

Neuropsychological functions in anxiety disorders in population-based samples: evidence of episodic memory dysfunction

Eija Airaksinen ^{a,*}, Maria Larsson ^{b,c}, Yvonne Forsell ^a

^a Karolinska Institute, Department of Public Health Sciences, Division of Social Medicine, Stockholm, Sweden

^b Department of Psychology, Stockholm University, Sweden

^c Centre for Advanced Study, Oslo, Norway

Received 3 March 2004; revised 14 May 2004; accepted 9 June 2004

Abstract

Most of the available evidence on neuropsychological functioning in anxiety disorders is based on clinical samples, investigating persons affected by obsessive–compulsive disorder. Knowledge is sparse regarding cognitive functions in other types of anxiety disorders.

The aim of this study was to examine whether persons diagnosed with an anxiety disorder show neuropsychological impairments relative to healthy controls in tasks tapping episodic memory, verbal fluency, psychomotor speed, and executive functioning. Population-based samples comprising individuals affected by panic disorder with and without agoraphobia or agoraphobia ($n = 33$), social phobia ($n = 32$), generalised anxiety disorder ($n = 7$), obsessive–compulsive disorder ($n = 16$), and specific phobia ($n = 24$) were compared with healthy controls ($n = 175$) in test performance. Overall, the total anxiety disorder group exhibited significant impairments in episodic memory and executive functioning. Separate analyses on the respective anxiety subgroup indicated that panic disorder with and without agoraphobia, and obsessive–compulsive disorder were related to impairments in both episodic memory and executive functioning. In addition, social phobia was associated with episodic memory dysfunction. Verbal fluency and psychomotor speed were not affected by anxiety. Specific phobia and generalised anxiety disorder did not affect neuropsychological functioning.

© 2004 Elsevier Ltd. All rights reserved.

Keywords: Anxiety; Neuropsychological functions; Panic disorder; Social phobia; Obsessive–compulsive disorder; Episodic memory

1. Introduction

Anxiety disorders are common with the prevalence varying between 2% and 5% in population-based studies (APA, 1994). During the past decade, an increasing number of studies addressing neuropsychological functioning in anxiety disorders have been published. However, the majority of this research has focused on the less

prevalent obsessive–compulsive disorder (OCD), whereas less attention has been paid to the other *diagnostic and statistical manual of mental disorders* (DSM-IV) (APA, 1994) defined anxiety disorders, such as panic disorder (PD) and social phobia (SP).

Research focusing on cognitive functioning in OCD has demonstrated episodic memory impairments for both non-verbal (Dirson et al., 1995; Savage et al., 1996, 1999) and verbal information (Savage et al., 2000; Zitterl et al., 2001). Also, reliable performance deficits have been obtained in tasks tapping executive functioning (Martinot et al., 1990; Purcell et al., 1998a,b; Veale et al., 1996; Head et al., 1989), although some

* Corresponding author. Present address: Department of Epidemiology, Division of Social Medicine, Norrbacka, Se-171 76 Stockholm, Sweden. Tel.: +46-8-517-781-19; fax: +46-8-517-765-29.

E-mail address: eija.airaksinen@phs.ki.se (E. Airaksinen).

research has reported normal executive functioning among persons affected by OCD (Boone et al., 1991; Christensen et al., 1992; Zielinski et al., 1991).

As noted above, only a few studies have addressed neuropsychological functioning in other DSM-IV defined anxiety disorders, and available evidence presents a mixed pattern of results. Regarding episodic memory, Lucas et al. (1991) reported that persons with PD exhibit reliable performance impairments for both visual and verbal information. In a similar vein, Asmundson et al. (1995) reported that both PD and SP were associated with significant recall deficits for verbal information, although individuals with PD performed as well as controls for visually based information. In addition to these findings, some research has established significant executive dysfunction in PD (Cohen et al., 1996). In contrast to these observations, other investigators found no evidence of an episodic memory dysfunction in PD, and this was true for both verbal and visual stimuli (Gladsjo et al., 1998). Also, Purcell et al. (1998a,b) compared groups of OCD patients, PD, and major depression with healthy controls across a number of cognitive domains. The results indicated that only OCD patients exhibited impairments in executive functioning, attention, and episodic memory, whereas the PD and major depression groups performed as well as the healthy controls. It is highly likely that these inconsistent findings are a function of methodological differences between the studies regarding selection of participants, patient status, materials used in the memory tasks, and memory performance assessment (e.g. recall vs. recognition).

Evidence from neurobiological studies suggests that brain structures subserving episodic memory functioning are affected in anxiety disorders. For example, positron emission tomography studies demonstrate abnormal blood flow in medial temporal lobe including amygdala and hippocampus in symptom provoked SP patients (Tillfors et al., 2001), and an involvement of the hippocampal and parahippocampal areas in PD (Bisaga et al., 1998). In addition, magnetic resonance imaging study reported abnormalities in temporal lobe structures in PD subjects (Vythilingam et al., 2000). Further, neuroimaging studies in patients with OCD suggest a frontal-subcortical circuit involvement (Kwon et al., 2003).

The main objective of this research was to extend our knowledge on neuropsychological functioning in persons affected by an anxiety disorder in a population. In contrast to most previous research addressing this topic, the present investigation is based on population-based samples of persons meeting the DSM-IV criteria for an anxiety disorder. We compared different anxiety subgroups with non-anxious healthy controls across a number of different tasks tapping various cognitive domains including episodic memory for verbal information, verbal fluency, psychomotor speed, and executive

functioning. In this way, we were able to examine cognitive functioning in population-based samples of persons suffering from an anxiety disorder, and to determine whether cognitive performance varied as a function of anxiety subgroup.

2. Methods

The participants were selected from the PART-study, an ongoing population-based, longitudinal project on mental health, work and relations in Stockholm County. In short, an extensive questionnaire comprising questions regarding demography, life events, social support, working conditions, unemployment, health status, well-being, and screening scales for mental disorders were mailed to a random sample of 19,742 inhabitants aged 20–64 years, Swedish citizens, and registered in Stockholm County. In total, 10,441 persons responded (53%). From the pool of questionnaire respondents, random samples of persons reporting many psychiatric symptoms ($n = 884$), and persons reporting no psychiatric symptoms ($n = 209$) were interviewed using the Schedules for Clinical Assessments in Neuropsychiatry (SCAN) (Wing et al., 1990), which gives DSM-IV diagnoses. Clinically experienced psychiatrists and psychologists conducted the interviews. In connection with the SCAN interview a comprehensive neuropsychological test battery was administered including tests of episodic memory, verbal fluency, perceptual-motor speed, and mental flexibility.

Of the 1093 interviewees, 136 fulfilled the criteria of at least one anxiety disorder according to DSM-IV. Persons affected by posttraumatic stress disorder ($n = 4$), and anxiety due to somatic disease ($n = 1$) was excluded due to low numbers. Of the remaining 131 persons, 19 were excluded for harming co-morbid neurological diseases ($n = 6$), psychotic episodes ($n = 2$), intoxication ($n = 2$), bad eyesight ($n = 3$), obvious language problems ($n = 3$), not been sleeping the night before the test session ($n = 2$) and missing cognitive data ($n = 1$). Thus, the final study sample consisted of 112 individuals fulfilling the criteria for one or more DSM-IV anxiety disorders. Due to low numbers the persons were grouped together according to the clinical impressions. The first group ($n = 33$) was formed by individuals suffering from PD with and without agoraphobia ($n = 30$), or agoraphobia only ($n = 3$). Persons suffering from SP that did not fulfil the criteria for some of the disorders in the first group formed the second group ($n = 32$). The third group ($n = 7$) was comprised by persons diagnosed with generalized anxiety disorder (GAD) who met no criteria for belonging to any of the groups above. The fourth group ($n = 16$) was formed of those with OCD who do not belong to groups above. Finally, the fifth group ($n = 24$) consisted of those with specific phobia only. It

Download English Version:

<https://daneshyari.com/en/article/10302021>

Download Persian Version:

<https://daneshyari.com/article/10302021>

[Daneshyari.com](https://daneshyari.com)