



## Original article

# Disability and functional burden of disease because of mental in comparison to somatic disorders in general practice patients



M. Linden<sup>a,\*</sup>, U. Linden<sup>a</sup>, U. Schwantes<sup>b</sup>

<sup>a</sup> Research Group Psychosomatic Rehabilitation, Charité University Medicine, Berlin, Germany

<sup>b</sup> Department of General Practice Medicine, Charité University Medicine, Berlin, Germany

## ARTICLE INFO

## Article history:

Received 19 February 2015

Received in revised form 26 April 2015

Accepted 27 April 2015

Available online 26 May 2015

## Keywords:

Participation restriction

ICF

Primary care

Disability

Burden of disease

Social psychiatry

## ABSTRACT

**Background:** Severity of illness is not only depending on the symptom load, but also on the burden in life. Mental disorders are among those illnesses, which in particular cause suffering to the individual and society.

**Method:** To study burden of disease for mental in comparison to somatic disorders, 2099 patients from 40 general practitioners filled in (a) the Burvill scale which measures acute and chronic illnesses in ten different body systems and (b) the IMET scale which measures impairment in ten different areas of life.

**Results:** Patients were suffering on average from acute and/or chronic illness in 3.5 (SD: 2.0) body systems and 56.6% of patients complained about acute and/or chronic mental disorders. The most significant negative impact on the IMET total score have acute and chronic mental disorders, followed by chronic neurological and musculoskeletal and acute respiratory and gastrointestinal disorders, while cardiovascular, metabolic, urogenital, haematological and ear/eye disorders have no greater impact. Acute as well as chronic mental disorders cause impairment across all areas of life and most burden of disease (functional burden of disease 1.69), followed by musculoskeletal disorders (1.62).

**Conclusion:** Mental disorders are among the most frequent health problems with high negative impact across all areas of life. When combining frequency and impairment mental disorders cause most burden of disease in comparison to other illnesses. This should be reflected in the organization of medical care including family medicine.

© 2015 Elsevier Masson SAS. All rights reserved.

## 1. Introduction

Severity of illness is first of all defined by the type, number, and intensity of symptoms and subjective suffering of the patient, be it immediately or in the future. This can be measured by self and observer symptom rating scales (e.g. the Hamilton Depression Rating Scale). A second severity criterion is the resulting disability, i.e. social consequences or participation restrictions. These are depending on (a) the course of the illness, as even mild disorders can have a huge negative impact on participation if they take a chronic course, and (b) on the living conditions of an individual, like job demands. Measures for the assessment of impairment are, for example, the Activities of Daily Living scale (ADL scale) [10], the Personal and Social Performance scale (PSP) [13], the WHO Disability Assessment Schedule (WHODAS) [24] or the Index for

the Assessment of Health Impairments (IMET) [3]. A comprehensive model for functional health and the interaction between symptoms of illness and participation restrictions can be found in the International Classification of Functioning, Disability and Health (ICF) as published by the World Health Organization (WHO) [23].

Additional to this individual perspective, there is also a societal definition of illness severity, i.e. the “burden of disease” for the health care system and the society, that is individual suffering multiplied by the frequency of an illness. In this respect, a deadly but rare illness is of less importance than a minor but frequent disorder [9]. In a Global Burden of Disease study published in the “World Development Report” [20], the “Disability-Adjusted Life Years (DALY) index” is used to estimate how much quality of life and how many years of life are lost across society by an illness based on a combination of objective data and consensus decisions. The DALY is the sum of “Years of Life Lost (YLL)” by early death and the “Years Lived with Disability (YLD)”. YLL is the number of years (N) a patient dies before the average life expectancy (L). The YLD is the prevalence of an illness (P) multiplied by the severity of

\* Corresponding author. Research Group Psychosomatic Rehabilitation, Reha-zentrum Seehof, Lichterfelder Allée 55, 14513 Teltow, Berlin, Germany.

Tel.: +49 3328 345678; fax: +49 3328 345555.

E-mail address: [michael.linden@charite.de](mailto:michael.linden@charite.de) (M. Linden).

disability (disability weight, DW) which results in the formula  $DALY = YLL + YLD = N \times L + P \times DW$  [21,22].

Based on case record data most burden of disease is due to ischemic heart diseases, pulmonary diseases and mental disorders [9]. Still, mental disorders are sometimes not accepted as “real” illnesses in comparison to somatic health problems [8,15], although they cause relevant suffering to the patient and the environment and result in much disability [5,6,11,17,18]. Aim of the present study has been to investigate the burden of disease as caused by mental disorders in relation to other major health problems. This was done by examining individual patients in general practice, which present the full range of somatic and mental disorders.

## 2. Method

### 2.1. Setting and patients

The present study is part of a greater research project on mental disorders and rehabilitation in general practice [14]. Two thousand nine hundred and eighty-seven patients were contacted in the waiting rooms of 40 general practitioners; 2099 patients agreed to participate. They were between 14 and 89 years old (MW: 46.4, SD: 16.1) and 62.6% of patients were female.

### 2.2. Measures

The “Burvill scale” [2] was used, as it allows to assess health problems across all relevant body systems and at the same time gives a measure for the global present health status, including acute and chronic disorders. It asks for ratings of the presence and severity of health problems on a four point Likert scale from “(0) no” to “(3) severe” in respect to ten different body systems (cardiovascular, metabolic, respiratory, genitourinary, gastrointestinal, haematological/blood, ear and eye, musculoskeletal, neurological, and mental system). This is done separately for acute and chronic disorders.

The IMET scale [3] was used, as it allows to assess restrictions in participation over most areas of life and at the same time gives a measure for the global impairment. It asks for a rating on the presence and severity of disability or restrictions in participation (“[0] no impairment” to “[10] most serious impairment, no activity possible”) in ten areas of life (basic activities in daily life like washing or dressing, domestic activities like housework or gardening, activities out of house like shopping or using public transportation, daily intentional activities, recreational activities like hobbies or sports, social activities like visiting friends or going out, relationship activities like upholding a friendship or partnership, sexual activities, coping with special burdens like mastering family or work related conflicts, and work activities like productivity or meeting job requirements).

### 2.3. Statistics

After reporting descriptive statistics, we calculated multiple regression analyses in order to answer which health problem has which impact on disability when taking into account multimorbidity. We used backward elimination in order to get statistics for all candidate variables. This was done for each area of life in the IMET as dependent variable and all acute and chronic ratings of the Burvill scale as independent variables,

Following the concept of DALY or YLD and YLL we estimated the functional burden of disease (FBD) by multiplying frequency and restrictions in participation ( $FBD = P \times DW$ , P: percentage of

respective patients in the practice; DW: mean IMET score per body system).

## 3. Results

According to the Burvill rating, patients were suffering on average from acute health problems in 2.4 (SD: 2.0) and chronic health problems in 2.8 (SD: 2.1) body systems, i.e. 3.5 (SD: 2.0) acute and/or chronically affected body systems. We see that 62.5% of patients suffer from acute and/or chronic problems in the musculoskeletal system (acute: 45.6%, chronic: 49.3%), 56.6% of patients from acute and/or chronic problems in the mental system (acute: 48.0%, chronic: 43.4%), 46.8% in the eye and ear system (acute: 29.3%, chronic: 41.3%) and 43.6% in the respiratory system (acute: 30.2%, chronic: 30.2%). We see that 38.7% of patients have problems in the cardiovascular system (acute: 24.2%, chronic: 32.4%), 38.6% in the gastrointestinal system (acute: 26.8%, chronic: 26.3%), 28.3% in the metabolic system (acute: 15.7%, chronic: 24.4%), 17.9% in the urogenital system (acute: 11.0%, chronic: 13.9%), 11.1% in the blood system (acute: 7.5%, chronic: 9.2%), 8.1% in the neurological system (acute: 5.4%, chronic: 6.8%), and 4.2% are at present not suffering from an health problem (acute: 4.8%, chronic: 4.5%).

In the IMET, the average score is 2.29 (SD: 2.31). In at least one area of life, 30.2% of patients are impaired to a severe and very severe degree (ratings: 7 and higher). Most affected is the area of “work” (mean: 3.20, SD: 3.28, 17.6% severe), followed by “coping with special burdens” (mean: 2.81, SD: 3.05, 14.5% severe), “recreational activities” (mean: 2.65, SD: 2.97, 12.3% severe), “daily intentional activities” (mean: 2.55, SD: 2.90, 11.6% severe), “sexual activities” (mean: 2.46, SD: 3.30, 14.5% severe), “social activities” (mean: 2.30, SD: 2.90, 10.8% severe), “domestic activities” (mean: 1.93, SD: 2.57, 7.1% severe), “out of house activities” (mean: 1.85, SD: 2.57, 7.3% severe), “relationship activities” (mean: 1.82, SD: 2.62, 7.7% severe), “basic activities in daily life” (mean: 1.35, SD: 2.31, 4.9% severe).

When comparing patients with and without acute or chronic disorders in the different body systems the greatest overall impairment, i.e. global IMET score, is found for neurological disorders (acute: 3.72, SD: 2.54, chronic: 4.07, SD: 2.55), followed by mental disorders (acute: 3.05, SD: 2.31, chronic: 3.20, SD: 2.30), gastrointestinal system (acute: 2.89, SD: 2.50, chronic: 3.03, SD: 2.38), blood system (acute: 3.02, SD: 2.69, chronic: 2.98, SD: 2.61), urogenital system (acute: 2.70, SD: 2.54, chronic: 2.90, SD: 2.47), metabolic system (acute: 2.72, SD: 2.42, chronic: 2.77, SD: 2.40), musculoskeletal system (acute: 2.56, SD: 2.40, chronic: 2.75, SD: 2.43), pulmonary system (acute: 2.61, SD: 2.33, chronic: 2.72, SD: 2.38), cardiovascular system (acute: 2.83, SD: 2.58, chronic: 2.71, SD: 2.48), and eye/ear system (acute: 2.62, SD: 2.51, chronic: 2.57, SD: 2.46). These data allow an estimate of the general uncontrolled effect of the different health problems on the IMET scores.

In order to test the effects, which are unique to specific health problems, not shared with any other predictor, multiple regression analyses were calculated. Table 1 shows the significant standardized coefficients, indicating which health problem has which impact on disability when taking into account multimorbidity.

Acute and chronic mental disorders have the most significant negative impact on the IMET total score, followed by chronic neurological and musculoskeletal and acute respiratory and gastrointestinal disorders, while cardiovascular, metabolic, urogenital, haematological and ear/eye disorders have no greater impact. If one looks at the different areas of life all are impaired by acute as well as chronic mental disorders. Acute respiratory and gastrointestinal illnesses impair areas, which need immediate

Download English Version:

<https://daneshyari.com/en/article/6229245>

Download Persian Version:

<https://daneshyari.com/article/6229245>

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