

Personal goals and factors related to QoL in Dutch homeless people: what is the role of goal-related self-efficacy?

Jorien van der Laan MSc^{1,2,†}, Sandra N. Boersma PhD^{3,†}, Barbara van Straaten PhD^{4,5}, Gerda Rodenburg PhD^{4,5}, Dike van de Mheen PhD^{4,5,6} and Judith R.L.M. Wolf PhD¹

¹Impuls – Netherlands Center for Social Care Research, Radboud Institute for Health Sciences, Radboud University Medical Center, Nijmegen, The Netherlands, ²Amsterdam University of Applied Sciences, Amsterdam, The Netherlands, ³Department of Primary and Community Care, Radboud Institute for Health Sciences, Radboud University Medical Center, Nijmegen, The Netherlands, ⁴IVO, Addiction Research Institute, Rotterdam, The Netherlands, ⁵Erasmus Medical Centre, Rotterdam, the Netherlands and ⁶Department of Health Promotion, Maastricht University, the Netherlands

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Correspondence

Judith R.L.M. Wolf
Impuls – Netherlands Center for
Social Care Research
Radboud Institute for Health Sciences
Radboud University Medical Center
P.O. Box 9101, 6500 HB (68)
6525 GB, Nijmegen, the Netherlands
E-mail: Judith.wolf@radboudumc.nl

What is known about this topic

- Quality of life in homeless people is generally lower than in the general population.
- Quality of life in homeless people is associated with socioeconomic resources, housing status, demographic and health characteristics and service provision.
- In other vulnerable populations, goal-related self-efficacy is an independent predictor of quality of life but this has not been assessed in homeless people.

What this paper adds

- The majority of homeless adults have personal goals, most goals concern their socioeconomic resources.
- Goal-related self-efficacy is positively related to quality of life, independent of socioeconomic resources (i.e. income and housing), health and service use.
- It is important to promote the goal-related self-efficacy of homeless people by strength-based interventions.

[†]Equal contributors

Abstract

Very little is known about the personal goals of homeless people and how these relate to their quality of life (QoL). By using survey data on 407 homeless adults upon entry to the social relief system in 2011, we examined the personal goals of homeless adults and the association between their perceived goal-related self-efficacy and their QoL. A hierarchical regression analysis was used to analyse the association between QoL and goal-related self-efficacy, relative to factors contributing to QoL, such as demographic characteristics, socioeconomic resources, health and service use. Results indicate that the majority of homeless adults had at least one personal goal for the coming 6 months and that most goals concerned housing and daily life (94.3%) and finances (83.6%). The QoL of homeless adults appeared to be lower in comparison with general population samples. General goal-related self-efficacy was positively related to QoL ($\beta = 0.09$, $P = 0.042$), independent of socioeconomic resources (i.e. income and housing), health and service use. The strongest predictors of QoL were psychological distress ($\beta = -0.45$, $P < 0.001$), income ($\beta = 0.14$, $P = 0.002$) and being institutionalised ($\beta = 0.12$, $P = 0.004$). In conclusion, the majority of homeless adults entering the social relief system have personal goals regarding socioeconomic resources and their goal-related self-efficacy is positively related to QoL. It is therefore important to take the personal goals of homeless people as the starting point of integrated service programmes and to promote their goal-related self-efficacy by strength-based interventions.

Keywords: efficacy, homelessness, quality of life, stress and coping

Introduction

The World Health Organization (WHO) defined quality of life (QoL) as “individuals’ perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns” (Kuyken *et al.* 1995, p. 1405). Although previous research gives considerable insight into the QoL of homeless people, very little is known about their goals, expectations, standards and concerns. In this study, we examine the personal goals of homeless adults and the association between perceived goal-related

self-efficacy and QoL, relative to known factors contributing to QoL such as socioeconomic resources, health and service use.

QoL in homeless people is generally lower than in the general population (Hubley *et al.* 2014). A recent review on factors associated with QoL in homeless people showed that socioeconomic resources, housing status, demographic and health characteristics and service provision are associated with their QoL (Hubley *et al.* 2014). Homeless individuals identified socioeconomic resources as one of the most influential factors for their QoL (Palepu *et al.* 2012) and improvements such as increased income are associated with improvements in their QoL (Lam & Rosenheck 2000, Sullivan *et al.* 2000). Even though some studies report a higher QoL in homeless women (Cal-syn & Morse 1990, Marshall *et al.* 1996, LaGory *et al.* 2001), others did not (Wolf *et al.* 2001, Rich & Clark 2005). QoL in homeless people increases with age (LaGory *et al.* 2001), with better physical health (Wood *et al.* 1997, Wolf *et al.* 2001) and better mental health (Schutt *et al.* 1997, Lam & Rosenheck 2000) and with reduced substance use (Lam & Rosenheck 2000). Furthermore, homeless people receiving services show a better QoL than those who do not (Drake *et al.* 1997, Rich & Clark 2005) with integrated service programmes especially benefitting homeless people's QoL (e.g. Lehman *et al.* 1997, Shern *et al.* 2000).

Personal goals and goal-related self-efficacy

The successful 'strengths-based approach' for vulnerable people with multiple problems (Song & Shih 2010) states that all people, irrespective of their current level of functioning, have individual strengths, talents and aspirations and the capacity for growth and autonomy (Rapp & Goscha 2006). Goals can be defined as thoughts about desired consequences one would like to achieve or undesired consequences one would like to avoid (Carver & Scheier 1990). From a goal theory perspective, strong emotional reactions and a lower QoL signal a potential threat to success in the attainment of personal goals (Carver & Scheier 1998). The relevance of personal goals in the study of QoL has been established in the general population and in different vulnerable groups (e.g. elderly people and chronic patients) (Senecal *et al.* 2000, Boersma *et al.* 2006, Swift & Callahan 2009, Knittle *et al.* 2011, Brink *et al.* 2012).

Goal-related self-efficacy is the extent to which one is confident that a particular goal can be attained. It appears to influence QoL directly as well as indirectly through its effect on goal attainment (Karoly 1993).

Research with other populations has confirmed that goal-related self-efficacy is an independent predictor of QoL (Karoly 1993, Robinson-Smith *et al.* 2000, Boersma *et al.* 2006, Mancuso *et al.* 2010, Axelsson *et al.* 2013). Goal-related self-efficacy of homeless people increases after motivational interviewing (Wain *et al.* 2011) and is associated with more proactive searching behaviour for housing and employment (Epel *et al.* 1999) and readiness to quit smoking and interest in smoking cessation counselling (Arnsten *et al.* 2004). However, to our knowledge, associations between goal-related self-efficacy and QoL have not been studied in this population. A study of homeless young adults showed that more satisfaction with competence, which can be conceived of as a measure of general self-efficacy, resulted in a higher QoL, less psychological distress and more satisfaction with perceived social support (Krabbenborg *et al.* 2016).

The present study

In the Netherlands, care and support for homeless people is provided by the social relief system that provides shelter and integrated service programmes. The aim of this study was to investigate the personal goals of homeless people when they enter the social relief system and to examine the role of goal-related self-efficacy for their QoL.

The research questions of this study are: (i) What are the personal goals of homeless people on different life domains when they enter the social relief system and what is the goal-related self-efficacy for these goals?; (ii) Is goal-related self-efficacy upon entry in the social relief system related to QoL in addition to the previously found factors: demographic characteristics, socioeconomic resources, health and service use? Based on the strength-based approach, we expect homeless people to have goals (Rapp & Goscha 2006), predominately regarding their living conditions, such as housing and income (Acosta & Toro 2000). We further hypothesise, on the basis of goal theory and previous research that goal-related self-efficacy is positively related to QoL (Karoly 1993, Robinson-Smith *et al.* 2000, Boersma *et al.* 2006, Mancuso *et al.* 2010, Axelsson *et al.* 2013).

Methods

Ethics statement

This study complies with the criteria for studies which have to be reviewed by an accredited Medical Research Ethics Committee. Upon consultation, the Medical Review Ethics Committee region Arnhem-

Nijmegen concluded that the study was exempt from formal review (registration number 2010/321). The study was conducted according to the principles expressed in the Code of Conduct for health research with data (<http://www.federa.org>). All participants were 23 years and older and gave written informed consent.

Design and participants

This cross-sectional study is part of a larger observational multi-site cohort study following homeless people for a period of 2.5 years, from the moment they reported themselves at a central access point for social relief in 2011 in one of the four major cities in the Netherlands (Amsterdam, The Hague, Rotterdam and Utrecht) and were accepted for an individual programme plan. It is obligatory for every homeless person to report at a central access point for social relief in order to access to social relief facilities, such as a night shelter. All study participants satisfied the criteria for starting an individual programme plan, which included being forced to leave the home situation and not being sufficiently competent to live independently. Therefore, all participants were considered homeless. This study sample consists of homeless adults (aged ≥ 23 years). The participants were divided over the four cities in accordance with the inflow of homeless people at the central access points for social relief.

In 2011, over 1800 adults and 1100 young adults reported themselves at a central access point for social relief and were accepted to start an individual programme plan in one of the four major cities of the Netherlands (Tuyman & Planije 2012); all these persons were potential participants for this study. No data were available on how many potential participants were approached and how many refused to participate. Therefore, in order to obtain information about the representativeness of the study participants, we compared the total population of homeless adults who reported themselves at a central access point for social relief in the four major cities in 2011 with the study participants on age and gender.

The cohort study had a follow-up period of 2.5 years. After the baseline interview (January–December 2011), participants were interviewed an additional three times; after 6, 18 and 36 months. The cross-sectional data in this study are derived from the homeless adults at first interview.

Procedure

At the start of the study in 2011, potential participants were approached at a central access point for

social relief or at the temporary accommodation where they stayed. When the participant agreed to participate, a trained interviewer met the participant at the participant's location of choice. Participants were interviewed face-to-face using a structured questionnaire (mean duration of 1.5 h) and received €15 (around \$16) for their participation. All interviews were held in Dutch, apart from two in English, two in Spanish and two in Arabic.

Measures

Demographic characteristics included gender, age, ethnicity and educational level. Ethnicity consisted of two categories based on the classification by Statistics Netherlands as 'native Dutch' when the participant and both parents were born in the Netherlands and as 'non-native Dutch' when participants were foreign born or when participants were born in the Netherlands but one or both parents were foreign born (Alders 2001). Educational level was categorised into two categories based on the International Standard Classification of Education as 'none to low' when the participant completed lower secondary education at the most and 'intermediate to high' for upper and post-secondary education and any form of tertiary education.

Personal goals were assessed independently on six life domains based on the life domains in the Lehman QoL interview (Lehman 1983, 1995): housing and daily life, finances, daily activities, physical health, psychological health and social relations. In each life domain, we first questioned the participants about their QoL, followed by questions about their goals. Participants were asked: "Do you want to reach a specific goal in the coming 6 months with respect to your [housing and daily life/finances/daily activities/physical health/mental health/social relations]?" with the answer categories "No" and "Yes, namely...". The interviewer noted what participants said verbatim, and checked for correct understanding by repeating the answer back to the participant. By asking for personal goals on all six life domains, we stimulated the participants to think of a broad range of personal goals.

When participants stated a personal goal on a life domain, their goal-related self-efficacy for that goal was assessed. Self-efficacy with respect to the attainment of a self-set goal was measured by a single question based on the goal efficacy subscale of the Self-Regulation Skills Battery (Maes *et al.*, 2006). These items were first used by Boersma *et al.* (2006) in a population of myocardial infarction patients and were also tested in a population of rheumatoid

arthritis patients and showed good scale reliability ($\alpha = 0.81$; 0.80 respectively) (Boersma *et al.* 2006, Maes *et al.*, 2006). Goal-related self-efficacy was measured by asking the participants for each stated goal: "Do you think you can reach this goal within the next 6 months?" Scores were measured on a 5-point scale, ranging from 1 (not at all) to 5 (completely).

As only 12.6% of the participants mentioned a goal on all life domains, the life domain-specific self-efficacy scores could not be included in the regression analysis predicting QoL as there would be too many missing values. Instead, in line with the majority of published personal goal research, we used an overall goal-related self-efficacy score calculated as the sum of the domain scores (Sheldon & Elliot 2000). Based on 1 to 6 self-efficacy scores (range 1–5), the score was calculated by replacing the missing item(s) for an individual on the scale by the mean of the items that they did score. This individual mean imputation can perform almost as well as multiple imputations (Shrive *et al.* 2006). The overall goal-related self-efficacy score we refer to as 'goal-related self-efficacy'.

General QoL was assessed by two questions of the brief Dutch version of Lehman Quality of Life Interview (Lehman 1983, 1995, Lehman *et al.* 1995, Wolf *et al.* 2002). One general QoL question was asked at the beginning of the interview (How do you feel about your life in general?) and one at the end (How do you experience your life in general?). Participants had to indicate their subjective satisfaction of QoL on a 7-point Likert scale, ranging from terrible (1) to delighted (7). Higher scores reflected a higher QoL. A total score was constructed by averaging the total score of the two items; Cronbach's α of the two item scale was 0.69. The Lehman Quality of Life Interview was used among homeless persons in previous studies (Linn & Gelberg 1989, Lehman *et al.* 1997, Sullivan *et al.* 2000, Wolf *et al.* 2002).

Socioeconomic resources (i.e. income, housing and hours of (volunteer) work) were assessed by asking participants how many euros they had received in total during the last month (including social security, wages and income from illegal activities), how many hours of a week they normally worked (paid or volunteer work) and by asking them about their current housing status. Housing status was assessed by asking the participants where they slept the previous night. We categorised these locations into two categories: (i) Literally homeless and marginally housed: staying in an emergency shelter or night shelter; residing in transitional accommodation (where the period of stay is intended to be short term); living rough, i.e. living on the streets or in public spaces; temporarily staying with friends, relatives or acquaintances; or

facing eviction from independent housing. The 15 participants who were housed at baseline had already been accepted for an individual programme plan because of a forthcoming eviction. (ii) Institutionalised: residential care or supported accommodation (long stay); staying in a medical institution, addiction care institution or psychiatric hospital; staying in a correctional or penal institution; living in residential care or supported accommodation for people with mental health or substance abuse problems.

To measure physical complaints, self-reported physical complaints in the last 30 days were assessed on 20 categories of complaints. This included 14 categories based on the International Classification of Diseases (ICD) (WHO, 1994), and 5 categories of common complaints in homeless people (visual, auditory, dental or foot problems and fractures (Levy & O Connell 2004). We added an undefined category for reporting other health-related complaints that were not mentioned. A 'physical complaints' measure was created by summing the number of categories in which complaints were reported (range 0–20).

The Dutch version of the Brief Symptom Inventory (BSI-53) (Derogatis 2001, de Beurs & Zitman 2005) was used to assess psychological distress. The BSI is a 53-item self-report inventory, covering nine symptom dimensions and four additional items that can be summed up to a general scale of psychological distress. Items were measured on a 5-point Likert scale, ranging from 0 (not at all) to 4 (extremely). This inventory has been widely used in research with similar groups (Nyamathi *et al.* 2000, Ball *et al.* 2005). The Dutch version of the BSI demonstrates good reliability and validity (de Beurs & Zitman 2005). A total score was constructed by averaging the total score of the 53 items; Cronbach's α was 0.97.

The number of days of alcohol use (at least five units) and cannabis use during the last month were assessed using a module from the European version of the Addiction Severity Index (Europ-ASI, version III (Kokkevi & Hartgers 1995)). The ASI is frequently employed in effect studies with homeless people with severe psychiatric and/or substance abuse problems (Min *et al.* 2004, Kasproff & Rosenheck 2007).

Service use was assessed by a questionnaire that was developed by Impuls – Netherlands Center for Social Care Research (Lako *et al.* 2013), which assesses whether participants accessed various services during the last 6 months. In particular, data were collected on the use of mental healthcare, medical care, social work services or legal aid during the past 6 months. Four dummy variables were created that were scored as 1 when a participant used any of these services.

Data analysis

Analyses were conducted using the IBM SPSS Statistics 20 program. Missing values on items of a scale were substituted with the mean score of the other items on that scale for the participant when missing variables did not exceed 30% of the scale. Participants were not included in the analyses if there was a missing value on the outcome measure of QoL.

Descriptive analyses were performed to describe the personal goals and the goal-related self-efficacy for these goals. To analyse the correlation between goal-related self-efficacy scores and QoL, Pearson's correlation coefficients were used.

To examine whether the QoL was related to the overall goal-related self-efficacy score, in addition to demographic characteristics, socioeconomic resources, health and service use, Pearson's correlation coefficients and point-biserial correlations were used. A hierarchical regression analysis was then conducted. We controlled for the demographic variables by including these variables in the first step. In the second step, socioeconomic resources, health and use of services were entered into the equation. Only the variables that were univariately related to QoL were entered in this step to reach a parsimonious model. In the third and final step, goal-related self-efficacy was entered into the equation. Hierarchical regression analysis is a rigorous test of the relation between goal-related self-efficacy and QoL. This approach estimated the added value of this predictor in addition to the known predictors of QoL in homeless people.

All variables were inspected for multicollinearity; as the highest variation inflation factor (VIF) was 1.39 and the lowest tolerance statistic was 0.72, this was not the case (Myers 1990, Menard 1995). After the regression analysis, residual scatterplots were examined to test the assumptions of homoscedasticity, normality and linearity. None of the assumptions were violated. The data contained no outliers on Cook's distance but five outliers on the Mahalanobis distance (Cook's $D < 1.0$, Mahalanobis distance $\chi^2(11) = 31.26$). As these cases did not influence the regression analysis significantly (both the standardised DFBeta's for the predictors and DFFit had absolute values below 1), they were not excluded from the analyses (Field 2005).

Results

Sample characteristics and univariate relationships with QoL

A total of 410 study participants satisfied the criteria for starting an individual programme plan. Three

participants were not included in the analyses due to a missing value on the dependent variable QoL. Thus, analyses were conducted on a sample of 407 homeless adults. As is common in this population, no data were available on how many potential participants were approached and how many refused to participate. Comparison of the total population of homeless adults who reported themselves at a central access point for social relief in one of the four major cities revealed that the participants were representative in terms of age and gender.

Most participants were male (80.6%), with an average age of 40.3 years ($SD = 11.35$) and 62.7% were non-native Dutch. The majority of the participants had a low educational level (72.7%); 34.0% completed no or primary education at the most and 38.7% completed lower secondary education. The majority of participants were literally homeless and marginally housed (62.8%). The remaining participants were institutionalised (37.2%), mainly residing in long-term residency for homeless people (35.9%). Participants rated their QoL on average with 4.1 ($SD = 1.50$) on a 7-point scale, corresponding to feeling "mixed, about equally satisfied and dissatisfied" about their life in general. Table 1 shows the sample characteristics as well as the means, standard deviations and correlation coefficients for the variables used in the univariate analyses.

QoL was higher in native Dutch participants and no differences were found based on educational level or gender. QoL was positively associated with higher age. More income, being institutionalised and doing more hours of (volunteer) work were positively related to QoL. QoL was negatively associated with physical complaints, psychological distress and the use of mental healthcare and legal aid. QoL was not associated with alcohol use, cannabis use, use of social work and use of medical care.

Personal goals and goal-related self-efficacy in relation to QoL

Almost all participants (99.5%) could formulate at least one personal goal for the 6 months after entering the social relief system. On average, participants formulated goals on four of six life domains. The majority of participants formulated a goal regarding their housing and daily life (94.3%), finances (83.6%), daily activities (66.3%) and physical health (62.8%). Examples of goals regarding housing and daily life included finding housing, living with a partner and/or child and getting into supported housing. The most common finance-related goals concerned repayment of debts, gaining income and saving. Finding

Table 1 Means, standard deviations, percentages and bivariate correlations with QoL

Variables	M (SD)	%	Correlation <i>r</i>
Socio-demographic characteristics			
Male (<i>n</i> = 407)		80.6	-0.09
Age (<i>n</i> = 407)	40.32 (11.35)		0.21***
Ethnicity (<i>n</i> = 397)			-0.11*
Native Dutch		37.3	
Non-native Dutch		62.7	
Education (<i>n</i> = 403)			0.06
Up to lower secondary		72.7	
Upper secondary or higher		27.3	
Socioeconomic resources			
Income (<i>n</i> = 367)	609.91 (484.56)		0.21***
Housing (<i>n</i> = 406)			0.14**
Literally homeless and marginally housed		62.8	
Institutionalised		37.2	
Hours of (volunteer) work (<i>n</i> = 395)	5.21 (10.66)		0.17**
Health			
Number of physical complaints (<i>n</i> = 405)	3.00 (2.50)		-0.14**
Psychological distress score (<i>n</i> = 404)	0.71 (0.67)		-0.50***
Days of alcohol use (<i>n</i> = 405)	3.68 (8.32)		-0.04
Days of cannabis use (<i>n</i> = 406)	8.06 (11.99)		-0.02
Service use			
Social work (<i>n</i> = 407)		49.4	0.02
Legal aid (<i>n</i> = 407)		25.3	-0.12*
Medical care (<i>n</i> = 407)		68.6	-0.06
Mental healthcare (<i>n</i> = 407)		23.6	-0.19***

P* < 0.05, *P* < 0.01, ****P* < 0.001.

and keeping employment, daily activities and volunteer work were mentioned as goals regarding daily activities and reducing or stopping substance use, dental care and gaining or losing weight were physical health-related goals. Goals concerning social relations (42.4%) and psychological health (41.2%) were mentioned less frequently. Examples of goals regarding social relations included improving family relations, improving relation with child and making new friendships. Receiving help for mental health, stability and rest, and gaining confidence and resilience were mentioned as goals regarding psychological health.

Goal-related self-efficacy in relation to QoL

Goal-related self-efficacy scores and their bivariate relations with QoL are shown in Table 2. Goal-related self-efficacy was highest for physical health and daily

activities and lowest for finances and social relations. Positive univariate relationships with QoL were found for goal-related self-efficacy in the life domains housing and daily life, finances, daily activities and physical health. Finally, overall goal-related self-efficacy was positively correlated with QoL.

Table 3 presents the results of the hierarchical regression analysis including the change in *R*² after each step and the unstandardised and standardised regression coefficients from the final equation with all of the three steps included. This model successfully explained 32% of the variance in QoL in homeless people. All steps significantly improved the amount of explained variance. A higher level of goal-related self-efficacy was a significant predictor of a higher QoL in homeless adults ($\beta = 0.09$, $P = 0.042$, $B = 0.02$, 95% $CI = 0.00, 0.05$, $\Delta R^2 = 0.01$), in addition to higher age, more income, being institutionalised, doing more hours of (volunteer) work, less psychological distress and not receiving legal aid or mental healthcare.

Discussion

The aim of this study was to investigate the personal goals of homeless adults when they enter the social relief system and to examine the role of goal-related self-efficacy for QoL relative to known correlates of QoL. In line with our expectations, we found that homeless people predominately stated goals regarding their housing and daily life and their finances. As expected, we found that self-efficacy beliefs with respect to self-chosen goals proved to be a significant independent positive predictor of QoL in addition to having more resources (e.g., more income) and less psychological distress. Contrary to our expectations, we could not relate QoL to alcohol or cannabis use or number of physical complaints, and use of mental health services and legal services.

Personal goals

Almost all of the participants (99.5%) could formulate at least one personal goal for the 6 months after entering the social relief system. This underlines that homeless people have a future life perspective beyond their current experience and that they are motivated to improve their situation, which is contrary to popular belief that poverty and homelessness is rooted in personal failings including a lack of motivation (Lee *et al.* 1991, Toro *et al.* 2007).

We found that the majority of the participants reported personal goals regarding socioeconomic resources, while fewer participants reported goals

Table 2 Number of participants who stated a goal per life domain and self-efficacy and bivariate correlations with QoL for participants who stated a goal

Goal on life domain	Number of participants stating a goal [†] n (%)	Number of participants saying they could reach their goal within 6 months		
		n (%)	Self-efficacy Mean (SD)	Correlation <i>r</i>
Housing and daily life	382 (94.3)	355 (87.6)	3.71 (1.19)	0.16**
Finances	336 (83.6)	315 (78.4)	3.53 (1.31)	0.15**
Daily activities	265 (66.3)	252 (63.0)	3.81 (1.19)	0.16*
Physical health	253 (62.8)	236 (58.6)	3.85 (1.17)	0.16*
Psychological health	166 (41.2)	151 (37.5)	3.71 (1.02)	0.12
Social relations	170 (42.4)	156 (38.9)	3.54 (1.21)	0.11
General goal-related self-efficacy		398 (98.3)	22.08 (1.50)	0.20***

[†]not all participants answered the question: “Do you want to reach a specific goal in the coming 6 months with respect to your...?” These participants had a missing score on the life domain-specific goal question: housing and daily life (*n* = 2); finances (*n* = 5); daily activities (*n* = 7); physical health (*n* = 4); psychological health (*n* = 4) or social relations (*n* = 6).

P* < 0.05, *P* < 0.01, ****P* < 0.001.

Table 3 Predictors of QoL in the hierarchical regression analysis and the coefficient of determination per step for the full model (*N* = 407)

Variable	Δ <i>R</i> ²	<i>B</i>	95% CI for <i>B</i>	β
Step 1				
Female	0.05***	-0.23	[-0.86, 0.40]	-0.03
Age		0.02	[0.01, 0.05]	0.09*
Non-native Dutch		-0.13	[-0.66, 0.41]	-0.02
Education (upper secondary or higher)		-0.03	[-0.59, 0.52]	-0.01
Step 2				
Income	0.28***	0.00	[0.00, 0.00]	0.14**
Institutionalised		0.38	[0.12, 0.64]	0.12**
Hours of (volunteer) work		0.01	[0.00, 0.02]	0.08*
Number of physical complaints		0.04	[-0.01, 0.10]	0.07
Psychological distress score		-1.01	[-1.23, -0.80]	-0.45***
Use of legal aid		-0.31	[-0.60, -0.03]	-0.09*
Use of mental healthcare services		-0.31	[-0.62, -0.01]	-0.09*
Step 3				
Self-efficacy	0.01*	0.02	[0.00, 0.05]	0.09*
Constant		7.11		
Full model		Adj. <i>R</i> ² = 0.32		
		<i>F</i> (12, 406) = 16.958***		

P* < 0.05, *P* < 0.01, ****P* < 0.001.

with respect to their social relations and psychological health. According to human needs theories, when physiological and safety needs are not met, they take precedence over other needs such as affiliation and esteem (Maslow 1943, 1970, Kenrick *et al.* 2010). This could explain why participants focus on their socio-economic resources such as housing when they enter the social relief system. It also suggests that goals with respect to one’s psychological health, despite being important for QoL, can only become salient when basic needs are met.

Goal-related self-efficacy and QoL

Participants in our study rated their QoL on average with a 4.1 on a 7-point scale when they entered the social relief system, which is comparable to other homeless populations (Hubley *et al.* 2014) but lower than general community samples. In general community samples, the majority of people tend to report levels of QoL of 75% of the scale maximum (which would correspond with a 5.3 on the Lehman QoL questionnaire) (Cummins 1995, Evans & Huxley 2002).

Previous research showed that QoL in homeless people is positively associated with increased income, age, good physical health and good mental health, reduced substance use and receiving services (Hublely *et al.* 2014). The hierarchical regression analysis in this study provides a rigorous test of the unique relation between goal-related self-efficacy upon entry in the social relief system and QoL for homeless people, apart from the shared variance with QoL and the other predictors. After controlling for the influence of the other factors in our model, self-efficacy beliefs with respect to self-chosen goals still proved to be a significant positive correlate of QoL in homeless people when entering the social relief system. These results can be explained by goal theories (Karoly 1993, Carver & Scheier 1998) and are supportive to earlier findings in other groups of vulnerable individuals (Robinson-Smith *et al.* 2000, Boersma *et al.* 2006, Mancuso *et al.* 2010, Axelsson *et al.* 2013). Having personal goals is thought to be protective in stressful situations (Karoly 1993, Carver & Scheier 1998). Goal-related self-efficacy can play a role in this process by influencing QoL directly as well as indirectly through its effect on goal attainment (Karoly 1993). Research with other populations established a causal direction of this relationship in that changes in self-efficacy result in improvements of (health-related) QoL (Robinson-Smith *et al.* 2000, Boersma *et al.* 2006, Mancuso *et al.* 2010, Axelsson *et al.* 2013).

The strongest correlate of QoL in this study was psychological distress which is in line with previous studies that showed a positive relationship between QoL and good mental health in homeless people (Lam & Rosenheck 2000). Being institutionalised compared to being homeless was a significant positive predictor of QoL. Most institutionalised adults resided in a long-term residency for homeless people (35.9%). Contrary to earlier research, we could not relate QoL to substance use (Lam & Rosenheck 2000) and physical health (Wood *et al.* 1997, Lam & Rosenheck 2000, Wolf *et al.* 2001). Because of the rare use of hard drugs in our sample ($\leq 5\%$) (Van Straaten *et al.* 2015), we included only the use of cannabis and alcohol in the analyses. This might explain why we did not find an association with QoL (Hublely *et al.* 2005), whereas Lam and Rosenheck who included a wider range of drugs, did. Although physical health was univariately related to QoL, in the multivariate regression model, this association was no longer significant. In the current study, we approached physical health as symptom status (perception of an abnormal physical state). Possibly, differences in results could be explained by differences in operationalisation of health status as it has been suggested to distinguish

between health status as general health perceptions, symptom status and functional status, in order to better understand the relationship between health and QoL (Wilson & Cleary 1995, Sullivan *et al.* 2000, Valderas & Alonso 2008).

Limitations and recommendations for future research

This study has three main limitations. First, the results of this study are limited to homeless adults who were eligible for registration at the social relief system. They do not generalise to minority subgroups of homeless people such as undocumented immigrants. Although it was not feasible to include them in this study, it would be interesting in future research to study motivational factors related to QoL in other subgroups. Second, the cross-sectional design of this study limits the conclusions that can be drawn. Positive associations are not conclusive with regard to direction. For one, psychological distress may reduce QoL, or low QoL could promote psychological distress. We recommend longitudinal studies that could help clarify the causal direction of these findings and enable to follow the development of personal goals over time. In addition, to further our knowledge on the relationship between health and QoL in homeless people, future research should explore the associations of different aspects of health status and QoL. Third, the goal-related self-efficacy score used in this study was based on a single-item measurement for each goal and has not been previously validated in this population. However, it was based on a goal efficacy subscale of the Self-Regulation Skills Battery (Maes *et al.*, 2006), first used by Boersma *et al.* in a population of myocardial infarction patients and tested in a wide diversity of populations (see for example: Kalavana *et al.* 2010, Marques *et al.* 2012). In this first exploratory study, we showed that goal-related self-efficacy is positively related to QoL in homeless people. This warrants for further research on goal-related self-efficacy in homeless populations by means of a more elaborate instrument such as the goal efficacy subscale of the Self-Regulation Skills Battery.

Practical implications

The results show that upon entry into the social relief system, homeless individuals have clear-cut personal goals. As inclusion of client preferences has a positive effect on treatment outcomes such as greater improvement and smaller drop-out rates (Swift & Callahan 2009), we suggest to take the personal goals

of homeless people as the starting point of their integrated service programmes. According to the strengths-based approach, personal goals can provide a better starting point for formulating an integrated service programmes especially when taking into account personal strengths and resources (Rapp & Goscha 2006, Wolf 2016). Current research among homeless young adults shows that young adults who receive strength-based care, receive care for a longer duration and more often complete their trajectory compared to those who receive care as usual (Krabbenborg *et al.* 2015).

Second, the results of this study point towards a relationship between mental health and QoL, suggesting that adequate screening for high levels of psychological distress is important and that referral to specialised care might be required (Barendregt *et al.* 2013). Adequate screening could also distinguish between enduring characteristics (e.g. demographic characteristics) and potentially modifiable characteristics (e.g. income and psychological distress) that influence QoL (Sullivan *et al.* 2000).

Finally, our results showed that self-efficacy beliefs with respect to self-chosen goals are positively related to QoL in homeless people. As there is ample evidence that self-efficacy can be increased during interventions (Marks *et al.* 2005a,b, Wain *et al.* 2011, Williams & French 2011), homeless people may benefit from such interventions not only to attain their goals but also to improve their QoL (Bandura 2004).

Conclusion

This study shows that QoL in homeless adults on entry to the social relief system is lower in comparison with general population samples. Upon entry, personal goals with respect to improved socioeconomic resources are most salient. We identified goal-related self-efficacy as an important factor for their QoL, which provides opportunities for intervention. In addition, psychological distress had the largest negative influence on QoL. These results underscore the importance of a tailored approach to providing services to homeless people, to also look at motivational factors and potential strengths besides problems and poor levels of functioning, and to use their personal goals as a starting point for their support in integrated service plans.

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