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Y Motreff, P Pirard, C Vuillermoz, G Rabet, M Petitclerc, L Eilin Eilin Stene, T Baubet, P Chauvin, S Vandentorren

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Y. Motreff[1,2], P. Pirard[1,3], C. Vuillermoz[2], G. Rabet[4], M. Petitclerc[5,6], L. Eilin Stene[7], T. Baubet[6,8,9], P. Chauvin[2] and S. Vandentorren[2,10]

[1]Santé publique France, Direction des maladies non transmissibles et traumatismes, F-94415 Saint-Maurice, France, [2]INSERM, Sorbonne Université, Institut Pierre Louis d'Epidémiologie et de Santé Publique (IPLESP), Department of Social Epidemiology, F75012 Paris, France, [3]MOODS, INSERM U 1018, CESP, Université Paris–Saclay, Faculté de Médecine Paris–Saclay, F–94275 Le Kremlin Bicêtre, France, [4]Santé publique France, Direction appui, traitements et analyses des données, F-94415 Saint-Maurice, France, [5]Service médical d'urgence—bureau de santé et de prévention, Brigade de sapeurs-pompiers de Paris, 1, place Jules-Renard, 75017 Paris, France, [6]Université Sorbonne Paris Nord, Ecole doctorale Erasme, Laboratoire UTRPP, F93430 Villetaneuse, France, [7]Norwegian Centre for Violence and Traumatic Stress Studies (NKVTS), NO-0409 Oslo, Norway, [8]APHP Hôpital Avicenne, Psychopathology Department for Children, Adolescents, General Psychiatry and Specialized Addiction, F93009 Bobigny, France, [9]Centre National de Ressources et de Résilience Lille-Paris (CN2R), F-59000 Lille, France, [10]Santé publique France, Direction des régions, F-94415 Saint-Maurice, France.

Correspondence to: Y. Motreff, Sante publique France, 12 rue du val d'Osne, 94415 Saint-Maurice, France. Tel: +33 (0)1 41 79 69 60; e-mail: yvon.motreff@santepubliquefrance.fr

Background	First responders (FRs) are frequently exposed to potentially traumatic events, including terror attacks, and may consequently be at risk of developing mental health disorders. Prior research suggests that FRs with mental health disorders often do not receive appropriate treatment. More knowledge is needed about their use of mental health care (MHC).
Aims	This study aimed to identify factors associated with receiving immediate support, post-immediate support and engagement in MHC among FRs of the November 2015 terror attacks in Paris.
Methods	A web-based study was conducted 8–12 months after the attacks on 663 FRs who were mobilized during the night and/or the aftermath of the attacks. Logistic regression was performed to analyse factors associated with MHC.
Results	Overall, 44 FRs sought MHC. Among FRs with post-traumatic stress disorder (PTSD), partial PTSD or depression (n = 60), 38% sought MHC (n = 23). Post-immediate support was associated with immediate support, and both were associated with knowing someone who could help regarding the potential psychological risks following a traumatic event. MHC engagement was associated with a history of MHC, post-immediate support and the presence of PTSD, partial PTSD or depression.
Conclusions	Among FRs with PTSD, partial PTSD or depression, few sought MHC. Improved access to MHC for FRs after terror attacks is essential. Knowing someone who could help regarding potential psychological risks may facilitate immediate and/or post-immediate support. Furthermore, post-immediate support could encourage engagement in MHC. Efforts should be made before and after potentially traumatic events to ensure mental health education for FR.

Key words	Depression; emergency responders; mental health services; post-traumatic; stress disorders, terrorism.

Introduction

On 13 November 2015, several coordinated terror attacks occurred in Paris and in the neighbouring town of Saint-Denis: three bombings in Saint-Denis, three shootings, one bombing and a large-scale shooting and hostage incident at the Bataclan Theatre in Paris. One hundred and thirty people were killed and 643 were injured. In the aftermath, 2148 medico-psychological consultations were performed. Thousands of first responders (FRs) were mobilized that night and in the following weeks [1].

Key learning points

What is already known about this subject:

- First responders are at risk of developing post-traumatic stress disorder, partial post-traumatic stress disorder and/or depression after exposure to potentially traumatic events such as terror attacks and must receive adequate mental health care.
- The scarce literature on first responders' use of mental health care suggests that relatively few first responders receive appropriate mental health care.
- More research is needed to better understand factors associated with seeking mental health care among first responders after terror attacks, especially in Europe.

What this study adds:

- Our study highlights the necessity of improving access to mental health care for first responders after terror attacks because a large proportion of first responders who needed mental health care did not receive any mental health care.
- Our study underlined a virtuous sequence, whereby mental health care was associated with post-immediate support and post-immediate support with immediate support. Both immediate and post-immediate support may be facilitated by knowing someone who could help regarding the potential psychological risks following a traumatic event.
- Practical reasons or bad timing was the most frequently reported reason not to seek mental health care among first responders with post-traumatic stress disorder, partial post-traumatic stress disorder or depression.

What impact this may have on practice or policy:

- Our study underlines the importance of helping exposed first responders become aware of and recognize potential mental health symptoms after potential traumatic events, and of empowering them to openly disclose such symptoms with colleagues and/or professionals, as core components of their professional norms and skills.
- Our study underlines the importance of working on the organizational culture in order to remove taboos and barriers to seeking mental health care among first responders.
- Interventions should be implemented to mitigate the stigma and barriers to seeking mental health care by, e.g. assessing mental health disorder routinely in the form of annual monitoring exams or with systematic monitoring, short after exposure to potentially traumatic events, of all first responders who intervened.

FRs are highly exposed to life-threatening and potentially traumatic events. Consequently, they run the risk of developing mental health problems including post-traumatic stress disorder (PTSD) [2] and depression [3]. The estimated worldwide pooled PTSD prevalence in FRs was 10% [2], while the estimated 12-month PTSD prevalence in the general population in Europe was 1% [4]. PTSD prevalence in studies on FR following man-made mass violence ranges from 1 to 22% [5]. Pre-trauma factors (previous life stressors, education [6], mental health history [7], training [8]), peritraumatic factors [9] and post-traumatic factors (social isolation [6]) have been associated with PTSD in FRs after terror attacks. The prevalence of PTSD among FRs of the Paris attacks in November 2015 was 4.8% and PTSD was associated with exposure, low education, social isolation and lack of training [1].

FRs who develop mental disorders must be provided mental health care (MHC) to reduce their psychological burden. International and French guidelines recommend psychological interventions such as eye movement desensitization and reprocessing and cognitive-behavioural therapy for PTSD [10]. For depression, stepped-care approaches are recommended [11]. Providing treatment to FR with partial PTSD is increasingly recommended because partial PTSD can become chronic and is associated with other psychiatric disorders, functional difficulties and a need for MHC [6].

The scarce literature on FRs' use of MHC suggests that few FRs receive appropriate MHC. In a survey of firefighters in South Korea, among those with current PTSD, only 16% had received MHC during the previous year [12]. Among disaster workers with mental health disorders following the 2001 World Trade Centre (WTC) attacks, 57% of those who initially expressed their willingness to be referred for psychotherapy did not subsequently access available services [13]. Furthermore, Jacobson *et al.* [14] found that 35% of rescue and recovery workers from the WTC attacks sought counselling in the subsequent 15 years.

In the above-mentioned South Korean study, firefighters' perceived barriers to accessing MHC (lack of information, lack of time, financial reasons) and potential stigma were reasons for not seeking treatment [12]. In Jacobson *et al.*'s study on the WTC attacks, predictors of seeking counselling were ethnicity, age, educational level, level of exposure, other traumatic experiences, mental health symptomology and pre-existing MHC

[14]. When appropriate, early post-trauma interventions may contribute to reduce mental health burden and encourage FRs to seek MHC [15].

Because trauma may impair both social and occupational functioning (social anxiety, difficulties in interpersonal relationship [16], performance deficits on complex cognitive tasks [17]), it is essential that FRs with MH problems receive adequate MHC. For this to happen, barriers and factors associated with seeking MHC need to be understood. We aimed to identify FRs mobilized during the November 2015 terror attacks who subsequently developed PTSD, partial PTSD and/or depression but who did not engage in MHC and to describe the reasons for this, to identify factors associated with receiving immediate and/or post-immediate support and to identify factors associated with engaging in MHC, in particular the role of immediate and post-immediate support.

Methods

ESPA 13 November is an ongoing longitudinal online survey of people exposed to the Paris terror attacks of 13 November 2015. The following FR categories are included: health professionals, Paris fire brigade members, volunteers from civil protection associations, police officers and city hall staff. Inclusion criteria were aged 16 or older, intervened the night of 13 November and/or during the following 3 weeks in contexts specifically linked to the terrorist attacks, and satisfied criterion A of the DSM-5 (*Diagnostic and Statistical Manual of Mental Disorders*, fifth edition) definition of PTSD.

FRs were solicited by a media campaign and by their institutional colleagues, hierarchy, doctors and psychologists via e-mail, meetings, posters and videos. Initial data were collected 8–12 months after the attacks using a web-based self-administered questionnaire [1]. Inclusion questionnaire and informed consent were completed by 837 FRs. Data for 663 FRs were analysed (Figure 1).

Immediate and post-immediate support for FRs were defined as having had an interview with someone in their organization to discuss the psychological impact of the events during the first 48 h and between 48 h and 1 week after the attacks, respectively. Inspired by Critical Incident Stress Management (CISM) components [18] and emergency medico-psychological unit interventions to civilians [19], the support aimed to provide information and guidance, restore group cohesion and unit performance, give a first sense of soothing and to provide an entry point to MHC. The support organized after the attacks differed between services of the different FR categories and was not systematic. The common thread was to propose immediate and/or post-immediate support, targeting FRs at higher risk of developing PTSD.

Concerning immediate and post-immediate support, participants were asked whether the interview(s) had been performed by a member of the organizational hierarchy and/or someone from the organization's health staff. They were also asked whether they had received psychological support outside their organization.

Engagement in MHC was assessed with the question 'Since the events, have you sought regular care, support or follow-up with a psychologist or psychiatrist?'

Participants who responded 'yes' specified the kind of MHC professional involved, whether a third party advised them to seek MHC and if so who, along with the kind of therapy followed and when they initiated it.

Participants who responded 'no' were asked why they did not seek MHC. Several answers were possible and were merged for the analysis:

- No need: 'you were offered MHC but you did not feel the need', 'you did not feel the need',
- Not offered: 'you were not offered MHC',
- Mental health stigma: 'you would have liked to but you were embarrassed by the fact that in your profession it's not the done thing',
- Practical reasons or bad timing: 'the proposed modalities of the MHC did not suit you', 'you were offered MHC but you didn't want to talk/ you weren't ready to talk'
- Financial reasons: 'because of the financial cost',
- Lack of information: 'you didn't know it was possible'

Participants could also choose 'other' whereby they could write down other reasons that were post-classified into the six categories listed above.

PTSD and partial PTSD at the time of the survey were measured using the PTSD Checklist for DSM-5 (PCL-5) [20]. Each PCL-5 item with a rating of 2

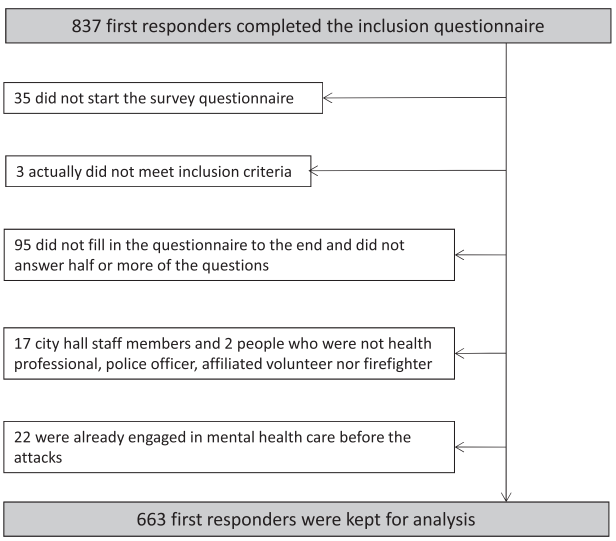

Figure 1. Flow chart (*ESPA 13 November* survey).

('moderately' or 'higher') was considered as a PTSD symptom. We then applied the DSM-5 diagnostic rule for PTSD: at least one B item (questions 1–5), one C item (questions 6–7), two D items (questions 8–14) and two E items (questions 15–20). Partial PTSD was defined as meeting two or three of criteria B–E [21]. We wanted to identify FRs with partial PTSD that could necessitate engagement in MHC. Accordingly, for partial PTSD, we took into account criteria G (functional impairment) of the PTSD for DSM-5. PTSD-related functional impairment was defined as answering 'yes' to at least one of the following 'yes/no' questions: 'Do these symptoms 1/ make your relationships with your family more difficult? 2/ make it difficult for you to get along with your friends? 3/ make it difficult for you to work well? 4/ cause you problems for your general level of functioning in your everyday life?'.

Depressive symptoms at the time of the survey were measured using the seven depression-related items in the Hospital Anxiety and Depression Scale (HADS). A score of 8 or more was considered to reflect depression [22].

Sociodemographic variables, level of exposure to the attacks, MHC history, knowing someone who could help regarding potential psychological risks following a traumatic event and the social isolation variable are described elsewhere [1].

MH disorders and immediate and post-immediate support were reported by FR category. To identify factors associated with receiving immediate support, a logistic regression model was computed. Based on the literature, we introduced gender and age, social support, educational level, FR category, level of exposure to the attacks, MHC history and the presence of PTSD, partial PTSD and/or depression as independent variables. To identify factors associated with post-immediate support, a second logistic regression model was computed, where we additionally included immediate support as an independent variable. We tested for an interaction between the presence of PTSD, partial PTSD and/or depression on the one hand, and immediate support on the other. The interaction was not significant and therefore not retained.

To identify factors associated with seeking MHC, a third logistic regression model was computed, where we added post-immediate support as an independent variable. We tested for interactions between the presence of PTSD, partial PTSD and/or depression on the one hand, and both (separately) immediate support and post-immediate support on the other. They were not significant and therefore were not retained. To keep all three models as parsimonious as possible and because age was not associated with immediate support, post-immediate support or MHC, age was not retained.

Missing values varied between 0 and 33%. Multiple imputation was performed on the dependent and independent variables listed in Table S1 (available as Supplementary data at *Occupational Medicine* Online). A fully conditional specification method was used. Data were assumed to be missing at random. Based on the highest fraction of missing information, the number of imputations was set at 50. Analyses were performed using SAS EG v7.11. Multiple imputation was performed using Proc MI and pooled analyses using Proc MIANALYZE. Complete case analyses were also performed for the logistic regression models; results were similar. Accordingly, only results with imputed data are presented for the logistic regression models.

ESPA 13 November received approval of the Commission Nationale de l'Informatique et des Libertés (CNIL) (authorization demand n°915262v2, deliberation n°2016–209, 7 July 2016) and of a French ethics committee (CPP, amendment n°7035/3/3283).

Results

Of the 663 people in our study sample, 226 were health professionals (34%), 210 firefighters (32%), 132 affiliated volunteers (20%) and 95 police officers (14%). Overall, 14% had PTSD, partial PTSD and/or depression. This proportion fluctuated from 10% among health professionals to 27% among police officers (Table 1). Men accounted for 63% of the sample (n = 418), specifically from 38% among health professionals to 90% among firefighters. Mean age was 38 years (SD = 11), from 32 (SD = 7) among firefighters to 43 (SD = 11) among health professionals. Sixty-seven per cent (n = 449) had a tertiary educational level, from 44% among firefighters to 85% among health professionals.

Overall, 39% of the study sample received immediate support, from 20% among police officers to 51% among affiliated volunteers. Post-immediate support was received by 45%, from 30% among health professionals to 60% among affiliated volunteers (Table 2).

Forty-four participants sought MHC (10%). Among those with PTSD, partial PTSD and/or depression (n = 60), 23 sought MHC (38%). Of the latter, 10 (43%) saw a psychiatrist in public or private practice, 9 (39%) a psychologist in public or private practice and 3 a psychologist working in occupational medicine at their organization. Ten FRs (43%) sought MHC on their own initiative, five did so based on the advice of a psychologist or a psychiatrist (22%), and four on the advice of their occupational medicine professional or their organization's hierarchy. Fifteen FRs (65%) did not know what kind of MHC they were receiving. Eleven (58%) sought MHC within the 2 months following the attacks. Among FRs without PTSD, partial PTSD or depression at the time of the *ESPA 13 November* survey (n = 378), 6% sought MHC (n = 21).

Among FRs with PTSD, partial PTSD or depression who did not seek MHC (n = 37), 13 (35%) declared

Table 1. PTSD, partial PTSD and comorbid depression according to FR category (*ESPA 13 November* survey, *n* = 663, 16 missing values)

	PTSD and depression		PTSD		Partial PTSD and depression		Partial PTSD		Depression		PTSD, partial PTSD or depression		None of these disorders		Total	
	n	(%)	*n*	(%)	*n*	(%)	*n*	(%)	*n*	(%)	*n*	(%)	*n*	(%)	*n*	(%)
Firefighters	1		6	(2)	3		9	(4)	5	(3)	24	(12)	180	(88)	204	(100)
Health professionals	5	(2)	5	(2)	2		6	(3)	3		21	(10)	197	(90)	218	(100)
Affiliated volunteers	1		5	(4)	1		8	(6)	4		20	(15)[a]	110	(85)	130	(100)
Police officers	6	(6)	3		9	(10)	7	(7)	1		26	(27)	69	(73)	95	(100)
Total	13	(2)	19	(3)	15	(2)	30	(5)	13	(2)	91	(14)[a]	556	(86)	647	(100)

[a]Of the affiliated volunteers, one person had depression and a missing value for PTSD or partial PTSD. Consequently, this person was counted in the column 'PTSD, partial PTSD or depression' but was not classified in the details of the disorders.

Table 2. Immediate support and post-immediate support according to FR category and MHC (*ESPA 13 November* survey), *N* = 663

	Health professionals (*n* = 226)		Firefighters (*n* = 210)		Affiliated volunteers (*n* = 132)		Police officers (*n* = 95)		Total (*N* = 663)		MHC (218 MV)[a]			
											No		Yes	
	n	(%)	*n*	(%)	*n*	(%)	*n*	(%)	*n*	(%)	*n*	(%)	*n*	(%)
Immediate support (within the first 48 h after the attacks)														
Within organization (37 MV)														
No	148	(69)	103	(51)	60	(49)	72	(80)	383	(61)	240	(88)	32	(12)
Yes											156	(94)	10	(6)
Yes, with health staff only	38	(18)	33	(16)	19	(16)	9	(10)	99	(16)				
Yes, with hierarchy only	19	(9)	45	(23)	32	(26)	6	(7)	102	(16)				
Yes, with hierarchy and health staff	8	(4)	20	(10)	11	(9)	3		42	(7)				
Outside organization (34 MV)														
No	206	(95)	185	(92)	113	(94)	86	(95)	590	(94)				
Yes	11	(5)	16	(8)	7	(6)	5	(5)	39	(6)				
Post-immediate support (48 h to 1 week after the attacks)														
Within organization (196 MV)[a]														
No	109	(70)	66	(48)	39	(40)	45	(59)	259	(55)	231	(94)	16	(6)
Yes											161	(86)	26	(14)
Yes, with health staff only	33	(21)	49	(35)	20	(21)	19	(25)	121	(26)				
Yes, with hierarchy only	10	(6)	18	(13)	29	(30)	9	(12)	66	(14)				
Yes, with hierarchy and health staff	4		5	(4)	9	(9)	3		21	(5)				
Outside organization (196 MV)[a]														
No	141	(90)	127	(91)	90	(93)	73	(97)	431	(92)				
Yes	15	(10)	12	(9)	7	(7)	2		36	(8)				

MV, Missing value.
[a]Due to a problem in the sequencing of steps in the online questionnaire on the page collecting immediate support, post-immediate support and MHC data, the proportion of missing values was higher for post-immediate support and MHC. The proportion of missing values returned to normal on the following page which collected data on social support.

they did not need it. Twelve (32%) responded that MHC had not been offered. Six (16%) respondents mentioned mental health stigma, while 17 (46%) indicated practical reasons or bad timing. Three reported financial reasons.

Receiving immediate support was associated with a lower educational level (odds ratio [OR] = 1.66; 95% confidence interval [CI] = 1.11–2.47), intervening in unsecured attack sites (OR = 2.05; 95% CI = 1.34–3.12), and knowing someone who could help regarding

potential psychological risks following a traumatic event (OR = 2.40; 95% CI = 1.51–3.81). Police officers were less likely to have had immediate support than firefighters (OR = 0.45; 95% CI = 0.24–0.85) (Table 3).

Receiving post-immediate support was associated with a lower educational level (OR = 1.82; 95% CI = 1.11–3.00), knowing someone who could help regarding potential psychological risks following a traumatic event (OR = 2.43; 95% CI = 1.42–4.16) and receiving immediate support (OR= 3.42; 95% CI = 2.20–5.32) (Table 4).

Engagement in MHC was associated with a history of MHC (OR = 3.73; 95% CI = 1.28–10.87), post-immediate support (OR = 5.07; 95% CI = 1.98–12.94) and having PTSD, partial PTSD or depression (OR = 22.81; 95% CI = 8.94–58.21). A negative association was found between seeking MHC and receiving immediate support (OR = 0.41; 95% CI = 0.18–0.96) (Table 5).

Discussion

In line with studies of persons exposed to the WTC attacks [13,14], our results underline that a large proportion of FRs with PTSD, partial PTSD or depression did not seek MHC (62%). Previous studies have highlighted underuse of health services and prevention screening among physicians [23], police officers [24] and firefighters [12]. Our study highlighted a virtuous sequence, whereby MHC was associated with post-immediate support and post-immediate support with immediate support. Post-immediate support may have helped to mitigate barriers to care by reducing stigma and improving education and awareness regarding duty-related mental health problems. As expected, because immediate support targeted FRs at greater risk of developing mental health problems, FRs exposed to unsecured attack sites were more likely to receive immediate support. The provision of immediate support differed between organizations: police officers were less likely to receive immediate support than firefighters. Knowing someone who could help regarding potential psychological risks following a potentially traumatic event was associated with both immediate and post-immediate support and therefore probably encouraged FRs to look for immediate or post-immediate support. As in other studies, we found an association between MHC history

Table 3. Factors associated with immediate support among FRs (*ESPA 13 November* survey), *N* = 663

	Immediate support	
	OR	95% CI
Gender		
Male	1.00	–
Female	1.11	0.73–1.69
FR category		
Firefighters	1.00	–
Affiliated volunteers	1.33	0.80–2.22
Police officers	0.45	0.24–0.85
Health professionals	0.88	0.51–1.52
Educational level		
Third-level education	1.00	–
High-school diploma or less	1.66	1.11–2.47
Level of exposure to the attacks		
At secured attack sites or at a distance on 13 November 2015, or during the following 3 weeks	1.00	–
At unsecured attack sites on 13 November 2015	2.05	1.34–3.12
History of mental health care		
No	1.00	–
Yes	0.65	0.31–1.34
Knowing someone who could help regarding psychosocial risks following a traumatic event		
No	1.00	–
Yes	2.40	1.51–3.81
Social isolation		
No	1.00	–
Yes	0.90	0.47–1.71
PTSD, partial PTSD or depression		
No	1.00	–
Yes	0.58	0.32–1.07

Table 4. Factors associated with post-immediate support among first responders (*ESPA 13 November* survey), $N = 663$

	Post-immediate support	
	OR	95% CI
Gender		
Male	1.00	–
Female	1.30	0.80–2.11
FR category		
Firefighters	1.00	–
Affiliated volunteers	1.56	0.84–2.90
Police officers	1.31	0.69–2.49
Health professionals	0.66	0.34–1.27
Educational level		
Third-level education	1.00	–
High-school diploma or less	1.82	1.11–3.00
Level of exposure to the attacks		
At secured attack sites or at a distance on 13 November 2015 or during the following 3 weeks	1.00	–
At unsecured attack sites on 13 November 2015	1.57	0.99–2.50
History of mental health care		
No	1.00	–
Yes	0.93	0.43–2.03
Knowing someone who could help regarding psychosocial risks following a traumatic event		
No	1.00	–
Yes	2.43	1.42–4.16
Social isolation		
No	1.00	–
Yes	1.32	0.68–2.59
Immediate support		
No	1.00	–
Yes	3.42	2.20–5.32
PTSD, partial PTSD or depression		
No	1.00	–
Yes	0.86	0.43–1.70

[14], mental health symptoms [13,14] and engagement in MHC.

Our study is the first to analyse the factors associated with FR engagement in MHC after a terror attack in France, and to describe the reasons why some FRs do not seek MHC. However, several biases should be taken in consideration when interpreting our results [1]. When assessing engagement in MHC, we did not ask how many times and how often they saw a MHC professional. Because it was not possible to get access to rosters of FRs mobilized after these terror attacks, it was not possible to estimate participation rates in our survey. The healthy worker effect cannot be ruled out because information about the study was given by hierarchy, colleagues and occupational medicine. FRs on sick leave or who quit their organization may not have been reached for participation in our study. Furthermore, because of potential recruitment and selection biases, as well as the absence of a sampling frame, our results cannot be extrapolated to the entire population of FRs who responded to these attacks. Our results should be interpreted bearing in mind that no consensus exists on the treatment of partial PTSD and general practitioner follow-up may be sufficient for mild depression. Our study has several strengths [1], specifically the involvement of stakeholders in the study design, the high number of participants compared with other studies after terror attacks in France, and the use of standardized scales and similar questionnaire items as in other studies in France [25,26]. Finally, the utilization of an online questionnaire guaranteed complete confidentiality and consequently may have reduced social desirability bias [27].

With regard to the reasons not to seek MHC, compared with Haugen's meta-analysis [28], barriers to seeking care (practical reasons or bad timing) were more frequently reported in our study (46% versus 9%) while mental health stigma was less frequently reported (16% versus 33%). The latter finding might partially be explained by the fact that the terror attacks in Paris in January 2015 may have already brought to light the issue of psychological risks, thereby reducing associated taboos and consequently perceived related stigmas. With regard to barriers to seeking MHC, several terror

Table 5. Factors associated with MHC among first responders (*ESPA 13 November* survey), $N = 663$

	Mental health care	
	OR	95% CI
Gender		
Male	1.00	–
Female	2.04	0.89–4.67
FR category		
Firefighters	1.00	–
Affiliated volunteers	0.63	0.20–2.01
Police officers	0.99	0.27–3.61
Health professionals	2.52	0.80–7.97
Educational level		
Third-level education	1.00	–
High-school diploma or less	1.68	0.75–3.75
Level of exposure to the attacks		
At secured attack sites or at a distance on 13 November 2015 or during the following 3 weeks	1.00	–
At unsecured attack sites on 13 November 2015	1.54	0.63–3.78
History of mental health care		
No	1.00	–
Yes	3.73	1.28–10.87
Knowing someone who could help regarding psychosocial risks following a traumatic event		
No	1.00	–
Yes	1.70	0.57–5.12
Social isolation		
No	1.00	–
Yes	1.28	0.49–3.32
Immediate support		
No	1.00	–
Yes	0.41	0.18–0.96
Post-immediate support		
No	1.00	–
Yes	5.07	1.98–12.94
PTSD, partial PTSD or depression		
No	1.00	–
Yes	22.81	8.94–58.21

attacks have been perpetrated in France since January 2015. Accordingly, FRs have had extremely busy work schedules since then and may not have enough time to seek MHC. Furthermore, these differences with respect to Haugen's meta-analysis may also be partly explained by the fact that our assessment of stigma and barriers to care were specific to our study.

More than one-third of FRs with PTSD, partial PTSD or depression who did not seek care in our study did not feel they needed MHC. FR culture—and indeed society—both value 'strength' in FRs [29], making it difficult for them to admit they need MHC and seek care [30]. Jones *et al*. highlighted that a knowledge deficit related to mental health was the most significant barrier to MHC among FRs. This result underlines the importance of helping exposed FRs to become aware of potential mental health symptoms after potentially traumatic interventions, of teaching them how to recognize these symptoms, and of empowering them to openly disclose these symptoms with colleagues and/or professionals, as core components of their professional norms and skills. This could be done both proactively (before potentially traumatic events occur) through mental health education [30], and reactively through providing immediate, post-immediate and longer-term support.

To mitigate the stigma and barriers to seeking MHC which we identified here, several actions can be implemented, for example making mental health disorder assessments (i) routine in the form of annual monitoring exams [28] and (ii) systematic after potentially traumatic events. Other examples include offering easily accessible self-screening tools and secondary prevention tools online and through digital applications [28], along with developing mental health education.

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Competing interests

None declared.

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