

Lifetime and 12-month prevalence of DSM-III-R mental disorders among the homeless in Madrid: a European study using the CIDI

Vázquez C, Muñoz M, Sanz J. 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 1997; 95: 523-530. © Munksgaard 1997.

The characteristics of homeless people in Europe are almost unknown. The aim of this study was to describe the lifetime and 12-month prevalence of DSM-III-R/CIDI mental disorders among the homeless population of Madrid. A total of 261 homeless subjects, sampled from different sites, participated in the study. In terms of DSM-III-R lifetime rates, 50% of the sample had substance-related disorders and 35% had non-substance-related disorders. In total, 67% of the study subjects had some type of disorder. The lifetime prevalence of schizophrenia (4%) was lower than reported in most previous studies. Although the mental illness pattern is similar to that observed in studies using the same diagnostic methods, the results reported here show a lower prevalence of drug abuse and schizophrenic disorders. The reasons for these cultural differences and their implications for international public health research are discussed.

C. Vázquez, M. Muñoz, J. Sanz

School of Psychology, Universidad Complutense,
Madrid, Spain

Key words: homelessness; mental illness;
drug abuse; alcohol abuse; comorbidity

Carmelo Vázquez, Facultad de Psicología,
Universidad Complutense, 28223 Madrid, Spain

Accepted for publication October 19, 1996

Introduction

Until now, the majority of the research on homelessness has been conducted in the USA. However, the problem appears to be increasing in many industrialized societies, and is reaching epidemic proportions (1).

Unfortunately, the condition of the homeless in Europe is far from well understood. No common standards have been set to define homelessness on an operational level. Each country reports data obtained using different methods and counting procedures (2). According to the most frequently employed indicators, which are based on the percentage of monthly net income, there are 53 million people below the poverty line in the European Union (EU). It is estimated that 1.8 million people per year are either dependent on public and voluntary services for temporary shelter and housing, or else sleep rough (2). Broader definitions might also include those homeless people who stay with friends or relatives, increasing this estimate to 2.7 million people over a 1-year period. However, it is

apparent that the problem of homelessness does not affect all European countries, or similar cultural and geographical areas, to the same extent. In Spain, statistics based on the number of people using services for the homeless suggest that, out of the total population of 40 million, only 11 000 people could be described as literally homeless (3). However, this figure could be higher if those individuals who live in poor housing conditions are also taken into account.

Little is known about possible cross-cultural differences, despite the fact that some experts have suggested that studies of this aspect should be a high priority (4). It would be very worthwhile to determine exactly the differentiating characteristics and causes of homelessness in different countries. Existing European studies, mainly from the UK, on mental health among the homeless population show very elevated rates of severe mental disorders, especially psychoses (5). However, these studies tend to have sampling biases, because their

samples are typically drawn from emergency rooms or special accommodation (such as low-cost hostels), i.e. places which are associated with higher rates of psychiatric disorders (6). Furthermore, the European studies have not used valid, standardized procedures for reaching psychiatric diagnoses (7).

Briefly, then, these are some of the main problems encountered in studying psychiatric morbidity among the homeless (8, 9). One exception at this stage is a study conducted in the UK on a large sample of homeless people ($n=1100$), using the Clinical Interview Schedule-Revised (CIS-R) and a screening test for psychosis, after which subjects who tested positive were interviewed with the Schedules for Clinical Assessment in Neuropsychiatry (SCAN) several days later (10).

The available data on the mental health of the homeless are relatively heterogeneous (8, 9) because the various studies have differed in sampling procedures used, the selection of subjects, and even in the definition of mental illness (9, 11–13). Early studies reported extraordinarily high rates of mental illness among the homeless population. Needless to say, these rates were likely to be biased due to sampling problems, among other factors (11). In recent years, studies using more satisfactory sampling and diagnostic procedures, mainly conducted in the USA, have in most cases concluded that between 25–35% of the homeless are seriously mentally ill (9, 14–17). It is estimated that 30–50% of cases of homelessness are linked to alcohol and drug abuse (14, 16, 17). Taking into account diagnostic overlap and comorbidity rates, it would appear that 50–60% of the homeless show some kind of mental illness and/or substance abuse (11).

Reliable data for countries other than the USA are almost non-existent. The aim of the present study was to provide an estimation of the prevalence of mental disorders among the homeless population of Madrid. To our knowledge, this is the first European study to date that has used a relatively large sample and has employed structured diagnostic interviews which have already been used on the homeless population of the USA (9) and in other non-European countries (6).

Material and methods

Madrid, the capital of Spain, has a population of about 4 million. Estimates of the number of homeless people, based on field samples and service centre statistics, range from 900 to 2000 (3). The most reliable data concerning the homeless in Madrid come from three different sources: the total capacity of the shelters ($n=991$); the studies conducted by the Unidades Móviles de Emergencia

Social (UMES) (Mobile Social Emergency Units), which provide a 24-hour service for homeless people found literally 'in the street' ($n=200$); and the Social Integration Services, which help homeless people to find work and housing. The latter group includes those individuals who have problems with living arrangements and who live mainly in bedsit hotels or else stay with relatives or friends ($n=250$). In total, the number of homeless people in Madrid can be estimated to be approximately 1500 to 2000.

Sample

In order to determine the criteria for inclusion in the sample, the operational definition of the *Stuart B. McKinney Homeless Assistance Act, 1987* was used with the following sampling criteria: Spanish nationality; over 18 years of age; and sleeping primarily in one or more locations such as the street, shelters, abandoned houses, parks, or other places normally unfit for human habitation (e.g. subways or tunnels) during the last month.

A list of all of the centres and existing social resources for the homeless in Madrid was compiled. Several centres were then selected to be used in a stratified sample depending on the nature of the service. The subjects were drawn from two shelters (355 beds), two soup kitchens (300 meals daily), one social integration service (attended by 100 individuals) and people living on the street, located by the UMES service (which assists 200 homeless people annually).

Using a random sample drawn from each of these selected centres, the aim was to collect data from approximately 15% of the target population. The randomization procedures included, in all cases except the emergency shelter, the use of a table of random numbers corresponding to the alphabetical subject lists that had been compiled on the day when data collection in each centre began. Substitutions were made according to the same random procedure. In the cited exception it was impossible to know who would use the services on any determined night. In this case, a combined time/reason sample was used, by selecting every third person who arrived at the centre after 22.00 hours at 10-min intervals until the daily quota was reached.

The most complex sampling procedure was the one used on the street. The UMES had completed a census of all individuals who had been attended to during the previous trimester, and from that census a sample was selected using a table of random numbers. First, subjects were selected for daily contact using the random numbers and the trimester reference index. The Mobile Unit then

located the subjects one by one in the street. This unit was followed by some of the interviewers who, once they had been introduced to the selected subject, conducted the interview. These procedures were continued until the daily quota was reached. If, for some reason, after the Mobile Unit had gone it was necessary to make a substitution, the investigators conducted an immediate search of the area to find another homeless person. All sampling was completed between November 1993 and April 1994. In order to minimize the risk of seasonal biases, the sample was obtained during the two most important seasons for this population. The sociodemographic characteristics of the sample are shown in Table 1.

Instruments

Version 1.1 of the Composite International Diagnostic Interview (CIDI) was used in its official Spanish adaptation (18). The CIDI is a structured interview that employs the diagnostic criteria of the DSM-III-R (19) and the ICD-10 (20), with high validity indices (21). It has recently been introduced into large-scale epidemiological studies (22). The CIDI includes the entire Diagnostic Interview Schedule (DIS) (23) and the Mini-Mental State Examination (24). Therefore, the data can be directly compared with those obtained in studies using the DIS (see Table 3). As is customary in studies of the homeless, the entire CIDI was not used, and only those modules pertaining to the following disorders were administered: major depressive disorder (single or recurrent episodes), dysthymic disorder, cognitive impairment, schizophrenia, schizophreniform disorders and disorders related to the consumption of alcohol or psychotropic substances.

Procedure

The interviews were conducted by pairs of interviewers from a team of 12 individuals who had been trained both by the World Health Organization (WHO) group for the Spanish CIDI (a group from the University of Puerto Rico, under the direction of Dr M. Rubio-Stipec) and by the authors of the present study.

For each interview the following protocol was used. First, the subjects were selected according to the procedures described above. The technical personnel from each service then contacted each individual, explained the nature of the study and asked for their voluntary co-operation. When consent had been obtained (from 88% of all subjects initially approached), each subject was introduced to the pair of interviewers. The duration of each interview was approximately 60 min (range 30–120 min). All of the

Table 1. Selected demographic characteristics of the total sample ($n=261$) according to gender, with data expressed as percentage values

Characteristics	Sample		
	Total ($n=261$)	Male subjects ($n=205$)	Female subjects ($n=56$)
Male (%)	79		
Age (years)			
18–30	24	26	14
31–45	38	39	44
46–60	28	29	24
> 60	10	8	18*
Mean value \pm SD	41.9 \pm 12.7	41.2 \pm 12.5	44.7 \pm 13.1
Years of education			
Mean \pm SD	7.7 \pm 4.5	7.8 \pm 4.3	7.5 \pm 5.2
Marital status			
Married	7	6	9
Widowed	5	2	12**
Separated or divorced	24	23	30
Single	64	68	48*
Total unmarried	93	94	91
Previous psychiatric hospitalization	25	23	36*
Previous jail or prison sentence	28	31	17*
Employment in the last year			
Unemployed	59	55	72*
Employed 0–6 months	30	33	18*
Employed 7–12 months	11	12	9
Currently unemployed	97	97	97
Where living homeless during the past month			
Shelters	57	54	73*
Streets	21	25	8**
Bedsit hotels	11	10	10
Shared housing	4	4	4
Other	5	5	5
Combination of places	2	2	0
Living alone	95	94	96
Duration of homelessness (years)			
< 1	20	25	18
1–5	39	39	31
5–10	16	13	23
> 10	25	23	28

* $P \leq 0.05$, ** $P \leq 0.01$.

interviews were tape-recorded. The CIDI scoring was completed using its computer algorithm.

Data analysis

The data presented here are expressed as percentage values. Dichotomous variables were compared using Chi-square tests. If the expected value of the cells was <5, Fisher's exact test was used. Continuous variables were compared by means of t -tests. In contrast to some of the other studies on homelessness (14, 25), the data here show final

Table 2. Major DSM-III-R diagnoses for 261 homeless people (205 men and 56 women) in Madrid, with data expressed as percentage values

Disorder	Lifetime prevalence			12-month prevalence		
	Total	Male subjects	Female subjects	Total	Male subjects	Female subjects
Mood disorders						
Major depression (single episode)	12	11	16	9	7	14
Major depression (recurrent)	8	7	11	5	4	9
Dysthymia	17	17	18	13	11	18
Any major depression	20	18	27	13	11	23*
Any mood disorder	27	25	34	19	17	30*
Psychotic disorders						
Schizophrenia	4	4	5	2	2	2
Schizophreniform disorder	0	0	0	0	0	0
Current cognitive impairment (Mini-Mental State Examination)						
Mild	—	—	—	19	17	27
Severe	—	—	—	6	5	9
Substance-related disorders						
Alcohol abuse or dependence	41	48	18**	28	32	12**
Substance abuse or dependence	17	17	16	10	10	11
Opioids	5	6	4	4	5	2
Cannabis	7	8	5	3	3	2
Hypnotics and sedatives	6	4	11	5	3	9
Cocaine	4	4	4	2	2	2
Anphetamines	5	5	4	2	2	0
Hallucinogens	1	1	0	1	1	0
Inhalants	0	0	0	0	0	0
Other substances	0	0	0	0	0	0
Mono/polyaddiction ratio	2.2	1.9	3.5	2.8	2.5	4.9
Any non-substance-related disorder (excluding OMD)	30	28	38	22	18	32*
Any non-substance-related disorder	35	33	43	26	23	38*
Any substance-related-disorder	50	56	27**	34	38	20**
Any mental disorder (excluding OMD)	62	66	50*	47	48	41
Any disorder	67	70	55*	51	52	46

* $P \leq 0.05$, ** $P \leq 0.01$; significant gender differences.
 OMD, organic mental disorder.

diagnoses with exclusion criteria, so the prevalence rates could be somewhat lower. However, the use of exclusion criteria is normal procedure in standard epidemiological surveys (22, 26).

Results

Demographic characteristics

Table 1 shows the demographic characteristics of the sample. In total, 79% of the sample was male, a value close to the estimates of the actual population given by various sources (2, 4). The mean age (\pm SD) was 41.9 ± 12.7 years, and the proportion of subjects over 60 years of age was significantly higher for men than for women (18% vs. 8%) ($\chi^2=4.95$, $df=1$, $n=261$; $P<0.03$).

With regard to the total duration of homelessness, 80% of the subjects in our sample had remained in the same housing situation for more than 1 year. This was in marked contrast to patterns reported in the USA where, as recent meta-analyses

of the literature have shown, 73% of the sample had been homeless for less than 1 year (4). Thus it would appear that our sample is characterized by a higher level of chronicity than that of US samples.

CIDI/DSM-III-R prevalence rates

The lifetime and 12-month CIDI/DSM-III-R diagnoses are shown in Table 2, where the data are presented both for the total sample and according to gender. Unfortunately, as there have been no Spanish household population studies of mental disorders using highly structured interviews, these data for the homeless could not be compared with the general population data as has been done in other published studies (14, 25).

Lifetime rates

The overall lifetime prevalence of mental illness was very high, 67% of the total sample displaying

Table 3. Lifetime prevalence of DSM-III or DSM-III-R disorders based on structured interviews, with homeless data compared to general population data, and prevalence rates expressed as percentage values

Population/authors	Location	Site	Instrument	n	Male (%)	Schizophrenia	Major depression	Dysthymia	Current severe cognitive impairment	Alcohol abuse or dependence	Drug abuse or dependence	
Homeless												
Fischer et al. (34)	Baltimore, MD	Shelters	DIS	51	94	2.0 ^a	13.7 ^b	NR	7.8	NR	NR	
Venez et al. (35)	California	Shelters, streets	DIS	315	62	11.0	22 ^b	NR	NR	57	48	
Koegel et al. (14) ^c	Los Angeles, CA	Shelters, meal programmes, indoor congregation areas	DIS	328	95	13.1	18.3	9.3 ^d	3.4	62.9	30.8	
Herrman et al. (6)	Melbourne, Australia	Shelters, hotels, accomodation houses	SCID	382	82	13	20	4 ^e	NR	44	20	
Toro & Wall (25)	Buffalo, NY	Shelters, streets	DIS	76	79	1.4	10.5	7.9	0	52.8	36.6	
North & Smith (32)	St Louis, MO	Shelters, hotels, indoor congregation areas	DIS	900	66	4.7	16.9	NR	NR	37.2	15.5	
Present study	Madrid, Spain	Shelters, meal and social programmes, streets	CIDI	261	79	4.2	19.8	16.8	6.3	44.3	13.2	
General population												
Regier et al. (26)	5 US cities	Households	DIS	18571	41	1.3	8.3	6.0	NR	13.3	5.9	
Kessler et al. (22)	48 US states	Households	CIDI	8098	48	0.6 ^a	12.7	4.8	NR	20.1	9.2	

DSM-III, Diagnostic and Statistical Manual; DIS, Diagnostic Interview Schedule; CIDI, Composite International Diagnostic Interview; SCID, Structured Clinical Interview for DSM-III-R; NR, not reported.

^a Includes 3-month symptoms.

^b Includes affective disorders in general.

^c DSM-III exclusion criteria were not used.

^d Only current episode.

^e Diagnosed with a version of the SCID.

some of the above-mentioned DSM-III-R disorders. The prevalence rates were significantly higher in men than in women (70% vs. 55%) ($\chi^2=4.10$, $df=1$, $n=261$; $P<0.04$). However, this difference was reversed when only disorders other than substance abuse were considered. In fact, although the difference did not reach the level of statistical significance, women tended to have more non-substance-related mental disorders than men (43% vs. 33%) ($\chi^2=1.80$, $df=1$, $n=261$; $P<0.18$). This reversed pattern appears to be due to the fact that men show disproportionately higher rates of alcohol abuse or dependence compared to women (48% vs. 18%) ($\chi^2=16.26$, $df=1$, $n=261$; $P<0.0001$). Substance abuse or dependence (excluding alcohol) affected 17% of the sample, but there were no significant differences between the sexes. An analysis of each of the specific substance abuse or dependence disorders assessed in the CIDI also revealed no significant gender differences (see Table 2).

Non-substance-related mental disorders affected 35% of the total sample. Most of the diagnoses were related to mood disorders, and 27% of the homeless subjects had experienced at least one mood disorder. Women showed higher rates than men (34% vs. 25%), although the difference was not significant ($\chi^2=0.17$, $df=1$, $n=261$; non-significant). Major depression (single or recurrent episodes) and dysthymia showed similar overall rates (20% and 17% of the total sample, respectively).

As mentioned earlier, compared to other published studies, the prevalence of schizophrenia was not particularly high. Only 4% of the total sample fulfilled the criteria for this diagnosis (4% for men and 5% for women). There were no cases of schizophreniform disorder.

12-month rates

Although the 12-month prevalence estimates were lower, the pattern of results obtained was very similar to that of the lifetime results. The rates for the total sample were as follows: 19% for mood disorders, 2% for schizophrenia, 6% for severe cognitive impairment, 26% for all of the non-substance-related mental disorders studied.

With regard to substance abuse or dependence, 28% of the sample displayed alcohol-related disorders and 10% displayed substance abuse disorders. In total, 34% of the total sample showed some type of substance-abuse-related disorder. Finally, 51% of the sample displayed some of the disorders studied over the 12-month period.

The differences between the sexes showed a similar trend to that observed in the lifetime rates.

However, the prevalence of current mood disorders was significantly higher in women than in men (30% vs. 17%) ($\chi^2=5.30$, $df=1$, $n=261$; $P<0.02$). This discrepancy helped to explain the significant difference in the prevalence of non-substance-related disorders: women showed higher rates than men (38% vs. 23%) ($\chi^2=4.48$, $df=1$, $n=261$; $P<0.03$).

Discussion

Examination of the demographic data for the sample (see Table 1) reveals some noteworthy differences between the pattern of homelessness in Spain and the patterns reported in studies from the USA (4) and UK (5). Perhaps the most interesting difference is that, compared to the US data (4), homelessness tends to be a more chronic condition in Spain. No other major differences in any of the comparable variables (gender ratio, marital status or previous psychiatric hospitalization) were found.

The data for psychiatric hospitalization are very similar to the results reported from US studies (4, 15). Although some authors have stated that an inadequate deinstitutionalization policy has led to a spectacular increase in the homeless population in the USA, there are no scientific data to support this commonly held view (8). Our data also appear to support the notion that deinstitutionalization does not play a major role in the homeless situation in Spain. First, the 12-month prevalence rates of schizophrenia-related disorders in our sample are low (2%). Secondly, the reforms of the psychiatric institutionalization policy in Spain began in the mid-1980s and, according to most experts, there has been no notable increase in the homeless population in Spain in recent years (3).

In Table 3 our data are compared with the results obtained from previous studies on homelessness which also used structured diagnostic interviews. With regard to mental disorders, both lifetime and 12-month prevalence rates of schizophrenia in the present study were lower than those reported in previous studies with similar sample sizes. This suggests that, in countries other than the USA, the prevalence rates of functional psychoses in the homeless population are lower (6). However, these data should be interpreted with caution, since structured interviews such as the CIDI have been shown to have a rather low reliability and validity in diagnosing psychotic disorders (22).

Affective disorders appear to be a major problem among the homeless population of Madrid. Although previous studies have reported lower rates of mood disorders (15), more recent studies have shown that depression could be the most frequent single problem (27). Depression has been a rather 'silent

disorder', and this may prevent homeless people from seeking help and may also interfere with the use of effective coping strategies (13, 27). In terms of prevalence rates using reliable psychiatric diagnoses, the lifetime prevalence of mood disorders in the present study (27%) was higher than the values reported in other studies using similar criteria. Despite this, the prevalence of major depression was similar to the prevalence rates cited in other studies (Table 3). The reason for the discrepancy in the prevalence of mood disorders may be due to the high prevalence of dysthymia among Spanish homeless people. This could be partially explained by the fact that some of the other studies (6, 14) have coded only current dysthymia, ignoring the lifetime rates of that disorder (see Table 3).

The prevalence of current cognitive impairment (6%) was very similar to the values obtained in other studies. However, this figure must be interpreted with caution, since the diagnostic tool (the Mini-Mental State Examination) is a very broad, unspecific test (22).

As in all of the previously published studies, substance-related disorders, and specifically alcohol abuse, were the most prevalent disorders in the present sample. In total, 50% of the subjects had a drug-related lifetime disorder (abuse or dependence). With regard to alcohol-related problems, the prevalence rates were very similar across different studies and cultures (Table 3), which would appear to support the view that alcohol may play a more important role in the condition of homelessness than was previously thought (14, 16). Health problems, lack of social and family support, problems with the legal system and even higher death rates have been associated with alcohol consumption among the homeless population (28, 29).

The drug abuse rates for this sample were about 50% of those reported in most previous studies (see Table 3). This seems striking in view of the fact that Spain is claimed to be one of the European countries with the highest rates of drug consumption (30). One possible reason for this discrepancy could be that the homeless population of Madrid does not appear to belong to the so-called 'new homelessness' (31). It is likely that younger, heavy drug users are not disproportionately incorporated into the homeless population, since most of them live with their families. Thus the family support network again seems to be an important structural factor that may help to explain these cross-cultural differences (3).

The literature on gender differences in mental health and homelessness is scarce, and the evidence that is available is contradictory (12, 32). In general, the results presented here indicate that, disregarding alcohol abuse, women have a poorer

current mental health status than men (9). This is consistent with the fact that, in this sample as in many other studies (33), women had been hospitalized more often. These results also reveal that alcohol abuse is a more frequent problem among men than in women, whereas mood disorders display the opposite tendency.

A final word of warning should be given about the CIDI. Studies using the CIDI (18) usually tend to report higher prevalence rates of mental disorders than those obtained in comparable studies that have employed diagnostic interviews such as the DIS (26). It is still unclear whether these differences are due to methodological biases, rather than representing true differences in prevalence.

As already stated, this study has attempted to clarify the characteristics of the homeless. Given the complexity of the problem and the multitude of intervening factors (4), it would be useful to conduct not only within-country but also between-country studies in order to shed further light on the homeless condition (7). Undoubtedly, concerted international action is needed to increase our general knowledge of a social issue which extends beyond national boundaries.

Acknowledgements

This study was funded by a grant from the European Union (Program Poverty 3, Innovative Initiatives, No. 32) to Dr Manuel Muñoz, Dr Carmelo Vázquez and Dr Juan A. Cruzado. We thank Abelardo Rodríguez, Dr Maritza Rubio-Stipec, Darío Pérez, Asociación Realidades, Damas Apostólicas, Grupo 5, Dr Mike Dennis, Dr Paul Koegel, and Dr Martha Burt for their assistance. We also thank our team of voluntary interviewers for their co-operation throughout all the stages of this study, and Katherine Karriker and Dayna Harting for their assistance with the translation of this paper.

References

1. BURT M. Over the edge: the growth of homelessness in the 1980s. New York: The Russell Sage Foundation, 1992.
2. AVRAMOV D. Homelessness in the European Union Social and legal exclusion in the 1990s. Brussels: European Federation of National Organizations Working with the Homeless (FEANTSA), 1995.
3. VÁZQUEZ C, MUÑOZ M, RODRIGUEZ A. Homelessness in Spain. In: HELVIE CO, KUNTSMANN M, ed. Homeless: an international perspective. Westport, CT: Greenwood Press, 1997 (in press).
4. SHLAY AB, ROSSI PH. Social science research and contemporary studies of homelessness. *Annu Rev Sociol* 1992; 18: 129-160.
5. SCOTT J. Homelessness and mental illness. *Br J Psychiatry* 1993; 162: 314-324.
6. HERRMAN H, MCGORRY P, BENNETT P et al. Prevalence of severe mental disorders in disaffiliated and homeless people in inner Melbourne. *Am J Psychiatry* 1989; 146: 1179-1184.

7. BHUGRA D, ed. Homelessness and mental health. Cambridge: Cambridge University Press, 1996.
8. COHEN CI, THOMPSON KS. Homeless mentally ill or mentally ill homeless? *Am J Psychiatry* 1992; 149: 816–822.
9. ROBERTSON MJ. The prevalence of mental disorders among homeless people. In: JAHIEL RI, ed. Homelessness. New York: John Hopkins University Press, 1992: 57–86.
10. MELTZER H. Methodological issues in conducting surveys of psychiatric morbidity among homeless people. Paper presented at the Institut National d'Etudes Demographiques (INED) Meeting on Homelessness, Paris, October 1995.
11. MANDERSCHIED RW, ROSENSTEIN MJ. Homeless persons with mental illness and alcohol or other drugs abuse: current research, policy, and prospects. *Curr Opin Psychiatry* 1992; 5: 273–278.
12. FISCHER PJ, BREAKEY WR. The epidemiology of alcohol, drug and mental disorders among homeless persons. *Am Psychol* 1991; 46: 1115–1128.
13. KOEGEL P, BURNAM A. Problems in the assessment of mental illness among the homeless. An empirical approach. In: ROBERTSON MJ, GREENBLATT M, ed. Homeless: a national perspective. New York: Plenum Press, 1992: 77–100.
14. KOEGEL P, BURNAM MA, FARR R. The prevalence of specific psychiatric disorders among homeless individuals in the inner city of Los Angeles. *Arch Gen Psychiatry* 1988; 45: 1085–1092.
15. ARCE AA, TADLOCK M, VERGARE MJ. A psychiatric profile of street people admitted to an emergency shelter. *Hosp Commun Psychiatry* 1983; 34: 812–817.
16. GARRETT GR. Alcohol problems and homelessness: history and research. *Contemp Drug Prob* 1989; 16: 301–332.
17. KOEGEL P, BURNAM MA. Alcoholism among homeless adults in the inner city of Los Angeles. *Arch Gen Psychiatry* 1988; 45: 1011–1018.
18. RUBIO-STIPEC M, BRAVO M, CANINO G. La Entrevista Diagnóstica Internacional Compuesta (CIDI): Un instrumento epidemiológico adecuado para ser administrado conjuntamente con otros sistemas diagnósticos en diferentes culturas (The Composite International Diagnostic Interview (CIDI): an epidemiological instrument that can be jointly administered with other diagnostic systems across different cultures). *Acta Psiq Psicol Am Latina* 1991; 37: 191–204.
19. American Psychiatric Association. Diagnostic and statistical manual, revised 3rd edn. Washington, DC: American Psychiatric Association, 1987.
20. World Health Organization. International Classification of Diseases — Classification of Mental and Behavioral Disorders, 10th revision. Geneva: World Health Organization, 1992.
21. JANCA A, ROBINS LN, COTTLER LB et al. Clinical observation of CIDI assessments: an analysis of the CIDI field trials-wave II at the St Louis site. *Br J Psychiatry* 1992; 160: 815–818.
22. KESSLER RC, MCGONAGLE KA, ZHAO S et al. Lifetime and 12-month prevalence of DSM-III-R psychiatric disorders in the United States. *Arch Gen Psychiatry* 1994; 51: 8–19.
23. ROBINS LE, HELZER JE, CROUGHAN JL, RATTCLIFF KS. National Institute of Mental Health Diagnostic Interview Schedule: its history, characteristics and validity. *Arch Gen Psychiatry* 1981; 38: 381–389.
24. FOLSTEIN MF, FOLSTEIN SE, MCHUGH PR. Mini-Mental State: a practical method for grading the cognitive state of patients for the clinician. *J Psychiatr Res* 1975; 12: 189–198.
25. TORO PA, WALL D. Research on homeless persons: diagnostic comparisons and practice implications. *Prof Psychol Res Practice* 1991; 22: 479–488.
26. REGIER DA, BOYD JH, BURKER JD et al. One-month prevalence of mental disorders in the United States: based on five epidemiologic catchment area sites. *Arch Gen Psychiatry* 1988; 45: 977–986.
27. LAGORY M, RITCHE FJ, MULLIS J. Depression among the homeless. *J Health Soc Behav* 1990; 31: 87–101.
28. BRICKNER PW. Health issues in the care of the homeless. In: BRICKNER PW et al., ed. Health care of homeless people. New York: Springer, 1985.
29. HANZLICK R. Deaths among the homeless: Atlanta, Georgia. *Morbidity Mortal Weekly Rep* 1984; 36: 297–299.
30. World Health Organization. Health in Europe: the 1993/94 Health for All Monitoring Report. WHO Regional Publications, European Series, No. 56. Geneva: World Health Organization, 1994.
31. ROSSI PH. The old homeless and the new homelessness in historical perspective. *Am Psychol* 1990; 45: 954–959.
32. NORTH CS, SMITH EM. A systematic study of mental health services utilization by homeless men and women. *Soc Psychiatry Psychiatr Epidemiol* 1993; 28: 77–83.
33. BREAKEY WR, FISCHER PJ, KRAMER M et al. Health and mental health problems of homeless men and women in Baltimore. *JAMA* 1989; 262: 1352–1357.
34. FISCHER PJ, SHAPIRO S, BREAKEY WR et al. Mental health and social characteristics of the homeless: a survey of mission users. *Am J Pub Health* 1986; 76: 519–524.
35. VERNEZ G, BURNAM MA, MCGLYNN EA et al. Review of California's Program for the Homeless Mentally Disabled. Santa Monica, CA: RAND Corporation, 1988.