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ORIGINAL ARTICLE

Distress and unemployment: the related economic and noneconomic factors in a sample of unemployed adults

Diana Frasquilho · Margarida Gaspar de Matos · Adilson Marques · Tânia Gaspar · José Miguel Caldas-de-Almeida

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Abstract
Objectives To examine the associations between economic and noneconomic factors and psychological distress in a group of 748 unemployed adults during economic recession.
Methods Data were collected through a questionnaire. Bivariate and logistic regression analyses were used to test the associations between distress and the deprivation of income and latent benefits of employment (time structure, activity, status, collective purpose and social contact).
Results The participants' mean of distress was higher than the national population mean, and 46.5% of the participants scored above that. All economic and noneconomic factors emerged as strong predictors of distress; particularly financial deprivation (OR 1.06; CI 95 % 1.04–1.09) and lack of structured time (OR 1.07; CI 95 % 1.05–1.09). Women (OR 1.40; CI 95 % 1.04–1.86) and people with lower education levels (OR 0.45; CI 95 % 0.34–0.61) were more affected.
Conclusions The unemployed individuals score high on distress, especially those facing financial strain and lack of structured time, and women and individuals with lower education in particular. Given the recessionary context and high unemployment rates, these insights raise awareness for policies and actions targeting the needs of unemployed people.

Keywords Economic recession · Financial deprivation · Mental health · Psychological stress · Time structure · Unemployment

Introduction

The 2009 economic recession has had a profound impact on labour markets, increasing unemployment rates (EUROSTAT 2015). Unemployment is a major concern in terms of public health given that evidence suggests it is

D. Frasquilho (✉) · M. G. de Matos
Aventura Social, Faculty of Human Kinetics, University of Lisbon, Lisbon, Portugal
e-mail: dianafguerreiro@gmail.com; diana.frasquilho@hbsc.org

M. G. de Matos
e-mail: mmatos@fmh.ulisboa.pt

D. Frasquilho
Medical School and CMDT, Nova University of Lisbon, Lisbon, Portugal

M. G. de Matos
William James Research Center, ISPA, Lisbon, Portugal

A. Marques
Interdisciplinary Centre for the Study of Human Performance, Faculty of Human Kinetics, University of Lisbon, Lisbon, Portugal
e-mail: amarques@fmh.ulisboa.pt

A. Marques
Public Health Research Centre, National School of Public Health, Nova University of Lisbon, Lisbon, Portugal

T. Gaspar
Lisbon Lusíada University, Lisbon, Portugal
e-mail: tania.gaspar@edu.ulusiada.pt

T. Gaspar
ISAMB, University of Lisbon, Lisbon, Portugal

J. M. Caldas-de-Almeida
Department of Mental Health, Medical School, Nova University of Lisbon, Lisbon, Portugal
e-mail: caldasjm@fcm.unl.pt

related to higher mortality risk (Roelfs et al. 2011; Clemens et al. 2015) and mental health problems (McKee-Ryan et al. 2005; Paul and Moser 2009; Riumallo-Herl et al. 2014; WHO 2014).

In Portugal, despite being one of the European countries where the unemployment rates have grown the most (9 % in 2008 to 14 % in 2014), little research to our knowledge has focused on the mental well-being of the unemployed population (Sousa-Ribeiro et al. 2014; EUROSTAT 2015). The main objective of the present study is to research differences between groups of unemployed people defined by individual factors with regard to distress levels, and to investigate how the deprivation of access to latent and manifest benefits of employment relates to distress. This study addresses this aim in light of two main theoretical frameworks in unemployment research: the Latent Deprivation Model (Jahoda 1982) and the Agency Restriction Model (Fryer 1986).

According to the Latent Deprivation Model (Jahoda 1982), unemployment-related stress is due to loss of income and deprivation on five latent benefits of work: time structure, social contacts, social purpose, status, and activity. The factors suggested by the model have been empirically validated by other studies (Creed and Klisch 2005;

Hoare and Machin 2006; Creed and Bartrum 2008; Paul and Batinic 2010; Kroll and Lampert 2011; Selenko et al. 2011; Feuls et al. 2014).

In the Agency Restriction Model (Fryer 1986), distress found in unemployed people is mainly associated with the loss of (absolute and relative) financial resources that restricts personal agency. This model has been validated empirically (Creed and Macintyre 2001; Creed and Klisch 2005; Breslin and Breslin 2013). Thus, in this unemployed sample, those experiencing high financial deprivation and high deprivation scores on latent benefits of work are expected to report more distress.

Individual factors are also important to consider. Reflecting on gender and age differences, there is evidence that unemployed women tend to report poorer mental health (McKee-Ryan et al. 2005) and that older unemployed may face discrimination given the scarcity of jobs during recession and may stay longer in unemployment (Jackson and Warr 1984). Being unemployed for longer periods (cumulative stress) and having repeated experiences of unemployment (scarring effect) may also increase the likelihood of distress (Jackson and Warr 1984; Clark et al. 2001; McKee-Ryan et al. 2005; Stankunas et al. 2006). Low levels of education may expand these situations, thus increasing job search discouragement and distress (Berchick et al. 2012). In line with this, specific individual factors might exacerbate or improve distress levels.

Methods

Study population and data collection

This study involved 750 unemployed adults from Lisbon (Portugal) who were registered at the Job Centre and were receiving state benefits (a convenience sample). At the time of data collection, 9 % of people in Lisbon were registered as unemployed from a total population of 260,405 economically active people (INE 2014). The estimated sample size required for the study was 549 to obtain a confidence interval level of 0.95 and at least 80 % power for analysis. Accordingly, 1000 self-administered questionnaires were handed to all unemployed people who voluntarily agreed to respond during their bi-weekly presentation to their local civil parish as part of the requirements to continue receiving the unemployment benefit. Informed consent was obtained, and confidentiality was assured. In total, 750 questionnaires were returned completed (75 %) and 2 were dropped from the analysis for missing important socio-demographic data. A final response rate of 74.8 % was obtained, and 748 unemployed adults (386 males and 362 females) took part in the study.

Measures

The General Health Questionnaire-12 (GHQ-12) was used to measure distress (Goldberg 1992). It had been adapted and validated for the Portuguese population (Laranjeira 2008). This measure has been recommended for use as a screening instrument for common mental disorders and widely used in unemployment research (McKee-Ryan et al. 2005; Warr 1987). Responses were scored on a four-point scale ranging from 1 to 4 (*better than usual—much less than usual*), with higher scores indicating greater distress. For this study, the Goldberg's GHQ scoring method (0–0–1–1) was used (Goldberg 1992).

Latent and manifest deprivations of unemployment were assessed using the Latent and Manifest Benefits of Work-LAMB-scale (Muller et al. 2005), adapted and validated for the Portuguese population (Sousa-Ribeiro and Coimbra 2007). The LAMB-scale is organized in a factorial structure of six components, which can be identified with the latent benefits people derived from Jahoda's Latent Deprivation Model (1982) (collective purpose, social contact, status, time structure, enforced activity) and with the manifest benefit of work stated in Fryer's Agency Restriction Model (1986) (financial income). The domain benefits are presented as bipolar phrased statements that correspond, on one hand to access and, on the other, to the deprivation of access to a particular benefit. The respondents identified for each phrased statement the degree of agreement regarding a seven-point scale. The higher scores

stand for greater deprivation to access certain benefits. The LAMB-subscales were: *financial strain* (e.g. my level of income usually/rarely allows me to make future plans); *time structure* (e.g. there is usually/rarely too much spare time in my day); *social contact* (e.g. I regularly/rarely engage in social activities with others); *status* (e.g. I am usually/rarely important to my friends); *enforced activity* (e.g. I usually/rarely do the things I have to do) and; *collective purpose* (e.g. I often/seldom feel as a valuable part of society).

It also assessed education level (secondary level and higher education), marital status (cohabiting or not with a partner), partner employment status (partner is employed or unemployed), household type (cohabiting with someone or living alone), parental status (having or not having dependent children), number of unemployment spells (first unemployment experience or a repeated experience), and unemployment duration (short-term unemployment was defined as being unemployed for less than a year and long-term unemployment for longer than 1 year).

Data analysis

Descriptive statistics (means, standard deviations, and percents) were calculated for all variables. Bivariate relationships between distress and independent variables (gender, age, educational level, household type, marital status, parental status, unemployment spells, unemployment duration, and the manifest and latent benefits of employment) were tested by Chi-square tests. Afterwards, logistic regression was used to assess the extent to which variables were associated with low and high distress levels. Adjusted and unadjusted odds ratio (OR) with 95 % confidence intervals (CIs) were calculated and the significance level was set at $p < 0.05$. All data analysis was completed using Statistical Package for Social Sciences (SPSS), version 22.0.

Results

The reliability of the instruments used in this study was assessed. The coefficient of internal consistency of the GHQ-12 for the current study tested by Cronbach's alpha was 0.92. We used the mean GHQ-12 score (5.94 ± 4.04) for the population of respondents as the cutoff point, as suggested by the authors (Goldberg et al. 1998). For this sample, the cutoff point 6/7 was used to establish levels of low distress and high distress. The internal reliability coefficients of the LAMB-subscales were also tested by the Cronbach's alpha and were, respectively, 0.88 for financial strain; 0.85 for time structure; 0.84 for social contact; 0.87 for status; 0.81 for enforced activity; and 0.81 for collective purpose.

Table 1 presents the descriptive characteristics of the study population. The sample was balanced across gender (51.6 % men) and the mean age was 42.7 (SD = 11.4) years. More than half had attained up to secondary education (54.7 %), and a higher proportion of women had higher education (51 %) in comparison to men. The majority were cohabiting with someone (79 %), more than half (57.8 %) were living with a partner out of which 64.1 % were living with an employed partner. In terms of parental status, a higher percentage of women reported having dependent children (54.1 %) in comparison to men. For the most part, this was the first time they were unemployed (64 %) and have been unemployed for less than a year (57.4 %). Almost half of the individuals (46.5 %) and more than half of the women (51.3 %) reported high distress levels. Additionally, high scores of deprivation were found for financial deprivation (even more for women), time structure (even more for men), social contact (even more for women), status, activity, and collective purpose (even more for women).

Table 2 shows the results of the comparison analysis of demographic variables and distress tested by the chi square. Higher deprivation was associated with higher distress levels across all variables (financial deprivation $t = -9.068$, $p < 0.001$; time structure $t = -9.380$, $p < 0.001$; social contact $t = -8.553$, $p < 0.001$; status $t = -5.162$, $p < 0.001$; activity $t = -4.412$, $p < 0.001$ and; collective purpose $t = -8.104$, $p < 0.001$). Additionally, women reported significantly higher distress levels than men [$\chi^2(1) = 5.107$, $p < 0.05$] and older people tended to report higher distress levels than younger people [$\chi^2(1) = 10.078$, $p < 0.01$]. There was a statistically significant association between educational level and distress [$\chi^2(1) = 27.564$, $p < 0.001$]; that is, people with lower educational levels reported higher distress levels than people with higher educational levels. Long-term unemployment was also associated with higher levels of distress [$\chi^2(1) = 3.489$, $p < 0.05$].

Table 3 shows the results of the unadjusted and adjusted results of the logistic regression analysis across the different variables and distress levels, first including all the participants and then by gender. The unadjusted results show that people experiencing deprived access to the latent benefits of work also tend to exhibit significantly higher stress levels ($p < 0.001$). This is true for time structure deprivation, social contact deprivation, status deprivation, activity, and financial deprivation of collective purpose. Furthermore, these results are independent of gender, even though for men and women separately the deprivation of activity was slightly less significant ($p < 0.01$). Women were also more likely to report higher levels of stress compared to men (OR 1.40; CI 95 % 1.04–1.86; $p < 0.05$). In addition, both older unemployed men and women (OR

Table 1 Description of the study population ($N = 748$ unemployed adults), in terms of total number and by gender, in Lisbon, Portugal 2013

Variables	Total		Males		Females		P^a
	N	%	*N*	%	***N***	%	
Gender							
Male	386	51.6	386	51.6	362	48.4	
Female	362	48.4					
Level of education							
Secondary level	405	54.7	228	60.0	177	49.0	0.003
Higher education	336	45.3	152	40.0	184	51.0	
Household type							
Living alone	157	21.0	93	24.2	64	17.7	0.029
Cohabiting with other people	589	79.0	291	75.8	298	82.3	
Marital status							
Cohabiting with partner	432	57.8	225	58.4	57.2	57.2	n.s.
Single	315	42.2	160	41.6	42.8	42.8	
Partner employment status							
Employed	255	64.1	119	57.5	136	71.2	0.004
Unemployed	143	35.9	88	42.5	55	28.8	
Parental status							
Dependent children	383	51.3	187	48.6	196	54.1	n.s.
No children	364	48.7	198	51.4	166	45.9	
Unemployment spells							
First time	476	64.0	249	65.2	227	62.7	n.s.
Repeated	268	36.0	133	34.8	135	37.3	
Unemployment duration							
<1 year	425	57.4	218	57.5	207	57.3	n.s.
≥1 year	315	42.6	161	42.5	154	42.7	
Psychological stress (GHQ-12)							
Low distress	393	53.0	219	57.0	174	48.7	0.024
High distress	348	46.5	165	43.0	183	51.3	
Variables	Mean ± SD		Mean ± SD		Mean ± SD		P^b
Age	42.7 ± 11.4 (19–66)		43.4 ± 11.6 (19–66)		42.0 ± 11.2 (21–66)		n.s.
Financial deprivation	31.5 ± 8.9 (6–42)		30.3 ± 9.0 (6–42)		32.8 ± 8.5 (6–42)		<0.001
Time structure	30.6 ± 10.4 (8–56)		31.6 ± 9.9 (8–56)		29.5 ± 10.8 (8–56)		0.007
Social contact	26.0 ± 9.3 (7–49)		25.2 ± 8.7 (7–49)		26.7 ± 9.9 (7–49)		0.026
Status	10.1 ± 5.4 (4–28)		10.3 ± 5.3 (4–28)		9.9 ± 5.5 (4–28)		n.s.
Activity	11.5 ± 5.2 (4–28)		11.3 ± 5.1 (4–28)		11.7 ± 5.4 (4–28)		n.s.
Collective purpose	18.9 ± 7.0 (5–35)		18.0 ± 6.5 (5–35)		20.0 ± 7.3 (5–35)		<0.001

n.s. nonsignificant

[a] Tested by Chi-square

[b] Tested by *t* test

1.02; CI 95 % 1.00–1.04; $p < 0.05$) were more likely to report higher distress levels than younger men and women, respectively. In general, higher educated people were more likely to report less stress than those with lower education levels (OR 0.45; CI 95 % 0.34–0.61; $p < 0.001$). This was observed for men (OR 0.36; CI 95 % 0.23–0.56; $p < 0.001$) and women (OR 0.50; CI 95 % 0.33–0.77; $p < 0.001$) separately. Additionally, long-term unemployment was associated with higher stress (OR 1.32; CI 95 % 1.00–1.77; $p < 0.05$). Yet, when the results were analysed separately by gender, the association was found only in women (OR 1.61; CI 95 % 1.05–2.46; $p < 0.05$).

Table 2 Descriptive statistics by distress level, socio-demographic variables, gender and age, and economic and noneconomic variables of deprivation in a sample of unemployed adults ($N = 748$) from Lisbon, Portugal 2013

Variables	Low distress		High distress		p[a]
	N	%	*N*	%	
Gender					
Male	219	55.7	165	47.4	0.024
Female	174	44.3	183	52.6	
Level of education					
Secondary level	175	45.2	224	64.6	<0.001
Higher education	212	54.8	123	35.4	
Household type					
Living alone	88	22.5	68	19.5	0.324
Cohabiting with other people	303	77.5	280	80.5	
Marital status					
Cohabiting with partner	225	57.4	202	57.4	0.859
Single	167	42.6	146	42.0	
Partner employment status					
Employed	138	67.6	114	60.3	0.130
Unemployed	66	32.4	75	39.7	
Parental status					
Dependent children	192	49.0	187	53.7	0.196
No children	200	51.0	161	46.3	
Unemployment spells					
First time	243	62.3	226	65.1	0.427
Repeated	147	37.7	121	34.9	
Unemployment duration					
<1 year	237	60.8	185	53.9	0.042
≥1 year	153	39.2	158	46.1	
Variables	Mean ± SD		Mean ± SD		p[b]
Age	41.4 ± 11.5		44.1 ± 11.1		<0.001
Financial deprivation	28.8 ± 8.5		34.5 ± 8.3		<0.001
Time structure	27.3 ± 9.1		34.2 ± 10.6		<0.001
Social contact	23.3 ± 8.5		28.9 ± 9.3		<0.001
Status	9.1 ± 5.1		11.1 ± 5.5		<0.001
Activity	10.6 ± 4.8		12.3 ± 5.5		<0.001
Collective purpose	17.0 ± 6.5		21.0 ± 6.8		<0.001

[a] Tested by Chi-square

[b] Tested by *t* test

The results of the adjusted regression analysis, when all variables were entered into the model, are shown in Table 3. Financial deprivation (OR 1.06; CI 95 % 1.04–1.09; $p < 0.001$) and time structure deprivation (OR 1.06; CI 95 % 1.04–1.09; $p < 0.001$) maintain a positive relationship with higher distress reports among the entire sample and in men and women separately. In turn, deprivation of social contact, status, activity, and collective purpose are no longer significant among the total population and across genders after the adjustment. Moreover, the link between distress and educational level remained negatively associated for the entire sample (OR 0.61; CI 95 % 0.43–0.87; $p < 0.01$) and for the men (OR 0.50; CI 95 % 033–0.77; $p < 0.05$).

Discussion

This study covered a comprehensive range of variables associated with mental distress of a group of unemployed individuals. The mean score for GHQ-12 for the current study (5.94 ± 4.04) indicated that this group of

Table 3 Logistic regression analyses with odds ratios (OR) and 95 % confidence intervals (CI) by distress including unadjusted and adjusted ratios for gender, age, level of education, unemployment duration, and deprivation variables for the total sample and with separate analyses for men and women, on a sample of unemployed adults ($N = 748$) from Lisbon, Portugal 2013

Explanatory variables	Total		Men		Women	
	Unadjusted OR (95 % CI)	Adjusted OR (95 % CI)	Unadjusted OR (95 % CI)	Adjusted OR (95 % CI)	Unadjusted OR (95 % CI)	Adjusted OR (95 % CI)
Gender						
Male	1.00 (ref.)	1.00 (ref.)				
Female	1.40 (1.04–1.86)*	1.52(1.06–2.17)*				
Age	1.02 (1.01–1.03)***	1.02 (1.00–1.03)*	1.02 (1.00–1.04)*	1.01 (0.99–1.03)	1.02 (1.01–1.04)*	1.03 (1.00–1.05)*
Level of education						
Secondary level	1.00 (ref.)	1.00 (ref.)	1.00 (ref.)	1.00 (ref.)	1.00 (ref.)	1.00 (ref.)
Higher education	0.45 (0.34–0.61)***	0.62 (0.43–0.89)**	0.36 (0.23–0.56)***	0.55 (0.33–0.94)*	0.50 (0.33–0.77)***	0.73 (0.44–1.21)
Unemployment duration						
<1 year	1.00 (ref.)	1.00 (ref.)	1.00 (ref.)	1.00 (ref.)	1.00 (ref.)	1.00 (ref.)
≥1 year	1.32 (1.00–1.77)*	1.05 (0.73–1.51)	1.10 (0.73–1.66)	0.87 (0.51–1.48)	1.61 (1.05–2.46)*	1.30 (0.73–2.09)
Financial deprivation	1.08 (1.06–1.11)***	1.06 (1.04–1.09)***	1.08 (1.05–1.11)***	1.07 (1.03–1.10)***	1.09 (1.06–1.12)***	1.06 (1.02–1.09)**
Time structure	1.07 (1.05–1.09)***	1.07 (1.05–1.09)***	1.08 (1.06–1.11)***	1.08 (1.04–1.11)***	1.07 (1.05–1.10)***	1.06 (1.04–1.09)***
Social contact	1.07 (1.05–1.09)***	1.02 (0.99–1.04)	1.07 (1.04–1.10)***	1.02 (0.98–1.06)	1.07 (1.05–1.10)***	1.02 (0.98–1.05)
Status	1.08 (1.05–1.11)***	1.03(0.99–1.08)	1.08 (1.04–1.13)***	1.06 (0.99–1.13)	1.07 (1.03–1.12)***	1.01 (0.95–1.08)
Activity	1.07 (1.04–1.10)***	1.04 (1.00–1.08)	1.07 (1.02–1.11)**	1.04 (0.98–1.11)	1.06 (1.02–1.11)**	1.04 (0.98–1.10)
Collective purpose	1.09 (1.07–1.12)***	1.03 (1.00–1.06)	1.10 (1.06–1.14)***	1.02 (0.97–1.08)	1.09 (1.05–1.12)***	1.03 (0.99–1.07)

*** $p \leq 0.001$; ** $p \leq 0.01$; * $p \leq 0.05$

unemployed people reported considerably high levels of distress when considering the mean score for GHQ-12 (2.4 ± 2.7) presented in the adaptation study to the Portuguese population (Laranjeira 2008). This is consistent with previous research suggesting that unemployed samples have increased levels of distress (Paul and Moser 2009). Moreover, when considering people who scored above the mean, a great proportion of the study participants (46.5 %) reported to be very distressed.

Overall, more deprivation of latent and manifest benefits of work was linked to more distress. These findings support that both theoretical models of unemployment (Jahoda 1982; Fryer 1986) are not mutually exclusive and that deprivation of access to latent and manifest benefits of work is associated to higher distress among the unemployed individuals. Adjusting for all variables in the model, deprivation of time structure and financial deprivation showed the strongest associations. Research on the distressing effects of financial deprivation confirms our findings (Price et al. 2002; Breslin and Breslin 2013). Indeed, unemployed people experiencing a better financial situation probably feel they have better access to other benefits, such as social contact and leisure activities. In line with prior research, our findings suggested that individuals who show an ability to schedule purposeful activities during unemployment experience higher well-being (McKee-Ryan et al. 2005). After the adjustment, we did not find that the levels of distress are lower for people with high social contact, cohabiting with someone or a partner or living alone. This contradicts some of the evidence showing that social support moderates the effects of stress (Kroll and Lampert 2011). We can estimate that because the stress levels are so high in this sample that social support eventually loses its power of moderation.

Considering the socio-demographic factors, the results showed that women and people with lower educational levels had an increased likelihood of experiencing higher distress levels. These results have received empirical support in the literature (McKee-Ryan et al. 2005). It may reflect the general findings established in Europe that

women, in general, display poorer mental health than men (European Commission 2010). Additionally, the results might be due to the fact that in Portugal, a significant contribution to household income is made by women's participation in the labour force (OECD 2012). Thus, hypothetically, for these specific women work may contribute to a higher share of personal identity and income source. Furthermore, as expected, higher education presents itself in this sample of unemployed persons as a protective factor against high distress. Research consistently found that education was an important social determinant of mental health (WHO 2014). These findings may be also partly due to low expectations on re-employment chances because of low qualifications. Long-term unemployment alone was associated with higher distress. Prior research also found an association between increasing length of unemployment and deterioration of mental health (McKee-Ryan et al. 2005; Stankunas et al. 2006). However, when controlled for other variables, the association between the duration of unemployment and distress was not statistically significant. Then again, it is possible that this nonsignificant association might be explained by limitations of the study design.

Limitations

This study has a cross-sectional design, so causal inference and generalization are limited and reverse causation effects should not be ruled out. Nonetheless, the findings receive ample empirical support from longitudinal studies that state that higher distress among the unemployed is largely a consequence of job loss and not the contrary (Paul and Moser 2009). Also, latent deprivation has been found to be reduced when people are re-employed (Hoare and Machin 2006). In addition to this limitation, unemployed people are a very heterogeneous group and other key moderators of mental well-being should be accounted for in future research (i.e. personality traits). The use of a convenience sample undermines the ability to make generalisations and implies that the findings should be treated with caution. Moreover, the findings are obtained with a group of unemployed individuals receiving state unemployment benefits; only 44 % of the Portuguese unemployed individuals receive financial benefits (MSSS 2014). Another limitation is the fact that this specific group has a high number of first-time unemployed, which we believe is related to the increase in unemployment rates registered during the recessionary period. Generalization of the findings is therefore also limited to different welfare systems and socioeconomic contexts. These limitations reinforce the fact that the findings need to be carefully interpreted.

Besides the aforementioned limitations, the findings are relevant given the scarce available studies focusing on distress among the unemployed people in Portugal and especially pertinent to raise awareness of its importance, as the unemployment rate is high like in many European countries in recession.

These findings provided insights into a number of demographic and socioeconomic variables that were associated with psychological distress in unemployed adults and may therefore help policy-makers and practitioners in their decisions and actions. Literature has shown that mental health inequalities among unemployed individuals are related to weak national economic performance, unequal distribution of income and lack of unemployment social policy (Paul and Moser 2009). Interventions that are aimed at the protection of populations' mental health promote greater health equity. Unemployment benefits are important determinants for individuals' well-being and are especially important during recession periods when scarcity of jobs makes people stay out of the labour force for longer. However, individuals differ in terms of financial obligations. Therefore, it is important that financial and debt management services be made available. Moreover, in line with empirical literature, the results from this study have showed that higher time structure is associated with lower distress. Therefore, encouraging unemployed people to schedule meaningful routines and set daily goals to better cope with the situation may prove useful to decrease levels of distress during unemployment. Although any initiative should respect gender equality, it is important to recognize that women and people with low education levels may be at higher risk of poor mental health.

Conclusion

In summary, the findings indicate that socioeconomic deprivation accounts for distress, particularly because of a lack of structured use of time and financial deprivation. Additionally, women and people with lower education levels showed higher likelihood of experiencing distress during unemployment. Overall, the associations found in this study may be seen as a further step for the better comprehension of the unemployment experience. This is useful to raise awareness in times of high unemployment rates and economic recession that affect many European countries about the need of tailored policies and health interventions to limit periods of inactivity, tackle distress, gender and educational inequities, and increase the probability of reintegration of social capital into labour market.

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