

Posttraumatic stress disorder

Nicola T Fear | Sally Bridges | Stephani Hatch |
Victoria Hawkins | Simon Wessely

Summary

- This chapter presents findings about the extent of trauma and of screening positive for posttraumatic stress disorder (PTSD) in the general population.
- Traumatic events were defined as experiences that either put a person – or someone close to them – at risk of serious harm or death, like a major natural disaster, a serious car accident, being raped, or a loved one dying by murder or suicide. About a third (31.4%) of adults in England report having experienced at least one traumatic event.
- Individuals who experience such trauma may go on to develop PTSD. PTSD is a severe and disabling condition, characterised by flashbacks, nightmares, avoidance, numbing and hypervigilance. While effective treatments exist, many with the condition delay seeking help or are not identified by health services.
- Participants completed the 17-item PTSD Checklist – Civilian (PCL-C) in the self-completion part of the interview. Those with a score of 50 or more and meeting Diagnostic Statistical Manual (DSM) criteria for PTSD were identified as screening positive for PTSD. A positive screen did not mean that a disorder was necessarily present, only that there were sufficient symptoms to warrant further investigation.
- Overall, about one participant in twenty (4.4%) screened positive for PTSD in the past month, with similar rates for men and women. Among women, the likelihood of screening positive for PTSD was particularly high among 16–24 year olds (12.6%) and then declined sharply with age. In men, the rate remained quite stable between the ages of 16 and 64, only declining in much later life.
- Screening positive for PTSD was higher in households where one person aged 60 or under lived alone, among those not in work (either unemployed or economically inactive), and among benefit recipients (especially those in receipt of an out-of-work benefit related to disability).
- Overall, 3.3% of people believed that they have had PTSD, and 1.9% had also been diagnosed by a professional. Of those screening positive for PTSD, one in eight (12.8%) had already been diagnosed by a health professional.

- About half (50.9%) of people screening positive for PTSD were in receipt of mental health treatment: 43.6% were taking medication and 24.0% were having psychological therapy. People screening positive for PTSD were far more likely than the rest of the population to have requested – but not been given – particular treatment (16.1% compared with 1.0%).
- People screening positive for PTSD were about six times more likely to have recently used health care for a mental or emotional problem, than those who did not screen positive (60.5% compared with 10.4%). However, by no means all had done so: four in ten adults who screened positive for PTSD in the past month had not spoken with a GP about a mental or emotional problem in the last year (39.8%).

4.1 Introduction

During their lifetime many people will experience traumatic events, for example, road traffic accidents, assaults or natural disasters. During and immediately after such trauma, they will commonly feel distressed, experiencing (for example) symptoms of insomnia and anxiety. These symptoms usually dissipate with time. Although this is the usual response, symptoms may sometimes persist, and some individuals go on to develop posttraumatic stress disorder (PTSD) (RCPsych 2013). This can be a severe and disabling condition, characterised by flashbacks, nightmares, avoidance, numbing and hypervigilance. PTSD is often comorbid with other mental health disorders, including depression (Rytwinski et al. 2013) and substance misuse (Debdell et al. 2014).

Effective treatments for PTSD do exist (National Institute for Health and Clinical Excellence, NICE 2005). However, due to the stigma associated with help seeking and delayed recognition of symptoms, treatment is often delayed for many years, reducing its effectiveness. NICE (2005) guidelines indicate the types of treatment suitable for those with established difficulties due to PTSD. These guidelines remind us that ‘a number of sufferers with PTSD may recover with no or limited interventions. However, without effective treatment, many people may develop chronic problems over many years.’ Recommended treatments include psychological interventions, whereas there is limited evidence for the use of medication.

PTSD was first included in the third edition of the Diagnostic and Statistical Manual for Mental Disorders (DSM) (APA 1980). However, it had been known for some time previously that trauma was associated with mental health consequences, and terms like shell shock, nervous shock and combat fatigue were in common usage. The inclusion of PTSD in DSM-III was mainly because the mental health consequences seen in US Vietnam veterans had encouraged a more thorough examination of the disorder. PTSD was defined as a stress disorder consequent on many different types of stressors occurring in both combat and civilian contexts. This traumatic event must be sufficiently severe to make individuals fear for their own – or their loved ones' – lives or safety.

Traumatic events are not randomly distributed among the general population. Certain groups or individuals are at higher risk of exposure (Breslau et al. 2008), including military personnel, emergency service workers, refugees and those living in inner city (or deprived) areas. However, not everyone exposed to trauma develops PTSD. A number of risk and protective factors have been reported, such as sex, age, ethnicity and income (Brewin et al. 2000). In addition, research has shown that subjective appraisal of threat is more important for the development and maintenance of PTSD than objective trauma severity (Elhers and Clarke 2000).

The prevalence of PTSD in the general community has been shown to vary considerably across (and within) nations (Kessler et al. 2005; Darves-Bornoz et al. 2008; Van Ameringen et al. 2008; Frissa et al. 2013; Dorrington et al. 2014). Some of this variation is likely to be due to the method of data collection (for example, face-to-face interviews versus self-reported questionnaire measures), the instrument used to measure PTSD (clinician administered tools versus screening questionnaires), and underlying cultural differences.

Epidemiological studies of PTSD typically rely on a subjective assessment by the participant as to whether a particular event was sufficiently severe to justify being a trauma and self-reported assessment of their symptoms – raising the possibility of reporting bias (Roemer et al. 1998). In the Adult Psychiatric Morbidity Survey (APMS) 2014, questions have been asked of everyone irrespective of whether or not they report trauma.

In this chapter, the prevalence of exposure to trauma and screening positive for PTSD are reported, overall and in relation to a variety of socio-demographic factors. Levels of service use and treatment for a mental health reason are also presented. Comorbidity with PTSD is examined in Chapter 13.

4.2 Definition and assessment

PTSD

Individuals responding to a traumatic event may develop PTSD. This involves having experienced, witnessed, or been confronted with an event or events involving actual or threatened death or serious injury, or a threat to the physical integrity of self or others. Moreover, their response must have involved intense fear, helplessness, or horror. Symptoms can develop within weeks but according to the 10th Revision of the International Statistical Classification of Diseases and Related Health Problems (ICD-10) (WHO 2010) onset is almost always within six months. It may take months or even years for individuals to present to services. Delayed presentation is common but there is also some evidence that PTSD may have a delayed onset (Andrews et al. 2007).

According to DSM-IV (APA 1994) the symptoms are grouped into three clusters¹:

- Re-experiencing (including recurrent distressing images, thoughts, dreams or perceptions of the event)
- Avoidance and numbing (avoiding thoughts, feelings, activities or conversations associated with the trauma; diminished interest or participation in activities, feelings of detachment or estrangement from others)
- Hyperarousal (including difficulty falling or staying asleep, irritability or outbursts of anger, difficulty concentrating, hypervigilance and an exaggerated startle response).

¹ DSM5 identifies four symptom clusters to PTSD, the PTSD Checklist draws on the original three clusters (www.dsm5.org/Documents/PTSD%20Fact%20Sheet.pdf).

For a diagnosis of PTSD, symptoms must have been evident for more than one month and must cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.

PCL-C

The PTSD Checklist (PCL) is a 17-item self-report measure reflecting DSM-IV symptoms of PTSD (Blanchard et al. 1996). The PCL has a variety of clinical and research purposes, including:

- Testing individuals for possible PTSD
- Aiding in diagnostic assessment of PTSD
- Monitoring change in PTSD symptoms.

The PCL-C (civilian) asks about symptoms in relation to generic “stressful experiences” and can be used with any population. This version simplifies assessment based on multiple traumas because symptoms are not attributed to a specific event.

The response options are: not at all (scored 1), a little bit (2), moderately (3), quite a bit (4), and extremely (5). A total symptom severity score (range = 17–85) can be obtained by summing the scores from each of the 17 items listed below. There are a number of ways of scoring the PCL. For this report, a positive screen was defined as a score of 50 or more, together with endorsement of the DSM-IV criteria, identified as positive responses to at least one B item (questions 1–5 on re-experiencing symptoms), three C items (questions 6–12 on avoidance and numbing), and two D items (questions 13–17 on hyperarousal symptoms). Where a participant missed two or more items, for example due to responding ‘don’t know’ or refusing to answer, no score was derived. This only applied in 15 cases.

The PCL-C is referred to in this chapter as a screen for reasons of convention although it is not currently recommended as part of an official screening programme in England. A positive screen for PTSD does not mean that someone necessarily has the disorder; instead it indicates that someone has sufficient symptoms to warrant a clinical assessment.

The PTSD Checklist Civilian version (PCL-C)

Below is a list of problems and complaints that individuals sometimes have in response to stressful life experiences. Please read each one carefully, and indicate how much you have been bothered by that problem in the last month:

1. Repeated, disturbing memories, thoughts, or images of a stressful experience from the past
 2. Repeated, disturbing dreams of a stressful experience from the past
 3. Suddenly acting or feeling as if a stressful experience were happening again (as if you were reliving it)
 4. Feeling very upset when something reminded you of a stressful experience from the past
 5. Having physical reactions (e.g., heart pounding, trouble breathing, or sweating) when something reminded you of a stressful experience from the past
 6. Avoid thinking about or talking about a stressful experience from the past or avoid having feelings related to it
 7. Avoid activities or situations because they remind you of a stressful experience from the past
 8. Trouble remembering important parts of a stressful experience from the past
 9. Loss of interest in things that you used to enjoy
 10. Feeling distant or cut off from other people
 11. Feeling emotionally numb or being unable to have loving feelings for those close to you
 12. Feeling as if your future will somehow be cut short
 13. Trouble falling or staying asleep
 14. Feeling irritable or having angry outbursts
 15. Having difficulty concentrating
 16. Being "super alert" or watchful on guard
 17. Feeling jumpy or easily startled
-

Exposure to trauma

Irrespective of how participants scored on the PCL-C, all were asked after completing the PCL-C whether a traumatic event or experience had happened to them at any time in their life. To clarify the nature and severity of traumatic stressor that should be included, the following was stated:

'The term traumatic event or experience means something like a major natural disaster, a serious automobile accident, being raped, seeing someone killed or seriously injured, having a loved one die by murder or suicide, or any other experience that either put you or someone close to you at risk of serious harm or death.'

Participants were not asked to specify the nature or number of events experienced.

4.3 Results

Prevalence of trauma, by age and sex

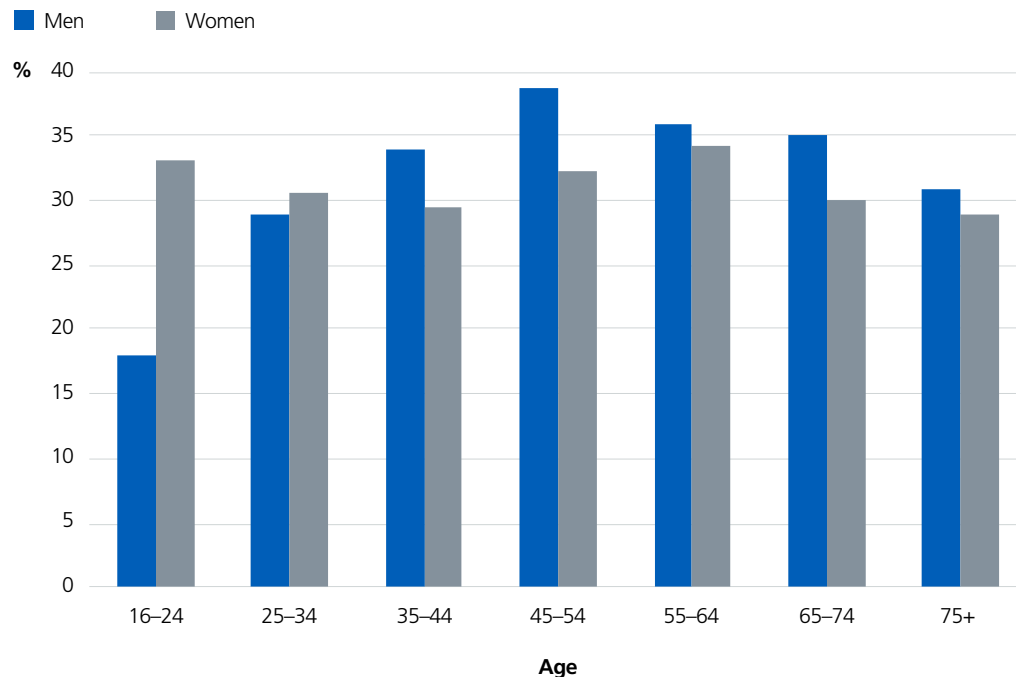
Lifetime experience of trauma

In 2014, all participants were asked whether they had experienced a traumatic event. About a third (31.4%) reported having experienced at least one major trauma in their lifetime. If all adults in the population had been asked this, it is likely (95% confidence interval) that the proportion to report having experienced a trauma would be between 30.0% and 32.7%. Rates were very similar for men and women (31.5% and 31.2% respectively). However, there was a statistically significant interaction between the effects of sex and current age on reporting of traumatic experience. While reporting of lifetime experience of trauma did not vary with age among women, reporting of lifetime traumatic experience among men peaked in midlife (45 to 54 year olds) and was lowest among 16 to 24 year olds.

Table 4.1

Figure 4A: Whether experienced trauma, by age and sex

Base: all adults



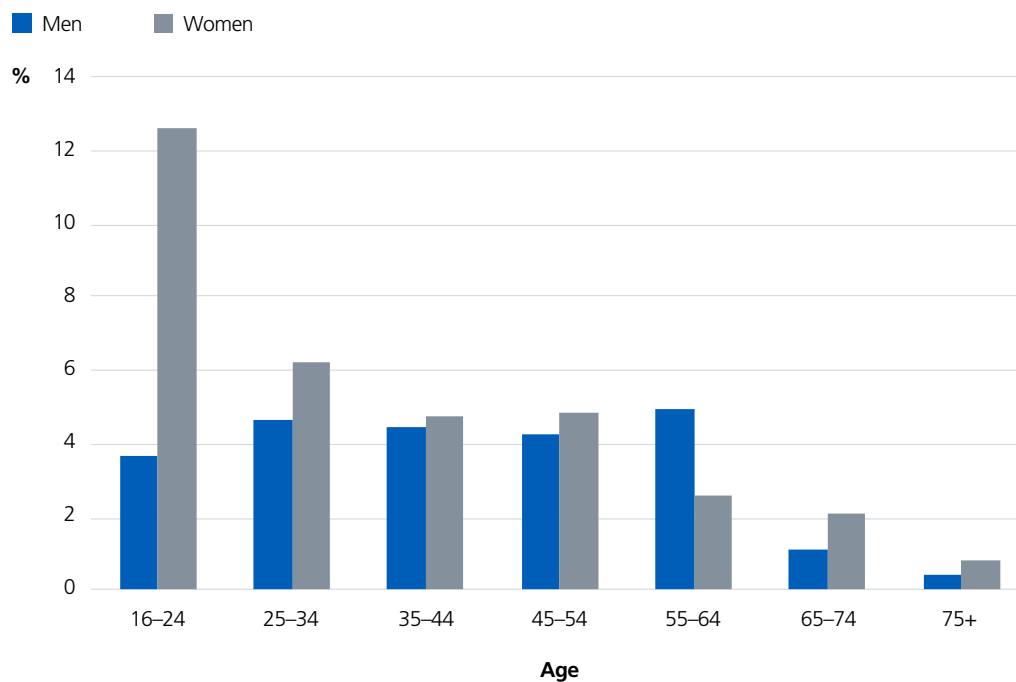
Screening positive for PTSD in past month, by age and sex

Rates of PTSD were considerably lower than the experience of traumatic events. Overall, 4.4% of adults screened positive for PTSD in the last month (95% confidence interval: 3.8% to 5.0%).

Screening positive for PTSD did not vary by sex, but did vary with age, with younger people more likely to do so than older people (8.0% of 16 to 24 year olds screened positive for PTSD in the last month compared with 0.6% of those aged 75 and over). However, the pattern of association by age was different for men and women. Among women, the likelihood of screening positive for PTSD was particularly high among 16–24 year olds (12.6%), and then declined sharply with age (to 0.8% of women aged 75 and over). In men, the rate remained quite stable between the ages of 16 and 64 (between 3.6% and 5.0%), only declining in later life (to 1.1% of those aged 65–74 and 0.4% of those aged 75 and over). [Table 4.1](#)

Figure 4B: Screen positive for PTSD, by age and sex

Base: all adults



Experience of PTSD symptoms, by age and sex

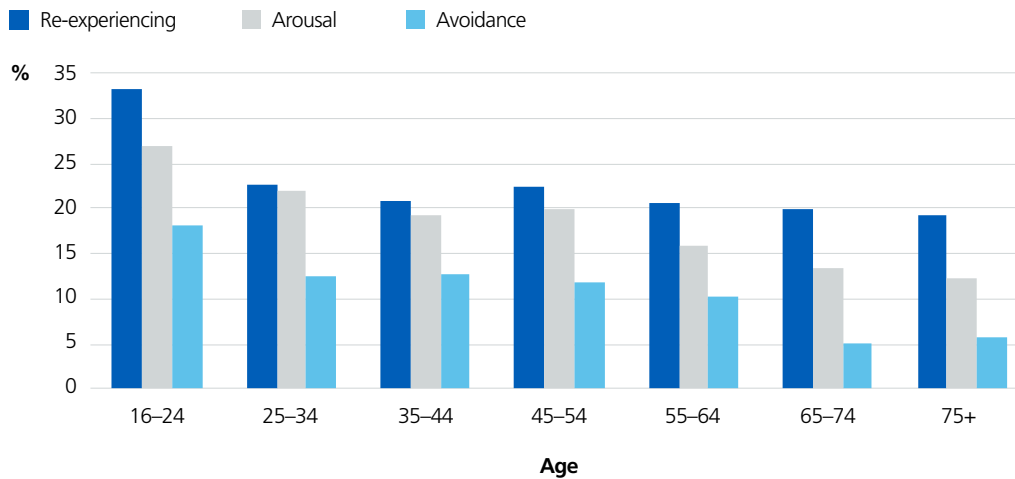
All adults were asked whether they had experienced a number of symptoms relating to PTSD in the last month. The most common symptom was re-experiencing, mentioned by around one in five adults (22.9%). A similar proportion (19.1%) had experienced arousal, while fewer mentioned avoidance (11.3%).

Women were more likely than men to report the re-experiencing symptom in the last month (25.5% of women, compared with 20.2% of men). There was no difference by sex in the presence of the arousal and avoidance symptoms.

The prevalence of individual PTSD symptoms varied significantly by age. For all symptoms, prevalence was highest in younger people and decreased with age. For example, the re-experiencing symptom was present in 33.3% of 16 to 24 year olds, and decreased with age to 19.2% of those aged 75 and over. [Table 4.1](#)

Figure 4C: Experience of PTSD symptoms, by age

Base: all adults



Variation in screening positive for PTSD by other characteristics

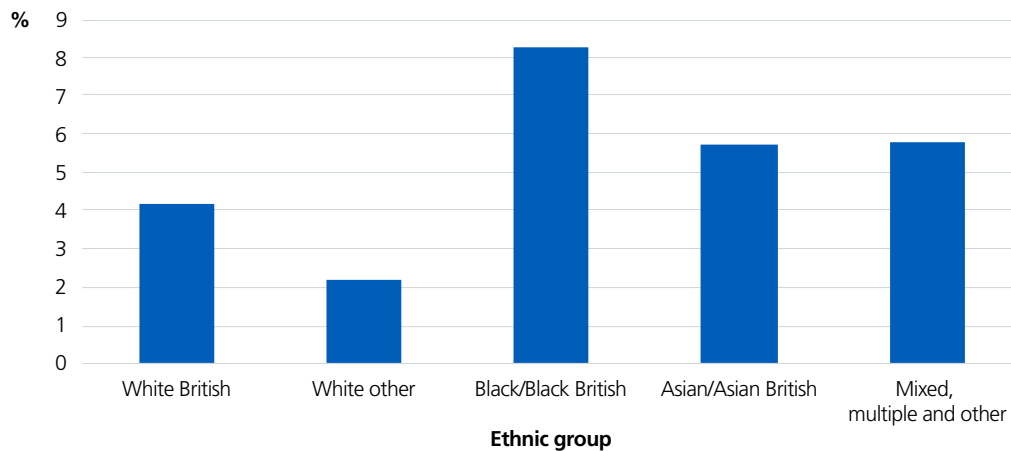
Ethnic group

The age-standardised rate of trauma in adulthood did not vary significantly by ethnic group.

Variation by ethnic group in the rate of screening positive for PTSD, however, did approach significance (95% confidence). 8.3% of Black/Black British adults screened positive for PTSD (age-standardised) compared with 4.2% of their White British counterparts. [Table 4.2](#)

Figure 4D: Screen positive for PTSD, by ethnic group (age-standardised)

Base: all adults



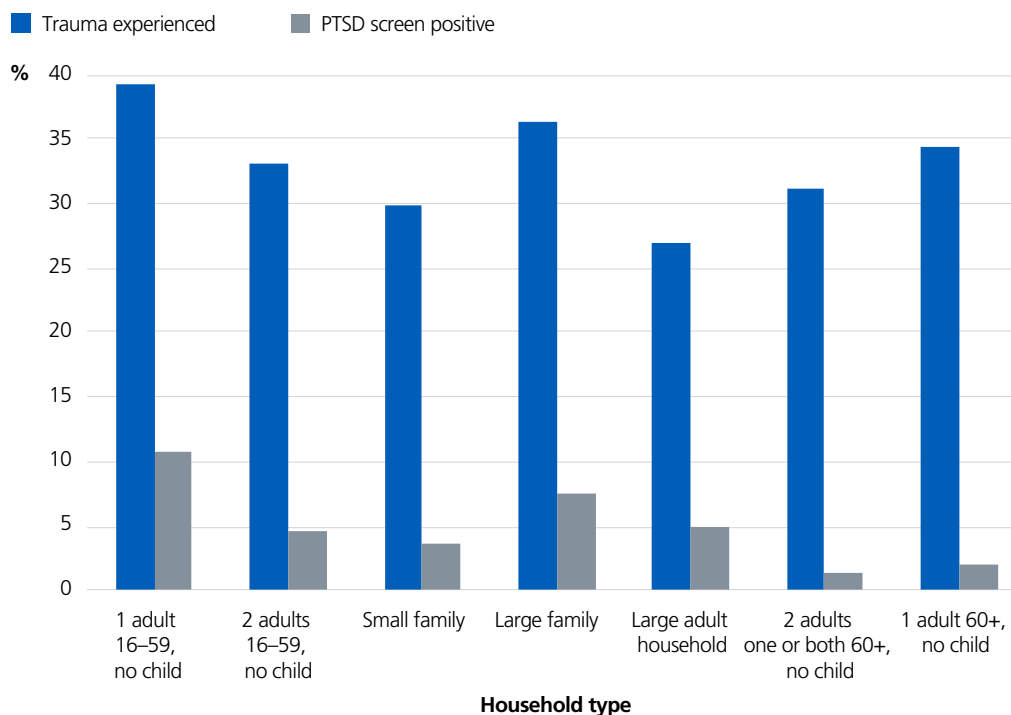
Household type

Traumatic experience was associated with living in certain types of household, being highest in households containing a lone adult under the age of 60 with no children (39.2%). The experience of trauma was lowest in people living in large adult households, where 27.0% reported a major traumatic event.

This pattern was similar to the distribution of people screening positive for PTSD, with those living in households containing a single adult under the age of 60 being the most likely to screen positive for PTSD (10.8%). Analysis by household type could not be age-standardised. For this reason, the younger age profile of those living in households of one adult under the age of 60 may account for some of this association. [Table 4.3](#)

Figure 4E: Experience of trauma and screen positive for PTSD, by household type

Base: all adults

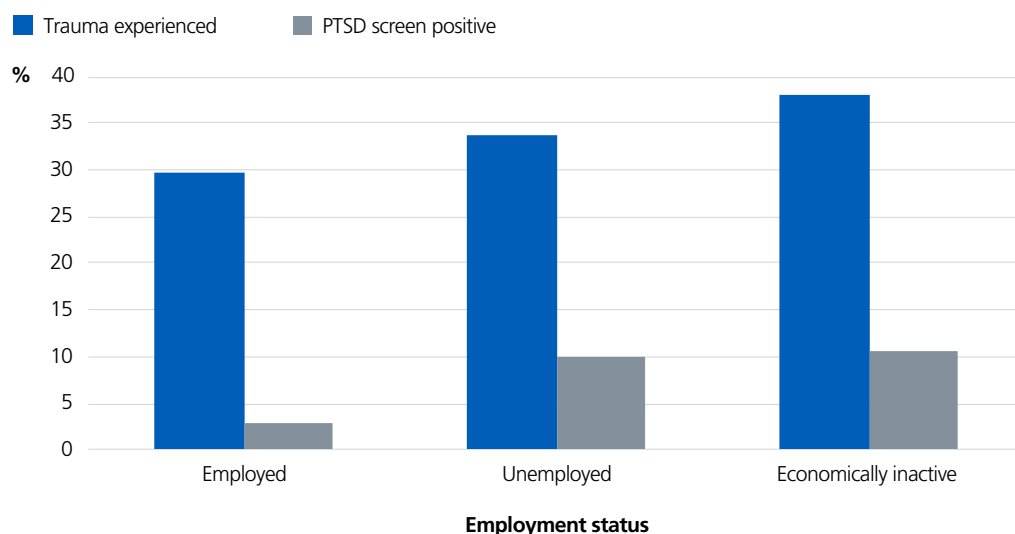


Employment status

Employment status was associated with both experience of trauma and likelihood of screening positive for PTSD. Of economically inactive people of working age, almost four in ten adults (38.2%) reported a major trauma at some point in their lives, compared to three in ten (29.7%) of those in employment. Similarly, economically inactive people were more likely to screen positive for PTSD (10.5%) than their employed counterparts (2.7%). [Table 4.4](#)

Figure 4F: Experience of trauma and screen positive for PTSD, by employment status (age-standardised)

Base: adults aged 16–64



Benefit status

Benefit status was looked at in relation to three groupings: being in receipt of any out-of-work benefit (including Jobseeker's Allowance and Employment and Support Allowance (ESA)), receiving an out-of-work benefit specifically related to disability (almost always ESA), and living in a household that received housing benefit support with rent. These categories are further described in the Glossary.

Screening positive for PTSD was higher in those who received benefits than in those who did not. The strength of association was greatest among those receiving ESA (the out-of-work benefit related to disability). One in three people in this group (25.2% of men and 45.9% of women) screened positive for PTSD, compared with

one in twenty (3.6% of men and 4.9% of women) not receiving an out-of-work disability benefit. Note that some of these bases sizes were small, so the findings should be treated with caution. [Table 4.5](#)

Region

There were no regional differences in levels of trauma exposure or screening positive for PTSD. Variation in trauma exposure, however, did approach significance (95% confidence) : with people living in the West Midlands the most likely to report trauma (34.3%), and those living in Yorkshire and the Humber least (25.6%). [Table 4.6](#)

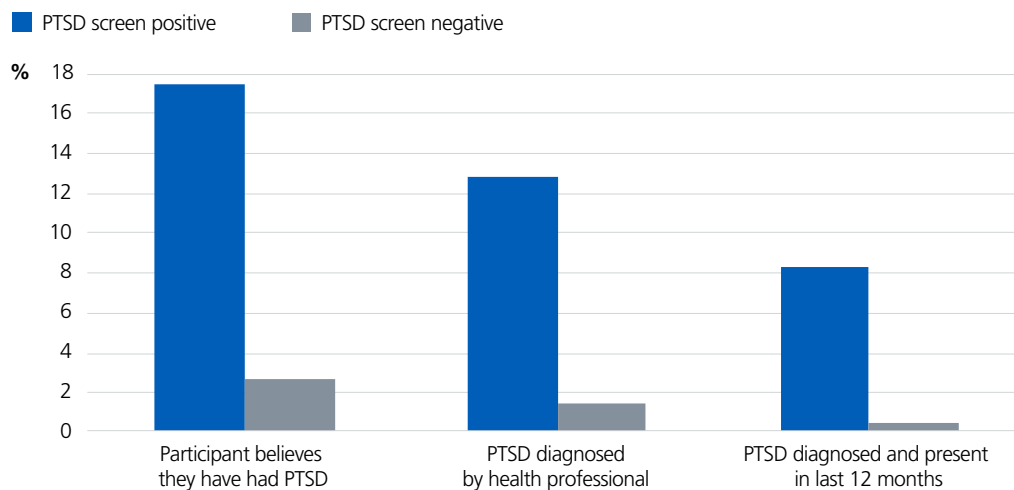
Self diagnosis and professional diagnosis

Participants were asked whether they thought they had ever had PTSD and, if so, whether this had been diagnosed by a professional and if they felt that the disorder had been present in the last 12 months.

Overall, 3.3% of adults believed that they have had PTSD at some point and 1.9% had also had this diagnosed by a professional. Of those who screened positive for PTSD on the PCL-C, about one in six (17.4%) believed that they had had PTSD, and one in eight (12.8%) had been diagnosed with PTSD by a professional. 8.2% of adults who screened positive for PTSD had a diagnosis and experienced symptoms of PTSD within the last 12 months. [Table 4.7](#)

Figure 4G: Self-diagnosed, professional diagnosis and recent symptoms of PTSD, by PTSD screen

Base: all adults

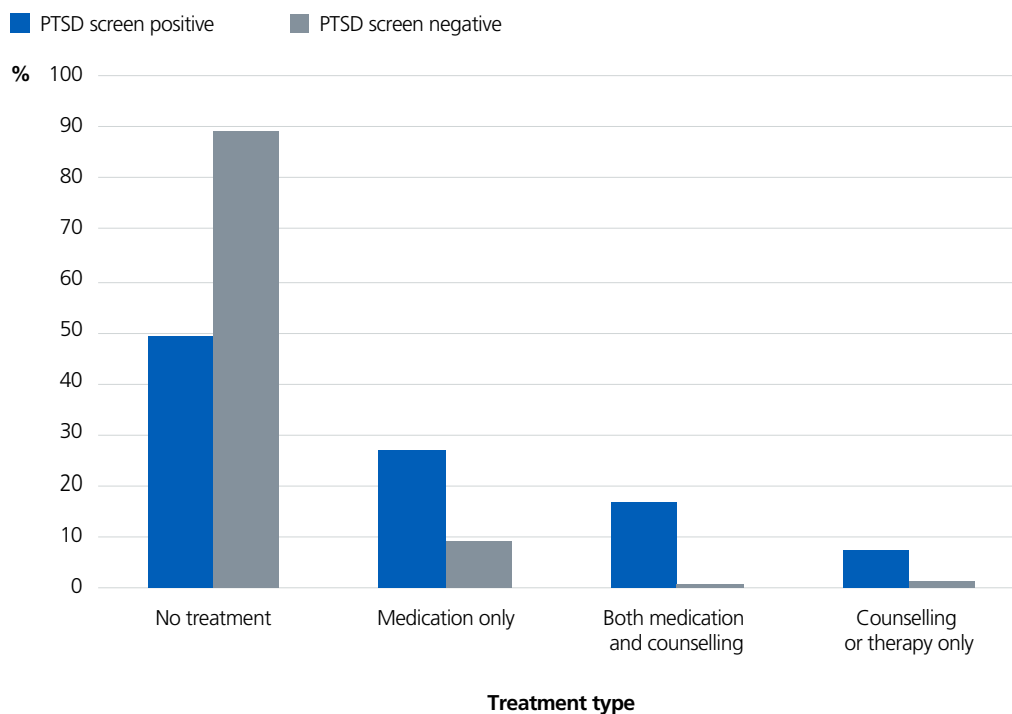


Treatment

Around half of those who screened positive for PTSD (50.9%) were currently receiving treatment for a mental or emotional problem. The most common form of treatment was psychotropic (mental health) medication, either on its own (26.9% of those who screened positive for PTSD), or in combination with psychological therapy (16.7%). Psychological therapy without medication was the least common form of treatment (7.3%). [Table 4.8](#)

Figure 4H: Screen outcome for PTSD, by treatment type

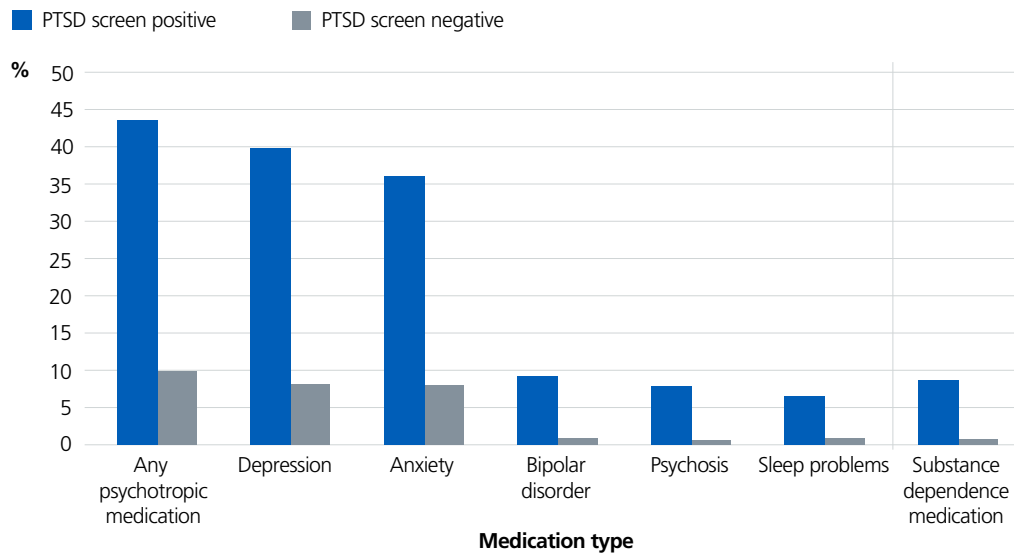
Base: all adults



Four in ten participants who screened positive for PTSD (43.6%) were currently taking psychotropic medication. The most common types were those primarily used for the treatment of depression (39.8%) or anxiety (36.0%). In addition, 8.7% were taking medication used in the treatment of substance misuse disorders. [Table 4.9](#)

Figure 4I: Screen outcome for PTSD, by medication type

Base: all adults

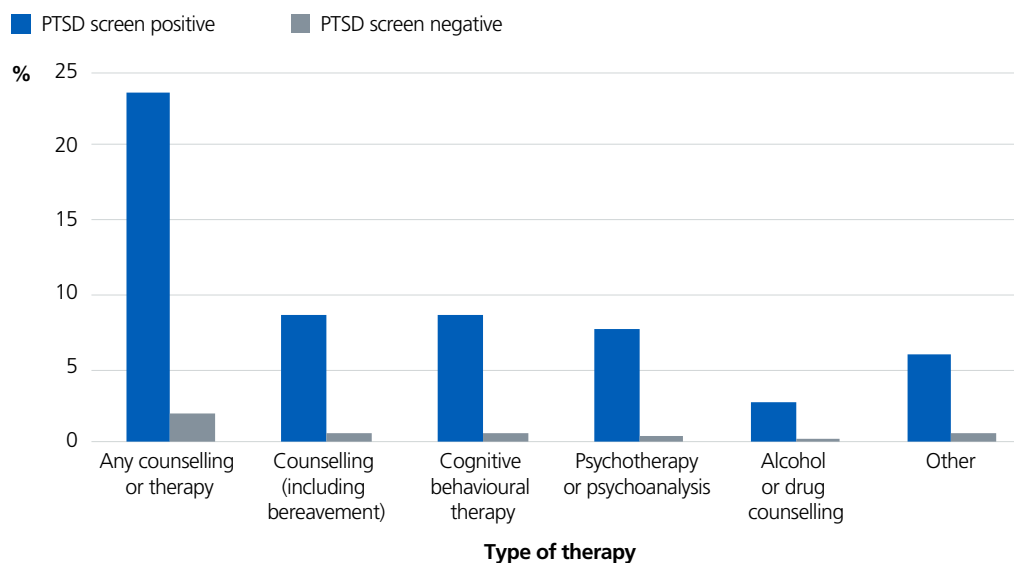


One in four of those who screened positive for PTSD (24.0%) were currently having psychological therapy such as counselling. The most common types were cognitive behavioural therapy (8.6%), counselling (8.6%) and psychotherapy or psychoanalysis (7.6%). Smaller proportions were receiving other types of therapy.

Table 4.10

Figure 4J: Screen outcome for PTSD, by type of therapy currently used

Base: all adults



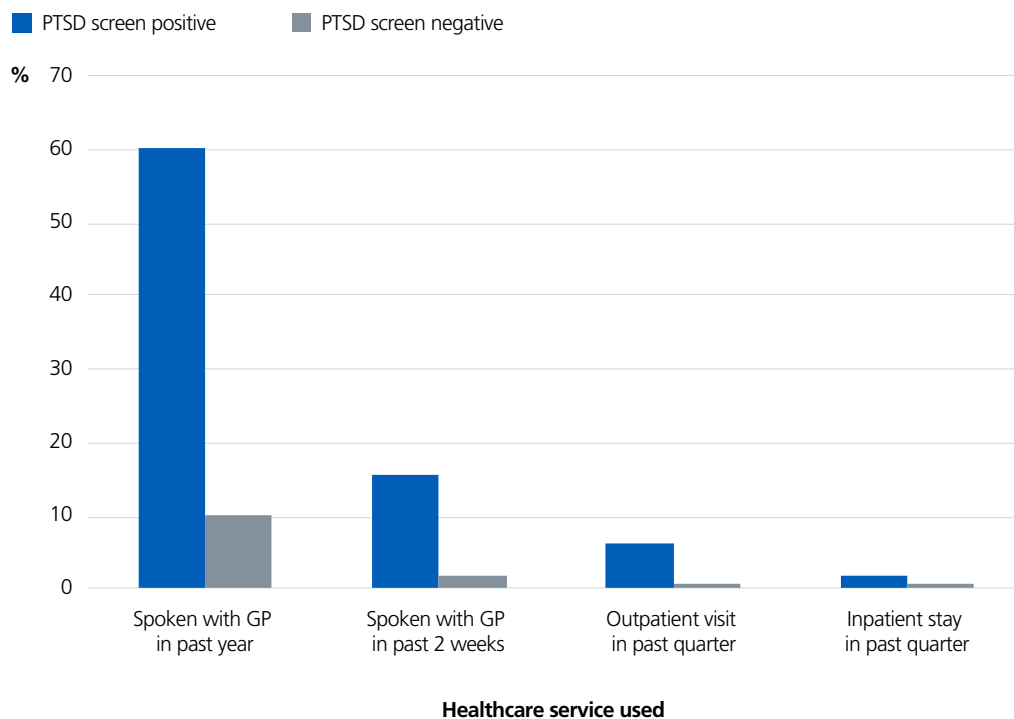
Participants were also asked if, in the past 12 months, they had asked for any kind of mental health treatment but had not received it. Those who screened positive for PTSD were about 16 times more likely than those who screened negative to have requested treatment unsuccessfully (16.1% compared with 1.0%). [Table 4.13](#)

Service use

People screening positive for PTSD were about six times more likely than those who screened negative to have used a healthcare service in the last year for a mental or emotional problem (60.5% compared with 10.4%). The most common was primary care. However, four in ten adults who screened positive for PTSD had not spoken with a GP about a mental or emotional problem in the last year (39.8%). [Table 4.11](#)

Figure 4K: Screen outcome for PTSD, by type of healthcare used for a mental or emotional problem

Base: all adults



People who screened positive for PTSD were almost five times more likely than those who screened negative to have used a community or day care service in the last year (30.0% compared with 6.4%). The most commonly used services were a psychiatrist (10.5%), community day care centre (9.7%) and a community psychiatric nurse (7.8%). [Table 4.12](#)

4.4 Discussion

Epidemiological studies on PTSD in the general population are relatively rare, as most studies have focussed on groups at high risk of exposure to trauma, notably military personnel (Fear et al. 2010), other occupational groups (Bennett et al. 2004; Carlier et al. 1997; Meyer et al. 2012) or populations exposed to natural disasters (Galea et al. 2007) and war (Weine et al. 1995). This chapter presents the prevalence of lifetime trauma and screening positive for PTSD based on a general population sample of adults living in England, both overall and broken down by age, sex, ethnicity, household structure, employment status and region. This is the first time the PCL-C has been used in this population, and the use of this measure allows direct comparisons with other population groups.

Around a third of all adults experienced a major trauma in their lifetime. Overall, there was no difference between men and women, though in the youngest age group a lifetime trauma was reported more frequently by women than by men. The rates reported here are much lower than those from a community sample of individuals living in South East London, which used a similar but not directly comparable measure (72.1%) (Frissa et al. 2016). However, less than half of those who reported a trauma in that study felt that the trauma had placed themselves or others at risk of severe harm, while this was specified in the APMS question.

Overall, 4.4% of adults screened positive for PTSD in the last month, this did not vary significantly by sex. Examination of the PTSD symptom clusters showed that the most frequently reported were re-experiencing symptoms, rather more frequently in women than in men. Screening positive for PTSD did vary by age, with the presence of symptoms highest among younger participants.

The adult prevalence of PTSD was reported for the first time in APMS 2007 (McManus et al. 2009), with 3.0% of participants screening positive for current PTSD using the Trauma Screening Questionnaire, while 42.2% reported at least one lifetime trauma. Rates of PTSD using these different measures are not comparable, although the proportion of adults reporting a lifetime trauma declined.

Although the highest rates of PTSD were observed in Black/Black British participants, the ethnic differences fell short of conventional levels of statistical significance. This corresponds with the findings in the 2007 APMS (McManus et al. 2009). The prevalence of trauma by ethnicity did not vary significantly, though the rates were highest among those of mixed and other ethnic groups, and lowest among Asian/Asian British adults.

Examination of the data by household type showed that the highest rates of trauma and PTSD occurred in adults living in households containing only one adult (aged less than 60) and no children. The social circumstances of individuals exposed to trauma may act as a protective factor. Social support has been associated with lower PTSD risk in the general population (Brewin et al. 2000), military (Iversen et al. 2008) and other occupational settings (Carlier et al. 1997). It is likely to help individuals cope with potentially traumatic experiences because close-knit social environments promote support, advice and feedback (Cohen and Willis 1985).

Employment status was associated with both exposure to trauma and PTSD. Economically inactive participants reported higher rates of trauma exposure and PTSD than those in employment. Unemployment is known to be associated with a range of mental health problems but due to the cross-sectional nature of these data it is not possible to determine causality.

NICE guidelines have been developed regarding treatment for people with PTSD (NICE 2005). Psychological interventions are the most effective treatment, while evidence to support the use of medications is limited. Data presented in this chapter show that about half of those screening positive for PTSD were not receiving any treatment. The proportion receiving treatment was substantially higher than in the 2007 APMS (28%), however, the results are not directly comparable as the previous survey used a different measure of PTSD (McManus et al. 2009). In the current study, of those screening positive for PTSD and were receiving treatment,

about half were receiving some form of counselling or therapy either on its own (the NICE recommended treatment for PTSD) or in combination with medication. The rest were generally receiving antidepressants and/or anxiolytics (medication to treat anxiety).

We did not collect or link to other sources of information on service utilisation, so we are therefore unable to ascertain the validity of the self-report methodology used. However, other work has shown this to be a relatively accurate method of obtaining service use data (Beebe et al. 2006).

There was a lack of recognition of symptoms among those screening positive for PTSD, with 3.3% reporting that they thought they have had PTSD at some point in their life and 4.4% screening positive for PTSD in the past month. This may be due to an individual's poor recognition of the disorder, the stigma associated with seeking help or lack of awareness of treatment need. However, nearly two-thirds of those who screened positive had contacted some form of health service during the last year – with the vast majority speaking to their GP. Of concern is that 16.1% of those screening positive for PTSD had requested a particular type of mental health treatment which had not been provided.

Some of the comparisons reported in this chapter are based on small numbers and thus should be interpreted with caution. In addition, due to the cross-sectional nature of these data, the direction of cause and effect is unclear.

Although a third of adults living in England reported experiencing at least one lifetime trauma, only 4.4% screened positive for PTSD. The link between exposure to trauma and the development of symptoms of PTSD is not fully understood, and so the factors associated with resilience in the general population require investigation.

4.5 Tables

Prevalence

Table 4.1 Domain, screen positive for PTSD in last month and whether experienced trauma, by age and sex

Characteristics

- Table 4.2 Screen positive for probable PTSD in past month and whether experienced trauma (observed and age-standardised), by ethnic group and sex
- Table 4.3 Screen positive for probable PTSD in past month and whether experienced trauma, by household type and sex
- Table 4.4 Screen positive for probable PTSD in past month and whether experienced trauma (age-standardised), by employment status and sex
- Table 4.5 Screen positive for probable PTSD in past month and whether experienced trauma (age-standardised), by benefit status and sex
- Table 4.6 Screen positive for probable PTSD in past month and whether experienced trauma (observed and age-standardised), by region and sex

Treatment and service use

- Table 4.7 Self diagnosed PTSD and professional diagnosis of PTSD, by screen positive for probable PTSD
- Table 4.8 Treatment currently received for a mental or emotional problem, among people with and without a positive probable PTSD screen
- Table 4.9 Types of psychotropic medication currently taken by people with and without a positive probable PTSD screen
- Table 4.10 Current counselling or therapy for a mental or emotional problem, among people with and without a positive probable PTSD screen
- Table 4.11 Health care services used for a mental or emotional problem, among people with and without a positive probable PTSD screen
- Table 4.12 Community and day care services used in past year, among people with and without a positive probable PTSD screen
- Table 4.13 Requested but not received a treatment, among people with and without a positive probable PTSD screen

4.6 References and notes

- American Psychiatric Association (1980) *Diagnostic and Statistical Manual for Mental Disorders*, 3rd Edition.
- American Psychiatric Association (1994) *Diagnostic and Statistical Manual for Mental Disorders*, 4th Edition.
- Andrews B, Brewin CR, Philpott R, Stewart L. Delayed-onset posttraumatic stress disorder: a systematic review of the evidence. *American Journal of Psychiatry*, 2007; 164: 1319–1326.
- Beebe TJ, McRae JA Jr, Barnes SA. A comparison of self-reported use of behavioral health services with Medicaid agency records in Minnesota. *Psychiatric Services*, 2006; 57: 1652–1654.
- Bennett P, Williams Y, Page N et al. Levels of mental health problems among UK emergency ambulance workers. *Emergency Medicine*, 2004; 21: 235–236.
- Blanchard EB, Jones-Alexander J, Buckley TC, Forneris CA. Psychometric properties of the PTSD checklist (PCL). *Behaviour Research and Therapy*, 1996; 34: 669–673.
- Breslau N, Peterson E, Schultz L. A second look at prior trauma and the posttraumatic stress disorder effects of subsequent trauma: A prospective epidemiological study. *Archives of General Psychiatry*, 2008; 65: 431–437.
- Brewin CR, Andrews B, Valentine JD. Meta-analysis of risk factors for posttraumatic stress disorder in trauma-exposed adults. *Journal of Consulting and Clinical Psychology*, 2000; 68: 748–766.
- Carlier IV, Lamberts RD, Gersons BP. Risk factors for posttraumatic stress symptomatology in police officers: a prospective analysis. *Journal of Nervous and Mental Disorders*, 1997; 185: 498–506.
- Cohen S, Willis TA. Stress, social support, and the buffering hypothesis. *Psychological Bulletin*, 1985; 98: 310–357.

- Darves-Bornoz J-M, Alonso J, de Girolam G et al. Main traumatic events in Europe: PTSD in the European Study of the Epidemiology of Mental Disorders Survey. *Journal of Traumatic Stress*, 2008; 21: 455–462.
- Debdell F, Fear NT, Head M et al. A systematic review of the comorbidity between PTSD and alcohol misuse. *Social Psychiatry & Psychiatric Epidemiology*, 2014; 49: 1401–1425.
- Dorrington S, Zavos H, Ball H et al. Trauma, post-traumatic stress disorder and psychiatric disorders in a middle income setting: prevalence and comorbidity. *British Journal of Psychiatry*, 2014; 205: 383–389.
- Elhers A, Clarke DM. A cognitive model of posttraumatic stress disorder. *Behaviour Research and Therapy*, 2000; 38: 319–345.
- Fear NT, Jones M, Murphy D et al. What are the consequences of deployment to Iraq and Afghanistan on the mental health of UK armed forces? A cohort study. *Lancet*, 2010; 375: 1783–1797.
- Frissa S, Hatch S, Gazard B et al. Trauma and current symptoms of PTSD in a South East London community. *Social Psychiatry & Psychiatric Epidemiology*, 2013; 48: 1199–1209.
- Frissa S, Hatch SL, Fear NT et al. Challenges in the retrospective assessment of trauma: comparing a checklist approach to a single item trauma experience screening question. *BMC Psychiatry*, 2016; 16, 20.
- Galea S, Brewin CR, Gruber M et al. Exposure to hurricane-related stressors and mental illness after Hurricane Katrina. *Archives of General Psychiatry*, 2007; 64: 1427–1434.
- Iversen AC, Fear NT, Elhers A et al. Risk factors for post-traumatic stress disorder among UK Armed Forces personnel. *Psychological Medicine*, 2008; 38: 511–522.
- Kessler RC, Chiu WT, Demler O et al. Prevalence, severity, and comorbidity of 12-month DSM-IV disorders in the National Comorbidity Survey Replication. *Archives of General Psychiatry*, 2005; 62: 617–627.

- McManus S, Meltzer H, Brugha T et al (2009) *Adult Psychiatric Morbidity in England, 2007: results of a household survey*. Health and Social Care Information Centre, Leeds. <http://digital.nhs.uk/catalogue/PUB02931/adul-psyc-morb-res-hou-sur-eng-2007-rep.pdf>
- Meyer EC, Zimering R, Daly E et al. Predictors of posttraumatic stress disorder and other psychological symptoms in trauma-exposed firefighters. *Psychological Services*, 2012; 9: 1–15.
- National Institute for Health Care Excellence. (2005) *Post-traumatic stress disorder (PTSD). The management of PTSD in adults and children in primary and secondary care. NICE clinical guideline 26*. National Institute for Health Care Excellence. www.nice.org.uk/guidance/CG26
- Roemer L, Litz BT, Orsillo SM, Ehlich PJ, Friedman MJ. Increases in retrospective accounts of war-zone exposure over time: The role of PTSD symptom severity. *Journal of Traumatic Stress*, 1998; 11: 597–605.
- Royal College of Psychiatrists. www.rcpsych.ac.uk/healthadvice/problemsdisorders/posttraumaticstressdisorder.aspx
- Rytwinski NK, Scur MD, Feeny NC, Youngstrom EA. The co-occurrence of major depressive disorder among individuals with posttraumatic stress disorder: a meta-analysis. *J Trauma Stress*, 2013; 26: 299–309.
- Van Ameringen M, Mancini C, Patterson B, Boyle MH. Post-traumatic stress disorder in Canada. *CN SNeuroscience and Therapeutics*, 2008; 14: 171–181.
- Weine S, Becker D, McGlashan T et al. Psychiatric consequences of “ethnic cleansing”: clinical assessments and trauma testimonies of newly resettled Bosnian refugees. *American Journal of Psychiatry*, 1995; 152: 536–542.
- World Health Organization (2010) *International Classification of Diseases 10th Revision*. www.who.int/classifications/icd/en/

This chapter should be cited as:

Fear NT, Bridges S, Hatch S, Hawkins V, Wessely S. (2016) 'Chapter 4: Posttraumatic stress disorder' in McManus S, Bebbington P, Jenkins R, Brugha T. (eds) *Mental health and wellbeing in England: Adult Psychiatric Morbidity Survey 2014*. Leeds: NHS Digital.

Designed by Soapbox soapbox.co.uk