

## Health and Disability

# Coping and financial strain as predictors of mental illness in over- indebted individuals in Sweden

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This cross-sectional study examined psychological mechanisms in order to increase knowledge regarding mental illness amongst 561 over-indebted individuals in Sweden. Differences were explored between individuals with probable clinical depression and/or anxiety and individuals without probable clinical depression and/or anxiety, considering objective measures of the debt, financial strain, coping strategies as well as sociodemographic variables. Furthermore, binary logistic regression analyses were performed in order to construct a model of predictors of mental illness. In order to collect the data, Hospital Anxiety and Depression Scale (HADS), Brief Coping Orientation to Problems Experienced (COPE), as well as questions formulated by the research team, were used as measures. Prominent results showed that over-indebted individuals with probable clinical depression and/or anxiety were younger, showed greater levels of financial strain, used adaptive coping strategies to a lesser extent, and maladaptive coping strategies to a greater extent. Additionally, financial strain, use of maladaptive and emotion-focused coping, age and employment status were significant predictors of mental illness. These results put emphasis on the importance of adaptive coping as well as the psychological exposure of over-indebted individuals.

**Key words:** Over-indebtedness, coping, depression, anxiety, financial strain.

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## INTRODUCTION

Over-indebtedness is a growing problem in today's society. In Sweden, the number of debtors has increased dramatically since the middle of the 1980s, when a deregulation of the credit market took place. The increased access to credit loans has not only entailed possibilities but also new forms of financial difficulties (Poppe, 2008). This leads to indebtedness and over-indebtedness, complex problems that originate in a financial inability to repay loans (The Swedish Enforcement Authority, 2014.). Over-indebtedness is a concept that lacks a thorough and clear definition. In the present article the definition of over-indebtedness presented by Ahlström and Edström (2014, p. 12) is used:

that the debt burden of the household/debtor has become so heavy that the household/debtor is unable to fulfil payments as they become due and that this inability is not just temporary. The debts are so large – in relation to incomes and other assets – that repayment is not possible within the foreseeable future.

In Sweden, the costs for society for over-indebtedness amount to more than 200 billion SEK (approximately 19.1 billion euro) per year (The Swedish Enforcement Authority, 2014.; The Swedish National Audit Office [RiR], 2015). The number of debtors that have an active debt registered at the Enforcement Authority amounts to approximately 420,000, 4.2% of the Swedish population (The scientific council of the Enforcement Authority, personal communication, 14 August 2017), which is

equivalent to the situation in other western European countries (European Consumer Debt Network, 2009). Besides constituting a huge cost on the societal level over-indebtedness has been shown to be linked to psychological suffering for the individual. Mental illness is prevalent among persons who are over-indebted. There is a connection between over-indebtedness and mental illness, and research has shown a positive correlation between over-indebtedness and depression, anxiety, and general mental illness (Drentea & Reynolds, 2012; Fitch, Hamilton, Bassett & Davey, 2011; Hodson, Dwyer & Neilson, 2014; Richardson, Elliott & Roberts, 2013; Selenko & Batinic, 2011; Zurlo, Yoon & Kim, 2014). Studies show that suicide attempts are almost five times more common among over-indebted individuals than among the normal population (Hintikka, Kontula, Saarinen, Tanskanen, Koskela & Viinamäki, 1998). The same relation exists with regard to the frequency of anxiety and depression (Ahlström & Edström, 2014).

Researchers have investigated the link between objective measures of the debt situation and mental illness. A positive link has been found regarding the number and size of debts and increased mental illness (Meltzer, Bebbington, Brugha, Farrell & Jenkins, 2013). On the other hand, researchers that have examined the income of the households in relation to the prevalence of mental illness have concluded that income has no significance for the outcome on mental illness in indebted persons (Drentea & Reynolds, 2012; Hintikka *et al.*, 1998). However, Sweet, Nandi, Adam and McDade (2013) found that a higher relative debt in relation to the repayment ability was associated with higher levels of experienced stress, as well as a higher prevalence of depression

(Sweet *et al.*, 2013). Research that focuses on individuals' subjective experience of their financial situation uses the concept experienced financial strain. Unlike measures of the objective debt, questions around experienced financial strain focus on the experience of the debt burden. Experienced financial strain differs from clinical states of psychological suffering, such as depression and generalized anxiety syndrome, in that it focuses on psychological well-being specifically in relation to the economic situation (Shapiro & Burchell, 2012). Increased experienced financial strain has been found to correlate with depression (Frank, Davis & Elgar, 2014; Peirce, Frone, Russell & Cooper, 1994; Stein *et al.*, 2013), anxiety (Dijkstra-Kersten, Biesheuvel-Leliefeld, van der Wouden, Penninx & van Marwijk, 2015; Frank *et al.*, 2014; Stein *et al.*, 2013), stress (Frank *et al.*, 2014), and general ill health (Frank *et al.*, 2014; Savoy *et al.*, 2014). This correlation seems to be robust and is found in non-Western contexts as well (Chi & Chou, 1999; Wei & Chen, 2014).

How a financial situation is dealt with may depend on what coping strategies the individual resorts to. Coping is the individual's cognitive and behavioral attempt to handle specific demands that can be said to exceed the individual's resources (Lazarus & Folkman, 1984). Coping strategies are crucial in the relationship between experienced negative life events and mental illness and they may constitute either a protective factor or a risk factor for, for example, anxiety and depression symptoms (Garnefski, Kraaij & Spinhoven, 2001; Roohafza *et al.*, 2014). In research focusing on the association between coping strategies and mental illness the concept of coping strategies are often separated into two dimensions: adaptive and maladaptive. Adaptive coping consists of strategies that have a stress-reducing effect, with regard to both aim and function. This dimension encompasses both problem-focused and emotion-focused strategies such as positive reframing, humor, and using emotional support. Maladaptive coping consists of strategies that fail to reduce stress (Doron, Thomas-Ollivier, Vachon & Fortes-Bourbousson, 2013; Garnefski *et al.*, 2001; Orgeta & Orrell, 2014; Roohafza *et al.*, 2014) such as denial and self-blame. Research has shown that the kind of coping strategy used varies within the group of individuals who are over-indebted (Tach & Greene, 2014). It is reasonable to assume that there is a connection between what coping strategies the individual resorts to and the individual's subjective experience of his or her financial situation. An earlier study has shown that individuals who experienced financial strain and used the coping strategy "positive reinterpretation," an emotion-focused strategy, felt considerably better than those who resorted to problem-focused coping strategies (Wrosch, Heckhausen & Lachman, 2000).

#### *The aim of the study*

As stated, over-indebtedness gives rise to huge personal suffering as well as constituting an economic burden for society. Today, there is a lack of research that examines what psychological mechanisms can affect the mental health of individuals who are over-indebted. The present study aims to contribute to filling this knowledge gap by studying a large group of individuals who are over-indebted ( $n = 561$ ). Up to this date, studies have generally been focusing on debts in a general population. This study is unique in including only

individuals that are over-indebted, that is that the debt problems should be such that the Swedish Enforcement Authority (Kronofogden) subjects them to debt collection measures and/or seizure order. Greater understanding of mental illness in individuals who are over-indebted may, by extension, provide implications for how clinical and societal activities can develop adapted interventions for this group. As part of an attempt to create increased understanding, the present article takes as its starting point the recognized importance of coping strategies and of experienced financial strain for mental illness (Frank *et al.*, 2014; Garnefski *et al.*, 2001; Roohafza *et al.*, 2014; Stein *et al.*, 2013). There is, furthermore, a debate among researchers concerning the extent to which the mental illness may be explained by the subjective experience of one's financial situation as well as by objective measures of that situation. This article is an attempt to contribute to the clarification of this question.

The aim of this article is to investigate whether demographic variables, income, duration and size of the debt, experienced financial strain, and use of coping strategies differ between over-indebted individuals with mental illness and over-indebted individuals without mental illness. The aim is further to build a model including important factors for predicting mental illness amongst over-indebted individuals. In this article, mental illness has been narrowed down to encompass depression and/or anxiety.

## METHOD

### *Sample and procedure*

As there was no public register of over-indebted individuals, random sampling of participants was not possible and therefore an accessibility selection was used. The recruitment of participants was done in collaboration with the Swedish Enforcement Authority, The Professional Association for Budget Advisors (Yrkesföreningen för budgetrådgivare), and the National Association for Over-indebted (Insolvens). The inclusion criteria were that, at the time of completing the questionnaire, the participants should be indebted and that the debt problems should be such that they had been subjected to debt collection measures and/or seizure order by the Swedish Enforcement Authority. No exclusion criteria were applied. In total, 2,205 questionnaires were mailed out by post at the break of 2009/2010. Because of the lack of a public register of over-indebted individuals, questionnaires were distributed by municipal budget services – Sweden and The Swedish Enforcement Authority. Out of those, 726 questionnaires were returned, 561 of which were correctly completed and fulfilled the inclusion criteria of the study. Participation rate was 33%. In those cases where the participants had answered more than half of the questions, the replace-with-mean strategy was used in order to deal with the internal non-response. SPSS Statistics version 22.0 was used in the analysis. In cases where a participant had not replied to a specific question the participant was excluded from the analysis of that question.

The participants of the study consisted of 235 men and 323 women as well as three persons who did not indicate their gender (age:  $M = 51.91$ ,  $SD = 11.21$ , range = 21 to 79 years). A total of 50.8% fulfilled the requirements of probable clinical depression

Table 1. Descriptive statistics of the participants of the study

Characteristics	N	%	M (SD)	Min-max
Sample size	561	100		
Sex				
Men	235	41.9		
Women	323	57.6		
Age			51.91 (11.21)	21–79
Employment status				
Paid employment	236	42.1		
No paid employment	312	55.6		
Annual household income before tax (in thousand SEK)				
<145	157	28.0		
145–235	173	30.8		
235–375	117	20.9		
>375	52	9.3		
Reported debt size on individual level, including secure and unsecure debt (in thousand SEK)				
<100	85	15.2		
100–200	94	16.8		
>200	375	66.8		
Period of indebtedness (in years)			9.88 (7.68)	0.2–36
Depression (HADS-D $\geq$ 11)	177	31.6		
Anxiety (HADS-A $\geq$ 11)	229	40.8		
Depression and/or anxiety	285	50.8		

and/or anxiety. Descriptive statistics of the participants can be found in Table 1.

#### Questionnaire and measures

All participants were asked to complete a questionnaire in their own time and return them to the researcher by post. The questionnaire included a spectrum of questions and measurements regarding debts, health, and life quality. Only those measures used in the current analyses are described.

**Demographic variables.** Demographics included sex, age, and employment status (paid employment/no paid employment).

**Mental illness.** The prevalence of anxiety and depression was measured by means of Hospital Anxiety and Depression Scale (HADS). This measurement instrument consists of the two subscales depression (HADS-D) and anxiety (HADS-A); each subscale contains seven questions. In total, the scale consists of 14 questions, where each question is answered using a four-graded rating scale from 0 to 3. The participants are encouraged to answer the questions based on how they have felt during the past week. The points are calculated separately according to each subscale, which gives a possible result between 0 and 21, where 11 points and more indicate that clinical depression/anxiety probably may exist (Zigmond & Snaith, 1983). In the present study, mental illness was defined as having 11 points or more on one or both subscales (see Table 1), which is in line with the guidelines established by Zigmond and Snaith (1983). However, later studies have found that a threshold value as low as 8 points may be used in order to attain a good balance between specificity and sensitivity (Bjelland, Dahl, Haug & Neckelmann, 2002). Studies of the psychometric characteristics of HADS have shown good validity and reliability regarding use on both a clinical and a non-clinical population (Bjelland *et al.*, 2002). In the present study, the internal reliability

was estimated at  $\alpha = 0.88$  for the subscale depression and  $\alpha = 0.89$  for the subscale anxiety. Mental illness was used for creating the groups and subsequently used as the dependent variable.

**Objective measures of the financial situation.** The participants were asked to report their period of indebtedness (for how many months they had been in debt), the total income of the household before tax, including salary, taxable subsidies, operating revenue and pension (“less than 145,000 SEK”, “145,000–235,000 SEK”, “235,000–375,000 SEK” or “over 375,000 SEK”) as well as the size of their individual debts (“less than 50,000 SEK” (approximately 4,800 euro), “50–100,000 SEK” (approximately 4,800–9,600 euro), “100–200,000 SEK” (approximately 9,600–19,100 euro), “over 200,000 SEK” (approximately 19,100 euro), and “over 1 million SEK” (approximately 95,600 euro)). Based on the responses given by the participants, the size of the debts was categorized into the following intervals: less than 100,000 SEK, between 100,000 and 200,000 SEK, and more than 200,000 SEK before analyses were made. The group of participants reporting a debt size over 1 million SEK was too small for appropriate statistical analyses, hence one group was created for debt over 200,000 SEK. Participants were asked to report all types of debts, unsecure as well as secure, and not only the debt that had been subjected to debt collection measures and/or seizure order by the Swedish Enforcement Authority.

**Financial strain.** Based on earlier research (Breslin & Breslin, 2013; Dijkstra-Kersten *et al.*, 2015; Selenko & Batinic, 2011; Shapiro & Burchell, 2012), experienced financial strain was measured by means of the question “How mentally stressful have you felt that your own indebtedness has been during the past 4 weeks?” The assessment was made on a scale of 10 from 1 (not at all stressful) to 10 (unbearably stressful). Correlation analyses with Pearson correlation ( $r$ ) indicated that experienced financial strain is distinct from depression and anxiety (depression  $r = 0.49$ ; anxiety  $r = 0.55$ ).

**Coping.** In order to capture the prevalence and frequency of coping strategies among the participants Brief COPE was used. Brief COPE consists of 28 questions aimed at measuring 14 different coping strategies (Carver, 1997; Carver, Scheier & Weintraub, 1989) and investigates how participants generally act when they are stressed by problems, which is evaluated on a scale ranging from 1 (very seldom) to 4 (very often). Based on earlier research (Coolidge, Segal, Hook & Stewart, 2000; Orgeta & Orrell, 2014), the coping strategies were divided into the three dimensions; maladaptive, problem-focused, and emotion-focused coping. A mean value was calculated for each participant on each dimension. E.g. one participant thus belongs to one category for each dimension (e.g. a mean of 3.26 on the dimension emotion-focused coping resulted in this participant belonging to the category “often”). As no participant, on average, used maladaptive coping strategies very often this dimension consists only of the remaining categories. Brief COPE has shown good psychometric properties (Doron, Trouillet, Gana, Boiché, Neveu & Ninot, 2014; Yusoff, 2011). The internal reliability in the present study was estimated at  $\alpha = 0.78$  for the dimension problem-focused coping,  $\alpha = 0.71$  for the dimension emotion-focused coping, and  $\alpha = 0.70$  for the dimension maladaptive coping.

### Ethical considerations

This study is part of a larger project that has been reviewed and approved by the Regional Ethics Committee in Umeå, Sweden (no. 09-069Ö).

### RESULTS

An overview of the distributions and means of the variables financial strain and coping for the entire sample is presented in Table 2.

The following section will give an account of the statistical calculations made in order to answer the questions posed by the study. Group 1 consists of individuals without probable depression and/or anxiety, and group 2 consists of individuals with probable depression and/or anxiety.

#### Differences between the groups regarding demographic factors

The analysis showed that the individuals in group 1 ( $M = 54.05$ ,  $SD = 11.25$ ) were significantly older than the individuals in group 2 ( $M = 49.83$ ,  $SD = 10.79$ ),  $t(552) = 4.51$ ,  $p < 0.001$ ,  $d = 0.38$ . Furthermore, there was a significant association,  $\chi^2(1, n = 558) = 4.67$ ,  $p = 0.03$ ,  $\Phi = 0.09$ , between sex and mental illness, in group 2 there was a higher number of women than in group 1. No significant association was found between employment status and mental illness,  $\chi^2(1, n = 548) = 3.51$ ,  $p = 0.06$ ,  $\Phi = 0.08$ .

#### Differences between the groups regarding objective measures of the financial situation and experienced financial strain

No significant differences were found between group 1 ( $M = 9.47$ ,  $SD = 7.18$ ) and group 2 ( $M = 10.26$ ,  $SD = 8.12$ ) with regard to the duration of the debts,  $t(507) = 1.16$ ,  $p = 0.25$ ,  $d = 0.10$ . Furthermore, there was no significant association between the size of the debts and mental illness,  $\chi^2(2, n = 554) = 1.23$ ,  $p = 0.54$ ,  $\Phi = 0.05$ . Nor was there any significant result regarding the association between income and mental illness,  $\chi^2(3, n = 499) = 3.78$ ,  $p = 0.29$ ,  $\Phi = 0.09$ . In contrast, individuals belonging to group 2 reported a higher degree of experienced financial strain ( $M = 8.31$ ,  $SD = 1.92$ ) than individuals belonging to group 1 ( $M = 5.96$ ,  $SD = 2.90$ ),  $t(545) = 11.27$ ,  $p < 0.001$ ,  $d = 0.98$ .

#### Differences between the groups regarding coping

Significant association was found between the groups regarding use of problem-focused coping strategies,  $\chi^2(3, n = 561) = 7.94$ ,  $p = 0.05$ ; emotion-focused strategies,  $\chi^2(3, n = 561) = 17.88$ ,

Table 2. Distribution and means of measures of financial strain and use of coping for the sample

Measure	<i>n</i>	<i>M</i> ( <i>SD</i> )	Min–max
Financial strain	561	7.16 (2.72)	1.00–10.00
Brief COPE			
Use of maladaptive coping	561	2.08 (0.47)	1.00–3.42
Use of emotion-focused coping	561	2.19 (0.51)	1.00–3.80
Use of problem-focused coping	561	2.59 (0.64)	1.00–4.00

Table 3. Distribution of use of coping within group 1 (individuals without mental illness) and group 2 (individuals with mental illness)

	Group 1 <i>n</i> (%)	Group 2 <i>n</i> (%)
Problem-focused coping		
Very seldom	6 (2.2)	15 (5.3)
Seldom	85 (30.8)	106 (37.2)
Often	152 (55.1)	140 (49.1)
Very often	33 (12.0)	24 (8.4)
Emotion-focused coping		
Very seldom	7 (2.5)	26 (9.1)
Seldom	173 (62.7)	193 (67.7)
Often	91 (33.0)	64 (22.5)
Very often	5 (1.8)	2 (0.7)
Maladaptive coping		
Very seldom	47 (17.0)	11 (3.9)
Seldom	195 (70.7)	186 (65.3)
Often or very often	34 (12.3)	88 (30.9)

$p < 0.001$  and maladaptive strategies,  $\chi^2(2, n = 561) = 46.33$ ,  $p < 0.001$ . Effect size indicated a small effect (problem-focused coping  $\Phi = 0.12$ ; emotion-focused coping  $\Phi = 0.18$  and maladaptive coping  $\Phi = 0.29$ ) (Table 3).

#### Determinants of mental illness

In order to build a logistic regression model individual binary logistic regression analyses were carried out for each of the independent variables, see Table 4 (model 0). Financial strain, maladaptive coping, emotion-focused coping, and problem-focused coping as well as sex and age were found to be significant in predicting mental illness.

A logistic regression analysis was then performed to ascertain the effects of financial strain, use of maladaptive, emotion-focused, and problem-focused coping on the likelihood that participants have mental illness. Backward conditional variable selection was used. Model 2 included financial strain, use of maladaptive coping and use of emotion-focus coping as determinants, see Table 4. The logistic regression model was statistically significant,  $\chi^2(6) = 136.67$ ,  $p < 0.001$ . The model explained 29.5% (Nagelkerke  $R^2$ ) of the variance in mental illness and correctly classified 70.2% of cases.

In the final step, the variables from model 2 were kept and demographic variables were added. A new logistic regression analysis was then carried out. Backward conditional variable selection was used. The full logistic regression model was statistically significant,  $\chi^2(8) = 153.24$ ,  $p < 0.001$ , see Table 4, and included financial strain, use of maladaptive coping, use of emotion-focused coping, age and employment status as significant determinants of mental illness. The model explained 33.7% (Nagelkerke  $R^2$ ) of the variance in mental illness and correctly classified 68.3% of cases. Increased reported financial strain was associated with an increased likelihood of exhibiting mental illness. Individuals who used maladaptive coping strategies very seldom or seldom were less likely to have mental illness than individuals who used maladaptive coping strategies often or very often. Using emotion-focused coping strategies was also shown to

Table 4. Logistic regression analysis of determinants for mental illness amongst over-indebted individuals

Backward conditional logistic regression																		
Variable	Model 0			Model 1			Model 2			Model 3			Final model					
	$\chi^2$	df	b(SE)	Wald $\chi^2$	OR	95% CI	b(SE)	Wald $\chi^2$	OR	95% CI	b(SE)	Wald $\chi^2$	OR	95% CI	b(SE)	Wald $\chi^2$	OR	95% CI
Age	20.00**	1																
Sex	4.68*	1																
Male																		
Female																		
Employment status	3.52	1																
Paid employment																		
No paid employment																		
Annual household income	3.80	3																
Debt size	1.23	2																
Period of indebtedness	1.36	1																
Financial strain	113.68**	1	0.36 (0.05)	57.42**	1.43	1.30–1.57	0.35 (0.05)	55.48**	1.41	1.29–1.55	0.35 (0.05)	50.57**	1.43	1.29–1.57	0.36 (0.05)	51.84**	1.43	1.30–1.57
Use of maladaptive coping	48.88**	2		12.72**				12.64**				12.09**				11.94**		
Very seldom																		
Seldom																		
Often or very often																		
Use of emotion-focused coping	18.65**	3		6.72				9.42*				8.59*				8.52*		
Very seldom																		
Seldom																		
Often																		
Very often																		
Use of problem-focused coping	8.07*	3		5.46														
Very seldom																		
Seldom																		
Often																		
Very often																		
Use of seldom coping																		
Very seldom																		
Seldom																		
Often																		
Very often																		

Note: \*p < 0.05, \*\*p < 0.01.



be significant in predicting mental illness. Increasing age was associated with a reduction in the likelihood of having mental illness. Finally, individuals with no paid employment were more likely to meet the criteria for mental illness than individuals with paid employment.

## DISCUSSION

In this study, differences were examined between over-indebted individuals with mental illness and over-indebted individuals without mental illness regarding objective measures of the financial situation, experienced financial strain, coping strategies, and demographic variables. Furthermore, logistic regression analyses were carried out to build a model with variables predicting mental illness. Noteworthy results were that over-indebted individuals with mental illness were younger, exhibited a higher degree of experienced financial strain, and used problem and emotion-focused coping strategies to a lesser extent but maladaptive strategies to a higher extent. Moreover, the results indicate that financial strain, use of maladaptive and emotion focused coping, age, and employment status were significant determinants of mental illness amongst over-indebted individuals.

### *Demographic factors*

When comparing the groups there are differences between individuals with mental illness and individuals without mental illness regarding sex, age, and employment status. The group with mental illness consists of more women than the group without mental illness. In a normal population in Sweden it is significantly more common for women to suffer from depression or anxiety problems than men (The National Board of Health and Welfare, 2013; The Public Health Agency, 2015), and an overrepresentation of women in the group consisting of individuals with depression or anxiety was expected in view of the available data. Although, when used as a possible predictor of mental illness, gender no longer acts as a significant variable.

Somewhat surprisingly, the result of the present study shows that individuals with mental illness are significantly younger than individuals without mental illness, a difference that amounts to a moderate effect size. Age is also shown to be a significant predictor of mental illness when carrying out the logistic regression analysis, where a higher age is associated with a reduction in the likelihood of having mental illness. In previous research this link has been shown only for anxiety (Drentea, 2000). In both groups, a majority do not have paid employment. Not having paid employment has been shown to be a risk factor for depression and anxiety (Gathergood, 2013; Pelzer, Schaffrath & Vernaleken, 2014). This study indicates a similar association for persons who are over-indebted.

### *Objective measures of the debt situation as well as experienced financial strain*

The result of the study does not point to any significant differences between individuals with or without mental illness regarding the size of the debt, how long the individuals have been indebted, or the income of the household. Neither do any of these

variables show significance in predicting mental illness among the entire sample. It would therefore seem as if the presence of depression or anxiety in persons who are over-indebted cannot be understood in terms of having a large debt or having been in debt during a long period of time. Neither does the size of the income seem to affect the presence of depression or anxiety. Hitherto, contradictory results have been presented in research concerning objective measures. Our results to a large extent correspond with earlier research that has found that objective measures of the debt situation do not have any significance for the outcome on either depression (Bridges & Disney, 2010; Drentea & Reynolds, 2012) or anxiety (Drentea, 2000). However, the opposite result has also been presented in earlier research. Jenkins *et al.* (2008) investigated a normal British population and found that increased mental illness followed on increased debt size. The fact that the study is based on a normal population might explain why Jenkins's result looks different. The participants of the present study differ from this population by having passed the limit of being able to repay their debts within the foreseeable future. It may be that the size of the debt affects the mental health only while there is still a possibility to repay the debt. When this possibility no longer exists, which is the case for individuals who are over-indebted, the size of the debt loses importance in relation to mental health.

Unlike objective measures of the debt, the subjective experience of the financial situation seems to differ between over-indebted individuals with or without mental illness. Those with mental illness rate their experienced financial strain as significantly higher than those individuals without mental illness, a result with a large effect size. Experienced financial strain is also shown to be a significant predictor in the logistic regression model. The more financial strain individuals experienced the more likely they were to report mental illness. The results are in line with research that has been presented earlier where the subjective experience of financial strain is linked to depression and anxiety (Dijkstra-Kersten *et al.*, 2015; Frank *et al.*, 2014; Stein *et al.*, 2013). In the present study this link is confirmed for individuals who are over-indebted as well. The results from this study indicate that it is the subjective experience of the debt situation, rather than the objective measures of that situation, that has a significant value in determining mental illness of the participants. This, too, corresponds with earlier research (Dijkstra-Kersten *et al.*, 2015; Ullah, 1990).

### *Coping*

The result of the study shows that the adaptive dimensions problem and emotion-focused coping are to a larger extent used by individuals without mental illness. These differences had a small effect size. Emotion-focus strategies were used to a larger extent by individuals without mental illness and was also a significant predictor of mental illness. According to the theory of coping presented by Lazarus and Folkman (1984) the aim of emotion-focused coping strategies is to handle the emotions that an apparently unalterable situation gives rise to. Thus, the strategies are aimed at the emotional experience of, rather than the practical circumstances around, a situation. Based on this theoretical reasoning it would seem logical that an increased use of emotion-

focused strategies leads to a decrease in the likelihood of having mental illness. This can be understood based on the reasoning of Roohafza *et al.* (2014) and Garnefski *et al.* (2001) regarding adaptive coping strategies being able to function as a protection against depression and anxiety. Stein *et al.* (2013) also presented support for the idea that active coping is compatible with a lower degree of depression and anxiety. Although our results indicate that use of emotion-focused coping strategies is a significant predictor of mental illness, no significant difference was found between using it very seldom compared to seldom, often or very often. It is therefore not simply the case that using emotion-focused strategies less often is a risk factor for mental illness but rather indicates a more complex association than needs to be further studied. In a similar way maladaptive coping strategies have been shown to function as a risk factor for depression and anxiety, since their stress reducing function is deficient (Lazarus & Folkman, 1984). In line with this the results of the present study show that the use of maladaptive coping strategies is more extensive among individuals with mental illness, a result with a large effect size, and that the less often individuals used maladaptive coping strategies, the less likely they were to report mental illness. Maladaptive coping strategies, such as denial, self-accusation, and resignation, are strategies whose stress reducing function is deficient (Orgeta & Orrell, 2014; Roohafza *et al.*, 2014). The strategies are not sufficient for getting to grips with either the stressful situation or the emotional reaction that the situation gives rise to. It would thus seem as if using these strategies to a high extent is a risk factor for developing mental illness in over-indebted individuals. It is known from before that individuals with mental illness use maladaptive coping strategies to a larger extent (Doron *et al.*, 2013; Orgeta & Orrell, 2014). The unique contribution of our study is to show that these patterns are to be found among the group of individuals who are over-indebted as well.

Problem-focused coping aims at changing the conditions of the environment in order to handle the prevailing situation (Lazarus & Folkman, 1984). When controlling for financial strain and use of maladaptive, as well as emotion-focused coping strategies, problem-focused coping does no longer act as a predictor of mental illness. One interpretation is that the situation of the over-indebted person is complex and may be hard to affect, which makes it clear that huge efforts are needed. This might be a plausible explanation as to why use of maladaptive and emotion-focused coping strategies better predicts mental illness than use of problem-focused coping.

#### LIMITATIONS AND FUTURE RESEARCH

A limitation of the present study is that response frequency was 33%. The fact that no non-response analysis was made on the 67% that chose not to participate in the study makes it harder to comment on the representativity of the selection. The fact that there is no national register of persons who are over-indebted in Sweden further contributes to the difficulty of deciding how generalizable the study is. Furthermore, it is unclear whether the results from the present study may be generalized to countries other than Sweden, as over-indebtedness is to some extent related to the societal context. It would be desirable for similar studies to be performed in other countries and cultures as well in order to find out whether the results are representative.

Yet another limitation in the design of the study is that it is performed as a cross-sectional study. Thus, the statistics resulting from this design makes it harder to draw causal conclusions. A recommendation is for future studies to focus more thoroughly on the study of causality regarding mental illness and coping strategies by applying a longitudinal design.

A third limitation is that the present study was based on self-reported data. Societal norms and attitudes towards over-indebtedness could lead to the participants not responding truthfully to the questionnaire. In view of the aim of the present study, the subjective experience is seen as extremely relevant and data based on self-reporting thus constitute an asset. It would be desirable for future research to strive to validate the reported data to as large an extent as possible by comparing the information with collected register data.

Finally, limitations are found in how the concept of experienced financial strain was operationalized in this study. Experienced financial strain was measured through a question where the participant's psychological strain in relation to his or her debt situation was assessed. Making use of several questions in order to properly identify the phenomenon would have been desirable, since that would have enabled an increased reliability. Furthermore, it is possible that the question raised in the present study merely captures one aspect of the phenomenon of experienced financial strain. Future research could focus closer on experienced financial strain as a theoretical concept.

#### IMPLICATIONS

Coping seems to be crucial to the psychological well-being of the over-indebted individual. Therefore, it seems reasonable that interventions leading to an increased use of emotion-focused coping strategies should be prioritized in the encounter with over-indebted individuals – an implication that is valid on a societal level as well as for psychologists and professionals in clinical practice. It would seem as if coping strategies may serve as a protection against depression and anxiety. Creating treatments focusing on the development of the over-indebted individual's adaptive coping strategies is, therefore, required.

Furthermore, it is important for professionals in clinical contexts to be aware of the prevalence of mental illness among over-indebted individuals, and perhaps pay specific attention to unemployed and young people who seem to have an increased vulnerability. The results of the present study indicate that the debt situation should be taken into account in the encounter with individuals who are over-indebted, as this situation may affect the clinical work. Awareness that debts may affect mental health, and vice versa, will enable treatment that is tailored to the individual.

To conclude, the present article shows that there are several ways to go about preventing mental illness in over-indebted individuals and opens up for new possibilities. It is the authors hope that these findings will help develop new ways of handling this issue.

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