided by charities. Participants could endorse accessing multiple sources of help for their problem.

An additional measure representing comorbidity was constructed. This combined scoring positive for probable diagnosis on any of the three mental health measures (PHQ-9, GAD-7 and PCL-5). This variable consisted of three categories: no mental disorder, one probable mental disorder and two (or three) probable mental disorders.

Response weights were generated to account for non-response, based on variables shown to be associated with responding (age, rank and service). Response weights were calculated as the inverse probability of responding once sampled (Supplement 1). Weighted percentages and multinomial odds ratios (MORs) with 95% confidence intervals (CIs) are presented in the tables, along with unweighted cell counts. Statistical significance was defined as

$p \leq 0.05$ . All statistical analyses were performed, with survey (svy) commands applied to account for weighting, using the statistical package STATA v.14 (StataCorp, College Station, TX, USA).

### 3. Results

Compared to responders, non-responders were younger, lower rank and more likely to be in the Army. Furthermore, those newly invited to take part in the cohort study (termed the replenishment sample) were less likely to take part in the current study than existing cohort members. Mental disorder symptomatology and alcohol misuse at phase 3 of the cohort study, from which the participants were sampled, did not predict response (Supplement 1).

#### 3.1. Sample characteristics, symptoms of probable mental disorders and alcohol misuse

In total, 1450 interviews were completed (response rate 84.6%). Altogether, 54.2% of the participants were older than 40 years, 85.0% were male, 65.9% were either current or former members of the Army and 54.9% were still serving. At the time of the interview, 42.9% reported a resolved stress, emotional, alcohol or mental health problem, compared to 57.1% who perceived that they were experiencing a current problem. Overall, 18.2% met probable diagnostic criteria for anxiety disorder and 8.7% for PTSD, and 7.8% were classified as having a depressive disorder. Criteria for potentially harmful alcohol use were met by 18.6%, and 9.1% were categorized as having two or more probable mental disorders (Table 1).

#### 3.2. Recognition of mental health problems and alcohol misuse

The majority of those who reported symptoms of anxiety, depression or PTSD were aware that they had a current problem (range 88.1–96.0%) (Table 2); however, this was the case for only 67.0% of those who were misusing alcohol. Of the 819 participants who reported a current problem, 188 (23.0%) did not meet the criteria for a probable mental disorder or alcohol

**Table 1.** Characteristics of participants who completed the interview study ( $n = 1448$ ).

	<i>n</i> (%) completed
Overall study sample ( $N = 1448$ )	
Age (years)	
< 30	174 (13.5)
30–39	470 (32.3)
≥ 40	804 (54.2)
Gender	
Female	219 (15.1)
Male	1229 (85.0)
Service	
Royal Navy or Royal Marines	197 (13.1)
Army	937 (65.9)
Royal Air Force	314 (21.0)
Rank	
Officer	380 (25.1)
Non-commissioned officer	879 (60.9)
Junior rank (private soldier or equivalent)	189 (14.0)
Engagement type	
Regular	1180 (81.3)
Reservist	268 (18.7)
Serving status	
Serving	791 (54.9)
Ex-serving	657 (45.1)
Completed operational deployment (Iraq/Afghanistan)	
No	382 (26.6)
Yes	1064 (73.4)
Self-reported stress, emotional, alcohol or mental health problem	
Current	819 (57.1)
Past	613 (42.9)
Overall health rating	
Excellent/very good	676 (46.6)
Good	529 (36.7)
Fair/poor	243 (16.7)
Functional impairment	
No	926 (63.9)
Yes	522 (36.1)
Symptoms of anxiety (GAD-7 score ≥ 10 = case)	
Case	260 (18.2)
Symptoms of depression (PHQ-9 score ≥ 15 = case)	
Case	110 (7.8)
Probable PTSD (PCL-5 score ≥ 38 = case)	
Case	124 (8.7)
Alcohol misuse (AUDIT-C score ≥ 10 = case)	
Case	267 (18.6)
Any mental health problem <sup>a</sup>	
0	1151 (79.3)
1	167 (11.6)
≥ 2	129 (9.1)

AUDIT-C, Alcohol Use Disorders Identification Test; GAD-7, Generalized Anxiety Disorder 7-item; PCL-5, PTSD Checklist for DSM-5; PHQ-9, 9-item Patient Health Questionnaire; PTSD, post-traumatic stress disorder. Percentages are weighted. <sup>a</sup>Any mental health problem is defined based on participants reporting symptoms of probable PTSD (PCL-5), depression (PHQ-9) or anxiety (GAD-7). Missing:  $n = 2$  for deployment status;  $n = 16$  for self-reported stress, emotional, alcohol or mental health problem;  $n = 1$  for symptoms of anxiety, depression and comorbidity.

misuse. Only a minority of those who reported a past problem were identified with a current mental health problem or alcohol misuse.

**Table 2.** Recognition of probable mental health disorders and alcohol misuse.

Current symptoms	Symptoms of anxiety ( $n = 260$ )	Symptoms of depression ( $n = 110$ )	Probable PTSD ( $n = 124$ )	Alcohol misuse ( $n = 266$ )
Self-reported current problem ( $n = 819$ )	229 (88.1)	105 (95.6)	119 (96.0)	178 (67.0)
Self-reported past problem ( $n = 613$ )	31 (12.0)	5 (4.4)	5 (4.0)	88 (33.0)

PTSD, post-traumatic stress disorder.

Data are shown as  $n$  (%). Percentages are weighted. Missing:  $n = 16$  for self-reported stress, emotional, alcohol or mental health problem;  $n = 1$  for symptoms of anxiety and depression.

### 3.3. Types of help-seeking

Overall, 7.2% (95% CI 5.97–8.66) of the participants had not sought any help (Table 3). In adjusted analyses, any form of help-seeking was associated with being female [adjusted multinomial odds ratio (AMOR) 3.45; 95% CI 1.33–8.95], serving or having served in the RAF (AMOR 1.97; 95% CI 1.08–3.60), reporting functional impairment (AMOR 1.69; 95% CI 1.07–2.70) and higher levels of perceived social support (AMOR 1.09; 95% CI 1.06–1.13).

Of the participants, 54.5% (95% CI 51.92–57.10) had accessed formal medical support, 46.4% (95% CI 43.82–49.00) had sought formal non-medical support and 85.9% (95% CI 83.98–87.60) had used informal support (Table 4). Compared to participants with other probable mental disorders, a greater proportion of the participants classified as alcohol misusers were less likely to seek help from formal medical or non-medical support sources.

**Table 3.** Sociodemographic and military characteristics of participants who did and did not seek help.

Type of help-seeking Characteristics	No help sought (n = 103, 7.2%)	Any form of help-seeking (n = 1328, 92.8%)	MOR (95% CI)	AMOR (95% CI)
Age (years)				
< 30	7 (7.9)	166 (14.0)	2.12 (0.95–4.70)	1.41 (0.57–3.51)
30–39	29 (28.2)	433 (32.4)	1.37 (0.87–2.16)	1.09 (0.66–1.80)
≥ 40	67 (64.0)	729 (53.6)	1	1
Gender				
Female	5 (4.9)	214 (16.0)	<b>3.68 (1.47–9.19)</b>	<b>3.45 (1.33–8.95)</b>
Male	98 (95.1)	1114 (84.0)	1	1
Service				
Royal Navy or Royal Marines	13 (11.9)	182 (13.2)	1.28 (0.70–2.36)	1.29 (0.70–2.37)
Army	77 (75.9)	850 (65.2)	1	1
Royal Air Force	13 (12.2)	296 (21.6)	<b>2.06 (1.12–3.76)</b>	<b>1.97 (1.08–3.60)</b>
Rank				
Officer	26 (24.2)	352 (25.3)	1.16 (0.73–1.86)	1.07 (0.67–1.72)
Non-commissioned officer	68 (66.8)	798 (60.3)	1	1
Junior rank (private soldier or equivalent)	9 (9.0)	178 (14.4)	1.77 (0.86–3.62)	1.71 (0.76–3.84)
Engagement				
Regular	82 (79.5)	1084 (81.5)	1	1
Reservist	21 (20.6)	244 (18.5)	0.88 (0.53–1.45)	0.85 (0.51–1.42)
Serving status				
Serving	46 (44.8)	736 (55.8)	1	1
Ex-service	57 (55.2)	592 (44.3)	<b>0.64 (0.43–0.96)</b>	0.70 (0.44–1.11)
Completed operational deployment (Iraq/Afghanistan)				
No	17 (16.5)	360 (27.3)	1	1
Yes	86 (83.5)	966 (72.7)	<b>0.52 (0.31–0.90)</b>	0.51 (0.30–0.88)
Overall health rating				
Excellent/very good	54 (52.5)	609 (45.7)	1	1
Good	34 (33.0)	492 (37.2)	1.29 (0.83–2.02)	1.36 (0.87–2.15)
Fair/poor	15 (14.6)	227 (17.0)	1.34 (0.74–2.43)	1.50 (0.82–2.74)
Functional impairment				
No	75 (72.6)	837 (63.0)	1	1
Yes	28 (27.4)	491 (37.0)	1.56 (0.99–2.44)	<b>1.69 (1.07–2.70)</b>
Any mental health problems				
0	83 (80.2)	1051 (79.0)	1	1
1	16 (15.7)	151 (11.4)	0.74 (0.42–1.30)	0.70 (0.39–1.24)
≥ 2	4 (4.1)	125 (9.6)	2.39 (0.86–6.65)	2.44 (0.86–6.95)
Social support, mean (95% CI)	29.55 (28.53–30.56)	32.47 (32.11–32.63)	<b>1.09 (1.06–1.13)</b>	<b>1.09 (1.06–1.13)</b>

AMOR, Adjusted multinomial odds ratio; CI, confidence interval; MOR, multinomial odds ratio.

Percentages and means are weighted. AMOR is adjusted for age (as a continuous variable), gender, rank, serving status and engagement type. Missing:  $n = 2$  for deployment status;  $n = 16$  did not disclose a past or current stress, emotional, alcohol or mental health problem;  $n = 1$  failed to answer help-seeking section;  $n = 1$  for any mental health problems.

The confidence interval in bold indicates that the difference was significant.

**Table 4.** Levels of help-seeking by probable mental health disorder, alcohol misuse and current or past self-reported problem.

Current symptoms of a mental disorder	No help sought <sup>b</sup> n (%; 95% CI)	Informal support n (%; 95% CI)	Formal non-medical support n (%; 95% CI)	Formal medical support n (%; 95% CI)
Whole sample <sup>a</sup>	103 (7.2; 5.97–8.66)	1230 (85.9; 83.98–87.60)	664 (46.4; 43.82–49.00)	785 (54.5; 51.92–57.10)
Symptoms of anxiety	17 (6.6; 4.13–10.42)	218 (83.7; 78.58–87.72)	135 (51.9; 45.72–57.92)	182 (69.8; 63.92–75.16)
Symptoms of depression	3 (2.7; 0.85–8.13)	97 (88.0; 80.28–92.97)	66 (60.3; 50.71–69.11)	88 (79.8; 71.07–86.42)
Probable PTSD	7 (5.7; 2.72–11.63)	105 (84.6; 76.97–90.02)	70 (56.4; 47.45–65.00)	97 (78.0; 69.67–84.53)
Alcohol misuse	29 (10.9; 7.64–15.26)	215 (80.8; 75.57–85.13)	98 (36.8; 31.21–42.86)	140 (52.5; 46.47–58.52)
Self-reported current problem	65 (8.0; 6.33–10.11)	690 (84.1; 81.45–86.49)	399 (48.8; 45.39–52.26)	519 (63.1; 59.75–66.39)
Self-reported past problem	38 (6.1; 4.47–8.29)	540 (88.2; 85.42–90.54)	265 (43.2; 39.29–47.16)	266 (43.1; 39.17–47.02)

CI, confidence interval; PTSD, post-traumatic stress disorder.

Percentages are weighted. <sup>a</sup>Includes those who did not meet the criteria for alcohol misuse or a probable mental disorder. <sup>b</sup>Numbers do not add up to 100% as participants can be included in more than one help-seeking category. Missing:  $n = 16$  did not disclose a past or current stress, emotional, alcohol or mental health problem;  $n = 1$  failed to answer help-seeking section.



Family (72.5%) and friends/colleagues (60.1%) were the most frequently accessed sources of informal support. The main source of formal non-medical support was from a non-medical professional such as a counsellor or social worker (27.2%). Of those who had accessed formal medical support, 49.5% had accessed the GP/MO and 32.7% had sought help from a mental health specialist (Supplement 2). Significant differences were found between serving and ex-serving members, with the latter being less likely to speak to friends/colleagues (64.7% vs 54.5%;  $p < 0.001$ ) and other non-medical professionals (29.8% vs 24.1%;  $p = 0.02$ ). TRiM practitioners (1.3% vs 3.2%;  $p = 0.02$ ) and chain of command (15.7% vs 34.7%;  $p < 0.001$ ) were used less often among ex-serving personnel compared to serving personnel. Ex-serving personnel were significantly more likely to visit the GP/MO (52.6% vs 47.0%;  $p = 0.04$ ) or a hospital doctor (6.3% vs 2.8%;  $p = 0.001$ ) than serving personnel.

### 3.4. Reasons for help-seeking

The most common reasons for seeking formal medical support were self-identifying a problem, concerns that the problem was getting worse, realizing that the problem could not be resolved alone and acting upon the advice of a healthcare professional, family member, friend or colleague, and/or that the problem had started to adversely affect work (Table 5).

### 3.5. Factors associated with types of help-seeking behaviour

Focusing on the participants who actually sought help ( $n = 1328$ ), the results suggested that seeking help from formal non-medical sources compared to informal sources of support was significantly associated with having completed an operational deployment to Iraq or Afghanistan (AMOR 1.61; 95% CI 1.02–2.55)

**Table 5.** Reasons given for accessing formal medical support.

Reason for accessing formal medical support ( $n = 785$ )	$n$ (%)
I realized that I had a problem	557 (71.0)
I was concerned that the problem was getting worse	448 (57.1)
I realized that I could not solve the problem myself	407 (51.7)
On the advice of or referral from a healthcare professional	397 (50.8)
On the advice of a family member, friend or colleague	386 (49.4)
The problem had started to affect my work	354 (45.1)
A change in life circumstances or a major life event	195 (24.7)
On the advice of my employer or chain of command	113 (14.5)
The problem was causing disciplinary problems	69 (9.0)
Due to physical symptoms or a physical health condition	56 (7.1)
Miscellaneous reasons	45 (5.6)
Advice from or referral by a non-healthcare professional	43 (5.6)
I found a service through word of mouth, advert or online	36 (4.7)
As part of the healthcare process	33 (4.2)
Due to mental health symptoms	17 (2.2)
The problem was starting to affect family and/or friends	5 (0.6)

Percentages are weighted. Participants often gave more than one reason for accessing a source of formal medical support.

(Table 6). Participants were significantly less likely to have received formal non-medical support if they had left the armed forces (AMOR 0.44; 95% CI 0.29–0.68) or if they were misusing alcohol (AMOR 0.59; 95% CI 0.36–0.98) compared to those who sought informal support.

Accessing formal medical support rather than informal support was significantly associated with being female (AMOR 2.49; 95% CI 1.66–3.74), reporting good (AMOR 1.58; 1.18–2.10) or fair/poor health (AMOR 2.32; 1.57–3.43), rather than excellent health, endorsing current functional impairment (AMOR 1.71; 95% CI 1.29–2.26) and experiencing one (AMOR 1.75; 95% CI 1.13–2.69) or more than one current mental health problem (AMOR 3.07; 95% CI 1.82–5.18). Compared to participants who received informal help, participants were less likely to seek formal medical support if they were under 30 years of age (AMOR 0.49; 95% CI 0.30–0.80) and reported lower levels of social support (AMOR 0.96; 95% CI 0.94–0.99).

## 4. Discussion

The principal findings of this study are that the majority of UK serving and ex-serving personnel with perceived mental health, stress or emotional problems sought some form of help. Informal support was most frequently accessed, followed by formal medical sources, usually a GP or an MO.

Serving and ex-serving personnel with perceived stressful, emotional or mental health problems who additionally reported current symptoms of probable anxiety, depression or PTSD had high rates of mental healthcare utilization (range 70–80%). Furthermore, those who reported higher levels of functional impairment as well as those who rated their overall health as suboptimal indicated more service use. This is consistently reported in the literature, where the severity of symptoms and level of distress experienced are the strongest predictors of help-seeking (Hines et al., 2013; Iversen et al., 2010; McKibben et al., 2013). In contrast, help-seeking was infrequent for participants who were misusing alcohol, with around 53% accessing formal medical support. It is possible that unlike mental disorder symptoms, for some, their alcohol use is not viewed as problematic or requiring support (Hines et al., 2013; Iversen et al., 2010; Jones et al., 2013).

Serving personnel accessed formal non-medical sources of support more often than ex-serving personnel. Ex-serving personnel have less opportunity to access these forms of support. For example, TRiM practitioners and chain of command are only accessible for those in service. At the time of this study, personnel may have left the military, but for some their mental health problem, and associated help-

**Table 6. Sociodemographic, health and military factors associated with help-seeking behaviour (n = 1328).**

Characteristics	Type of help-seeking		Informal support (n = 349)		Formal non-medical support (n = 194)		Formal medical support (n = 785)		AMOR (95% CI)	
	Informal support (n = 349)	Formal non-medical support (n = 194)	MOR (95% CI)	AMOR (95% CI)	MOR (95% CI)	AMOR (95% CI)	MOR (95% CI)	AMOR (95% CI)		
Age (years)										
< 30	51 (16.4)	40 (22.8)	<b>1.90 (1.16–3.11)</b>	1.64 (0.90–2.99)	1.90 (1.16–3.11)	1.64 (0.90–2.99)	75 (10.7)	<b>0.62 (0.42–0.92)</b>	<b>0.49 (0.30–0.80)</b>	
30–39	104 (29.5)	74 (37.7)	<b>1.75 (1.18–2.60)</b>	1.48 (0.97–2.24)	<b>1.75 (1.18–2.60)</b>	1.48 (0.97–2.24)	255 (32.4)	1.05 (0.79–1.39)	0.92 (0.68–1.26)	
≥ 40	194 (54.1)	80 (39.5)	1	1	1	1	455 (56.9)	1	1	
Gender										
Female	35 (9.9)	25 (12.7)	1.32 (0.76–2.29)	1.18 (0.67–2.07)	1.32 (0.76–2.29)	1.18 (0.67–2.07)	154 (19.6)	<b>2.21 (1.49–3.27)</b>	<b>2.49 (1.66–3.74)</b>	
Male	314 (90.1)	169 (87.3)	1	1	1	1	631 (80.4)	1	1	
Service										
Royal Navy or Royal Marines	41 (11.3)	29 (14.1)	1.37 (0.81–2.32)	1.38 (0.81–2.37)	1.37 (0.81–2.32)	1.38 (0.81–2.37)	112 (13.8)	1.38 (0.93–2.03)	1.36 (0.92–2.03)	
Army	243 (70.7)	122 (64.5)	1	1	1	1	485 (62.9)	1	1	
Royal Air Force	65 (18.0)	43 (21.4)	1.30 (0.83–2.03)	1.33 (0.84–2.11)	1.30 (0.83–2.03)	1.33 (0.84–2.11)	188 (23.3)	<b>1.45 (1.05–2.01)</b>	1.33 (0.95–1.87)	
Rank										
Officer	92 (25.2)	57 (27.8)	1.12 (0.75–1.67)	1.09 (0.72–1.65)	1.12 (0.75–1.67)	1.09 (0.72–1.65)	203 (24.8)	1.00 (0.69–1.47)	0.87 (0.64–1.19)	
Non-commissioned officer	210 (60.3)	114 (59.4)	1	1	1	1	474 (60.5)	1	1	
Junior rank (private soldier or equivalent)	47 (14.6)	23 (12.9)	0.90 (0.52–1.56)	0.83 (0.46–1.53)	0.90 (0.52–1.56)	0.83 (0.46–1.53)	108 (14.7)	0.98 (0.73–1.32)	1.22 (0.81–1.84)	
Engagement										
Regular	282 (80.6)	165 (85.1)	1	1	1	1	637 (81.0)	1	1	
Reservist	67 (19.4)	29 (14.9)	0.73 (0.45–1.17)	0.82 (0.50–1.34)	0.73 (0.45–1.17)	0.82 (0.50–1.34)	148 (19.1)	0.98 (0.71–1.35)	0.81 (0.58–1.14)	
Serving status										
Serving	190 (54.9)	146 (75.6)	1	1	1	1	400 (51.2)	1	1	
Ex-service	159 (45.1)	48 (24.5)	<b>0.39 (0.27–0.58)</b>	<b>0.44 (0.29–0.68)</b>	<b>0.39 (0.27–0.58)</b>	<b>0.44 (0.29–0.68)</b>	385 (48.8)	1.16 (0.90–1.50)	1.05 (0.79–1.39)	
Completed operational deployment (Iraq/Afghanistan)										
No	94 (27.0)	33 (17.3)	1	1	1	1	233 (29.9)	1	1	
Yes	255 (73.0)	160 (82.7)	<b>1.77 (1.13–2.76)</b>	<b>1.61 (1.02–2.55)</b>	<b>1.77 (1.13–2.76)</b>	<b>1.61 (1.02–2.55)</b>	551 (70.1)	0.87 (0.65–1.15)	0.98 (0.73–1.31)	
Overall health rating										
Excellent/very good	190 (54.0)	106 (54.6)	1	1	1	1	313 (39.8)	1	1	
Good	116 (33.5)	73 (38.0)	1.12 (0.77–1.64)	1.24 (0.85–1.82)	1.12 (0.77–1.64)	1.24 (0.85–1.82)	303 (38.7)	<b>1.57 (1.19–2.08)</b>	<b>1.58 (1.18–2.10)</b>	
Fair/poor	43 (12.5)	15 (7.5)	0.59 (0.31–1.12)	0.70 (0.37–1.34)	0.59 (0.31–1.12)	0.70 (0.37–1.34)	169 (21.5)	<b>2.33 (1.59–3.42)</b>	<b>2.32 (1.57–3.43)</b>	
Functional impairment										
No	248 (70.7)	135 (70.0)	1	1	1	1	454 (57.8)	1	1	
Yes	101 (29.3)	59 (30.0)	1.03 (0.70–1.52)	1.18 (0.80–1.75)	1.03 (0.70–1.52)	1.18 (0.80–1.75)	331 (42.2)	<b>1.76 (1.34–2.31)</b>	<b>1.71 (1.29–2.26)</b>	
Any mental health problems										
0	302 (86.2)	170 (88.2)	1	1	1	1	579 (73.4)	1	1	
1	29 (8.5)	18 (9.2)	1.06 (0.57–1.96)	1.09 (0.57–2.06)	1.06 (0.57–1.96)	1.09 (0.57–2.06)	104 (13.3)	<b>1.83 (1.19–2.84)</b>	<b>1.75 (1.13–2.69)</b>	
≥ 2	18 (5.3)	5 (25.7)	0.48 (0.17–1.31)	0.54 (0.19–1.49)	0.48 (0.17–1.31)	0.54 (0.19–1.49)	102 (13.3)	<b>2.96 (1.76–4.99)</b>	<b>3.07 (1.82–5.18)</b>	
Alcohol misuse (AUDIT-C score ≥ 10 = case)										
Non-case	277 (79.2)	169 (87.3)	1	1	1	1	645 (82.0)	1	1	
Case	72 (20.8)	25 (12.7)	<b>0.55 (0.34–0.91)</b>	<b>0.59 (0.36–0.98)</b>	<b>0.55 (0.34–0.91)</b>	<b>0.59 (0.36–0.98)</b>	140 (18.0)	0.84 (0.61–1.15)	0.90 (0.65–1.24)	
Social support, mean (95% CI)	32.85 (32.39–33.28)	33.01 (32.36–33.66)	1.01 (0.97–1.05)	1.00 (0.95–1.04)	1.01 (0.97–1.05)	1.00 (0.95–1.04)	31.99 (31.63–32.35)	<b>0.96 (0.94–0.99)</b>	<b>0.96 (0.94–0.99)</b>	

The confidence interval in bold indicates that the difference was significant. AMOR, adjusted multinomial odds ratio; AUDIT-C, Alcohol Use Disorders Identification Test; CI, confidence interval; GAD-7, Generalized Anxiety Disorder 7 item; PCL-5, PTSD Checklist for DSM-5; PHQ-9, 9-item Patient Health Questionnaire. Reference group: only informal support. Percentages and means are weighted. The numbers and percentages in the help-seeking categories are different from those in Table 3 as a hierarchical help-seeking variable was created for analysis purposes. Missing: n = 2 deployment status; n = 16 did not disclose a past or current stress, emotional, alcohol or mental health problem; n = 1 failed to answer help-seeking section; n = 1 for any mental health problems. AMOR is adjusted for age (as a continuous variable), gender, rank, serving status and engagement type.

seeking, occurred during their time in service. Hence, they could still have accessed these forms of support. We also found that the utilization of other non-medical professionals such as counsellors and social workers was lower in those who had left the armed forces. Comparable levels of mental health specialist support were reported, irrespective of serving status. In 2017, the NHS launched a new mental health service specifically for ex-serving personnel and serving personnel who are about to leave the service. This Transition, Intervention and Liaison service provides such personnel with evidence-based mental health interventions (NHS, 2017) (although outcome data have yet to be reported) and should further improve access to formal medical support for ex-serving personnel. The main gap in access to support appears to be formal non-medical support (wellbeing, social and welfare support) for ex-serving personnel, thereby highlighting the need for increased awareness among the veteran community of the appropriate sources of such support, especially for those who are not necessarily in need of specialist mental health support. An overview of the available services can be found at <https://www.veteransgateway.org.uk>.

Differences in help-seeking were also found by age and gender. Our results were in keeping with previous studies, in that women were significantly more likely than men to access formal medical support (51% vs 70%) (Oliver, Pearson, Coe, & Gunnell, 2005; Wang, Hunt, Nazareth, Freemantle, & Petersen, 2013). Younger personnel (< 30 years) preferred informal support over formal medical support. With research suggesting that mental disorders and alcohol misuse are more common among younger military personnel, it is important that younger serving and ex-serving personnel have access to effective healthcare and support; well-crafted messaging aiming to facilitate help-seeking may enable younger military personnel and veterans to access formal medical support if needed (Stevelink et al., 2018). However, promoting help-seeking among military personnel is not easily achieved. A randomized controlled trial showed that the provision of tailored help-seeking messaging following positive mental health assessment compared to general advice (the control condition) was not associated with help-seeking behaviour or a reduction in the prevalence of mental disorders among UK armed forces personnel (Rona et al., 2017).

Within the military, as is the case with many other organizations (Brohan et al., 2012), personnel with mental health conditions may have concerns relating to potential loss of trust with peers and commanders, and that revealing these problems may inhibit career progression (Fertout, Jones, Keeling, & Greenberg, 2015). Fears about the ability to fulfil one's military role may be especially relevant given the armed forces'

reliance on the ability of personnel to operate in arduous settings as well as the aspiration for being self-reliant (Blais & Renshaw, 2013; Gould et al., 2010; Iversen et al., 2011; Kim, Britt, Klocko, Riviere, & Adler, 2011; Vogel, Heimerdinger-Edwards, Hammer, & Hubbard, 2011). This may partly explain why personnel who had completed an operational deployment were less likely to seek any help. This is of concern as findings from a longitudinal study among UK military personnel suggested that higher levels of PTSD and alcohol misuse were found in deployed personnel compared to those not deployed (Stevelink et al., 2018). The highest levels of probable PTSD in our cohort study were reported in ex-serving regular personnel who had been deployed in a combat role (Stevelink et al., 2018). Future research should explore whether help-seeking is specifically associated with role on deployment in addition to deployment itself. In the current study, among those who sought help, deployment increased participants' propensity to seek help from formal non-medical sources of support rather than informal support. This can be partly explained by the availability of TRiM practitioners, padres and mental health nurses, both while deployed and in the firm base; these sources are less accessible or unavailable to veterans. Another explanation may relate to personnel being hesitant to access formal medical support, as they do not want any mental health problem to be on their medical records because they fear that it may harm their career (Hom et al., 2017). Once personnel leave the armed forces, one might expect help-seeking to increase as such pressures may be less salient, but still present, particularly in hierarchical organizations. However, the study results did not support this. As research indicates that serving personnel with mental health problems are more likely to leave the armed forces, and have poorer outcomes in civilian life, this is an area that should be explored in more detail (Iversen et al., 2005).

Because of methodological differences and variations in mental healthcare provision, it is difficult to compare levels of help-seeking across national and international studies; however, various estimates suggest that help-seeking for mental health conditions is increasing both in the UK and internationally. Previous estimates range from 20% to 40% for seeking formal medical support in the UK military (Hines et al., 2013; Iversen et al., 2010; Jones et al., 2015, 2013). In a study among US Army personnel, help-seeking increased from 19.8% in 2003 to 35.8% in 2011 in those with PTSD and/or depression (Quartana et al., 2014). A similar trend can be seen in the UK general population, as levels of help-seeking for common mental disorders are increasing, from less than 25% in 2000 to more than 33% in 2014 (NHS, 2009, 2016).

#### 4.1. Strengths and limitations

The strengths of this study were the large sample size and the response rate of 85%. With such a high response rate, the risk of response bias reduced. Using data from our cohort study, from which these participants are derived, we have demonstrated that mental health status was not associated with participation. In addition, the current study examined a wide range of potential sources of support, resulting in a comprehensive picture of help-seeking among serving and ex-serving UK armed forces personnel. Although the telephone interview was extensive, no clinical diagnostic interviews were used to establish the prevalence of mental health disorders; instead, well-validated instruments were used (Blevins et al. 2015; Bush et al., 1998; Kroenke et al., 2001; Spitzer et al., 2006) and these were administered by trained researchers. Furthermore, given the sometimes lengthy period between the onset of perceived mental ill-health or alcohol misuse and help-seeking for some participants, it may be that participants had difficulty recalling specific sources of support and patterns of help-seeking.

#### 4.2. Implications

Given the low levels of help-seeking among alcohol misusers, new ways of promoting engagement with evidence-based sources of help are required, as we found that only a limited number of alcohol misusers had engaged with formal sources of support. In addition, there appears to be considerable scope for developing interventions to encourage help-seeking among some groups, such as young males, who are less likely to access formal sources of support. There is evidence that influencing or training peers, or significant others, may facilitate help-seeking for mental health difficulties (Jones, Burdett, Green, & Greenberg, 2017). Further research is needed to determine why ex-serving personnel are less effective in managing mental health conditions, and whether greater awareness of this kind of service would enhance current care pathways. In addition, future research should explore the impact of the different sources of help-seeking on longer term mental health outcomes.

#### 5. Conclusions

In contrast to previous studies of help-seeking in serving and ex-serving personnel, and the public perception, this study found that the majority of those with perceived mental health problems sought some form of help, with over half using formal medical sources of support.

#### Disclosure statement

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#### Author contributions

SAMS was involved in the planning of the study, coordinated the project, participated in data collection, developed the analytical strategy for this paper, undertook the data analyses and wrote the paper. NJ contributed to the design of the study and interview questionnaire, provided military advice throughout and commented extensively on the paper. MJ contributed to the design of the study and commented on the paper. DD and CKK participated in data collection and commented on the paper. DP and SM provided technical support and commented on the paper. DM commented on the paper and contributed to the clinical implications. LH was involved in the planning of the study and commented on the paper. NG was involved in the design of the interview questionnaire and commented on the paper. DMM and LG contributed to the design of the study and interview questionnaire, and commented on the paper. MLS contributed to design of the interview questionnaire and commented on the paper. SW is one of the principal investigators of the study, was responsible for securing the funding of this study, was involved in the design and planning of the study and development of the interview questionnaire, and commented on the paper. RJR is one of the principal investigators of the study, contributed to the design and planning of the study and the development of the interview questionnaire, and commented extensively on the paper. NTF is one of the principal investigators of the study, was involved in the design and planning of the study, the development of the interview questionnaire and developing the analytical strategy for this paper, and commented extensively on the paper.

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