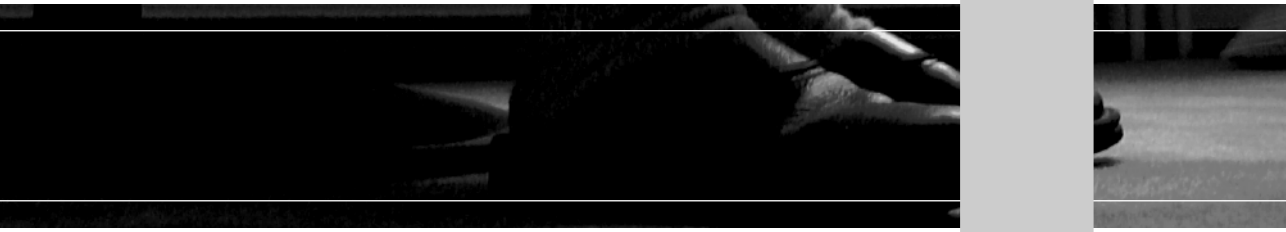
Posttraumatic stress disorder in late life

van Zelst-Kwakkel, W.H.

2007

document version
Publisher's PDF, also known as Version of record



1

General Introduction

Introduction

Serious traumatic events and symptoms of posttraumatic Stress Disorder (PTSD) occur in more than half of our population[1]. The lifetime prevalence rate of Posttraumatic Stress Disorder is estimated at 8-9%[1;2], making it an important mental health problem. Especially in old age when the remains of former traumas gained during a lifetime still exist or (re-) appear or when new traumas occur, PTSD deserves medical, social and health management attention. However, in this age group PTSD often remains undiscovered[3;4] because older people fail to associate their complaints with trauma[5;6], do not come with clear complaints [3;7] and physicians fail to ask for it. They are often preoccupied with attending to the many physical problems, which are also associated with PTSD[8-10] At the beginning of this millennium, when embarking on this thesis, information on PTSD in old age was scarce[11;12] and debate existed and still exists regarding which role age plays in the impact of trauma[5;13-16]. There were no validated screening instruments for PTSD for older people, let alone knowledge of the prevalence in this age group. Even regarding the phenomenology of PTSD in older people, little was known. For instance, how many older persons had all the criteria of the Posttraumatic Stress Disorder and how many belonged to the symptomatic ('subthreshold') group? Regarding the consequences of PTSD on individual health, health care service utilization and social functioning, there was evidence of severe impairments and costs in the younger population[17;19]. Moreover, results did not differ much between the group diagnosed with the disorder and the group showing only symptoms. The consequences for older adults were unknown. Although in adult psychiatry appreciation of comorbidity in PTSD began to grow[20-23], it attracted little or no atttention in geriatric psychiatry.

Awareness of PTSD in old age appears to have arisen after the terror attacks of 9/11, when the world viewed again the devastating effects of trauma, just as it had in the Vietnam War three decades before when the concept of PTSD was formulated.

The echo of the shock and terror that struck the world, watching the disaster on television, was even observed in the PTSD measurements of the ongoing study of the Longitudinal Aging Study Amsterdam (LASA). The investigation of the shift in these measurements became part of this thesis. Altogether, PTSD in older subjects was an unknown field in literature when starting this thesis and this study reveals many new findings never studied before. However, information on PTSD in old age is now becoming a fast growing part of the literature and the essentials of that will be covered in this thesis.

Posttraumatic Stress and Posttraumatic Stress Disorder: from shell shock to a clinical concept: a historical review

Combat reactions are known from antiquity, but only after the emergence of military psychiatry, a 100 years ago, were they subjected to research. Most of the illustrative symptom descriptions came from the horrifying battle scenes in WWI: ..."staring eyes, violent tremor, a look of terror, and blue cold extremities. Some were deaf and some were dumb, others were blind or paralysed"[24]. These descriptions remind us of the very unusual severity of the stressors which are involved in PTSD.

The names that were used for war related posttraumatic stress syndromes were known as shell shock, traumatic (war) neurosis, concentration camp syndrome. Attention gradually shifted to non combat events that could cause the syndrome such as rape-trauma syndrome and even 'railway spine' was noted as a form of posttraumatic stress. Eventually in 1980, the aftermath of the Vietnam War prompted the introduction of the modern concept of PTSD in the DSM-III. The disorder was first described in that edition as "the existence of a recognizable stressor that would evoke significant symptoms of distress in almost everyone" (A criterion) together with one symptom of intrusion, one of limited reactivity and two other symptoms (increased arousal, guilt, avoidance)[25]. In the DSM-III-R version[26] criteria were rearranged in intrusion, avoidance and increased arousal from which respectively 1, 3 and 2 criteria were needed for the diagnosis. The A-criterion had been reworded so that the stressor was required to be 'outside the range of usual human experience' and 'markedly distressing to almost anyone'. However, stricter criteria were felt necessary in the DSM-IV[27] and the A2-criteria that require the experience of intense fear, terror and helplessness were added. Regarding the nature of the stressors, many have argued that they should be broadened to include more civilian stressors[28] and medical incidents[29]. Debate still exists regarding placing PTSD in the DSM-IV as an anxiety disorder. Recent reports have revealed a heavier load on the depression domain for some symptom configuration[30].

Diagnostic criteria for Posttraumatic Stress Disorder according to DSM-IV:

A. The person has been exposed to a traumatic event in which both of the following were present:
    1. the person experienced, witnessed, or was confronted with an event or events that involved actual or threat of death or serious injury, or a threat to the physical integrity of self or others.
    2. The person's response involved intense fear, helplessness, or horror.

B. The traumatic event is persistently reexperienced in one (or more) of the following ways:

1. recurrent and intrusive distressing recollections of the event including images, thoughts, or perceptions.
2. recurrent distressing dreams of the event.
3. acting or feeling as if the traumatic event were recurring (includes a sense of reliving the experience, illusions, hallucinations, and dissociative flashback episodes, including those that occur on awakening or when intoxicated).
4. Intense psychological distress at exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event.
5. physiologic reactivity on exposure to internal or external cues that symbolize intense psychological distress.

C. Persistent avoidance of stimuli associated with the trauma and numbing of general responsiveness (not present before the trauma) as indicated by three (or more) of the following:

1. efforts to avoid thoughts, feelings. or conversations associated with the trauma.
2. efforts to avoid activities, places, or people that arouse recollections of the trauma.
3. inability to recall an important aspect of the trauma.
4. marked diminished interest or participation in significant activities.
5. feelings of detachment or estrangement from others.
6. restricted range of affect (e.g. unable to have loving feelings).
7. sense of a foreshortened future (e.g. does not expect to have a career, marriage, children or a normal life span).

D. Persistent symptoms of increased arousal (not present before the trauma) as indicated by two (or more) of the following:

1. difficulty falling asleep or staying asleep.
2. irritability or outbursts of anger.
3. difficulty concentrating.
4. hypervigilance.
5. exaggerated startle response.

E. Duration of the disturbance (symptoms in Criteria B, C and D) is more than one month.

F. The disturbance causes clinically significant distress or impairment in social, occupational, or other important areas of functioning.

Posttraumatic Stress: definition and measurement

Posttraumatic Stress Disorder refers to one of the most complex disorder definitions in the DSM. It is the only diagnosis that makes an etiologic connection to trauma. It is hardly surprising that in the literature the term Posttraumatic Stress is used to indicate a variety of entities and that it is often not clear what is meant by the term PTSD. Shifts in its definition from DSM-III to DSM-IV have added further to the confusion. In individual reports, the operationalized criteria are often less complete, frequently omitting (one of the) A2-criteria or omitting some symptoms in criteria C and D[1;31] or leaving out either the C or the D criteria altogether[32]. Usually, but not always[1], the report states that this is not the full diagnosis. Also, the list of traumatic events that is used for the diagnosis varies among researchers and produces differences in casefinding. Rigorous diagnostic criteria yield low prevalence figures and undermine the sensitivity of research. Broadening the concept of PTSD has been criticized as 'medicalisation', because so many of its critical features are non-specific and subjective[33]. Others pleaded to reserve the term only for the victims of extreme atrocities in war[34]. However, symptomatic cases that do not fulfill the strict diagnostic criteria, appear to have significant levels of impairment[8;18;19] These symptomatic cases are sometimes called subthreshold PTSD[27;35], partial PTSD[18;36] or posttraumatic stress syndrome (PTSS)[37]. Distinguishing the full from the subthreshold disorder seems therefore justified in adult psychiatry. Similar discussions about measurement of a disorder took place about depression some years ago and especially in the elderly it has proven fruitful to include in research both the strict diagnostic and the symptomatic ('minor') depression[38].
The inclusion of PTSD as well as subthreshold PTSD in the study design had several advantages. Firstly, by relating the entities to each other, the subthreshold disorder became measurable, permitting a study of its impact on functioning and comorbidity. Next, statistical power was enhanced which enabled us to research more correlations with possible risk factors.
A PTSD scoring list was applied to all subjects and allowed us to quantify subthreshold PTSD. Finally, this PTSD scoring list acted as the representative of the 'posttraumatic stress domain' in the same way as one uses the 'depressive domain' or the 'anxiety domain', although such a domain is hard to imagine in an entity as complex as PTSD.

This study used DSM-IV-criteria incorporated in the Composite International Diagnostic Interview (CIDI)-version 2.1[39] for the definition of PTSD. For the diagnosis, the list of traumatic events that is provided for by the CIDI was used. From this list the most severe event is kept in mind when answering the questions. Included are: war experience, life threatening accident, natural disaster, deadly injury, rape, (sexual) assault, attack, being taken hostage, torture, other extraordinary shocking experience.

Methods commonly used to delineate subthreshold cases include loosening the criteria when conducting a structured interview. Other methods include constructing a minimum of symptoms in a symptom scoring list or applying a cut-off on such a list. In this study, information on subthreshold PTSD was not available from the diagnostic interview because this interview skipped all further questions whenever one criterion necessary for the full diagnosis was negative. Therefore, subthreshold PTSD cases were identified by applying a cut-off on a symptom scoring list for PTSD, the Self-rating Inventory for PTSD (SRIP)[40;41]. This questionnaire follows the DSM-IV-criteria, irrespectative of traumatic events.

The Longitudinal Aging Study Amsterdam (LASA)

This study was embedded in the LASA study, which is an ongoing study of changes in autonomy and well-being in the older population[42;43]. The study was initiated by the Dutch Ministry of Health, Welfare and Sports and the Vrije Universiteit. Other grants are provided by the Prevention Fund / Health Research and Development Council (ZON), the University Stimulating Fund of the Vrije Universiteit, the National Research Program on the Chronically Ill, and the Netherlands Organization for Scientific Research (NWO). The Vrije Universiteit supports the study by supplying several research staff, housing, and facilities. In the prospective longitudinal design, data are gathered on social, cognitive, emotional and physical functioning. The main interest of the study is information on the age-related changes and interactions of these four components of functioning over time. For some LASA-projects, the data collected within the framework of Living Arrangements and Social Networks of Older Adults (LSN) served as baseline[44]. A large representative sample of older (55-85) adults in the Netherlands is followed with three year intervals. The first cycle was in 1992/93. The information for this thesis was gathered in the third (1998/99) and fourth cycle (2001) of the study.

Clinical relevance

Today it is generally acknowledged that in the increasing older population a notable percentage (will) experience symptoms of PTSD and that further specific research is needed in order to facilitate a better understanding of PTSD[5;6;11;12;45]. Because there has been a dearth in research, the fields that remain to be studied are numerable: demographics, clinical presentation, assessment, diagnosis, risk en vulnerability factors in concert with the multiple dimensions of psychosocial functioning,

management and treatment provision[5;6;11;12;45-47]. With so many questions and unresolved issues, even the modest contribution of information gathered in this study was welcome. Although the design of the study had some limitations, it offered a glimpse of what PTSD in late life may be.

Aims of this thesis

The primary aims of this thesis were to study the following research domains of posttraumatic stress in an older population-based sub-sample of the Netherlands:

1. The prevalence of PTSD and subthreshold PTSD.
2. The characterisation of PTSD and subthreshold PTSD and the associated risk factors that are involved.
3. The effect of PTSD and subthreshold PTSD on well-being, physical functioning and health care service utilization for PTSD and subthreshold PTSD.
4. The comorbidity of PTSD and subthreshold PTSD with depression and other anxiety disorders.
5. The longitudinal course of PTSD and subthreshold PTSD over three consecutive years.
6. The validation of a screening instrument for PTSD in this population.
7. To describe the impact of public events on the scores of the screening-instrument.

Specific research questions will be addressed in the subsequent chapters.

References

1. Kessler RC, Sonnega A, Bromet E, Hughes M, Nelson CB. Posttraumatic stress disorder in the National Comorbidity Survey. Arch Gen Psychiatry 1995; 52(12):1048-1060.
2. Ballenger JC, Davidson JR, Lecrubier Y, Nutt DJ, Foa EB, Kessler RC et al. Consensus statement on posttraumatic stress disorder from the International Consensus Group on Depression and Anxiety. J Clin Psychiatry 2000; 61 Suppl 5:60-66.
3. Magruder KM, Frueh BC, Knapp RG, Davis L, Hamner MB, Martin RH et al. Prevalence of posttraumatic stress disorder in Veterans Affairs primary care clinics. Gen Hosp Psychiatry 2005; 27(3):169-179.
4. Tagay S, Herpertz S, Langkafel M, Senf W. Posttraumatic stress disorder in a psychosomatic outpatient clinic. Gender effects, psychosocial functioning, sense of coherence, and service utilization. J Psychosom Res 2005; 58(5):439-446.
5. Busuttil W. Presentations and management of Post Traumatic Stress Disorder and the elderly: a need for investigation. Int J Geriatr Psychiatry 2004; 19(5):429-439.
6. Falk B, Hersen M, Van Hasselt V. Assesment of posttraumatic stress disorder in older adults: a critical review. Clin Psychol Rev 1994;(14):383-415.
7. Lyons J, McClendon O. Changes in posttraumatic stress disorder: Symptomatology as a function of aging. Nova-Psy Newsletter 1990;3-18.
8. Grubaugh AL, Magruder KM, Waldrop AE, Elhai JD, Knapp RG, Frueh BC. Subthreshold PTSD in primary care: prevalence, psychiatric disorders, healthcare use, and functional status. J Nerv Ment Dis 2005; 193(10):658-664.
9. Boscarino JA, Chang J. Electrocardiogram abnormalities among men with stress-related psychiatric disorders: implications for coronary heart disease and clinical research. Ann Behav Med 1999; 21(3):227-234.
10. Boscarino JA. Posttraumatic Stress Disorder and Mortality Among U.S. Army Veterans 30 Years After Military Service. Ann Epidemiol 2005.
11. Averill PM, Beck JG. Posttraumatic stress disorder in older adults: a conceptual review. J Anxiety Disord 2000; 14(2):133-156.
12. Ruskin PE, Talbot JA. Aging and Posttraumatic Stress Disorder. 1 ed. Washington, DC: American Psychiatric Press, 1996.
13. Knight BG, Gatz M, Heller K, Bengtson VL. Age and emotional response to the Northridge earthquake: a longitudinal analysis. Psychol Aging 2000; 15(4):627-634.
14. Kohn R, Levav I, Garcia ID, Machuca ME, Tamashiro R. Prevalence, risk factors and aging vulnerability for psychopathology following a natural disaster in a developing country. Int J Geriatr Psychiatry 2005; 20(9):835-841.
15. Yang YK, Yeh TL, Chen CC, Lee CK, Lee IH, Lee LC et al. Psychiatric morbidity and posttraumatic symptoms among earthquake victims in primary care clinics. Gen Hosp Psychiatry 2003; 25(4):253-261.

16. Fields R. Severe stress and the elderly. Are older adults at increase risk for posstraumatic stress disorder? Ruskin PE, Talbot JA, editors. Aging and Posttraumatic Stress Disorder. 79-100. 1996. Washington DC, American Psychiatric Press.
17. Hidalgo RB, Davidson JR. Posttraumatic stress disorder: epidemiology and health-related considerations. J Clin Psychiatry 2000; 61 Suppl 7:5-13.
18. Stein MB, Walker JR, Hazen AL, Forde DR. Full and partial posttraumatic stress disorder: findings from a community survey. Am J Psychiatry 1997; 154(8):1114-1119.
19. Amaya-Jackson L, Davidson JR, Hughes DC, Swartz M, Reynolds V, George LK et al. Functional impairment and utilization of services associated with posttraumatic stress in the community. J Trauma Stress 1999; 12(4):709-724.
20. Eaton WW, Kessler RC, Wittchen HU, Magee WJ. Panic and panic disorder in the United States. Am J Psychiatry 1994; 151(3):413-420.
21. Blanchard EB, Buckley TC, Hickling EJ, Taylor AE. Posttraumatic stress disorder and comorbid major depression: is the correlation an illusion? J Anxiety Disord 1998; 12(1):21-37.
22. Shalev AY, Freedman S, Peri T, Brandes D, Sahar T, Orr SP et al. Prospective study of posttraumatic stress disorder and depression following trauma. Am J Psychiatry 1998; 155(5):630-637.
23. Breslau N, Davis GC, Peterson EL, Schultz LR. A second look at comorbidity in victims of trauma: the posttraumatic stress disorder-major depression connection. Biol Psychiatry 2000; 48(9):902-909.
24. Bailey P., Williams F.E., Koroma P. Neuropsychiatry. [10]. 1929. Washington DC, U.S. Government Printing Office. The medical department of the US army in de World War.
25. APA. Diagnostic and Statistical Manual of Mental Disorders, 3rd ed. 1980. Washington, D.C, American Psychiatric Press Inc.
26. APA. Diagnostic and Statistical Manual of Mental Disorders, 3rd ed., revised. 1987. Washington, D.C., American Psychiatric Press Inc.
27. APA. Diagnostic and Statistical Manual of Mental Disorders, 4th ed. 1994. Washington, D.C, American Psychiatric Press Inc.
28. Resnick HS, Falsetti SA, Kilpatrick DG. Assessment of Rape and Other Civilian Trauma-Related Post-traumatic Stress Disorder: Emphasis on Assessment of Potentially Traumatic Events. In: Miller TW, editor. Theory and assessment of stressful life events. Madison CT: International Universities Press, Inc, 1996: 235-271.
29. Stein MB, McQuaid JR, Pedrelli P, Lenox R, McCahill ME. Posttraumatic stress disorder in the primary care medical setting. Gen Hosp Psychiatry 2000; 22(4):261-269.
30. McWilliams LA, Cox BJ, Asmundson GJ. Symptom structure of posttraumatic stress disorder in a nationally representative sample. J Anxiety Disord 2005; 19(6):626-641.
31. Schnurr PP, Spiro A, III, Aldwin CM, Stukel TA. Physical symptom trajectories following trauma exposure: longitudinal findings from the normative aging study. J Nerv Ment Dis 1998; 186(9):522-528.

32. Blanchard EB, Hickling EJ, Taylor AE, Loos W. Psychiatric morbidity associated with motor vehicle accidents. J Nerv Ment Dis 1995; 183(8):495-504.
33. Summerfield D. The invention of post-traumatic stress disorder and the social usefulness of a psychiatric category. BMJ 2001; 322(7278):95-98.
34. Havenaar JM, Bromet EJ. De psychiatrische gevolgen van rampen. Een overzicht van de epidemiologische literatuur. Tijdschrift Voor Psychiatrie 2003; 45(7):367-376.
35. Davidson JR, Hughes D, Blazer DG, George LK. Post-traumatic stress disorder in the community: an epidemiological study. Psychol Med 1991; 21(3):713-721.
36. McFarlane AC, Bookless C, Air T. Posttraumatic stress disorder in a general psychiatric inpatient population. J Trauma Stress 2001; 14(4):633-645.
37. Lai TJ, Chang CM, Connor KM, Lee LC, Davidson JR. Full and partial PTSD among earthquake survivors in rural Taiwan. J Psychiatr Res 2004; 38(3):313-322.
38. Beekman AT. Depression in Later Life: studies in the community. 1996.
39. Wittchen H-U. Reliability and validity studies of the WHO-Composite International Diagnostic Interview (CIDI) a critical review. Journal of Psychiatric Research 1994; 28(1):57-84.
40. Hovens JE, van der Ploeg HM, Bramsen I, Klaarenbeek MT, Schreuder JN, Rivero VV. The development of the Self-Rating Inventory for Posttraumatic Stress Disorder. Acta Psychiatr Scand 1994; 90(3):172-183.
41. Hovens JE, Bramsen I, van der Ploeg HM. Self-rating inventory for posttraumatic stress disorder: review of the psychometric properties of a new brief Dutch screening instrument. Percept Mot Skills 2002; 94(3 Pt 1):996-1008.
42. Deeg DJH, Westendorp-de Serière M. Autonomy and well-being in the aging population I: report from the Longitudinal Aging Study Amsterdam 1992-1993. VU University Press, 1994.
43. Deeg DJH, Beekman ATF, Kriegsman DMW, Westendorp-de Serière M. Autonomy and well-being in the aging population II report from the Longitudinal Aging Study Amsterdam 1992-1996. Amsterdam: VU University Press, 1998.
44. Knipscheer CP, Dykstra PA, van Tilburg TG, Jong-Gierveld J. [Living arrangements and social networks of elders. A selection of findings from a NESTOR-Study]. Tijdschr Gerontol Geriatr 1998; 29(3):110-119.
45. Owens GP, Baker DG, Kasckow J, Ciesla JA, Mohamed S. Review of assessment and treatment of PTSD among elderly American armed forces veterans. Int J Geriatr Psychiatry 2005; 20(12):1118-1130.
46. Blake DD, Cook JD, Keane TM. Post-traumatic stress disorder and coping in veterans who are seeking medical treatment. J Clin Psychol 1992; 48(6):695-704.
47. Cook JM, O'Donnell C. Assessment and psychological treatment of posttraumatic stress disorder in older adults. J Geriatr Psychiatry Neurol 2005; 18(2):61-71.