21 Rouillon F, Fuhrer R. La version française de l'échelle CES-D (Center for epidemiologic studiesdeprssion scale). Description et traduction de l'échelle d'auto-évaluation. *Psychiatr Psychobiol* 1989;4:163–6.

22 Radloff LS. The CES-D scale: a self-report depression scale for research in the general population. *Appl Psychol Meas* 1977;1:385.

23 St John PD, Montgomery P. Does a single-item measure of depression predict mortality? *Can Fam Physician* 2009;55:e1–5.

24 Horwath E, Johnson J, Klerman GL, Weissman MM. Depressive symptoms as relative and attributable risk factors for first-onset major depression. *Arch Gen Psychiatry* 1992;49:817–23.

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Associations between deprived life circumstances, wellbeing and self-rated health in a socially marginalized population

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Background: Previous studies of self-rated health among socially marginalized people provide insufficient understandings of what influences their self-rated health. This study aimed to examine how disadvantaged life circumstances (homelessness, substance abuse, poverty) and general well-being were associated with poor self-rated health among the socially marginalized. **Methods:** In a nationwide survey in Denmark, 1348 users of shelters, drop-in centres, treatment centres and social psychiatric centres answered a self-administered questionnaire. We analysed data using logistic regression. **Results:** Disadvantaged life circumstances and well-being were associated with self-rated health, also when controlling for illness, mental disorder and age. Male respondents exposed to two or more disadvantaged life circumstances had higher odds of poor self-rated health [odds ratio (OR): 2.96; 95% confidence interval (CI): 1.80–4.87] than males exposed to fewer disadvantages. A low sense of personal well-being implied higher odds of poor self-rated health among both men and women. Among men, not showering regularly (OR: 1.81; 95% CI: 1.17–2.79), and among women, not eating varied food (OR: 2.24; 95% CI: 1.20–4.20) and exposure to physical violence (borderline significant) implied higher odds of poor self-rated health. Male and female respondents reporting lack of sleep and loneliness (borderline significant among women) had higher odds of poor self-rated health. **Conclusions:** The poor self-rated health among socially marginalized is strongly associated with massive social problems, poor living conditions and poor well-being. This study elucidates the need for more broadly based and holistic initiatives by both the health sector and the social services, incorporating health promotion initiatives into social work.

Introduction

This study aims to examine the complex relationship between disadvantaged life circumstances, general well-being and self-rated health in a socially marginalized population. We define our study population in accordance with the target group of the Danish Council for Socially Marginalised People: people who use welfare work services defined as shelters, drop-in centres, treatment centres and social psychiatric centres. These places either provide meals, accommodation, treatment, support or in other ways help socially marginalized people, e.g. homeless people, substance abusers or the mentally ill. In the following, we use 'socially marginalized people' as a joint term to refer to users of such welfare work services.

Socially marginalized people suffer from poor physical and mental health, poor well-being, low health-related quality of life and have few and inadequate social relations.[1–4] The health of the socially marginalized is strikingly poorer than that of the general population.[3,5–8] In a study among meal service users, the odds of fair or poor self-rated health were 4.5 times higher compared to the general population after adjusting for age and sex.[8]

There is strong evidence that good self-rated health decreases with age and with having a long-standing illness.[9] Homeless males generally rate their health more positively than women.[8,10–13] Additional predictors of poor self-rated health among homeless persons are accommodation status, being in a depressed mood, severe symptoms of alcoholism, length of unemployment, low educational level[8,13] and extent of previous, negative life events such as job loss, eviction and physical abuse.[14]

Current research within the field of health and well-being among socially marginalized people has not produced sufficient understanding of which factors influence self-rated health. One reason is that numerous studies focus only on one subgroup of the socially marginalized, e.g. the homeless, another is that most studies refrain from taking into account the possible accumulation of disadvantaged life circumstances, that is, that the socially marginalized are often exposed to several disadvantages simultaneously. In this study, we aimed to examine how the number of disadvantaged life circumstances that socially marginalized people are exposed to, as well as general well-being, were associated with poor self-rated health among socially marginalized people.

Methods

Study population and data collection process

Data on health and well-being of the socially marginalized were obtained from a survey conducted in Denmark in 2007. The study population was defined as people who use welfare work services: shelters, drop-in centres, treatment centres and social psychiatric centres.

Conducting a health survey among socially marginalized people requires innovative data collection procedures as this population includes people without an address or people who for various reasons do not respond to postal questionnaires. In this study, we collected data by asking shelters and centres, where socially marginalized people live or spend part of their time, to hand out and collect self-administered questionnaires among their users. Shelters/centres and respondents were not randomly selected and thus, the respondents were not a representative sample of users of such shelters and centres in Denmark. Questionnaires were in Danish; consequently, the survey included Danish-speaking respondents only.

The participating shelters and drop-in centres provide either accommodation or meal services, or both. They all provide various degrees of social support, counselling and practical help. Some of these shelters are run by public services under the Act on Social Services, which places municipalities under an obligation to accommodate socially marginalized people temporarily in shelters. Other shelters and most of the drop-in centres are typically run by voluntary organizations, e.g. the Church Army, and financed partly by private funds, partly by the state. In Denmark, shelters and drop-in centres provide services not only to homeless people but to a broader spectrum of socially marginalized people, e.g. substance abusers, the mentally ill and the poor. Also participating were municipal substance abuse treatment centres (day or day and night) and municipal/regional social psychiatric centres, providing ambulant psychiatric treatment and social support to mentally ill adults.

Data collection period ran from April to November 2007. In collaboration with the Council for Socially Marginalised People, we initially identified local key persons from the five largest Danish cities. Through them we identified and invited 156 shelters, drop-in centres, treatment centres and social psychiatric centres nation-wide to participate in the survey and to hand out and collect self-administered questionnaires to/from their users. Of the 156 invited shelters and centres, 132 participated in the study, equal to 84.6%, covering more than 40 cities. Through telephone interviews, we got information that reasons for not participating were primarily lack of time and preoccupation with other tasks.

Questionnaires were posted to the participating shelters/centres along with an information letter, which included an appeal to the shelter staff and volunteers for their help in conducting the survey, e.g. via reading the questionnaire aloud. We also held information meetings in the five largest cities. We frequently contacted the shelters/centres via telephone to obtain information on the progress of the data collection. Most of the selected shelters viewed the data collection process positively but also as very time-consuming.

Many respondents were able to fill out the questionnaire on their own; others, however, needed help from the staff with reading the questionnaire. Some respondents did not complete the questionnaire due to tiredness or heavy influence of drugs or alcohol. In October 2007, the Council for Socially Marginalised People employed four interviewers who worked full-time at different shelters/centres, addressed the users and assisted them in filling out the questionnaire if needed. Specific distinction between these three different ways of filling out the questionnaire was not possible.

The questionnaire

Data collection among socially marginalized people required special attention to the questionnaire. Most important, the questionnaire had to be short, easily read and intelligible due to respondents' potential difficulties with e.g. concentrating for a longer period of time, substance influence or illiteracy. Questions were included to identify specific groups of socially marginalized people, e.g. respondents without a home or respondents with different types of abuse. Additionally, it was important that the questions were meaningful and relevant to the respondents and that they reflected their actual living conditions. For example, we included questions on whether respondents showered or washed clothes regularly. Finally, we prioritized comparability with standardized and thoroughly tested questions from the national representative Danish Health Interview Survey 2005.[15]

Statistical analysis

Table 1 describes the variables included in the analyses. The outcome variable, self-rated health, was dichotomized with categories 1, 2 and 3 indicating 'good health' and categories 4 and 5 indicating 'poor health'. This categorization is different from the one typically used in health studies of the general population: very good or good health versus less than good health. We chose this categorization because of the relatively high prevalence of poor or very poor health among the socially marginalized. Table 2 describes the population.

Data were analysed by performing multiple logistic regression analyses, carried out separately for men and women. Initially, we conducted a series of univariate logistic regression analyses for each explanatory variable. Insignificant variables in the preliminary analyses were excluded in the multiple regression analyses (except age). In order to describe groups of respondents exposed to various degrees of disadvantages, we performed chi-square tests of the associations between number of disadvantaged life circumstances and different health and socioeconomic variables (table 3). In order to examine whether number of disadvantaged life circumstances, personal and social

Table 1 Variables used in the analyses

Variable	Measured as	
Number of disadvantaged life circumstances: 0, 1, 2+	Homelessness	Persons who stayed at a shelter/social institution or lived on the streets the past month, or persons having no home the past month
	Alcohol abuse	Persons who drank everyday or almost everyday and who, at the same time, reported that they consumed more than five drinks the last time they drank
	Drug abuse	Persons who took amphetamine, cocaine, acid, heroin or other drugs, or had taken methadone, Subutex, Rohypnol or Ketogan illegally the past month
	Poverty	Persons who often did not get enough food because they could not afford it
Personal well-being (yes/no)		Have felt very discouraged, depressed or unhappy the past 14 days
		Often stressed in daily life
		Have felt full of energy only a little of the time, or not at all, the past month
		Have felt tired all the time, or most of the time, the past month
Social well-being (yes/no)	Social relations	Meets family (not cohabiting) at least weekly
		Meets friends/acquaintances daily/almost daily
		Often unwillingly alone
	Fulfilment of important needs in everyday life	Do often not eat the desired quality or variation of food, because of lack of money
		Do never, seldom, or only sometimes, shower regularly
		Do never, seldom, or only sometimes, wash clothes regularly
		Do never, or almost never, get enough sleep to feel rested
	Exposure to negative life events	Have attempted suicide
		Have been exposed to threats of physical violence the past year
		Have been exposed to severe, physical violence the past year
		Have been exposed to sexual assaults the past year
Long-standing illness (yes/no)		Illness that has lasted six months or more
Self-reported mental disorder (yes/no)		Persons, who: (i) had a mental disorder, (ii) suffered from chronic anxiety or depression or (iii) suffered from another mental or nervous disorder
Self-rated health	How would you rate your health?	1. Very good, 2. Good, 3. Average, 4. Poor, 5. Very poor

Table 2 Characteristics of the study population

Characteristics	Study population (%)
Age (mean)	
Men	44.2
Women	42.0
Age groups (years)	
15–34	19.8
35–44	31.9
45–54	32.3
55–76	16.0
Sex	
Male	72.3
Marital status	
Married/reg. partnership	6.1
Divorced/separated/widowed	36.1
Unmarried/never married	57.8
Employed	
No	89.4
Self-rated health	
Very good/good	31.2
Fair	41.7
Poor/very poor	27.1
Long-standing illness	
Yes	61.8
Self-reported mental disorder	
Yes	48.9
Pain or discomfort in arms, hands, legs, knees, hips or joints within the past 2 weeks	
Yes, very annoyed	30.7
Stomach ache within the past 2 weeks	
Yes, very annoyed	15.6
Breathing difficulties with the past 2 weeks	
Yes, very annoyed	20.2
Often unwillingly alone	
Yes	28.4
Homelessness	
Yes	28.6
Drug abuse	
Yes	32.5
Alcohol abuse	
Yes	25.4
Poverty	
Yes	14.4

well-being, respectively, was related to poor self-rated health when controlling for age, long-standing illness, and mental disorder, we carried out two separate multiple logistic regression analyses. In the first model, we included disadvantaged life circumstances, personal well-being and well-known determinants of self-rated health, namely age, long-standing illness and mental disorder. In the second model, we included variables measuring social well-being instead of personal well-being. Thus, the variables age, illness, mental disorder and disadvantaged life circumstances were included in both models, but since the estimates for these variables were very similar in the two models, Table 4 only contains the estimates from the model including social well-being.

The level of significance for a variable to be associated with poor self-rated health was $P < 0.05$, while $0.05 < P < 0.1$ was considered borderline significant. The estimated odds ratios (OR) are presented with 95% confidence intervals (CI). We carried out the analyses using STATA, version 10.

Results

In total, 1348 shelter and centre users answered the questionnaire. In all, 22 persons had answered the questionnaire twice, which was detected by checking the data for duplicated civil registration numbers. We randomly deleted one registration for each of these duplicates. In this study, we used data on 1306 respondents, excluding 42 persons who had not stated their sex, age or self-rated health.

Table 3 Characteristics of respondents exposed to various degrees of disadvantaged life circumstances: homelessness, poverty, drug abuse, alcohol abuse

Number of disadvantaged life circumstances	0	1	2+
Mean age (years)	45.7	44.5	41.2
Sex ($P = 0.001$)[a]			
Male	66.4	73.4	78.2
Marital status ($P = 0.017$)			
Married/reg. partnership	8.2	5.6	3.9
Divorced/separated/widowed	39.4	34.4	34.5
Unmarried/never married	52.3	60.0	61.6
Employed ($P < 0.001$)			
No	83.7	91.2	93.8
Self-rated health ($P < 0.001$)			
Very good/good	43.0	27.8	21.3
Fair	41.4	42.8	40.3
Poor/very poor	15.6	29.4	38.4
Long-standing illness ($P = 0.543$)			
Yes	59.9	63.4	61.9
Self-reported mental disorder ($P = 0.008$)			
Yes	45.2	47.4	55.7
Pain or discomfort in arms, hands, legs, knees, hips or joints the past 2 weeks ($P = 0.024$)			
Yes, very annoyed	26.3	31.6	35.0
Stomach ache within the past 2 weeks ($P < 0.001$)			
Yes, very annoyed	9.6	12.6	23.3
Breathing difficulties with the past 2 weeks ($P < 0.001$)			
Yes, very annoyed	14.3	21.8	25.5
Often unwillingly alone ($P < 0.001$)			
Yes	23.6	26.6	37.0
n	449	500	357

a: *P*-values stem from chi-squared tests.

The typical respondent was middle-aged, male, single and unemployed. Among all respondents, 27% reported having poor or very poor health (table 2).

Being unemployed, having a poor health, different physical conditions and symptoms, or often being unwillingly alone was more prevalent among respondents exposed to two or more disadvantaged life circumstances than among those exposed to fewer disadvantages (table 3).

Among men, increased disadvantaged life circumstances was associated with higher odds of poor health. This was the case in the model including personal well-being (data not shown) as well as the model including social well-being. Among women, we found a borderline significant association between disadvantaged life circumstances and self-rated health only in the model including social well-being ($P = 0.054$) (table 4).

Personal well-being was associated with self-rated health among both men and women, also when controlling for age, long-standing illness, mental disorder and disadvantaged life circumstances. Thus, often feeling stressed in daily life, having felt very discouraged, depressed or unhappy, having felt full of energy only a little of the time or not at all and having felt tired all of the time or most of the time was associated with significantly higher odds of poor self-rated health.

Social well-being was partly associated with self-rated health. Male respondents who never or seldom showered regularly had higher odds of poor health than men who showered more often. Among women, often not being able to eat the desired quality or variation of food increased odds of poor health. Additionally, never getting enough sleep to feel rested was associated with higher odds of poor health among both men and women. We found a borderline significant association between having been exposed to severe physical violence and poor self-rated health among women ($P = 0.060$). Finally, often being unwillingly alone was associated with higher odds of poor health among men and among women, a borderline significant association was found ($P = 0.069$).

Discussion

Compared to respondents not exposed to disadvantaged life circumstances, those exposed to two or more disadvantages had a higher

Table 4 Odds of poor self-rated health among respondents. Results of logistic regression analyses and of multiple logistic regression analyses of associations between number of disadvantaged life circumstances, personal or social well-being, and self-rated health among respondents

Variable	Categories[a]	Men ($n = 944$)		Women ($n = 362$)	
		OR univariate	OR (95% CI)	OR univariate	OR (95% CI)
Age (years)[b] ($P_{men} = 0.061$; $P_{women} = 0.258$)	15–34	1		1	
	35–44	0.9	0.9 (0.53–1.53)	1.41	1.77 (0.81–3.84)
	45–54	1.22	1.56 (0.92–2.63)	1.96	2.26 (1.04–4.93)
	55–76	0.89	1.38 (0.74–2.57)	1.05	2.28 (0.75–6.96)
Number of disadvantaged life circumstances[b]	0	1		1	
($P_{men} < 0.001$; $P_{women} = 0.054$)	1	2.25	2.4 (1.55–3.71)	2.38	2.17 (1.11–4.22)
	2 or more	3.54	2.96 (1.80–4.87)	3.17	2.37 (0.99–5.69)
Illness[b]					
Mental disorder ($P_{men} = 0.633$; $P_{women} = 0.611$)	Yes	2.58	1.74 (1.21–2.49)	2.37	1.25 (0.69–2.28)
Long-standing illness ($P_{men} < 0.001$; $P_{women} < 0.001$)	Yes	4.1	3.83 (2.58–5.66)	5.42	5.25 (2.58–10.71)
Personal well-being[c]					
Often stressed in daily life ($P_{men} < 0.001$; $P_{women} = 0.004$)	Yes	5.8	3.21 (2.17–4.76)	4.36	2.52 (1.34–4.72)
Have felt very discouraged, depressed or unhappy ($P_{men} = 0.002$; $P_{women} = 0.003$)	Yes	4.53	1.98 (1.30–3.02)	4.6	2.64 (1.39–5.01)
Have felt full of energy only a little of the time, or not at all ($P_{men} < 0.001$; $P_{women} = 0.008$)	Yes	5.67	2.87 (1.99–4.15)	4.4	2.26 (1.24–4.10)
Have felt tired all of the time/most of the time ($P_{men} = 0.004$; $P_{women} = 0.009$)	Yes	4.88	1.82 (1.21–2.74)	5.22	2.24 (1.23–4.10)
Social well-being: fulfilment of important needs[b]					
Do often not eat the desired quality or variation of food ($P_{men} = 0.838$; $P_{women} = 0.012$)	Yes	1.91	1.04 (0.70–1.55)	2.58	2.24 (1.20–4.20)
Do never, seldom, or only sometimes, shower ($P_{men} = 0.008$; $P_{women} = 0.323$)	Yes	2.7	1.81 (1.17–2.79)	2.48	1.44 (0.70–3.00)
Do never, seldom, or only sometimes, wash clothes ($P_{men} = 0.628$; $P_{women} = 0.969$)	Yes	2	0.9 (0.58–1.39)	2.1	0.99 (0.50–1.95)
Do never (almost never) get enough sleep ($P_{men} < 0.001$; $P_{women} = 0.004$)	Yes	4.77	3.44 (2.34–5.04)	3.51	2.59 (1.36–4.96)
Social well-being: Exposure to negative life events[b]					
Attempted suicide ($P_{men} = 0.394$; $P_{women} = 0.325$)	Yes	1.38	0.86 (0.60–1.22)	1.96	1.33 (0.75–2.34)
Threats of physical violence ($P_{men} = 0.107$; $P_{women} = 0.099$)	Yes	1.54	0.69 (0.44–1.08)	1.49	0.53 (0.25–1.13)
Severe physical violence ($P_{men} = 0.805$; $P_{women} = 0.060$)	Yes	1.34	1.06 (0.67–1.68)	2.43	2.07 (0.97–4.40)
Have been sexually assaulted[d]	Yes	0.8		1.51	
Social well-being: Social relations[b]					
Meets family at least weekly[d]	Yes	1.03		0.95	
Meets friends/acquaintances daily/almost daily ($P_{men} = 0.584$; $P_{women} = 0.514$)	Yes	0.7	0.91 (0.65–1.28)	0.63	0.83 (0.47–1.46)
Often unwillingly alone ($P_{men} < 0.001$; $P_{women} = 0.069$)	Yes	2.64	1.98 (1.36–2.88)	2.68	1.71 (0.96–3.05)

a: Reference category = 'no' for all dichotomized variables.
b: Analysis including: age, number of disadvantaged life circumstances, illness, mental disorder and variables measuring social well-being.
c: Analysis including: age, number of disadvantaged life circumstances, illness, mental disorder, and variables measuring personal well-being.
d: Variables not included in the multivariate analyses because of their insignificance in the preliminary analyses.

unemployment rate, a higher prevalence of being unmarried, more often had a very poor or poor health, more often reported a mental disorder, experienced specific conditions and symptoms to a larger extent, and more often felt lonely. Additionally, we found that the number of disadvantaged life circumstances, personal well-being and partly social well-being were significantly associated with self-rated health.

The more disadvantaged life circumstances respondents were exposed to, the worse their self-rated health, mental illness, feelings of loneliness and employment rate were. These findings underline the importance of taking into account the severity of their life circumstances and being able to differentiate between groups of socially marginalized people according to their accumulated disadvantages. Analyses focusing solely on separate groups or categories, e.g. drug abuse or homelessness, would fail to take into consideration this important finding.

There was a clear association between number of disadvantaged life circumstances and poor self-rated health among men, while among women, this association was only borderline significant. The uncertainty of the results for women may be due to a smaller number of female respondents (362 persons).

Our results indicate that a complex combination of physical and mental illness, number of disadvantaged life circumstances as well as personal and social well-being formed the basis of respondents' assessment of their health. Although important, illness and disadvantaged life circumstances did not explain all the variance in self-rated health; also personal and social well-being were associated with self-rated health. The importance of well-being for self-rated health could be linked to the findings of a Spanish study showing that in Europe, being socially marginalized is related less to poverty and more to other factors such as mental health or very poor social networks.[16] This may be particularly true in a welfare state as the Danish.

The finding that fulfilment of important needs in everyday life, such as having enough sleep, showering regularly and eating varied food was important for self-rated health is supported by other studies.[17,18]

Among women, exposure to severe physical violence increased odds of poor self-rated health; although the association was borderline significant. Studies among the general population confirm this association.[19,20] Studies among socially marginalized women confirm that violence is part of everyday life.[2,21,22] Often, they are victims of violence in more

than one sense; namely, street violence and domestic violence, which puts them in an even more vulnerable and socially marginalized position.[21,23]

Strengths of the study

We obtained unique data material among socially marginalized people whom we normally do not reach in general health surveys. Furthermore, data collection was nationwide; thus, covering a large spectrum of socially marginalized people in Denmark. Compared to other health studies among socially marginalized people, our data material is large. A few studies among homeless are based on large samples, approximately 1500–2000 respondents,[6,24] but most studies are much smaller than the present.[5,7,8,16,25–27] Typically, these relatively small-scale studies are questionnaire-based and carried out as face-to-face interviews with homeless people. Our study was partly based on self-administered questionnaires, partly on interviews, which made it easier to reach a larger number of respondents. Previous studies generally verify the reliability and validity of self-reported data given by socially marginalized people.[8,13,26] Most studies focus only on one subgroup of socially marginalized people, e.g. the homeless,[5,6,13,25,28,29] whereas our study took on a broader perspective of the socially marginalized study population by taking into account the possible accumulation of disadvantaged circumstances.

Weaknesses of the study and generalizability of the results

The questionnaire was for self-administration but some were answered in collaboration with staff or interviewers. This introduces potential bias to our data as the staff or the interviewers may have influenced the answers. We consider this potential bias an 'unwanted side effect' of studying socially marginalized people. Since they are very difficult to reach, may have difficulties concentrating for a longer period of time, or may be under the influence of substances, studying socially marginalized people depends to a great extent on the help of patient, persistent, local actors, whom they trust.

It is generally difficult to obtain representative samples of socially marginalized people,[30,31] partly because of the overlap across different socially marginalized groups and shelters/centres; and thus, due to the difficulties in accurately determining the denominator.[22,30,32] As such, it is not possible to generalize our results directly to all shelter/centre users in Denmark. According to the Council for Socially Marginalised People in Denmark, there are approximately 75 000 socially marginalized people in Denmark.[33] Including both visible groups of socially marginalized (the homeless, etc.) and the more invisible groups, e.g. single mothers with few resources, the socially marginalized are assessed to comprise at least 3% of the Danish population.[34] Due to our data collection strategy via shelters and centres, we reached only few percentages of the entire socially marginalized population in Denmark, because e.g. not all socially marginalized people use shelters/centres. With this survey, we have probably reached the best off of the socially marginalized, because only the best off wished to participate and were able to complete the questionnaire. This could increase the likelihood of underestimated results.

Moreover, some of the respondents of our study face multiple social problems (e.g. homelessness and drug abuse). We have taken this into account by including into the analysis the variable measuring the accumulation of disadvantaged life circumstances.

Overall, we do not consider the non-representativity of our data a problem for the validity of our results. The aim of the study was to investigate associations between disadvantaged life circumstances, well-being and self-rated health, not to establish causal pathways. Moreover, as data are cross-sectional, strong conclusions on causality are precluded. The use of standardized and thoroughly tested questions from the Danish Health Interview Survey 2005 strengthened the study and helped ensure internal validity.

Despite the non-representative data, the found associations may be indicative of other users of shelters, drop-in centres, treatment centres and social psychiatric centres. Other severely socially marginalized users of such shelters/centres may have poorer health, poorer social relations and a lower employment rate than less socially marginalized users. It is highly likely that the self-rated health of other shelter/centre users is also influenced by a complex combination of illness, disadvantaged life circumstances and well-being.

The implications of this study

In a broader perspective, the fact that well-being was associated with self-rated health, also when controlling for physical and mental illness and disadvantaged life circumstances, underlines the complexity of the life situation facing the socially marginalized. Our results indicate that their health problems cannot be viewed—or solved—isolated because they are strongly associated with massive social problems, poor living conditions, and poor well-being. The study also indicates that addressing the main social problems, such as homelessness, substance abuse and poverty is not sufficient to improve their general health status. A study from 2001 supports this by showing that, among homeless people, becoming housed was neither a predictor of changes in overall quality of life perceived by the homeless themselves nor in their satisfaction with leisure, clothing, food and social life. The study concluded that among homeless people, becoming housed did not necessarily improve other aspects of their lives.[35] Rather, improvement of their general well-being, such as providing food, showers, warmth, places to stay, security from violence, social networking and social activities is important, which our findings also support.

Our results elucidate the need for more broadly based, holistic initiatives by both the health sector and the social services, incorporating health promotion initiatives into social work.

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Key points

- Previous studies of self-rated health among socially marginalized people provide insufficient understanding of what influences their self-rated health. This study contributes with important findings that number of disadvantaged life circumstances and general well-being are associated with poor self-rated health among users of shelters, drop-in centres, treatment centres and social psychiatric centres.
- Increased disadvantaged life circumstances, as well as poor personal and social well-being, were significantly associated with higher odds of poor self-rated health among male and female respondents, also when controlling for presence of illness, mental disorder and age.
- Our results elucidate the need for more broadly based, holistic initiatives by both the health sector and the social services, incorporating health promotion initiatives into social work.

References

1 Feantsa. *The Right to Health is a Human Right: Ensuring Access to Health for People who are Homeless. Feantsa Annual Report 2006*. Brussels: European Federation of National Organisations working with the Homeless, 2006.

2 Philippot P, Lecocq C, Sempoux F, et al. Psychological research on homelessness in Western Europe: a review from 1970 to 2001. *J Soc Issues* 2007;63:483–504.

3 Pedersen PV, Christensen AI, Hesse U, et al. *SUSY UDSAT – Sundhedsprofil for socialt udsatte i Danmark 2007 (Health Survey of Socially Excluded People in Denmark 2007)*. Copenhagen: The Council for Socially Marginalised People, 2008.

4 Aday L A. Health status of vulnerable populations. *Annu Rev Public Health* 1994;15:487–509.

5 Westlake L, George SL. Subjective health status of single homeless people in Sheffield. *Public Health* 1994;108:111–9.

6 Whynes DK, Giggs JA. The health of the Nottingham homeless. *Public Health* 1992;106:307–14.

7 Burström B, Schultz A, Burström K, et al. *Hälsa och livsvillkor bland socialt och ekonomiskt utsatta grupper i Stockholms län (Health and Living Conditions Among Socially and Economically Marginalised Groups in Stockholm.* Stockholm: Centrum for Folkhälsa, Enheten för Socialmedicin, Enheten för Hälsoekonomi (Centre for Public Health, Department of Social Medicine, Department of Health-Economics), 2007. Report No.: 5.

8 Trevena LJ, Nutbeam D, Simpson JM. Asking the right questions of disadvantaged and homeless communities: the role of housing, patterns of illness and reporting behaviours in the measurement of health status. *Aust N Z J Public Health* 2001;25:298–304.

9 Ekholm O, Kjøller M, Davidsen M, et al. *Sundhed og sygelighed i Danmark 2005 og udviklingen siden 1987. (Health and Morbidity in Denmark 2005 and the Trend Since 1987).* Copenhagen: National Institute of Public Health, 2006.

10 Darnton-Hill I, Mandryk JA, Mock PA, Lewis J, Kerr CB. Sociodemographic and health factors in the well-being of homeless men in Sydney, Australia. *Soc Sci Med* 1990;31:537–44.

11 Nyamathi A, Berg J, Jones T, et al. Predictors of perceived health status of tuberculosis-infected homeless. *West J Nurs Res* 2005;27:896–910.

12 Nyamathi A, Sands H, Pattatucci-Aragón A, et al. Perception of health status by homeless US veterans. *Fam Commun Health* 2004;27:65–74.

13 Ropers RH, Boyer R. Perceived health status among the new urban homeless. *Soc Sci Med* 1987;24:669–78.

14 LaGory M, Fitzpatrick K, Ritchey F. Life chances and choices: assessing quality of life among the homeless. *Sociol Quart* 2001;42:633–51.

15 Ekholm O, Hesse U, Davidsen M, et al. The study design and characteristics of the Danish national health interview surveys. *Scand J Public Health* 2009;37:758–65.

16 Vázquez C, Muñoz M. Homelessness, mental health, and stressful life events. *Int J Mental Health* 2001;30–:6–25.

17 Power R, French R, Connelly J, et al. Health, health promotion, and homelessness. *BMJ* 1999;318:590–2.

18 Klee H. Homelessness among injecting drug users: implications for the spread of AIDS. *J Commun Appl Soc Psychol* 1991;1:143–54.

19 Sundaram V, Helweg-Larsen K, Laursen B, et al. Physical violence, self-rated health, and morbidity: is gender significant for victimisation? *J Epidemiol Commun Health* 2004;58:65–70.

20 Curtis T, Larsen FB, Helweg-Larsen K, et al. Violence, sexual abuse and health in Greenland. *Int J Circumpolar Health* 2002;61:110–22.

21 Vostanis P, Tischler V, Cumella S, et al. Mental health problems and social supports among homeless mothers and children victims of domestic and community violence. *Int J Soc Psychiatry* 2001;47:30–40.

22 Shaw M, Dorling D, Smith GD. Poverty, social exclusion, and minorities. In: Marmot M, Wilkinson RG, editors. *Social Determinants of Health*, 2 edn. Oxford: Oxford University Press, 2006.

23 Pedersen PV. *Dårligt liv – dårligt helbred. Socialt udsattes oplevelse af eget liv og sundhed (Poor Life – Poor Health. Experiences of Health and Lived Lives among Socially Excluded People).* Copenhagen: The Council for Marginalised People, 2009.

24 Koegel P, Burnam MA, Morton SC. Enumerating homeless people: alternative strategies and their consequences. *Eval Rev* 1996;20:378–403.

25 Kershaw A, Singleton N, Meltzer H. Survey of the health and well-being of homeless people in Glasgow. *Int Rev Psychiatry* 2003;15:141–3.

26 Calsyn RJ, Allen G, Morse GA, et al. Can you trust self-report data provided by homeless mentally ill individuals? *Eval Rev* 1993;17:353–66.

27 Rokach A. Private lives in public places: loneliness of the homeless. *Soc Indicators Res* 2005;72:99–114.

28 Biswas-Diener R, Diener E. The subjective well-being of the homeless, and lessons for happiness. *Soc Indicators Res* 2006;76:185–205.

29 Garibaldi B, Conde-Martel A, O'Toole TP. Self-reported comorbidities, perceived needs, and sources for usual care for older and younger homeless adults. *J Gen Intern Med* 2005;20:726–30.

30 Burnam MA, Koegel P. Methodology for obtaining a representative sample of homeless persons: the Los Angeles skid row study. *Eval Rev* 1988;12:117–52.

31 Malterud K, Bjorkman M, Flatval M, et al. Epidemiological research on marginalized groups implies major validity challenges; Lesbian health as an example. *J Clin Epidemiol* 2009;62:703–10.

32 Turnbull J, Muckle W, Masters C. Homelessness and health. *CMAJ* 2007;177:1065–6.

33 The Council for Socially Marginalised People. *Sociale ydelser set i et fattigdomsperspektiv (Social Benefits in a Poverty Perspective).* Copenhagen: The Council for Socially Marginalised People, 2003.

34 Larsen JE. Forståelser af begrebet social udsathed (Understandings of the concept of social exclusion). In: Brandt P, Henriksen BL, Jensen KB, et al, editors. *Udsat for forståelse (The Concept of Social Exclusion).* Copenhagen: The Council for Socially Marginalised People, 2009.

35 Wolf J, Burnam A, Koegel P, et al. Changes in subjective quality of life among homeless adults who obtain housing: a prospective examination. *Soc Psychiatry Psychiatr Epidemiol* 2001;36:391–8.