Soc Psychiatry Psychiatr Epidemiol (2005) 40 : 382–390 DOI 10.1007/s00127-005-0902-5

ORIGINAL PAPER

Gerhard Längle · Birgit Egerter · Friederike Albrecht · Monika Petrasch · Gerhard Buchkremer

Prevalence of mental illness among homeless men in the community

Approach to a full census in a southern German university town

Accepted: 12 October 2004

Abstract *Aim* Within the framework of a study of homeless men in the university town of Tübingen in southern Germany, the prevalence of psychiatric disorders and the existing help-seeking behavior, among other things, were to be recorded. *Method* A total of 151 men belonging to the target group were identified; 91 of them participated in the study. Besides the psychiatric diagnosis, the registered data included psychopathology, cognitive capacity, social functioning and satisfaction with life, as well as social history and case history. *Results* Of the probands, 73 % were suffering from at least one ongoing psychiatric disorder (diagnosed according to ICD-10 and DSM-IV), primarily alcohol dependence (74 %) and drug dependence (34 %), 26 % were suffering from an anxiety disorder, 15 % from an affective disorder, and 11 % from a disorder of the schizophrenic spectrum. Comorbidity was diagnosed in 67 %. Targeted help-seeking behavior concerning the psychiatric or addictive symptoms was extremely rare. Emergency contacts existed with hospitals and general practitioners. *Discussion* This study represents the first attempt within Germany and Europe at a full census of homeless men. In international terms, the target region – a small town on the fringes of a conurbation – is a special case. However, compared with studies of help-seeking populations in large cities, virtually no differences were recorded with respect to the prevalence of psychiatric disorders or to help-seeking behavior concerning psychiatric problems and addictions. On the other hand, a substantial number of those concerned evade a resource-intensive, outreach-based study like the present one. Because of German data protection legislation, data on these subjects remain sparse. Concepts aimed at improving the health care system for this target group were found to be dependent in no small measure on the success of the initial contact.

Key words homelessness – mental illness – addiction – epidemiology

G. Längle · B. Egerter · F. Albrecht · M. Petrasch · G. Buchkremer
Dept. of Psychiatry and Psychotherapy
University of Tübingen
Tübingen, Germany

G. Längle
Centre for Psychiatry, Psychotherapy, Neurology and Rehabilitation
Zwiefalten, Germany

Priv. Doz. Dr. G. Längle (✉)
Universitätsklinik für Psychiatrie und Psychotherapie
Osianderstrasse 24
72076 Tübingen, Germany
Tel.: +49-7071/29-86540
Fax: +49-7071/29-4141
E-Mail: gerhard.laengle@med.uni-tuebingen.de

SPPE 902

Introduction

Since the 1980s, studies on the situation and care of mentally ill homeless persons have been published in various European countries and especially in the USA (Koegel et al. 1988; Sleegers et al. 1998; Kovess and Lazarus 2001; Vazquez et al. 1997, etc.). The number of relevant studies published in Germany shows that this topic has also been the focus of increasing interest here in scientific research in recent years (e. g., Fichter et al. 1996; Fichter and Quadflieg 2000; Salize et al. 2001). However, Becker and Kunstmann (2001) pointed out in their survey that representative data on this topic were still scant in Germany. Nonetheless, it is being increasingly debated in the literature and at psychiatric congresses that comprehensive account of the specific problems of mentally ill and/or addictive homeless persons in Germany is taken neither in the community psychiatric support system nor in the addict support system or within the scope of support for the homeless. In view of the extensively separate nature of these support systems, there is a need for integrational concepts to be developed here at therapeutic and at administrative level (Torchalla 2002; Torchalla et al. 2003; Längle et al. 2003; Meller et al. 2000; Salize et al. 2003; Eikelmann 2003).

Concerning the prevalence of mental illness among homeless men, the figures published in various studies

carried out in Germany are similar to those reported from neighboring European countries (Salize et al. 2001; Podschus and Dufeu 1995; Fichter et al. 1996): 77–94 % (lifetime) prevalence, with addictions accounting for the highest percentage in all cases. Similarly, most authors report frequent comorbidity of addictive and other psychiatric disorders. Various authors (e. g., Salize et al. 2001) show consistently that this high prevalence of mental illness is accompanied by low utilization of offers made by the psychiatric or addiction-therapy support system.

In contrast to some other countries, the low utilization in Germany can hardly be due to financial barriers, since almost everyone is covered by the statutory medical insurance system, which extends to psychiatric care and addiction therapy. In addition to factors relating directly to those concerned, e. g., the patient's often very limited capacity to understand that he is in fact ill, Wessel (1996) points out that essential causes are to be found in the structuring of the health care system. Examples are the separation of the support structures (support for the mentally ill, support system for addicts, and support for the homeless), each of which has its own funding sources (statutory health insurance systems "gesetzliche Krankenkassen", statutory pension scheme "Rentenversicherung", local and regional social security systems) and a pronounced delineation between outpatient and inpatient support in these three systems.

Driessen et al. (1997), who investigated the status of Anglo-American research into the epidemiology and care of the homeless mentally ill, also reported high current prevalences for mental illness (30–50 %) and a tendency towards a low utilization of offers of support. New, promising approaches have recently resulted from various modern case management methods. This concept was developed in the 1970s by Stein and Test (1980) as an alternative to hospitalization of primarily severely mentally ill patients. Recent findings support a multiprofessional approach and outreach work (e. g., Gulcur et al. 2003).

The present study, carried out against the described background, aimed to answer the following main questions: (1) How many homeless men are living in Tübingen? (2) How many of these men are suffering from a psychiatric disorder? and (3) Can short-term behavior therapy be performed with these subjects? If so, does this lead to better results than those recorded in the control group with respect to the utilization of offers of support in the follow-up period (4 and 8 months)? The findings presented here relate to questions 1 and 2. Enrolment in the study was based on the principle of informed consent, and the study protocol was approved by the ethics committee of the Medical Faculty, University of Tübingen.

Subjects and methods

Definition and recruitment of the sample

The study was performed in Tübingen (population: approximately 82 000), a university town on the fringes of the conurbation that has developed on the central reaches of the River Neckar in southern Germany, in the period from January 2002 to December 2003. The first phase presented here is an epidemiologic study in the form of an attempted full census of the target group. The aim was to gain as many persons as possible from the sample for a comprehensive initial investigation. The probands were paid an expense allowance of € 25 for their participation in the initial investigation. Since homeless women had been investigated in a pilot study (Torchalla 2002), the present study was confined to male probands. The problems inherent in defining the target group have been frequently discussed (Becker and Kunstmann 2001). In the present case, the definition was based on that formulated in the Federal German Social Assistance Act (BSHG, § 72 dated 13. 2. 1976), which not only defines the need for support, but also regulates the principles underlying financial assistance. According to the executive order accompanying the Act, it covers "persons without adequate accommodation" (homeless persons "Obdachlose"), "vagrants" ("Landfahrer"), "tramps" ("Nichtsesshafte") and "those released from detention" without accommodation (persons of no fixed abode "Wohnungslose").

Many different means were used in the effort to identify all those within the target group. Account was taken of all men registered with the Tübingen Social Services Department as homeless or becoming so within the registration period (minimum age: 18 years) or receiving daily social assistance ("Sozialhilfe") through the advisory service for the homeless. In addition, help in the search was given by a variety of contacts within the support system (outreach workers, staff of a resocialization home and of the emergency overnight accommodation center, undergraduates belonging to a working group aimed at providing support for the homeless, staff of a soup kitchen, and many more). In addition, persons were addressed on the street and at known meeting points for the homeless. Last but not least, probands also drew the attention of the investigators to further persons within the target group. Overall, 151 men belonging to the target group were identified in this way. With a residential population of approximately 82 000, this complies with regional and national estimates (prevalence of 3.8 homeless per 1000 male inhabitants). However, no exact data are available although such data are registered in some parts of Germany, because the data sets are not allowed to be linked interregionally [German Study Group for Support for the Homeless (BAG) 2003].

As registration is compulsory in Germany – unlike the situation in many other countries, especially the Anglo-American countries – and as Germany has an unbureaucratic, basic financial support system through the agencies concerned, a high proportion of the target group could be identified through the respective agencies. In view of the additional, diversified sampling technique, the number of unidentified cases is likely to have been very low.

As enrolment in the study was subject to informed consent, the number of persons investigated in detail [91] is well below the overall sample size. The non-enrolled group consisted of two subgroups: (1) 35 men with whom no personal contact could be established. On account of German data protection legislation, they could be contacted only indirectly by mail through the Social Welfare Office. Despite a repeated written request, these 35 failed to establish contact with the investigators; and (2) 25 men with whom personal contact was initially established, but who refused to participate in the study.

In all, 91 men took part in the initial interviews, which were performed by two graduate psychologists and took between 1.5 and 2.5 hours.

Instruments

The diagnosis of psychiatric disorders was performed with the German version of the Structured Clinical Interview for DSM-IV: SKID I (sections A: Affective disorders, B: Psychotic disorders, E: Psy-

chotropic substance abuse and dependence, F: Anxiety disorders, G: Somatoform disorders, and H: Eating disorders) (Wittchen et al. 1997). The diagnoses were based on the ICD-10 criteria (WHO 1993) (after any deviations of the criteria had been checked in single cases). Only ongoing psychiatric disorders were registered. In addition, the Braunschweig Characteristics List (BML) (Hilge and Schulz 1999) was used to diagnose chronic multiply impaired alcoholics (CMA). This instrument permits the social situation, the previous treatment history and psychiatric-neurologic findings to be categorized by the examiner. Assessment of the cognitive and intellectual capacity was based on the Mini Mental Status Test (MMST) (Folstein et al. 1990), the Multiple Vocabulary Test (MWT-B) (Lehrl 1995) and two subtests from the Hamburg-Wechsler Intelligence Test for Adults (HAWIE-R) (Tewes 1991): the Mosaic Test and the Numbers-Symbol Test (nonverbal action tests). The Global Assessment of Functioning Scale (GAF) (Saß et al. 1996), an instrument with which global functioning is assessed on a hypothetic continuum from 0 (zero functioning) to 100 (good functioning), was used for the objective rating of social integration. The subjectively perceived quality of life was registered with the Berlin Quality of Life Profile (BeLP) (Priebe and Hoffmann 1996), the German version of the Lancashire Quality of Life Profile (Oliver 1991). Here, probands are asked to rate their satisfaction in various spheres – general satisfaction with life, work/job, recreational activities, finances, accommodation, law and order, family, friends and acquaintances, physical/mental health – on a scale ranging from 1 (completely dissatisfied) to 7 (completely satisfied). Other instruments used were questionnaires developed by the research group for the social history and the case history, for the utilization of support, and for the registration of sociodemographic and course data.

The interviews were carried out by clinical staff with experience in psychological testing. The tests were used only when the current capacity could be assumed to match the general capacity of the proband and not to be substantially impaired by alcohol or drug intoxication. Complete data sets are accordingly not available for all of the 91 probands.

Statistical analysis

All statistical analyses were performed with SPSS® 10.0 for Windows (SPSS Inc., Chicago, IL, USA).

Descriptive analysis

Most data underwent descriptive analysis, with the corresponding statistical parameters (means, standard deviations) being calculated, depending on the data material.

In the event of corresponding frequency distributions, chi-square techniques were used to analyze differences. As the parameter, Pearson's chi-square value was checked for significance. If the preconditions for the chi-square test were not fulfilled, Fisher's exact test was taken as the parameter. The presence of a normal distribution was checked with the Kolmogorov-Smirnov test. In the event of a normal distribution and interval scale level, a t-test was performed (Bortz 1999).

Results

Allocation to study groups

Of the 91 probands enrolled in the study, 66 (72.5 %) fulfilled the criteria for at least one ICD-10 diagnosis, while 25 (27.5 %) were without an ICD-10 diagnosis at the time of the initial interview. The calculation of sociodemographic data also covered the 60 men who either refused to take part in the study or were not accessible. In this analysis, individual sociodemographic data were recorded on a small scale and with strict anonymity (N = 151). The other findings were based on the number of persons actually participating in the study (N = 91).

Sociodemographic data

Ranging from 19 to 71, the mean age of the total sample was 44 years, with most of the probands (69.2 %) being less than 50 years old. Approximately two-thirds were living on their own (67.6 %). The majority of the men (approx. 73 %) were of German nationality, while some 8 % originated from EU countries and approximately 19 % from other countries, primarily in south-eastern Europe or Africa. Of the participating probands (N = 91), 18 % had no school-leaving certificate, some 57 % had at least an elementary school-leaving certificate, and 24 % had successfully completed junior or even senior high school. Just under 50 % had a successfully completed vocational training ("Berufsausbildung"); just under 70 % were unemployed at the time of the interview. In all, 82.4 % of the men had already come into conflict with the law; 64 % of them had served a prison sentence.

Division of the total sample into subgroups of participating (N = 91) and refusing (N = 60) persons revealed various significant intergroup differences. With an average age of 40 years (SD = 13), the participants were significantly younger ($p < 0.01$) than those refusing to participate (average age 50 years; SD = 13). The participant group had a significantly higher proportion of persons of German nationality.

The duration of ongoing homelessness could be ascertained for those men refusing to participate. In comparison with the participants, they had been homeless for a significantly longer period (the majority for more than 5 years, $p < 0.01$). Those refusing had been housed significantly more often in local authority accommodation, such as the municipal hostel ($p < 0.01$).

Accommodation

Of the 151 men forming the target group, 78 (51.7 %) were living in emergency accommodation allocated by the local authorities (in most cases, a men's hostel "Männerwohnheim"), 22 (14.6 %) had longer-term accommodation provided in most cases by the social welfare office, and 44 (29.1 %) had either only short-term housing or were staying in transitional or emergency accommodation. Approximately 33 % of the 91 men taking part in the study had become homeless during the previous 12 months, just under 24 % had lost their homes more than 10 years previously, and 42.2 % had been homeless for between 1 and 10 years at the time of the survey. Concerning the overall duration of homelessness to date, 50 % of those interviewed had been homeless for up to 5 years, and 50 % for more than 5 years in total. The causes or precipitating factors given for the homelessness or for the loss of a home were excessive al-

cohol consumption or illegal drug consumption (36 %), partnership conflicts (30 %), conflicts in the family of origin (27 %), and job loss (26 %). Concomitant causes were frequently named.

Prevalence of psychiatric disorders

A total of 66 (72.5 %) of the 91 probands fulfilled the criteria for at least one ICD-10 diagnosis, with 22 probands having only one psychiatric disorder. The majority (N = 14) of these 22 were suffering from ongoing alcohol addiction, 3 from drug addiction, 3 from alcohol abuse, and 1 from ongoing drug abuse. Only one man was not suffering from a substance-induced disorder, but from an affective disorder. Comorbidity was diagnosed in two-thirds of the probands. The most frequent combination was alcohol and drug dependence (N = 30). This was followed by the combination of substance-induced and anxiety disorders (N = 20). In all, 40 probands scored 4 or more points on the Braunschweig Characteristics List (BML) and were, thus, classified as chronic multiple damaged by alcohol. Since the reliable retrospective diagnosis of disorders is difficult to achieve, only ongoing disorders were taken into account (Table 1).

Existing help-seeking behavior

Approximately one-third of the 91 probands reported having no general practitioner ("Hausarzt"). Of the 56 men who named their general practitioner, 30 had consulted him about physical problems during the previous 4 weeks, while 5 of these 56 reported not having consulted their general practitioner during the last 6 months. The majority of probands (79 %) claimed never to have sought help in dealing with mental problems; 12 of the 19 men who had sought help had turned to a psychotherapist with a qualification in psychology or medicine, and only 3 reported being in ongoing outpatient psychiatric therapy or psychotherapy. In contrast, 40 had already been hospitalized as psychiatric patients, with addictions given as the most frequent reason for admission. However, an active search for help cannot be assumed in most of these cases, as most patients had been admitted to hospital within the scope of emergency treatment for intoxication or advanced withdrawal, and most of them had discharged themselves contrary to medical advice after overcoming the acute disorder. A total of 41 probands stated that they had utilized at least one outpatient or advisory service during the past 12 months. With 25 nominations, the most frequently named of these outpatient offers of support were contact points such as 'Streetwork', a voluntary youth-assistance agency run by the Protestant church in the Tübingen region; 10 reported having utilized job offers ('Job on' agency, etc.), while 8 had attended an addiction advisory center ("Suchtberatungsstelle"), and 4 a self-help group. One man had made use of the Psychosocial Service ("Sozialpsychiatrischer Dienst") (multiple nominations were possible) (Table 2).

To obtain a subjective assessment of the need for support in addition to the objective data on the living situation, the probands were asked the open question: "What might help you improve your present situation?". At 50 %, the factor most frequently specified was a job or vocational training. In second place with 36 % was the desire for an apartment/accommodation. A total of 12 % wished for an improvement in their financial situation, and 12 % for a partnership. Other factors named were: more/better recreational facilities (8 %), improved family relationships (7 %), health (4 %), to be accompanied on visits to local authorities (3 %), therapy/rehabilitation (3 %), reduced alcohol/drug consumption (3 %), and – as a thoroughly serious proposal – the legalization of drugs (3 %).

Social integration and quality of life

The GAF-based objective global assessment of functioning revealed that the majority of probands (N = 37) were moderately impaired in their social or vocational functioning; 22 were seriously impaired, and 19 only slightly impaired; 9 probands displayed only temporarily re-

Table 1 Current prevalence of psychiatric disorders

Current psychiatric diagnoses N = 66	N	%
Multiple diagnoses possible		
Alcohol dependence	49	74 %
Drug dependence	23	34 %
Anxiety disorder	17	26 %
Affective disorder	10	15 %
Psychotic disorder	7	11 %
Comorbidity	44	67 %

Table 2 Help-seeking behavior in the past 12 months

Help-seeking behavior in the past 12 months N = 91	N	%
Utilization of outpatient support/services in the past 12 months (multiple designations possible)	1	1.1
Psychosocial service		
Contact points/day centers (primarily 'Streetwork')	25	27.5
Self-help groups	4	4.4
Offers of employment (primarily 'Job on')	10	11
Counseling centers for addicts	8	8.8
Other services	12	13.2
Utilization of medical/psychotherapeutic treatment offers (outpatient/inpatient) in the past 12 months (multiple designations possible)		
Psychiatric hospital	14	15.4
Psychiatrist	4	4.4
Psychotherapist	2	2.2
General practitioner	54	59.3

stricted functioning or reactive symptoms; and 4 severe to very severe impairment. The mean GAF value was M = 63 (SD = 10, median: 65).

The subjective assessment of quality of life with reference to the Berlin Quality of Life Profile revealed least satisfaction in the fields of employment and finances. A total of 38 probands were dissatisfied with their employment situation, and 41 with their financial situation. In contrast, satisfaction was predominant with respect to law and order, and to family. The highest level of satisfaction was recorded with regard to friends and acquaintances, where 43 probands reported being satisfied with their current situation and 42 moderately satisfied (Table 3).

Cognitive and intellectual capacity

Assessment of the intellectual capacity with the Multiple Choice Vocabulary Test (Form B) indicated that an average capacity could be assumed in 44 of the probands, while 17 had a low to very low capacity and 16 an above-average capacity. No assessment could be made for the 14 men whose command of the German language was inadequate for this test. Assessment of the cognitive impairment resulting from a cerebral dysfunction was based on the Mini Mental Status Test. The majority of probands (N = 57) showed no cognitive impairment, 24 men displayed slight cognitive impairment, while moderate impairment was to be assumed in 6, and severe impairment in 2.

The subtests "Digits-Symbol Test" (DS) and "Mosaic Test" (MT) of HAWIE-R are a measure of general intelligence, in particular the aptitude for problem-solving thinking (MT) and the psychomotoric speed and attentation. In problem-solving thinking, 50 of the probands displayed a below-average to clearly below-average performance. In the Digits-Symbol Test, 60 probands achieved a below-average to clearly below-average score.

Discussion

The central aim of the present study was to register not only epidemiologic data, but also the extent of psychiatric disorders among homeless men in the city of Tübingen. A further central issue was the help-seeking behavior of this clientele with reference to somatic, psychiatric and social support.

In contrast to other studies (e. g., Salize et al. 2001; Fichter et al. 1996), the present study aimed at registering all persons belonging to the target group in a defined region. This seemed feasible in view of the fact that the population of Tübingen is only approximately 82 000, while that of the local rural administrative district is only about 200 000. A complete census could be attempted only because the support of all agencies and contact points concerned, of institutions offering support to addicts and to the homeless, of undergraduate and civic action groups, and of the university clinics was secured before the start of the study. Such an investigation is facilitated by the compulsory registration existing in Germany and by low-profile, community-based offers of support for the homeless. At local level, the survey was facilitated by long-standing personal contacts between the research institute and the support systems involved. Based on this initial situation, the 151 men identified can be cautiously assumed to represent the vast majority of those concerned.

Of those concerned, 60% were willing to participate actively in the study. In all, 17 % refused on initial personal contact to participate, while no personal contact was established by the investigators with 27 % of the target group. These were among those persons who were known only through contact points or the registration agency to be living in Tübingen and to fulfill the target group criteria. For reasons of data protection legislation, they could be informed of the study and asked to participate only indirectly by mail. Those from whom no reply was received accounted for 27 % of the total sample. If personal contact had been established, a better recruitment rate from this group might well have been possible. At least some of those actively refusing to take

Table 3 Berlin Quality of Life Profile

Aspect of life	Dissatisfied	Moderately satisfied	Satisfied	No data
General satisfaction with life	12.1	52.7	33	2.2
Job/training	41.8	27.5	28.6	2.2
Leisure time activities	12.1	40.7	42.9	4.4
Finances	45.1	34.1	18.7	2.2
Accommodation	13.2	42.9	41.8	2.2
Law and order	2.2	42.9	52.7	2.2
Family	14.3	33	50.5	2.2
Friends/acquaintances	1.1	37.4	59.3	2.2
Physical health	11	38.5	48.4	2.2
Mental health	4.4	41.8	51.6	2.2

N = 91; data in percent

part in the study were known through third parties to be suffering from a severe psychiatric disorder. The investigators gained the impression that these refusers could be divided into two groups: on the one hand, a few severely mentally ill men, and, on the other hand, men who were not suffering from mental illness, but had long been homeless. According to the collected data, most of those not participating had a long-term record of homelessness and were significantly older than the actual probands. It is quite conceivable that these men had no desire for change in view of their long-term homelessness and the "good" living situation in local-authority accommodation. From the strictly statistical standpoint, however, these significant differences mean that the probands cannot be claimed to be representative of the entire investigated population. However, as the diversity of homeless patients registered in this study was larger than in the other cited studies, a more comprehensive picture of the problems is provided – at least for a small city and surrounding rural region.

With respect to fundamental sociodemographic data such as age, partnership, education and vocational training, the findings comply largely with those of other studies carried out in Germany, other European countries, or the USA. On average, those concerned were aged between 40 and 45 years, were living on their own, had a lower educational level in general, and were predominantly unemployed at the time of the investigation (e. g., Fichter et al. 1996; Salize et al. 2001; Leonori et al. 2000). At 38.5 years (men: 39.7 years), the mean age determined for the population of Tübingen in 2001 was below the average age of the present sample (Statistical Office of Baden-Württemberg).

At approximately 7 years, the determined period of ongoing homelessness was also within the range of 5 years to about 10 years as reported in other German or European studies (Podschus and Dufeu 1995; Leonori et al. 2000; Salize et al. 2001; etc.). Because of the definition of homelessness given in the German Social Welfare Act, persons accommodated in a municipal hostel, some of them long-term, were included in the present study. In other studies (e. g., Podschus and Dufeu 1995; Kovess and Lazarus 2001), the majority of probands were living on the street or in short-term accommodation, i. e., on a daily or weekly basis. However, living in a hostel for the homeless is very remote from normal living circumstances, both in legal status and in terms of quality, so that such persons undoubtedly have to be included in the target group.

The reasons given by the probands for their homelessness were similar to those reported in other studies. In the study by Fichter and Quadflieg (1999), 76 % of the probands reported having had alcohol problems prior to becoming homeless, while 15 % claimed that the two problems had occurred simultaneously, and only 9 % stated that the alcohol problem had occurred after they became homeless. Reliable statements on this aspect could often not be made by the probands, as the first phase of their homelessness was so far back. It was, thus, often impossible to decide to what extent the consumption of addictive substances was a cause of homelessness and/or an outcome of the homelessness. Causes frequently named in our study, such as partnership conflicts (18 %) and conflicts in the family of origin (16 %), may well have been associated with the earlier consumption of addictive substances. In the study by Leder et al. (1999), such conflicts were also given as the main cause of homelessness, but without alcohol- or drug-related problems being listed separately. Meller et al. (2000) reported other precipitants of homelessness: financial problems (65.1 %), unemployment/job loss (49.3 %), alcohol problems (37 %), and mental problems (17.1 %) (multiple nominations were possible). Sullivan et al. (2000) pointed out that most homeless persons had been economically or socially deprived even in childhood. They concluded from their results that, while mental illness may be the causal factor underlying homelessness in some cases, it is not a significant risk factor per se.

In conformity with other German studies (e. g., Salize et al. 2001; Fichter et al. 1996; Fichter and Quadflieg 2000), the prevalence of psychiatric disorders was high at 73 %, with addictions being predominant. Overall, a high proportion of psychiatric comorbidity was also recorded.

Affective disorders and anxiety disorders were the next largest categories. However, figures on comorbidity vary. Fichter and coworkers (1996, 2000) reported more cases of affective disorder, but Salize et al. (2001) a slightly higher number of cases of anxiety disorder. This difference might be due to the differing diagnostic instruments (ICD-10 and DSM-IV). The international literature also reveals differences that are certainly due in part to social factors. In the Netherlands, for example, the number of drug addicts is very high and more homeless patients are suffering from an anxiety disorder than from an affective disorder. In the Paris-based study by Kovess and Lazarus (2001), unlike most other studies, it was not addictions that were predominant, but affective disorders with just under 24 %. In that study, however, the fact that 15 % of the probands were women contributed to the difference in prevalence rates.

The high prevalence of psychiatric disorders was accompanied by a low usage of offers of support, especially of outpatient psychiatric/psychotherapeutic treatment. The majority of probands (79.1 %) reported never having sought help in dealing with psychiatric problems. Concerning the low extent, confirmed in all studies, to which offers of outpatient support are taken up, Kellinghaus et al. (1999) rightly pointed out that low treatment motivation may also be due to a limited awareness of the illness. The large number of those who had once undergone psychiatric hospitalization (44 %) contradicts this statement only on first sight. The majority of these cases were emergency admissions resulting from acute intoxication, agitation, or the early stages of withdrawal, most of them induced by helpers such as the police, health officers or civic support groups, not infrequently against

the will of those concerned. In the Tübingen region, most of these cases are admitted to the University Clinic of Psychiatry. Most patients discharge themselves, contrary to medical advice, on the day after admission unless the preconditions for them to be sectioned are fulfilled. This cannot be seen as help-seeking behavior in the true sense. In the study by Meller et al. (2000), only 27.6 % of the male probands had ever undergone psychiatric hospitalization, although the number of alcohol addicts was similarly high at 71.2 % (6-month prevalence). This may be due to differences in the specified responsibility for the admission of intoxicated patients, who are often admitted elsewhere to departments of internal medicine.

The high utilization of outpatient medical support recorded in the present study is surprising, but can certainly be attributed to the fact that many of the probands were known to be suffering simultaneously from physical illnesses (Fichter and Quadflieg 2000). This may well be due to the relatively compact structure of the city of Tübingen and the availability of an adequate number of general practitioners willing to treat this clientele. In the USA, in particular, recent years have seen the publication of an increasing number of studies on the concept of case management as a means of dealing with the specific problems of this clientele. Results speak for this multidisciplinary, low-profile approach (e. g., Mueser et al. 1998). This might be an appropriate approach through local general practitioners for further-reaching addiction-specific treatment and counseling.

Unlike the procedure in most other studies, social integration/functioning (GAF) and subjectively perceived satisfaction with various areas of life (BeLP) were investigated with internationally recognized measuring instruments in the present study. This revealed that two-thirds of all probands were moderately to clearly impaired in their social functioning.

Subjective satisfaction with life, too, has only sporadically been recorded with standardized measuring instruments. In view of the frequently disastrous social circumstances, subjective satisfaction with life is often assumed to be low without being further investigated. When it is investigated, as in the present study, a surprisingly high general satisfaction with life is revealed (e. g., Salize et al. 2001). In particular with respect to living accommodation, where a lower level of satisfaction would have been expected, more than 80 % of the probands claimed to be "fairly satisfied" or "satisfied". Some probands seemed to find accommodation "of their own", albeit on a short-term basis or in very poor condition, preferable to a move into a local-authority hostel for the homeless. Equally surprising in view of the high prevalence of psychiatric disorders was the probands' high level of satisfaction with their mental health, with 95.5 % claiming to be moderately to completely satisfied. This suggests a low level of awareness of the illness and of motivation for change, especially among addicted patients. The same conclusion was reached by Kellinghaus et al. (1999), who likewise found an unexpectedly positive subjective assessment of mental and physical well-being among their sample. Least satisfaction was expressed in the fields of employment and finances. This is hardly surprising, since just under 70 % of the probands were unemployed at the time of the interview. The significance of employment is also reflected in the fact that the majority of probands (51.6 %) said a job or vocational training in reply to the question of what might help them improve their situation. One reason is certainly that it would normally be a job that enabled private accommodation to be financed at all. The notably high proportion of probands taking up an offer of employment confirms that this area meets with acceptance and could be expanded.

Previous studies have largely failed to take account of the probands' intellectual level. Although the predominantly low level of education among the probands might suggest a limited intellectual capacity, an average intellectual capacity (MWT-B) was found to be predominant (48.4 %), with the proportions of those with a below-average or above-average intellectual capacity being almost equal. In view of the fact that the test used investigates those parts of the intellectual capacity known as "crystalline" intelligence, the possibility of a disproportionate number of the probands having had below-average intelligence can be ruled out. As in other studies, the general cognitive capacity was measured with the Mini Mental Status Test. The results comply approximately with the figures published in other studies (e. g., Fichter et al. 1996; Salize et al. 2001). Marked restrictions in specific cognitive functions were registered in many of the probands (66 %). The performances in problem-solving thinking (HAWIE-R: Mosaic Test) were also mainly (55 %) below or even notably below average. However, the selective functions investigated here, in particular, attention, are readily influenced by situational framework conditions, by the effects of excessive alcohol intake during the preceding days, and by minor withdrawal symptoms, etc. This would account for the poor performance of the probands in these tests, especially in contrast to the intelligence level in normal range.

Limitations of the study

A number of limitations have already been specified: the representativity of the probands for the total group is limited; although the aim of a full census was achieved according to the impression of the institutions involved, this cannot ultimately be proven; subjective viewpoints of the probands were recorded, but their applicability as "soft data" is limited.

The comparability of the findings with those of studies performed outside Germany is, like any investigation on a national scale, limited to some degree, as the specific administrative framework conditions and health care structures for homeless, mentally ill and addicted persons vary from one country to another and may have a crucial influence on the findings.

The diagnoses made were only current and not lifetime diagnoses. The aim, on the one hand, was to keep the study period within an acceptable temporal framework. On the other hand, this approach took account of the fact that the recollective capacity is often too limited to answer questions in detail, partly as a result of the very changeable, unstable living situation.

In the case of probands whose native language was not German, the investigators had to decide whether their command of German was sufficient for an interview. This meant that not all questionnaires and tests could be used or applied in every case, so that complete data sets were not available for some probands.

Conclusions

In the present study, a full census of homeless persons in a community care region centered on the small university town of Tübingen was aimed at for the first time in Germany. With respect to psychiatric morbidity, no essential difference was observed from studies based on selective samples in large German cities and in the industrialized world.

To date, no success has been achieved in integrating these persons satisfactorily into the psychiatric care system. A network of low-profile offers from the sphere of psychiatry, support for addicts, and support for the homeless – in Germany, largely separate social welfare structures – seems to have a trail-blazing function. In this context, offers of care and treatment based on contact between the target group and the primary medical care system are of crucial importance. The contents should be focused on the development of an adequate understanding of the illness concerned, using psychoeducational therapeutic approaches. Offers of vocational rehabilitation need to be closely linked with this, since the probands expressed the view that employment is of crucial significance to their overall satisfaction with life.

The quality and success of a psychiatric care system – and of the social security system as a whole – are ultimately reflected in the effectiveness of accessing this exceptionally problematic clientele.

Acknowledgements The study was funded within the framework of the "Applied Clinical Research (AKF)" advancement program of the Medical Faculty, University of Tübingen, Germany (project no. 42–1–0). Logistic support was provided by local authorities and by regional institutions offering support for the homeless ("Wohnungslosenhilfe").

References

1. Becker H, Kunstmann W (2001) The Homeless Mentally Ill in Germany. Int J Ment Health 30(3):57–73
2. Bortz J (1999) Statistik für Sozialwissenschaftler. 5. Aufl. Springer, Berlin Heidelberg
3. Bundesarbeitsgemeinschaft Wohnungslosenhilfe e. V. (2003) Zahl der Wohnungslosen. BAG Informationen
4. Driessen M, Dilling H (1997) Psychische Störungen bei Wohnungslosen – angloamerikanische Untersuchungen zu Epidemiologie und Versorgung. Psychiat Prax 24:162–166
5. Eikelmann B, Inhester M, Reker T (1992) Psychische Störungen bei nicht-sesshaften Männern. Defizite in der psychiatrischen Versorgung? Sozialpsych Informationen (2):29–32
6. Eikelmann B (2003) Obdachlosigkeit als Herausforderung – Folgen der Desinstitutionalisierung, Defizite der psychiatrischen Rehabilitation und Kooperation. Nervenarzt 74(Suppl 2):S64
7. Fichter M, Koniarczyk M, Greifhagen A, Koegel P, Quadflieg N, Wittchen H-U, Wölz J (1996) Mental illness in a representative sample of homeless men in Munich, Germany. Eur Arch Psychiatry Clin Neurosci 246:185–196
8. Fichter M, Quadflieg N (1999) Alcoholism in homeless men in the mid-nineties: results from the Bavarian Public Health Study on homelessness. Eur Arch Psychiatry Clin Neurosci 249:34–44
9. Fichter M, Quadflieg N, Cuntz U (2000) Prävalenz körperlicher und seelischer Erkrankungen. Daten einer repräsentativen Stichprobe obdachloser Männer. Dt Ärztebl 97:980–986
10. Folstein M, Folstein S, McHugh P (1990) Mini Mental Status Test (MMST). Beltz Weinheim
11. Gulcur L, Stefancic A, Shinn M, Tsemberis S, Fischer S (2003) Housing, hospitalisation and cost outcomes for homeless individuals with psychiatric disabilities participating in continuum of care and housing first programmes. J Commun Appl Soc Psychol 13:171–186
12. Hilge T, Schulz W (1999) Entwicklung eines Messinstrumentes zur Erfassung chronisch mehrfach geschädigter Alkoholabhängiger: Die Braunschweiger Merkmalsliste (BML). Sucht 45(1):55–68
13. Kellinghaus C, Eikelmann B, Ohrmann P, Reker T (1999) Wohnungslos und psychisch krank. Fortschr Neurol Psychiat 67: 108–121
14. Koegel P, Burnam A, Farr K (1988) The prevalence of specific psychiatric disorders among homeless individuals in the inner city of Los Angeles. Arch Gen Psychiatry 45:1085–1092
15. Kovess V, Lazarus C (2001) Use of mental health services by homeless people in Paris. Int J Ment Health 30(3):26–39
16. Längle G, Egerter B, Albrecht-Dürr F (2003) Versorgung psychisch kranker Wohnungsloser im ländlichen Raum – randomisierte Interventionsstudie mit Vollerhebung. Nervenarzt 74(Suppl 2):S64
17. Leder T, Volk S, Georgi K, Pflug B (1999) Eine Feldstudie zur psychosozialen Situation Wohnungsloser in Frankfurt am Main. Nervenarzt 70:650–656
18. Lehrl S (1995) MWT-B. Mehrfachwahl-Wortschatz-Test Form B 3. Auflage Straube, Erlangen
19. Leonori L, Munoz M, Vazquez C, Vazquez J, Bravo M, Nuche M, Brandt P, Bento A, Horenbek B (2000) The Mental Health and Social Exclusion European Network: A Research Activity Report on European Homeless Citizens. Eur Psychol 5:245–251
20. Meller I, Fichter M, Quadflieg N, Koniarczyk M, Greifenhagen A, Wolz J (2000) Die Inanspruchnahme medizinischer und psychosozialer Dienste durch psychisch erkrankte Obdachlose. Nervenarzt 71:543–551
21. Mueser K, Bond G, Drake R, Resnick S (1998) Models of Community Care for Severe Mental Illness: A Review of Research and Case Management. Schizophr Bull 24(1):37–74
22. Oliver J (1991) The social care directive: Development of a quality of life profile for use in community services for the mental ill. Soc Work Soc Sci Review 3:5–45
23. Podschus J, Dufeu P (1995) Alkoholabhängigkeit unter wohnungslosen Männern in Berlin. Sucht 41(5):348–354
24. Priebe S, Hoffmann C (1996) Das Berliner Lebensqualitätsprofil. 2. korrigierte Version unter Mitarbeit von Röder-Wanner C, Kaiser W und Hoffmann K Freie Universität Berlin
25. Rössler W, Salize H, Biechele U (1994) Psychisch kranke Wohnsitzlose – Die vergessene Minderheit. Psychiat Prax 21:173–178
26. Salize H, Dillmann-Lange C, Kentner-Figura B (2003) Risikomodelle des Abstiegs in die Wohnungslosigkeit – Welche Rolle spielen psychische Störungen? Nervenarzt 74(Suppl 2):S64

27. Salize H, Horst A, Dillmann-Lange C, Killmann U, Stern G, Wolf I, Henn F, Rössler W (2001) Needs for mental health care and service provision in single homeless people. Soc Psychiatry Psychiatr Epidemiol 36:207–216
28. Saß H, Wittchen H-U, Zaudig M (1996) Strukturiertes klinisches Interview für DSM IV. Deutsche Bearbeitung der 4. Auflage des DSM der American Psychiatric Association. Göttingen: Hogrefe
29. Sleegers J, Spijker J, van Limbeek J, van Engeland H (1998) Mental health problems among homeless adolescents. Acta Psychiatr Scand 97:253–259
30. Stein L, Test M (1980) Alternative to mental hospital treatment: Conceptual model, treatment program, and clinical evaluation. Arch Gen Psychiatry 37:392–397
31. Sullivan G, Burnam A, Koegel P (2000) Pathways to homelessness among the mentally ill. Soc Psychiatry Psychiatr Epidemiol 35: 444–450
32. Tewes U (1991) HAWIE-R. Hamburg-Wechsler Intelligenztest für Erwachsene – Revision 1991. Huber, Erlangen
33. Torchalla I (2002) Wohnungslose Frauen mit psychischer Erkrankung in Tübingen. Diplomarbeit am Psychologischen Institut der Universität Tübingen
34. Torchalla I, Albrecht F, Buchkremer G, Längle G (2003) Wohnungslose Frauen mit psychischer Erkrankung – eine Feldstudie. Psychiatr Prax (accepted)
35. Vazquez C, Munoz M, Sanz J (1997) Lifetime and 12-month prevalence of DSM-III-R mental disorders among the homeless in Madrid: a European study using the CIDI. Acta Psychiatr Scand 95:523–530
36. Weltgesundheitsorganisation (1993) Internationale Klassifikation Psychischer Störungen: ICD-10. Bern, Göttingen, Toronto, Seattle: Hans Huber
37. Wessel T (1996) Im "Bermuda-Dreieck". Patienten zwischen Psychiatrie, Obdachlosenhilfe und Suchtkrankenhilfe. In: Institut für kommunale Psychiatrie (Hrsg.) Auf die Straße entlassen. Obdachlos und psychisch krank. Psychiatrieverlag Bonn, pp 77–94)
38. Wittchen H, Zaudig M, Fydrich T (1997) SKID. Strukturiertes klinisches Interview für DSM IV Achse I und Achse II. Göttingen: Hogrefe