Severely mentally ill substance abusers: an 18-month follow-up study

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Abstract Background: The aims of this study were to investigate initial characteristics and improvement after 18 months in patients with comorbidity of severe mental illness and substance dependence. These patients took part in a multicentre study aimed at improving co-operation between psychiatric health care units and social services. Methods: A total of 358 patients, 66% men, were included. There were four diagnostic subgroups: psychosis 29%, depression 17%, borderline personality disorder 23%, and other diagnoses of equal severity 31%. Initially and at follow-up the following measurements were used: global functioning axis V DSM-III-R (GAF), seven areas of Addiction Severity Index (ASI) and psychological symptoms (SCL-90). The outcome of substance use during the past 6 months was estimated by the Clinical Rating Scale (CRS). Results: Most patients were single (77%) and few (10%) had income from employment. Many (61%) had made suicide attempts, and 52% had somatic diseases before entering this project. After 18 months, 14 patients (3.9%) had died, and 288 patients (84%) could be interviewed. There were significant improvements in all but one ASI area (employment), in psychological symptoms and in global functioning. There was a positive correlation between the reductions in severity of alcohol abuse, drug abuse, psychiatric symptoms, relationships (ASI) and psychological symptoms. Forty-eight percent of patients with mainly alcohol-related problems, and 57% of those with mainly drug-related problems were either “abstinent” or using drugs “without impairment” (CRS) after 18 months. Improvement did not differ between psychiatric subgroups. Conclusion: These patients have weak social integration. Alcohol dependence was the most common substance use disorder. In most areas investigated, patients had improved. No substance abuse was found in half of the patients at follow-up.

Key words severe mental illness · substance abuse · dual diagnosis · follow-up study · social outcome · clinical outcome

Introduction

The frequent occurrence of comorbidity between mental disorders and substance use disorders has been shown in several epidemiological studies such as the Epidemiologic Catchment Area (ECA) study (Regier et al. 1990) and the National Comorbidity Survey (NCS; Kessler et al. 1994). The ECA study found that lifetime prevalence for alcohol dependence was more than doubled in subjects with a mental illness compared to those not mentally ill (22.5% vs 13.5%), and among those with alcohol dependence, mental illness occurred almost twice as often as compared to subjects without an alcohol dependence (36.6% vs 19.9%). Among subjects with substance use disorders other than alcohol dependence, mental illness occurred even more often, in 53% versus 20% of the subjects. The NCS study was based on non-institutionalized civilians, and presents estimates of lifetime and 12-month prevalence of 14 DSM-III-R psychiatric disorders as odds ratios. The study shows rates of comorbidity similar to or higher than those in the ECA study. A cross-national study of comorbidity between substance use and psychiat-
ric disorders from six different sites in Europe and North America, the International Consortium in Psychiatric Epidemiology, reported a strong association between mood disorders, anxiety disorders, antisocial behaviour, conduct disorder and substance use disorders, which was similar at all sites (Merkkangas et al. 1998). Approximately 50% of persons with severe mental disorders develop alcohol or other substance use disorders at some point in their lives (Cuffel 1996).

Comorbidity rates between substance use disorders and other psychiatric disorders are even higher among clinical populations (Drake and Brunette 1998). Dual diagnoses are more often associated with relapse, rehospitalization, familial problems, and residential instability, and patients with dual diagnoses are often non-compliant with medication (Drake and Brunette 1998; Drake and Wallach 1989; Drake et al. 1991; Hersh and Modesto-Lowe 1998; Ziedonis and D’Avanzo 1998). These patients often have a less favourable course than patients with either a severe mental illness or a substance use disorder, and it is a problem that patients with dual disorders traditionally receive treatment from two parallel treatment systems (Drake et al. 1998b). In a review by Drake and co-workers (1998b), the authors found general improvements in terms of substance abuse and psychiatric symptoms when mental health treatment was integrated with the treatment of substance use disorders.

As far as we know, no treatment studies of dual diagnoses have investigated outcome in relation to different psychiatric diagnoses.

In Sweden, a psychiatric care reform took place on 1 January 1995. The municipal social services were given total responsibility for patients who have a lifelong psychiatric illness. A multi-centre study was initiated by the Department of Social Affairs, aimed at improving co-operation between the local services, psychiatric health care and social services, in the care of severely mentally ill substance abusers. Ten projects from different parts of Sweden participated, representing both rural and urban settings, running over a period of 3 years (1995–1998).

The aims of this study were to investigate, firstly, the initial characteristics of patients with severe mental illness, secondly, the improvement and outcome after 18 months with respect to alcohol and drug abuse, global functioning and psychological symptoms, and, thirdly, whether improvements and outcome were related to diagnostic subgroups of psychiatric disorders.

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**Subjects and methods**

Among the ten projects, two models of co-operation were used. In four projects most treatment and support was administered by the treatment team themselves. The other six projects co-ordinate assessment and treatment planning in different ways, and most of the support was delivered by ordinary services.

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### Subjects

**Inclusion criteria**

All subjects investigated in this study were already known by the different psychiatric health care units and/or social services as having a severe mental illness, and/or a substance use disorder. Before inclusion, psychiatrists at the local psychiatric services settled the diagnoses, and no SCID interviews were used.

All subjects who fulfilled the diagnostic criteria of severe mental illness and dependence of substance use disorder according to DSM-III-R were invited to take part in the co-operation project. In this study, severe mental illness was defined as having a diagnosis of schizophrenia, other psychoses, unipolar or bipolar mood disorders, borderline personality disorder, schizotypal personality disorder, or any other diagnosis estimated as being of the same degree of severity. The substance use disorders included dependence on alcohol, illegal drugs and/or tranquilizers.

All eligible patients who took part in the study gave informed consent to participation in the study, including interviews and measurements at the start of the project and after 18 months. In total, 358 subjects agreed to participate. During the inclusion period of 6 months, a further 124 individuals were considered as possible participants, but during that period they were either too ill (n = 62) or unwilling (n = 62) to participate.

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### Methods

Personnel connected to this project performed the investigations (see below). In about half of the projects, the personnel were engaged both in the clinical work with the patients and in the assessments; in the other projects, the assessments were performed by personnel who had their ordinary work in other divisions of psychiatry or social welfare services.

Initially, and again after 18 months, interviews and various measurements were performed.

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### Measurements

Initially, psychiatric diagnoses were made according to DSM-III-R, axis I, axis II and axis V (the Global Assessment of Functioning Scale, GAF; American Psychiatric Association 1987). The severity of substance abuse was evaluated by the Addiction Severity Index (ASI), a semi-structured interview providing socio-demographic information on both past and recent problems in seven areas of life functioning: medical status, employment and self-support, alcohol use, drug use, legal status, family and social relationships and psychiatric symptoms. A composite score is derived from each area, based exclusively on the last 30-day period, the composite score ranges from 0.0 (no problem) to 1.0 (most severe problem). The ASI definition of alcohol and drug abuse is: use of alcohol/drugs at least 3 days weekly, independent of the amount, or using drugs at least 2 consecutive days a week to the degree that it harms daily living, such as school, family or car driving (McLellan et al. 1992; Bergman et al. 1996).

Psychological symptoms were estimated using the Symptom Check List 90 (SCL-90), a self-report symptom inventory with 90 items on a five-point scale of distress, from 0 (“not at all”) to 4 (“extremely”). The questions are scored and interpreted in terms of nine primary symptom dimensions. These are labelled: somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation and psychoticism. One of three global indices of distress is used in