Research report

Work functioning in persons with depressive and anxiety disorders: The role of specific psychopathological characteristics

I. Plaisier [a],*, A.T.F. Beekman [b], R. de Graaf [c], J.H. Smit [b], R. van Dyck [b], B.W.J.H. Penninx [b,d,e]

[a] Dept. Sociology/Faculty of Social Sciences/VU University, Amsterdam, The Netherlands
[b] Dept. Psychiatry/EMGO Institute, VU University Medical Center, Amsterdam, The Netherlands
[c] Netherlands Institute of Mental Health and Addiction, Utrecht, The Netherlands
[d] Dept. Psychiatry, Leiden University Medical Center, Leiden, The Netherlands
[e] Dept. Psychiatry, University Medical Center Groningen, Groningen, The Netherlands

ARTICLE INFO

ABSTRACT

Background: Depressive and anxiety disorders affect work functioning and cause high labour costs.
Aims: To examine and compare psychopathological characteristics of depressive and anxiety disorders in their effect on work functioning.
Method: In 1876 working participants of the Netherlands Study of Depression and Anxiety (NESDA) associations of presence, severity, comorbidity, duration and type of DSM-IV anxiety and depressive disorders with both absenteeism (<2 weeks and >2 weeks) and work performance (reduced and impaired) were assessed.
Results: People with current depressive disorders had 7.10 times greater odds for the risk of >2 weeks work-absence and 5.67 greater odds for the risk of impaired work performance, while persons with current anxiety disorders had 1.84 and 2.13 greater odds for the risk of >2 weeks absence and impaired work performance, respectively. Even when persons were recovered from depressive and anxiety disorders, they still had a higher risk of poor work functioning. Persons with comorbidity, chronic depressive disorder, a generalized anxiety disorder, and more severity of both anxiety and depressive disorder had higher odds for the risk of absenteeism and decreased work performance.
Conclusion: Anxiety disorders have significant negative impact on work functioning, although smaller than the effect of depressive disorders. Comorbidity, severity, type and duration of the disorder, differentiate the risk of poor work functioning.

© 2010 Elsevier B.V. All rights reserved.

1. Introduction

The prevalence of depressive and anxiety disorders is high. In the ESEMED study among the European population, 14% reported a lifetime history of any mood disorder and 13.6% a lifetime history of any anxiety disorder (Alonso et al., 2004). Depressive and anxiety disorders have major impact on functioning in daily life, and interfere with working and productivity (Stewart et al., 2003; Kessler and Frank, 1997; Adler et al., 2006; Lim et al., 2000; O'Neill et al., 2008; Waghorn and Chant, 2005). In a working population a prevalence of 6.1% for depressive disorders and a prevalence of 9.9% for anxiety disorders were found (Laitinen-Krispijn and Bijl, 2000). Depressive and anxiety disorders are associated with the highest productivity-loss related costs of all chronic illnesses (Druss et al., 2000; Buist-Bouwman et al., 2005; Verow and Hargreaves, 2000; Glozier, 2002). Working individuals with depressive and anxiety disorders not only have more absenteeism from work than their healthy counterparts, but they also report lower productivity

* Corresponding author.
E-mail address: I.Plaisier@fsw.vu.nl (I. Plaisier).

due to decreased work performance while working (Stewart et al., 2003; Adler et al., 2006; Kessler and Frank, 1997; Goetzel et al., 2004; Waghorn and Chant, 2006).

Work absenteeism and decreased work performance may depend on specific psychopathological characteristics, however not much is known yet about which characteristics are most important. Since not many studies have been able to compare the impact of depressive and anxiety disorders on work functioning, it is unknown whether there are really differences or mainly similarities in work function. Other aspects, such as severity of disorders (Wang et al., 2006; Waghorn and Chant, 2007), comorbidity of depressive and anxiety disorders (De Graaf et al., 2004), chronicity (Saarni et al., 2007; Waghorn et al., 2006), and types of disorders (Lim et al., 2000; Waghorn et al., 2006), may also further determine the impact of depressive or anxiety disorders on work functioning. Also receipt of treatment and disabilities in depressed or anxiety persons – which likely are partially proxy for severe and chronic disorders – has shown to be associated with poorer work performance (Waghorn et al., 2005b; Waghorn and Chant, 2006). However, a thorough, comprehensive examination of the role of psychopathological characteristics on work functioning has hardly been conducted.

Insights in which specific psychopathological characteristics are risk factors for absenteeism and decreased work performance, may provide opportunities for preventive strategies for prolonged absenteeism and productivity-loss among workers with depressive and anxiety disorders. Therefore, this study examines the association of detailed characteristics of depressive and anxiety disorders with work functioning (both absenteeism and decreased work performance) in a large sample, using data from NESDA (the Netherlands Study of Depression and Anxiety). We will examine and compare the impact of depressive and anxiety disorders on work functioning, and will explore the differential role that severity, comorbidity, type and duration may play in the link between depression and anxiety disorders with work function.

2. Methods

2.1. Study sample

NESDA is a multi site naturalistic cohort study ($n = 2981$, age 18–65 years) examining the long-term course and consequences of depressive and anxiety disorders designed to include respondents from different health care settings and in different stages of their developmental history of disorders. Participants with and without depressive and/or anxiety disorders were recruited in the general population (through the earlier NEMESIS (Bijl et al., 1998) and ARIADNE (Land-man-Peeters et al., 2005) studies), in general practice (through a screening procedure among 65 general practitioners) and in outpatient mental health organizations (when newly admitted for depressive or anxiety disorder). Across recruitment setting, uniform exclusion criteria were used: persons who were not fluent in Dutch and those with a primary diagnosis of a psychotic disorder, obsessive compulsive disorder, bipolar disorder, or severe alcohol or substance use disorder were excluded. The sample consists of 1701 persons with a current (six-month recency) diagnosis of depression and/or anxiety disorder, 907 persons with lifetime

diagnoses or at risk because of a family history or subthreshold depressive or anxiety symptoms, and 373 healthy controls. For rationale, objectives and methods of NESDA see Penninx et al., 2008. The NESDA study protocol was approved by the Ethical Review Board of participating institutes, and all participants signed written informed consent. The Composite International Diagnostic Interview (CIDI, lifetime version 2.1), was used to diagnose depressive and anxiety disorders based on DSM-IV criteria. For the present study, we selected participants with a paid job of more than 8 h a week ($n = 1883$) of whom 7 persons were excluded due to missing information about work functioning. This resulted in a sample of 1876 (673 male, 1203 female).

2.2. Work functioning

Work functioning was conceptualized in terms of absenteeism and impaired work performance, both assessed with the TiC-P (Trimbos/iMTA Questionnaire for costs associated with Psychiatric Illnesses) which was used before in various large-scale population studies (Smit et al., 2006; Cuijpers et al., 2007; Batelaan et al., 2007; Acarturk et al., 2009) and contains the Health and Labour Questionnaire Short Form (SF-HLQ) (Hak-kaart-Van Roijen, 2007), which has been validated before (Roijen et al., 1996). The variable work absenteeism was computed by dividing the number of days absent during the last six months by the number of workdays a person was supposed to work in the last six months, expressing the number of workweeks absence in the last 6 months. This variable did not meet normality assumptions, and was categorized as before (Uegaki et al., 2007) into three categories: no absenteeism, short-term absenteeism (<2 weeks in last 6 months) and long-term absenteeism (>2 weeks in last 6 months). With these categories, a distinction was made between short-term absenteeism that could also be due to rather common health conditions (e.g. colds, flu) and the more long-term absenteeism that is likely due to more chronic conditions and involves higher costs. Decreased work performance was based upon two questions. The first one was: "On how many days during the last 6 months did you perform paid work, although you were bothered by health problems?" The second question was: "Please rate how well you performed on the days you went to work even though you were suffering from health problems" which the respondent rated on a 10-point scale ($0.0 =$ maximally inefficient, $1.0 =$ efficient as usual). Work performance rates were computed by the next formula: (van Roijen et al., 1996; Osterhaus et al., 1992),

$$\frac{\text{days hindered}^*(1-\text{efficiency})^*\text{work hours per day}}{\text{work hours per week}} = \text{decreased work performance}$$

in which a higher rate indicates more impairment. For example decreased work performance rate of a person working 8 h a day, 40 h a week, who reported 10 days hindered in the past 6 months, and 0.0 at the efficiency scale, is $10^*(1-0.0)^*8/40 = 2$, and the decreased work performance rate of someone working 8 h a day, 40 h a week, who reported 25 days hindered, and 0.8 at the efficiency scale, is $25^*(1-0.8)^*8/40 = 1$. This variable had a range from 0 to 39.8 and did not meet normality assumptions. Therefore, we created a categorical variable, which had, in line with the variable for absenteeism, three