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Fatigue and psychological distress in the working population Psychometrics, prevalence, and correlates

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Abstract

Objective: The purposes of this study were: (1) to explore the relationship between fatigue and psychological distress in the working population; (2) to examine associations with demographic and health factors; and (3) to determine the prevalence of fatigue and psychological distress. **Methods:** Data were taken from 12,095 employees. Fatigue was measured with the Checklist Individual Strength, and the General Health Questionnaire (GHQ) was used to measure psychological distress. **Results:** Fatigue was fairly well associated with psychological distress. A separation between fatigue items and GHQ items was shown. No clear, distinct pattern of associations was found for fatigue vs. psychological distress with respect to demographic factors. The prevalence was 22% for fatigue and 23% for psychological distress. Of the employees reporting fatigue, 43% had fatigue only, whereas 57% had fatigue and psychological distress. **Conclusions:** The results indicate that fatigue and psychological distress are common in the working population. Although closely associated, there is some evidence suggesting that fatigue and psychological distress are different conditions, which can be measured independently.

Keywords: Epidemiology; Fatigue; Psychological distress; Working population; Prevalence; Psychometrics

Introduction

Community and primary care studies have repeatedly shown that fatigue is a common complaint [1–6], and that fatigue may accompany physical [1] as well as psychiatric disorders [1,5,7]. Fatigue that becomes prolonged is reported to be associated with impairments comparable to chronic medical conditions [7], and may affect the individual's performance and functioning in the occupational as well as in the home setting.

The concept and the assessment of fatigue have been subjects of controversy for many years [8,9], and there are still more questions than answers with respect to the status of fatigue. For example, is fatigue conceptually, operationally, and etiologically distinct from psychological distress, or is the overlap between the two constructs so large as to throw in doubt the usefulness of having two separate concepts? Is the natural history of the two different? Are different prevention and treatment strategies applicable? At present, these questions cannot be adequately answered. We do know that studies conducted in the general population [3] and in the primary care setting [5] have shown that fatigue is associated with psychological distress, with observed correlations of .62 and .51. However, the relationship between fatigue and psychological distress may vary across different populations. With respect to the working population, previous research of fatigue and psychological distress was restricted to a specific occupational setting [10], with an observed correlation of .54. Hence, one key issue is whether the available measures of fatigue and the existing measures of psychological distress assess highly similar or sufficiently different underlying concepts in the general working population.

The Maastricht Cohort Study of "Fatigue at work" contributes to this research field with a large-scale epidemiological study in a heterogeneous working sample, in which not only the etiological factors in the onset and

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natural history of fatigue and psychological distress will be investigated but also the measures of fatigue and psychological distress and the constructs themselves will be examined. Within the Maastricht Cohort Study, fatigue is measured with the self-report Checklist Individual Strength (CIS) [11–13]. The General Health Questionnaire (GHQ) is used to assess psychological distress [14,15].

In the present study, we used the baseline data from the Maastricht Cohort Study to describe the relationship between fatigue and psychological distress in the working population, to examine associations with demographic and health factors, and to determine the prevalence of fatigue and psychological distress.

Methods

Study population

In May 1998, a total of 26,978 male and female employees, aged 18–65 years, from 45 Dutch companies and organizations received a letter at home inviting participation and the baseline questionnaire. The letter explained the purpose and the general outline of the cohort study, described how the data would be used, and guaranteed anonymity of responses. The voluntary nature of participation was emphasized. Nonrespondents received a written reminder 2 weeks later. After 6 weeks, a random sample of 600 persistent nonrespondents was asked to complete a brief questionnaire about the reasons for nonresponse; 168 (30%) of the nonrespondents returned this questionnaire.

A total of 12,161 employees completed the baseline questionnaire. Written consent was obtained from all participants. The overall response rate was 45%. Twenty-one questionnaires were discarded from the analysis because of technical reasons; another 45 questionnaires were excluded because an inclusion criterion was not met. The final study population at baseline consisted of 12,095 employees: 8840 (73%) men and 3255 (27%) women. The mean age of the total cohort was 41.0 years (S.D. 8.9) — 42.0 years (S.D. 8.8) in men and 38.0 years (S.D. 8.8) in women. Table 1 shows demographic and health factors for the total cohort at baseline. In a nonresponse analysis, no significant differences were found between respondents and nonrespondents

Table 1
Demographic and health factors for the total cohort (N = 12,095)

	Total (N = 12,095)		Men (N = 8840)		Women (N = 3255)	
	n	%	*n*	%	*n*	%
Age group (years)						
18–25	488	4.0	253	2.9	235	7.2
26–35	3049	25.2	1924	21.8	1125	34.6
36–45	4530	37.5	3318	37.5	1212	37.2
46–55	3510	29.0	2905	32.9	605	18.6
56–65	518	4.3	440	5.0	78	2.4
Educational level						
Primary school	522	4.4	446	5.1	76	2.5
Lower vocational education	1833	15.6	1524	17.6	309	10.1
Lower secondary school	1526	13.0	932	10.8	594	19.4
Intermediate vocational education	2805	23.9	2044	23.6	761	24.8
Upper secondary school	1009	8.6	641	7.4	368	12.0
Upper vocational education	2705	23.1	2047	23.6	658	21.5
University	1335	11.4	1035	11.9	300	9.8
Living alone						
Yes	1227	10.2	840	9.5	387	11.9
No	10,852	89.8	7989	90.5	2863	88.1
Dependent children						
Yes	6459	53.9	4922	56.2	1537	47.7
No	5522	46.1	3835	43.8	1687	52.3
Presence of disease						
Yes	2839	24.2	1987	23.1	852	26.9
No	8914	75.8	6604	76.9	2310	73.1
Health status						
Excellent	1144	9.5	844	9.6	300	9.3
Very good	2653	22.1	2002	22.8	651	20.1
Good	6437	53.6	4661	53.1	1776	55.0
Moderate	1648	13.7	1187	13.5	461	14.3
Bad	124	1.0	81	0.9	43	1.3