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Health-related quality of life of primary care patients with depressive disorders

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ABSTRACT

Background: Depressive disorders are known to impair health-related quality of life (HRQoL) both in the short and long term. However, the determinants of long-term HRQoL outcomes in primary care patients with depressive disorders remain unclear.
Methods: In a primary care cohort study of patients with depressive disorders, 82% of 137 patients were prospectively followed up for five years. Psychiatric disorders were diagnosed with SCID-I/P and SCID-II interviews; clinical, psychosocial and socio-economic factors were investigated by rating scales and questionnaires plus medical and psychiatric records. HRQoL was measured with the generic 15D instrument at baseline and five years, and compared with an age-standardized general population sample ($n = 3707$) at five years.
Results: Depression affected the 15D total score and almost all dimensions at both time points. At the end of follow-up, HRQoL of patients in major depressive episode (MDE) was particularly low, and the association between severity of depression (Beck Depression Inventory [BDI]) and HRQoL was very strong ($r = -0.804$). The most significant predictors for change in HRQoL were changes in BDI and Beck Anxiety Inventory (BAI) scores. The mean 15D score of depressive primary care patients at five years was much worse than in the age-standardized general population, reaching normal range only among patients who were in clinical remission and had virtually no symptoms.
Conclusions: Among depressive primary care patients, presence of current depressive symptoms markedly reduces HRQoL, with symptoms of concurrent anxiety also having a marked impact. For HRQoL to normalize, current depressive and anxiety symptoms must be virtually absent.

1. Introduction

Depression is a major public health problem and known to cause distress and disability [1,2]. It has also been found to be associated significantly with decreased health-related quality of life (HRQoL) in both general population [3–6] and primary care studies [2,7–13]. Primary care patients with depressive symptoms have had worse HRQoL than patients with common chronic medical conditions and physical functioning in the midrange [2,8,12]. Convergently, in a study of secondary level psychiatric care patients, HRQoL, assessed by the 15D instrument, was found to be lowest in patients with depression relative to five common physical conditions (operative treatment of cataract, operative treatment of cervical or lumbar radicular pain, hysterectomy due to benign uterine conditions, hip or knee replacement surgery, coronary angiography due to suspected coronary artery disease) before elective treatment [14]. Thus, there is little doubt that HRQoL is impaired among individuals suffering from depression, irrespective of setting, and is typically worse than among subjects suffering from chronic physical diseases. However, the degree to which this is caused by depression or reflects clustering of disorders or adversity among individuals with depression remains less clear.

Although the epidemiological association between low HRQoL and depression is unequivocal, there are key areas of uncertainty that have major implications for health care. Establishing the precise relationship between severity, duration and unique course of depressive syndromes and HRQoL would help untangle the

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effects of depression, somatic illness and other psychosocial adversity linked to the condition. This would be especially important in focusing treatment and support in primary health and social care.

Depressive disorders are also known to be highly comorbid both in the general population [15,16] and primary care patients [17], so in theory, poor HRQoL may well be a result of multiple co-occurring syndromes rather than depression alone. In particular, anxiety disorders are known to affect HRQoL negatively [3,18]. Furthermore, many risk factors for depression, such as poor social support or stressful life conditions, may themselves predispose to poor HRQoL, but remain often partly or fully unmeasured in studies, and the association with depression could thus be partly a matter of co-occurrence rather than causal. However, current literature is largely unable to answer these questions.

Our aim was to investigate HRQoL and its predictors for change within a prospective Finnish cohort study of primary care patients with depressive disorders. We hypothesized that between-subject differences in HRQoL would correlate with severity and change of symptoms of depression and duration of depressive episodes as well as concurrent anxiety. Furthermore, we hypothesized that intraindividual change in HRQoL would be predicted by duration of depression and change in concurrent depressive and anxiety symptoms. We also explored the associations with other clinical and psychosocial factors. Furthermore, to determine whether remission from depression would normalize HRQoL, we compared HRQoL of depressive primary care patients with that of an age-standardized sample of the Finnish general population.

2. Methods

2.1. Patients and procedures of the Vantaa Primary Care Depression Study

The Vantaa Primary Care Depression Study (PC-VDS) was approved by the pertinent Ethics Committee in 2001. Details of methodology of the PC-VDS have been published elsewhere [17,19]. In brief, based on stratified sampling within the city of Vantaa, Finland, altogether 373 of 1119 general practitioners' patients aged 20–69 years screened with the Primary Care Evaluation of Mental Disorders (PRIME-MD) [20] had a positive screen for depression [17]. The presence of at least one core symptom of major depressive disorder (MDD) according to the Structured Clinical Interview for DSM-IV Axis I Disorders (SCID I/P) [21] was confirmed by telephone. All of the 175 potentially eligible patients were interviewed face-to-face using the SCID I/P with psychotic screen. Inclusion criteria were current: MDD, dysthymia, subsyndromal MDD with two to four depression symptoms (minimum one core symptom) and lifetime MDD and minor depression otherwise similar to subsyndromal MDD, but without MDD history. Patients who refused to participate (15%) did not differ significantly in age or gender from those who consented. The diagnostic reliability for current depressive disorder diagnoses was excellent (kappa = 1.0) [17].

The final study sample comprised 137 patients. Current and lifetime psychiatric disorders were assessed with SCID-I/P and SCID-II interviews [21,22]. In addition to the face-to-face interviews, observer- and self-report scales and all medical and psychiatric records were used to assess retrospective and prospective course of depression, comorbid disorders and psychosocial and socioeconomic factors [17]. Scales comprised Hamilton Rating Scale for Depression (HAMD) [23], Beck Depression Inventory (BDI) [24], Beck Anxiety Inventory (BAI) [25], Beck Hopelessness Scale (HS) [26], Social and Occupational Functioning Assessment Scale for DSM-IV (SOFAS) [27], Scale for Suicidal Ideation (SSI) [28] and Perceived Social Support Scale - Revised (PSSS-R) [29]. Personality was assessed by EPI-Q [30], a short measure based on Eysenck Personality Inventory, form B (EPI) [31].

After baseline, patients were prospectively investigated at 3, 6 and 18 months and 5 years [19]. The 5-year investigation included the same diagnostic interviews, scales and medical and psychiatric records as the baseline investigation. Timing and duration of episodes of depression and substance abuse were integrated into a graphic life-chart. The time after the baseline interview was divided into three categories: state of MDE (five or more of the nine criteria symptoms); partial remission (one to four symptoms); or full remission (no symptoms).

Drop-outs (18%) did not differ from participants in age, gender, baseline depression severity [19] or 15D score. At baseline, 88% (121/137) of all patients and 95% (106/111) of patients followed up for 5 years filled in the 15D questionnaire. Altogether 68% (93/137) of patients who had filled in the 15D questionnaire at both time points were included in the longitudinal regression analyses. Patient characteristics are shown in Table 1. The results are based on our whole sample of patients with depressive disorders.

2.2. Health-related quality of life

Health-related quality of life (HRQoL) was measured at baseline and at 5 years with a generic, self-report and preference-based HRQoL measure: the 15D, which can be used as a profile and a single index utility score measure. The 15D questionnaire is composed of 15 dimensions with five levels of severity: mobility, vision, hearing, breathing, sleeping, eating, speech (communication), excretion, usual activities, mental function, discomfort and symptoms, depression, distress, vitality and sexual activity. The single index score (15D score), representing the overall HRQoL on a 0–1 scale (1 = full health, 0 = being dead), and the dimension level values, reflecting the goodness of the levels relative to no problems on the dimension (= 1) and to being dead (= 0), are calculated from the questionnaire by using a set of population-based preference or utility weights [32]. The minimum clinically important change or difference in the 15D score is $\pm$ 0.015 [33]. With regard to the important properties (reliability, validity, discriminatory power, responsiveness to change), the 15D performs at least equally to the other preference-based generic instruments [32,34–37]. At baseline, Cronbach's alpha coefficient for the 15D was 0.870.

2.3. National Health 2011 Survey

For purposes of this study, the 15D data of the general population came from the National Health 2011 Survey and represented the Finnish population aged 18 years and over [38]. For this analysis, individuals in the age range of the patients were selected (n = 3707). This sample was weighted to reflect the age distribution of the patients. The mean 15D scores and dimension level values (15D profiles) of our patients and of age-standardized population are shown in Table 2 and Fig. 1.

2.4. Statistical methods

Between-group comparisons were carried out using the Chi^2 test statistic with Yates' continuity correction or Fisher's exact test, the two-sample t-test or ANOVA, and the Mann–Whitney and Kruskal–Wallis tests as appropriate. Bivariate correlational analyses and linear regression models were used to analyse associations of different variables with HRQoL. In multivariate models, variables were included based on our hypotheses. The predetermined independent variables at baseline comprised HAMD (alternatively BDI), history of former MDE, BAI, HS, SSI, SOFAS, PSSS-R, EPI-Q, psychiatric and medical comorbidity, and marital, educational, occupational and economic status. In final