Beyond debt. A moderator analysis of the relationship between perceived financial strain and mental health

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Abstract

Heavy debt not only has economic consequences, but has also been related to severe psychological and physical distress. The present study investigates the relationship between perceived financial strain and mental health, and individual level variables that moderate this relationship. Specifically it was expected that employment, access to the latent benefits of work (Jahoda, 1982), and self-efficacy would buffer the relationship between perceived financial strain and mental health. In a 2009 study conducted in Austria, among 106 people on the verge of bankruptcy, perceived financial strain appeared as the strongest predictor of distress. This effect was moderated by two out of five latent benefits of work and self-efficacy, but employment status failed to have a significant effect. The findings show the importance of subjective economic stress for the prediction of mental health among people in serious financial strain and indicate significant moderators of this relationship.

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Keywords:

Debt; Distress; Self-Efficacy; Latent Benefits; Austria
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This article was written at a time when the economy had just begun its struggle to recover from a recession, which affected many countries and companies, and consequently, individuals as well. Economic crises seem inevitably linked to a rise in unemployment, an increase in private debt, as well as a rise in mental health problems in the general population, a finding supported by several studies across various cultures (cf. Chatterjee, 2009; Friedman & Thomas, 2009; Stuckler et al., 2009). The relationship between economic stress and distress has also been well reported in studies using an individual level of analysis (e.g., DeVaney & Lytton, 1995). For example, household heads with outstanding non-mortgage credit debt have been found to report worse mental health, especially if debt is high (Brown et al., 2005). Adults who live in poverty have a risk of depression twice as high as those who do not (Bruce et al., 1991). Nevertheless, not everyone living in poverty suffers from depression, and not everyone with outstanding non-mortgage credit debt suffers from distress. The aim of the present study is to look at the subjective side of economic stress and the psychological factors that might moderate the impact of perceived financial strain on distress.

Applied psychologists, who have long been interested in the individual factors that moderate the relationship between financial hardship and individual well-being, distinguish between objective and subjective aspects of economic stressors (Sinclair et al., 2010). While the term objective aspect concerns “[. . .] the objective inability to meet current financial needs”, the subjective aspect relates to “[. . .] the perceived inadequacy of the financial situation” (Sinclair et al., 2010, p. 2). For the prediction of well-being, subjective economic stress plays an important role (e.g., Drentea & Lavrakas, 2000; Hoelzl et al., 2009;
Wadsworth et al., 2008). For example, among women with objective financial difficulties suffering from postnatal depression, worries about debt accounted for the largest amount of variance of depression, beyond the objective amount of debt and other health-related factors (Reading & Reynolds, 2001). In another study on the effects of credit card debt on well-being, the subjective appraisal of the economic situation was identified as the most important predictor of physical impairment and mental health, while the objective amount of debt was of minor importance (Drentea & Lavrakas, 2000). Certainly, objective and subjective economic stress are not unrelated. According to the multilevel model of economic stress (Sinclair et al., 2010), perceived economic stress acts as a mediator between objective economic stress and well-being. Moreover, the relationship between objective economic stress and subjective economic stress, as well as the relationship between subjective economic stress and individual well-being, is assumed to be moderated by a variety of individual-level factors. The present study focused on individual-level moderators of the latter relationship. The emphasis will be on the subjective economic stress of heavily indebted persons, and specifically its relationship with distress. Furthermore, three kinds of moderators will be analyzed: (a) the individual’s employment situation, (b) the latent benefits the individual has access to, and (c) the individual’s self-efficacy beliefs. Although the negative effect of financial strain on various aspects of life is repeatedly shown, research on moderators is still limited (Sinclair et al., 2010, p. 5).

The first factor we would like to propose as a moderator of the relationship between perceived financial strain and mental health is the person’s employment situation. The positive effect of employment on health is confirmed in a variety of studies (for meta-analysis see McKee-Ryan et al., 2005; Paul & Moser, 2009). Besides the direct positive effect it has on health, employment might also have a moderating effect on the relationship between perceived financial strain and mental health. Those with financial difficulties are restricted in
their roles as consumers and normal citizens. They are more likely to suffer from social exclusion as it is difficult to purchase the items needed to participate in ordinary social activities (e.g., Halleröd & Larsson, 2008; Hoelzl et al., 2009). Employment might be one of the few social institutions to which people under serious financial strain have access and thereby buffers the negative relationship between financial strain and mental health (cf. Jahoda, 1992, p. 356). Similarly, unemployment might strengthen the negative relationship between financial strain and well-being. Unemployment is usually discussed as a cause of financial strain and distress (e.g., Livingstone & Lunt, 1992; McKee-Ryan et al., 2005; Paul & Moser, 2009; Sales, 1995; Turner et al., 1991). Without denying that it can be a source of financial strain, we would like to suggest that given a situation of serious objective and subjective economic stress, unemployment might amplify the negative relationship between perceived financial strain and distress. If people who are in serious financial strain become unemployed, they are no longer able to cope with this strain through work and earning an income. Thereby, an important way of handling the financially adverse situation is beyond their control. The feeling of having no control is a major factor in the stressor-strain relationship and has been related to an increase in depressive symptoms (e.g., Frese & Mohr, 1987).

A theoretical model that explains the effect of employment on well-being is Jahoda’s latent deprivation theory (Jahoda, 1982). According to this model, employment grants access to several benefits, over and above the benefit of providing a financial income, which are essential for well-being. According to Jahoda (1982), employment

“[…] imposes a time structure on the waking day; it enlarges the scope of social relations […] it demonstrates that the purpose and achievements of a collectivity transcend those for which an individual can aim; it assigns social status […] ; it requires regular activity. (p. 83, emphases added)
Empirical studies repeatedly show a positive effect of these five so-called latent benefits of employment on mental health (e.g., Paul & Batinic, 2010), an effect that is also found longitudinally (cf. Hoare & Machin, 2010; Selenko et al., 2011). Recent studies indicate that there might also be other structures, besides employment, that influence access to latent benefits. Specifically, meaningful leisure activities (Waters & Moore, 2002), moonlighting (Šverko et al., 2008) or the kind of job a person works in (Batinic et al., 2010), have a positive impact on the latent benefits and consequently on health.

Besides having a direct beneficial effect on health, we propose that latent benefits might also function as moderators of the relationship between perceived financial strain and mental health. Access to latent benefits, gained either through employment or other structures, might soften the negative effect of perceived financial strain on well-being. For example, as sociological studies show, financial strain can induce feelings of worthlessness (Mirowsky & Ross, 1986). The latent benefit societal status and recognition could buffer this effect. Moreover, financial strain has been found to restrict a person’s social activities (e.g., Christie, 1976). Access to the latent benefit social contact might counterbalance this by enlarging the scope of the person’s social network. In addition, poverty is often associated with stigma and exclusion, access to the latent benefit collective purpose might reduce these feelings by enabling a person to feel part of a larger collective (Mickelson & Williams, 2008). Another serious negative effect of poverty is that it restricts personal agency, which makes it also more difficult to fill a day’s time (Fryer, 1997). The latent benefits activity and time structure might mitigate these restrictions. All in all, this gives reason to believe that the latent benefits can potentially buffer the negative relationship between financial strain and mental health.

Besides one's employment situation and the consequent access to latent benefits, there are also individual factors that might moderate the relationship between perceived financial
strain and well-being. Sinclair et al. (2010) suggest that most moderators of the financial strain-distress relationship can be related to the concept of core self-evaluations, which is defined as the “[…] fundamental assessments that people make about their worthiness, competence, and capabilities” (Judge et al., 2005, p. 257). One fundamental element of core self-evaluations is a person’s belief in his or her own competence, or self-efficacy. Self-efficacy has been identified as a moderator of strain-distress relationships in several studies (e.g., Jex et al., 2001; Schaubroek & Merritt, 1997; Stetz et al., 2006). It has been related to coping behaviours such as job-seeking behaviour among unemployed individuals (Creed et al., 2001; Vinokur et al., 1991). Studies on the moderating effect of self-efficacy on the relationship between financial strain and mental health are very scarce. However there are studies in the area of poverty research that indirectly support the assumption of self-efficacy being a moderator in this study. Homeless people with high self-efficacy were found to show a greater amount and variety of coping strategies, which resulted in their finding new housing more quickly than homeless people with low self-efficacy (Epel et al., 1999). A related concept, mastery, was found to moderate the impact of acute financial loss on depression among European American women (Ennis et al., 2000). This gives reason to believe that a similar mechanism might help people in heavy debt. Presumably, debtors who are confident about their ability to cope might be less affected by their perceived financial strain. A strong belief in one’s own capacity to cope with debt might buffer the negative effect of perceived financial strain on mental health.

In sum, this study aims to explore the factors that moderate the experience of subjective financial strain. In this regard, the focus will be on the perceived financial strain and well-being of people in serious debt. The individual’s employment status, the amount of latent benefits to which a person has access, and self-efficacy beliefs will be investigated as moderators of the perceived financial strain-distress relationship. Identifying factors that
moderate the effect of perceived financial strain might be of great value for practitioners working in the field of debt counselling. After all, interventions that buffer the impact of perceived financial strain might help debtors cope with their financial situation, even if a financial solution is not in sight.

This leads us to the following hypotheses. First of all, we propose that in times of objective economic stress, it is mostly the perceived financial strain that is important for mental health. This is what would be expected from previous studies on the subjective side of debt (cf. Hoelzl et al., 2009; Reading & Reynolds, 2001). Those who perceive more financial strain will report more distress (Hypothesis 1). Second, we assume that employment, the latent benefits, as well as self-efficacy will be positively related to mental health. We propose that debtors who are employed will report better mental health than debtors who are unemployed (Hypothesis 2a). Debtors who have more access to latent benefits will report better mental health than debtors who have less access to latent benefits (Hypothesis 2b). Debtors who are high in self-efficacy will indicate better mental health than debtors who are low in self-efficacy (Hypothesis 2c). Finally, we propose that the relationship between perceived financial strain and mental health will be buffered by employment (Hypothesis 3a), the latent benefits (Hypothesis 3b) and self-efficacy (Hypothesis 3c).

Method

Participants and Procedure

Respondents of this study were clients of a nationwide, non-profit, publicly funded Austrian debt-counselling institution, who were in the process of filing for bankruptcy. They were approached in spring 2009 by their counsellors; participation in the research was anonymous and non-obligatory. The study adhered to the ethical codes of the APA. In total,
200 questionnaires were sent out, of which 132 were returned, resulting in a response rate of 64.5%. Persons who did not indicate their employment status (N = 8) or who were neither employed nor unemployed (N = 15) (on maternity leave or sabbatical, in early retirement or on sick leave for longer than 4 weeks) were excluded from the analysis. Moreover, respondents with too many missing values (N = 3) were also excluded from further analysis.

**Demographics**

Of the remaining 106 participants, 43.4% were female, and participants were, on average, 36.90 years old ($SD = 10.08$). As for education, two people reported having not completed schooling at all, 34.9% of the respondents reported having completed 10 years of schooling as their highest level of education, 39.6% reported having additionally finished an apprenticeship, 11.3% had a craftsman certificate, 6.6% had finished grammar school only, and 4.7% had a university degree.

Half of the respondents (49.1%) indicated being in a relationship, and most of them had no children under 15 living in their household (61.4%). 20.8 % had one child, 11.9 % two children and 5.9 % three or more children. 25.8% of the respondents lived alone, 24.2 % lived with one other person, 21.7 % lived with two other people in a household, and 28.4 % lived with three or more in a household.

It should be noted that although debt counselling is free of charge and available to anyone in Austria, it is seen as a last resort and is mostly approached by those filing for bankruptcy. To be able to file for bankruptcy, debtors are obliged to be supervised by a debt counsellor. Since bankruptcy depends on the total income and property of a person in relation to the total amount of money owed, clients of debt counselling institutions can have a wide range of debts, although the ratio between debt and property is the same. In order to appraise the amount of actual debt in the present sample, respondents were asked to indicate their estimated amount of debt according to four different categories. In this study, 10.4 % of
the respondents indicated having less than 10,001 € of debt; 45.3 % indicated having debt between 10,000 € and 50,001 €; 25.5 % between 50,000 and 100,001 €; 16.0 % more than 100,000 €; and 3 respondents did not indicate their debt. Considering that filing for bankruptcy is a much stigmatized process, we presume the individual objective debt load to be substantial and rather similar across the debt range.

**Employment status**

Adopting the criteria from large-scale census classification (e.g., US Census Bureau, 2006), respondents who indicated full-time work, part-time work, self-employment or apprenticeship as their employment were considered as being employed (57.5%), while respondents who indicated being unemployed or in a reemployment program organised by the Federal Employment Office were considered unemployed (42.5%). A new categorical variable “employment” was created, with employed individuals being coded 1 on this variable and unemployed individuals being given the code 0. All in all, with regard to the amount of debt, demographic aspects and employment status, the sample is comparable to the average debtor in Austria (Austrian Federal Ministry of Justice, 2008).

**Measures**

**Perceived financial strain.** Most previous studies on people with high debt (e.g., Hoelzl et al., 2009) used single-item measures for assessing financial strain or debt burden. A single-item measure seemed too narrow to account for the various aspects of financial strain in the presented study. In close cooperation with employees of the debt-counselling agency participating in this research, six different items were developed, requiring participants to rate their agreement with each on a scale of 1-7. Two statements were general (“My current financial situation is a serious strain” and “I often think about my current financial situation”). Four statements were designed to measure how much the respondents felt restricted in their daily life (“Due to my financial situation, I have difficulties paying for
my apartment and utilities”; “Due to my financial situation, I have to save considerably on food”; “Due to my financial situation, I have to save considerably on clothes”; and “Due to my financial situation, I am restricted in my leisure activities”). Exploratory factor analysis resulted in a one-factor solution with an eigenvalue above 1, accounting for 66.63% of the variance. The internal consistency of the scale was also good (Cronbach’s alpha = .88). A mean across all items was used as an overall impression of perceived financial strain.

Perceived financial strain correlated with employment status, the latent benefits, self-efficacy and mental health in the expected direction (see Table 1).

Mental health was measured with the German translation (Linden et al., 1996) of the 12-item version of the General Health Questionnaire, a widely used screening instrument for identifying people likely to have psychological problems (Goldberg & Hillier, 1979). Participants had to indicate how often they experienced the respective symptom on a Likert scale from 1 to 4, with higher values indicating worse mental health. Internal reliability for this scale was good, Cronbach’s alpha = .93. Respondents of this sample scored on average $M = 1.52$, $SD = 0.70$ on the General Health Questionnaire, which is significantly worse than participants of a large-scale industrial sample, $M = 1.00$, $SD = 0.45$, $t(105) = 7.62$, $p < .001$ (cf. Stride et al., 2007, p. 80). Altogether, this indicates that the respondents of this sample had a higher likelihood of developing psychiatric disorders. For the rest of the analysis, mental health was recoded so that high values indicate good mental health.

Latent benefits of work were measured with the Access to Categories of Experience scale by Evans (1986). In this scale, each latent benefit is measured with three items to which respondents can indicate their agreement on a scale of 1 to 7. This widely used scale has recently been criticized for providing insufficient factor structure and weak scale reliabilities, especially with regard to the subscales time structure, collective purpose and social contacts (Paul & Batinic, 2010). Therefore, we included one extra item for each of
these three subscales, with the additional items being derived from the corresponding scales of the latent benefits by Muller and colleagues (2005). Collective purpose was measured with three items, with the additional item being “I often feel that I make a meaningful contribution to society”, and reliability was acceptable (Cronbach’s alpha =.66). Time structure was also measured using four items, with the additional item being “There is usually too much spare time in my day”. Nevertheless, reliability remained very weak, and we therefore decided to use the item by Muller et al. (2005) as a single-item measure of time structure. Activity was measured with three items by Evans (1986), showing satisfactory reliability (Cronbach’s alpha = .78). The latent benefit, social contacts, was measured with four items, and the additional item was taken from Muller et al.: “I seldom meet new people” (recoded). Reliability was satisfactory (Cronbach’s alpha = .75). Status was measured with three items; reliability was acceptable (Cronbach’s alpha = .66). Previous studies have shown that despite these low reliability indices, the Access to Categories of Experience scale still demonstrates sufficient convergent and discriminant validity (e.g., Paul & Batinic, 2010). An exploratory factor analysis across the items of the scale with an eigenvalue extraction above 1 reveals a five-factor solution, with an explained variance of 66.43%.

**Self-efficacy** was measured with the 10-item General Self-Efficacy scale by Schwarzer and Jerusalem (1995), in a German translation by the authors (Schwarzer & Jerusalem, 1999). A sample item would be: “I can always manage to solve difficult problems if I try hard enough”. Respondents indicate their agreement on a 4-point Likert scale ranging from *not at all true* (1) to *completely true* (4). High values indicate a high self-efficacy (Cronbach’s alpha = .84).

**Results**

In line with our expectations, perceived financial strain was negatively correlated with mental health, $r (106) = -.54$, $p < .001$ (see Table 1). The actual amount of debt was assessed
as a categorical variable, with the categories less than 10,000 € of debt, between 10,000 € and 50,001 €, between 50,000 € and 100,001 €, and more than 100,000 € of debt. 55.7% of the respondents fell into the first two categories. Contrary to expectations, the debt category was not correlated with mental health or perceived financial strain (see Table 1), nor did the debt categories differ on mental health, $F(3,99) = 1.18, p = .32, \eta^2 = .03$, or perceived financial strain, $F(3,99) = 0.62, p = .60, \eta^2 = .02$. For the respondents in our sample, only perceived financial strain was related to mental health, while the actual amount of debt did not play a role. Hypothesis 1 was thus only partly supported.

In our second set of hypotheses, we proposed that there would be differences in mental health between the unemployed and employed, between people with more or less access to latent benefits and between people with more or less self-efficacy. Pearson correlations (see Table 1) indicated that all of these variables were related to mental health in the expected direction.

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Furthermore, we assumed that self-efficacy, employment and the access to latent benefits would moderate the relationship between perceived financial strain and mental health. The Pearson correlations (see Table 1) revealed that mental health was related to gender and education, with men reporting worse health, $r(106) = -.19, p = .046$ and better educated people reporting better health, $r(106) = .20, p = .045$. These two variables were included as control variables in the subsequent analyses. To test our hypotheses, we conducted a hierarchical linear regression analysis, with tests of simple slopes to test for moderation effects (Cohen et al., 2003). After entering the control variables, perceived financial strain
was entered into the regression analysis. In a second step, employment, self-efficacy and latent benefits were entered in the prediction, and in a third step the interaction terms were added. All variables were mean-centred before being entered in the regression; all dichotomised variables were transformed into a 0-1 format. Interaction terms were calculated on the basis of the mean-centred variables.

The control variables gender and education accounted for 6.7% of the total variance of health, $F(2,103) = 3.71, p = .028$. However, neither gender ($B = -24, SE = .14, \beta = -.17, p = .076$) nor education ($B = .11, SE = .06, \beta = .17, p = .074$) had an independent impact on mental health.

In the first step of the hierarchical analysis, perceived financial strain was entered, which accounted for an additional 26.8% of explained variance in mental health, $F(1,102) = 41.10, p < .001$ (see Table 2). Next, being employed, self-efficacy and the latent benefits were entered in the prediction, $\Delta R^2 = .09, F(7,95) = 2.19, p = .042$. It appeared that although all variables were significantly correlated with mental health and contributed as a whole to the explanation of mental health, none of them contributed independently to the explained total variance. In a third step, the interaction terms were entered, which resulted in a total explained variance of 51.2%, $\Delta R^2 = .08, F(7,88) = 2.16, p = .045$. The effect of perceived financial strain was moderated by self-efficacy, and by the latent benefits of social contacts and collective purpose.

It should be noted that including a large number of predictors in a regression equation with little or no relation to the criterion comes with the risk of a lower efficiency of the prediction (Aiken & West, 1991, p .103). As a remedy to this, Aiken and West (1991)
suggest removing the non-significant effects and testing a reduced model. In order to provide a more powerful test of the effects, we conducted a second analysis, testing a reduced model in which only those coefficients that worked as moderators were included in the prediction, together with their lower order terms. All coefficients that had no independent relationship with mental health and did not work as moderators were removed. This analysis proceeded hierarchically in a similar fashion as the regression reported in Table 2. After entering the control variables and perceived financial strain in Step 1, self-efficacy, social contacts and collective purpose were added as main effects in Step 2 of the regression analysis. This step added significantly to the explained variance of mental health, $\Delta R^2 = .07, F(3,99) = 3.82, p = .012$. The inclusion of the interaction terms Perceived Financial Strain X Self-efficacy, Perceived Financial Strain X Social Contacts, and Perceived Financial Strain X Collective Purpose in Step 3 added significantly to the explained variance of health, $\Delta R^2 = .08, F(3,96) = 4.77, p = .004$, leading to a total explained variance of $R^2 = .48$. The coefficients of Step 3 of this reduced model are shown in the last column of Table 2. This indicates that the identified interactions of the full model are robust effects in their own right, and not the result of spurious correlations.

To illustrate the interaction effect, we plotted the regression equation of Step 3 of the full model (see Table 2) at one standard deviation above and below the centred mean of the moderators. This was done separately for each interaction. Additionally, a test of the simple slopes was carried out by calculating their standard errors and t values (Cohen et al., 2003). With regard to self-efficacy, it appeared that an increase in financial strain was related to a decrease in mental health only if a person was low in self-efficacy, $t(102) = 3.03, p < .01$. If a person was high in self-efficacy, their health remained stable, no matter how high or low their perceived financial strain was, $t(102) = 0.52, ns$ (see Figure 1). A similar effect was found for collective purpose (see Figure 2): If persons perceived above average access to
collective purpose, there was no difference in their mental health in terms of whether perceived financial strain was low or high; in other words, their mental health remained stable, $t(102) = 0.41, ns$. If persons perceived low access to collective purpose, then their mental health was worse when the perceived financial strain was high compared to when the perceived financial strain was low, $t(102) = 2.58, p < .05$.

The effect of social contacts on the perceived financial strain-distress relationship was not as expected (see Figure 3). There was no relationship between financial strain and mental health if people indicated little access to social contacts, $t(102) = 0.14, ns$; their health remained low no matter how high or low their perceived financial strain. People who indicated they had a lot of social contacts showed better mental health than those with few social contacts, if the perceived financial strain was low, $t(102) = 2.64, p < .05$; if the perceived financial strain was high, there was no difference in the mental health to the two groups, $t(102) = 1.11, ns$.

Taken together, the results indicate that financial strain had less effect on mental health if an individual had strong self-efficacy beliefs and had more access to collective purpose. More access to social contacts was related to better mental health only if the perceived financial strain was low. The results showed that the employment status had little effect on the relationship between perceived financial strain and mental health. Although providing partial support for the assumptions of Hypothesis 3, the results should be viewed with caution in light of the small sample size.

**Discussion**

In the present study, we explored the mechanisms underlying the association between perceived financial strain and mental health. All participants in this study were on the verge of bankruptcy, thus they were in a comparable financial situation. Moreover, they reported an above-average amount of distress in general. Nevertheless, even though their objective
economic stress might have been the same since they were all filing for bankruptcy, they varied with regard to their perceived financial strain and mental health. The perceived financial strain was related to an individual’s mental health, whereas the objective amount of debt was not. This is in line with previous research (e.g., Drentea & Lavrakas, 2000; Reading & Reynolds, 2001) and emphasizes the distinction between objective and subjective economic stress when it comes to debt. Furthermore, although conclusions regarding possible moderators should be drawn with caution since the sample on which the results are based was rather small, the findings suggest that the effect of perceived financial strain might be moderated by some latent benefits and self-efficacy beliefs.

Drawing on the propositions of latent deprivation theory (Jahoda, 1982), we expected to find that employment would be directly related to mental health and would have a moderating effect as well. Heavy debtors with employment should report better mental health than unemployed debtors, and the negative effect of the perceived financial strain on mental health should be lower if a person is employed. Contrary to expectation, the employment status neither showed a direct relationship with mental health nor did it work as a moderator. This is in contrast to the literature, which generally shows a health difference between unemployed and employed persons, even when controlled for normal financial difficulties (e.g., Paul & Moser, 2009). One possible reason why employment status had no independent part in the prediction of health is that it is conceptually related with the latent benefits (e.g., Paul & Batinic, 2010). As there is empirical evidence showing that employment status and latent benefits can have an independent share in the prediction of health (e.g., Selenko et al., 2011), we decided that keeping them separate would provide a more conservative test of our assumptions. Another explanation could be that in the case of extreme financial difficulty it no longer matters for people’s mental health whether or not
they are employed. Future studies that include people under a variety of economic stressors might help clarify this finding and elucidate the impact of employment on mental health.

Although employment did not act as a moderator, two of the five latent functions associated with employment moderated the relationship between perceived financial strain and mental health. As expected, the feeling that one is a part of a collective purpose lowered the effect of financial strain on mental health. Research on the perceived stigma of poverty has shown that people fear rejection by others, which leads to depression (Mickelson & Williams, 2008). It is reasonable to speculate that contributing to a higher collective purpose through work might inoculate against this fear of rejection. Certainly, more research is needed to verify this assumption.

The moderating effect of social contacts was different than expected, although findings regarding the role of social support as a moderator of the relationship between perceived financial strain and distress have been inconsistent (Sinclair et al., 2010). Good access to social contacts in the present study did not moderate the relationship between perceived financial strain and mental health in the expected direction, it was related to better mental health only if financial strain was low. The latent benefit social contact indicates the scope of the social network to which a person belongs outside the private family (Jahoda, 1982), which does not necessarily mean more or better social support. It has been argued that the beneficial function of a social network might depend on the person’s financial situation, as more financially deprived individuals do not have the means to participate in social activities. Hence, they might benefit less from a wider social network (see Creed & Watson, 2003, p. 96). Other research has shown that one factor that predicts depression among the impoverished is the fear of social rejection (Mickelson & Williams, 2008). We might speculate that a wider social network increases the chance, and thus fear of, social rejection.
The latent benefits of time structure, status and activity were neither directly related to mental health, nor did they have a moderating impact on the relationship between perceived financial strain and mental health. The direct beneficial effect of time structure, status and activity on mental health has repeatedly been shown in the literature (e.g., Paul & Batinic, 2010). The diverging result in our study might be due partly to measurement issues, as time structure was measured using a single-item measure only. A replication of this study including other measurement instruments of the latent benefits of work (e.g., Muller et al., 2005) might allow for a more definitive answer concerning the direct and moderating effect of these three benefits.

The third moderator we identified is self-efficacy. The results showed that for people high in self-efficacy, their perceived financial strain did not affect their mental health. This is in line with the expectations derived from stress research, as self-efficacy is well known for its potential as a strain-distress moderator. A similar effect has been found in previous studies on financial hardship and mental health (Ennis et al., 2000; Epel et al., 1999).

Certainly, there are also limitations to the present findings. First of all, the causal direction from perceived financial strain to mental health in our study is uncertain. Evidence from longitudinal studies suggests financial strain leads to distress rather than the other way around (e.g., Reading & Reynolds, 2001). But more studies are certainly needed in this regard. Furthermore, the sample on which the findings of this study are based is rather small, which limits the power to detect significant effects. In other words, the failure to find significant effects of employment status and the latent benefits time-structure, status and activity might be due to the small size of the sample. We tried to attenuate this by conducting a reduced regression analysis which shows that the effects that were found hold. Until the results are replicated in other studies, any generalisations from this study should be drawn with care. Third, although the measure of perceived financial strain that was created for this
study shows high reliability as well as good explained variance of the underlying factor, and functions well as a predictor of mental health, we know very little about it so far. Future studies might wish to concentrate on factors that lead persons to feel more or less financially deprived beyond the debt-to-income ratio alone.

Despite these limitations, we believe that there are important aspects in the present study for researchers as well as practitioners working in the field of debt counselling. First of all, our findings underline the importance of including the perception of financial strain when analyzing the situation of people under objective economic stress. Most research on debt and mental health relies on panel data, with very few studies (e.g., Reading & Reynolds, 2001) including measures of the individual account of the financial hardship. The present findings show that even under extreme objective economic stress (i.e., bankruptcy), subjective economic stress can vary, and as a result, so can mental health. Second, our study shows that although there is a significant negative effect of perceived financial strain on mental health, this relationship might be softened by self-efficacy and the amount of access a person has to collective purpose. The amount of social contacts also improved well-being, but only if perceived financial strain was low. These factors can be enhanced, either through training in the case of self-efficacy (e.g., Eden & Aviram, 1993; Wood & Bandura, 1989) or through meaningful leisure activities in the case of the latent benefits (cf. Waters & Moore, 2002). This indicates, even if a financial solution is not available, the amount of suffering stemming from financial difficulties can still be reduced by other means. ..

References


**Table 1**

*Pearson Correlations of Mental Health with Demographic Variables, Perceived Financial Strain and Moderators (N=106)*

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*Note.* Gender (1 = female, 0 = male), relationship (1 = in a relationship, 0 = no relationship), amount of debt (less than 10,001 € of debt, 2 = between 10,000 € and 50,001 €, 3 = between 50,000 and 100,001 €, 4 = more than 100,000 €).

* *p < .05. **p < .01.*
### Table 2

*Hierarchical Regression Analysis for Analysing Moderators of the Relationship Between Perceived Financial Strain and Mental Health (N = 106)*

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*Note.* Coefficients of control variables are omitted for the sake of clarity.

* *p < .05, ** p < .01.*
Figure 1. Simple slopes for the moderation of perceived financial strain on mental health by self-efficacy at -1 SD (low) and +1 SD (high) of the centred means.
Figure 2. Simple slopes for the moderation of perceived financial strain on mental health by collective purpose at -1 SD (low) and +1 SD (high) of the centred means.
Figure 3. Simple slopes for the moderation of perceived financial strain on mental health by social contacts at -1 SD (low) and +1 SD (high) of the centred means.