

Rewarding work: cross-national differences in benefits, volunteering during unemployment, well-being and mental health

Daiga Kamerāde

University of Salford, United Kingdom

Matthew R. Bennett

University of Birmingham, United Kingdom

Accepted for a publication in [Work, Employment and Society](#)

Abstract

Due to increasing labour market flexibilisation a growing number of people are likely to experience unemployment and, as a consequence, lower mental health and well-being. This article examines cross-national differences in well-being and mental health between unemployed people who engage in voluntary work and those who do not, using multilevel data from the European Quality of Life Survey on unemployed individuals in 29 European countries and other external sources.

This article finds that, regardless of their voluntary activity, unemployed people have higher levels of well-being and mental health in countries with more generous unemployment benefits. Unexpectedly, the results also suggest that regular volunteering can actually be detrimental for mental health in countries with less generous unemployment benefits. This article concludes that individual agency exercised through voluntary work can partially improve well-being but the generosity of unemployment benefits is vital for alleviating the negative mental health effects of unemployment.

Keywords: agency, labour de commodification, future of work, mental health, multi-activity society, unemployment, voluntary work, well-being, welfare generosity

Corresponding author:

Daiga Kamerāde, School of Nursing, Midwifery, Social Work and Social Science, Allerton Building, University of Salford, Salford, M6 6UP, UK.

Email: d.kamerade-hanta@salford.ac.uk

Introduction

Growing global economic competition accompanied by the expansion of neo-liberal capitalism is restructuring employment. Increasing labour market flexibilisation and the recent financial crisis mean many European countries are facing rising levels of non-standard forms of employment and unemployment (Barbieri, 2009; ETUC and ETUI, 2013; Guichard and Rusticelli, 2010; Prosser, 2015) and despite wanting, being available for and seeking employment, a growing number of Europeans are experiencing periods of unemployment (ILO, 2015).

Unemployment brings a considerable range of negative short and longer-term individual and societal consequences, contributing to poverty and social inequality, including financial losses, lower living standards and social exclusion and a decline in the well-being, mental health and physical health of the unemployed person and their families (Brand, 2015; Gallie et al., 2003; McKee-Ryan et al., 2005). This raises the question of how work can be organised to minimise these negative effects in a society with growing levels of unemployment.

According to Beck (2000), societies should accept that full employment is disappearing, and move towards a post-work, multi-activity society where all forms of work - not only employment - are socially recognised, valued and financially rewarded. This article draws on Beck's proposal as a way of addressing the challenges of unemployment by focusing on the potential effects such a multi-activity society could have on the well-being of the unemployed. This article argues that countries with more generous unemployment benefits represent an embryonic version of such a multi-activity society. In these countries the high level of welfare support is related to higher levels of labour de commodification – i.e. the extent to which individuals and their families can maintain socially acceptable standards of living independent of their employment status (Esping-Andersen, 1990). This generous

welfare support signals a degree of societal acceptance of a temporary exit from employment and enables individual agency by providing a space and resources for socially valuable regular voluntary work without high levels of financial worry. Drawing on Jahoda's Latent Deprivation Theory and Fryer's Agency Restriction Theory, this article argues that in countries with generous unemployment benefits, regular voluntary work during unemployment can at least partially compensate for the loss of the latent psychological and social benefits of paid work, thus reducing the negative effects of unemployment on subjective well-being and mental health. By contrast, countries with less generous unemployment benefits represent more traditional, paid work-focused societies with lower levels of decommodification. In this instance, therefore, voluntary work has a less positive effect on the mental health and well-being of the jobless.

As previous studies on voluntary work and well-being during unemployment have only been conducted in Sweden (Griep et al., 2015), this article also contributes empirically by examining the cross-national differences in the role that unemployment benefit generosity plays in the relationship between voluntary work, well-being and mental health. To do that it uses survey data from 29 countries with varying levels of unemployment, volunteering and unemployment benefits. This multilevel approach provides a refined understanding of the individual effects of voluntary work and the specific country factors moderating these effects.

The generosity of unemployment benefit and the relationship between voluntary work during unemployment, well-being and mental health.

Unemployed people, on average, have poorer well-being and mental health than those in paid work (e.g. Burchell, 1994; Darity and Goldsmith, 1996; Jahoda, 1981, 1982; McKee-Ryan et al., 2005; Warr et al., 1988). Some of these differences can be explained by the selection effects: people with lower well-being and mental health are more likely to become

unemployed. Unemployment itself also leads to a decline in well-being and mental health (Jefferis et al., 2011; McKee-Ryan et al., 2005; Paul and Moser, 2009; Wanberg, 2012).

Although the intensity varies from person to person and country to country, the link between unemployment and decline in well-being and mental health is consistent over time and across cultures (Artazcoz et al., 2004; Green, 2011; Paul and Moser, 2009).

Two theories explain why unemployment has such negative effects on well-being and mental health. Both Jahoda's Latent Deprivation Theory and Fryer's Agency Restriction Theory emphasise that unemployment worsens an individual's well-being and mental health because of the centrality of paid work as a social institution: paid work provides important manifest and latent benefits that are essential to that well-being (Jahoda, 1982). The manifest benefit of paid work is financial reward in the form of a wage. However, according to Jahoda (1982), employment is more than a source of income, supplying several latent socio-psychological benefits such as providing time structure, collective purpose and social contacts, identity and activity. The loss of these benefits due to unemployment damages both well-being and mental health.

Additionally, Fryer argues that the loss of latent psychological benefits alone does not explain the negative effects of unemployment. Becoming unemployed means losing not only a wage and an attachment to an important social institution but also the ability to control one's life. The experience of absolute or relative poverty damages well-being and mental health because of this loss of agency (Fryer, 1986, 1992, 2001).

Social scientists continue to debate the link between the loss of these benefits and the negative impact on well-being and mental health. Some studies suggest the loss of latent benefits is the most important (Winkelmann & Winkelmann, 1998), while others find that income has the largest negative impact (Creed and Macintyre, 2001; Ervasti and Venetoklis, 2010; Paul and Batinic, 2010; Weich and Lewis, 1998).

The negative effects of unemployment might be reduced if other social institutions provide a replacement for the lost manifest and latent benefits of paid work. This, according to Beck (2000), requires a transition from a work society focused on paid work to a multi-activity society in which housework, family work and voluntary work are valued alongside paid work. Beck argues that civil labour – socially recognised and valued work such as voluntary work, rewarded by public money – could benefit societies exhibiting increasing unemployment and under-employment. Civil labour could offer unemployed individuals an alternative source of activity, identity, purpose and other latent benefits.

By drawing on Beck's idea of a multi-activity society as well as the Latent Deprivation and Agency Restriction theories, this article hypothesises that voluntary work in countries with generous unemployment benefits is related to higher levels of well-being and mental health among the unemployed than in countries with less generous unemployment benefits. Voluntary work here is defined as formal unpaid work carried out voluntarily in organisational settings such as charities (Taylor, 2004) .

Voluntary work as unpaid, productive activity outside the household in the public domain (Glucksmann, 1995; Taylor, 2015; Tilly and Tilly, 1994) provides an unemployed individual with opportunities to exercise their agency via an alternative to employment. As another socially acceptable institution, voluntary work can compensate to some degree for the loss of the latent benefits of paid work. Voluntary work involves structuring one's time and contributes to a collective purpose, such as providing services for those in need or assisting an organisation and is a source of social capital (Low et al., 2007). Qualitative studies find that voluntary work gives individuals an identity alternative to 'the unemployed' and opportunities to use their skills (Baines and Hardill, 2008; Corden and Sainsbury, 2005; Nichols and Ralston, 2011; Ockenden and Hill, 2009).

However, this article hypothesises that *the strength of the relationship between voluntary work during unemployment, well-being and mental health varies from country to country, depending on the level of unemployment benefits in the country. The positive relationship between volunteering during unemployment and psychological well-being and mental health is stronger in countries that have more generous unemployment benefits.*

Countries with more generous unemployment benefits represent a version of Beck's (2000) multi-activity society. The generosity of unemployment benefits in these countries signals a certain level of approval from the state for a temporary exit from the labour market (Beck, 2000, p.162). The level of benefits also has a significant effect on the experience of unemployment (Gallie and Paugam, 2000). In countries with more generous welfare systems, people who become unemployed might experience less social stigma and lower financial stress while being able to exercise their agency through voluntary work. Countries with generous universal unemployment benefits for everyone, for example those classed by Esping-Andersen (1990) as socio-democratic welfare regimes, have a higher degree of decommodification of labour; where citizens are less reliant on the labour market to maintain a decent standard of living than in countries with lower benefit levels. Therefore voluntary work during unemployment in countries with higher benefit levels represents an embryonic version of civil labour in the multi-activity society imagined by Beck (2000). In these countries, voluntary work during unemployment could have more pronounced positive effects on well-being and mental health. Moreover, generous unemployment benefits might produce feelings of reciprocity between individuals doing voluntary work and society, which in turn may enhance their mental health.

By contrast, countries with less generous unemployment benefits represent more traditional, paid work-focused societies. Here short or long-term exits from paid work are less acceptable, less financially supported and the levels of decommodification are low

(Esping-Andersen, 1990). In such countries, individuals are dependent on paid work for survival, and voluntary work could be associated with negative connotations (e.g. worries about financial survival and the social shame of not spending all one's time looking for a new job). Therefore voluntary work might have a weak or negligible effect on well-being and mental health. Any beneficial effects accrued from engaging in voluntary work might be reduced or eliminated by the lower levels of financial support from the state.

Data and Methods

The article used data from the European Quality of Life Survey (EQLS) (EFILWC, 2014). These data captured a range of self-reported mental health and subjective well-being measures as well as information on volunteering, unemployment and demographic information. The EQLS individual-level data were matched with country-level data from external sources. The analyses were restricted to approximately 2,440 unemployed respondents (depending on the outcome variable) living in 29 countries for whom complete individual and contextual information was available. The initial sample of unemployed people was 2,629 but there were 189 missing cases which were distributed across the 18 individual-level variables (averaging 10.5 cases per variable).

Dependent variables

Basic descriptive statistics for the dependent variables and key independent variables by country are displayed in Table 1. Descriptive statistics for all dependent and independent variables are displayed in Table A1 (in online appendix) and the correlation matrix for all key volunteering, unemployment, benefits, poverty and country level variables is displayed in Table A2.

This research is based on four outcome measures: one capturing mental health and three measuring subjective well-being. **Mental health** was defined as 'a state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of

life, can work productively and fruitfully and is able to make a contribution to her or his community’ (WHO, 2014). It was measured using the World Health Organization mental health index, which ranged from 0 (lowest level) to 100 (highest level of mental health) (Topp et al., 2015).

Subjective well-being (SWB) was defined as ‘a person’s cognitive and affective evaluation of his or her life’ (Diener et al., 2005, p.63). The first measure of SWB captured the respondent’s level of **happiness** – an affective dimension of SWB. Respondents were asked: *“Taking all things together on a scale of 1 to 10, how happy would you say you are? Here 1 means you are very unhappy and 10 means you are very happy”*. The second measure of SWB captured a cognitive dimension - **life satisfaction**: *“All things considered, how satisfied would you say you are with your life these days? Please tell me on a scale of 1 to 10, where 1 means very dissatisfied and 10 means very satisfied.”* The third measure of SWB captured another cognitive dimension - the extent to which individuals *“generally feel that what I do in life is worthwhile”*, with response categories *“strongly agree”* (=5), *“agree”*, *“neither agree nor disagree”*, *“disagree”* and *“strongly disagree”* (=1).

These SWB measurements have good convergent validity with other assessments including expert ratings based on in-depth interviews, experience sampling in which feelings or level of satisfaction are reported at random moments in everyday life, participants’ reports of positive and negative events in their lives, smiling and the reports of friends and family (Dolan et al., 2011; Pavot et al., 1991; Sandvik et al., 1993). The reliability of SWB measures is sufficiently high, particularly in studies where group means are compared (Krueger and Schkade, 2008; Pavot and Diener, 1993).

TABLE 1 HERE

Individual-level independent variables

The frequency of **voluntary work** was measured, asking respondents to “*look carefully at the list of organisations and tell us, how often did you do unpaid voluntary work through the following organisations in the last 12 months?*”. Response categories were “*regularly (weekly or bi-monthly)*”, “*less often / occasionally*” and “*not at all.*” **Long term unemployment** was measured with a dummy variable (1 = “*unemployed 12 months or more*”, 0 = “*unemployed less than 12 months*”). Receipt of **benefits** took the value 1 if the respondent reported that they or a member of their household received unemployment, disability or any other social benefits and 0 if not. A **deprivation Index** was used to measure the number of things the household could afford: “*There are some things that many people cannot afford, even if they would like them. For each of the following things on this card¹, can I just check whether your household can afford it if you want it?*” (range: 0 to 6).

Sex was 1 if the respondent is female and 0 if male, and **Age** was included as a set of dummy variables (less than 25 years old; 25-44 years old; 45 years or over). **Education** was distinguished by dummy variables coded as 1 for each education level: “*primary or less*”; “*secondary*”; and “*tertiary*”. **Marital status** dummy indicators were included (“*married or living with partner*”, “*divorced or separated*”, “*widowed*” or “*single*”). **Housing Tenure** was distinguished by including dummy variables (“*owns outright*”, “*owns with mortgage*”, “*rents*”, “*does not own, but does not pay rent*”, or “*other*”). **Service attendance** was measured with the question “*How frequently do you attend religious services, apart from weddings, funerals or christenings?*” Response categories were “*Every day or almost every day*” (5) “*At least once a week*” (4), “*One to three times a month*” (3), “*Less often*” (2), or “*Never*” (1). **Health** status was measured with a question asking respondents “*In general, would you say your health is...*” with response categories “*very bad*”, “*bad*”, “*fair*”, “*good*”, or “*very good*” (1 = “*very bad*”, 5 = “*very good*”). Frequency of **meeting friends or neighbours face-to-face** was measured on a scale of 1-5 (1 = “*never*”, 2 = “*less often*”, 3 = “*one to three times a month*”,

4 = “at least once a week”, 5 = “every day or almost every day”). **The number of children** in the household was measured on a continuous scale from 1 to 5.

Contextual-level variables

Unemployment benefit generosity within a country was measured using net replacement rates (OECD, 2011), which measures the proportion of net income in work that is sustained through benefits after job loss (higher values indicate greater benefit generosity).

Unemployment rate referred to the share of the labour force that was without work in 2011 but available for and seeking employment -measured as a percentage of the total labour force (World Bank, 2011). The *income inequality* of a country was measured using the Gini coefficient in 2011 (CIA, 2015); with higher values indicating more income inequality. *Economic development* was included as the log of real GDP per capita in purchasing price parity for 2011 (in 1000s of constant 2005 international dollars) (World Bank, 2011). Higher values indicated higher economic development.

Analyses and presentation

All four dependent variables in this study were treated as continuous measures. To account for the clustering of data whereby individuals (level 1) live in countries (level 2) multilevel mixed-effects linear regression models (Snijders and Bosker, 1999) were estimated. Although the well-being scales were ordinal, where higher values equal higher levels of well-being and the gaps between the values are ambiguous, there were no substantive or statistical differences between multilevel ordered logit regression models and the multilevel mixed-effects linear regression model analyses presented (results available upon request). This article therefore reported the multilevel mixed-effects linear regression models for ease of interpretation. The consistent findings between model specifications were in line with previous work in this area (e.g. Diener and Tov, 2012; Ferrer -i-Carbonell and Frijters, 2004; OECD, 2013). All continuous independent variables were mean-centred.

Each dependent variable had two models. The first model included all individual and contextual-level variables, testing the relationships between engagement in voluntary work, country-level unemployment benefits and the outcome variables. The second model tested the hypothesis and included cross-level interactions where the coefficients for each volunteering frequency category at the individual level were allowed to vary across the level of unemployment benefits at the country level. The results are presented as regression coefficients alongside graphical representations of the hypothesis tests for statistically significant parameters.

Results

Before moving on to the results of the multilevel mixed-effects linear regression models, bivariate relationship between the country average of each dependent variable and the unemployment benefit generosity, as well as relationship between each of our dependent variables and benefit generosity at different levels of volunteering were analysed and presented in Figures A1-A5 (in online appendix).

Multilevel mixed-effects linear regression results

Table 2 presents the multilevel mixed-effects linear regression results. The hypothesis that ‘the positive relationship between volunteering during unemployment and psychological well-being and mental health is stronger in countries that have more generous unemployment benefits’ was supported only in relation to volunteering frequency and mental health (model 1b). The regression coefficient for the interaction terms in model 1b between volunteering regularly and unemployment benefit generosity was 0.24, which indicated that unemployed people who volunteered more regularly were more likely to have better mental health in countries with higher unemployment benefits, compared with unemployed people who did

the same level of volunteering in countries with a lower level of unemployment benefits. However the negative, albeit insignificant, coefficient (-1.23) on the main effect of volunteering regularly suggested that regular volunteers in countries with low levels of unemployment benefits scored on average lower on the mental health scale compared with someone in a country with low unemployment benefits who did not volunteer. This finding suggested that the hypothesis needed to be revised.

The model fit statistics (AIC, BIC, Deviance) demonstrated that models 1b, 2b, 3b and 4b were an improved fit over the previous models. There were also slight improvements in the level-1 and level-2 r^2 statistics.

In addition, while simple bivariate and regression models typically show a positive relationship between voluntary work and SWB measures, this study did not find this consistently among unemployed people once the background and contextual characteristics were included (model 1a, 2a, 3a). The exception was model 4a, which showed that unemployed individuals who volunteered occasionally and regularly were significantly more likely to report that their lives were worthwhile compared with individuals who did not volunteer at all. This effect remained significant after the inclusion of the individual and contextual-level variables.

This study also found a consistent positive effect of unemployment benefit generosity on each of the measures of SWB and mental health. In countries with more generous unemployment benefits, all unemployed people had better mental health, more happiness and greater life satisfaction and life fulfilment - regardless of whether they volunteered or not - than those who were out of work in countries with less generous unemployment benefits.

The r^2 statistics demonstrate that a considerable amount of variance was explained by the individual-level variables (1a=22.5%; 2a=23.06%; 3a=18.92%; 4a=7.45%). Furthermore

the models were also able to explain the large amount of the variance in well-being and mental health between countries (1a=46.76%; 2a= 23.06%; 3a=18.92%; 4a=59.76%).

There were also a number of consistent patterns across each outcome measure that demonstrated the importance of social networks for mental health and subjective wellbeing. Religious service attendance and frequency of seeing friends were both positively related with the outcome measures across all models (with the exception of happiness for religious service attendance). Material resources were also important correlates of mental health for unemployed people as the level of deprivation was negatively associated with all four outcome measures. Finally, general health was positively related with each outcome measure.

TABLE 2 HERE

Figure 1 visualises the cross-level interactions between unemployment benefit generosity, volunteering frequency and mental health. In countries where the income replacement rate was very low (ungenerous unemployment benefits), regular voluntary work was related to poorer mental health outcomes than either not volunteering or occasional volunteering. In contrast, regular volunteers had considerably higher levels of mental health in countries with generous unemployment benefits. Figure 1 also suggests that the more generous the unemployment benefits, the higher the mental health of all the unemployed, volunteers or not, even after controlling for all individual and contextual characteristics.

FIGURE 1 HERE

Figure 2 depicts the relationship between volunteering frequency and mental health in each country in our sample (countries are sorted according to the generosity of unemployment benefits). The figure suggests that in countries to the left side of the graph – Ireland to Finland - (that is, those with the most generous employment benefits) unemployed people who volunteered frequently had higher levels of mental health than people who did

not volunteer or did it occasionally. The welfare regimes in these countries, with the exception of Ireland, have been described as social democratic (Esping-Andersen, 1990) with a high degree of decommodification of labour: citizens are less reliant on the labour market to maintain a decent standard of living. Countries with the least generous unemployment benefits — Bulgaria to Greece — are shown on the far right of the graph. In most of these countries regular volunteers had the poorest mental health and occasional volunteers had the highest levels of mental health. The welfare regime in these countries is characterised as rudimentary and limited with very low levels of decommodification (Ferge and Kolberg, 1992). The countries in the middle of the graph — Germany to the Slovak Republic — were mainly Western European countries with conservative and liberal welfare regimes (e.g. France, Germany and the UK) (Esping-Andersen, 1990) and Eastern European countries with welfare regimes based on conservative or liberal principles coupled with low levels of welfare support (Fenger, 2007). In these countries, it was observed that voluntary work had mixed effects on mental health. These results suggest that a more detailed analysis of the role of other welfare support aspects in the relationship between volunteering and well-being would be useful. That, however, was beyond the scope of this article.

[FIGURE 2 HERE]

Discussion

This study contributes to the evidence regarding the factors that mitigate the negative effects of unemployment on SWB and mental health. It examines how the cross-national differences in unemployment benefit generosity moderate the relationship between voluntary work, SWB and mental health.

There are some unexpected results concerning the hypothesis proposed in this article. Jahoda's Latent Deprivation Theory and Fryer's Agency Restriction Theory suggest that unemployed people who engage in voluntary work regularly would have higher levels of

mental health compared to unemployed people who volunteered less frequently or not at all. Furthermore, the theory suggests that this relationship would get stronger as the level of unemployment benefits increased. The results do support this hypothesis in relation to countries with generous unemployment benefits. However, the results also demonstrate that volunteering regularly in countries where benefits are less generous is actually associated with lower levels of mental health than for people in the same country who do not volunteer at all.

This study also found that unemployed people who volunteer regularly report that their life is more worthwhile and they have better mental health than the unemployed, who do not volunteer, irrespective of the levels of benefits in their country. This is in line with other studies that have found positive effects of volunteering on well-being (e.g. Griep et al., 2015).

Another important finding is that the unemployed who live in countries with more generous unemployment benefits score higher on mental health and all SWB dimensions, regardless of voluntary activity. These findings suggest that generous unemployment benefits are crucial for maintaining the mental health and well-being of the unemployed. This is in line with previous studies which have found that higher levels of welfare support reduce the negative effects of unemployment on mental health and well-being as it lessens the levels of poverty, social exclusion and stress (Brennenstuhl et al., 2012; Ervasti and Venetoklis, 2010; McKee-Ryan et al., 2005).

The findings from this study have three important theoretical implications. Firstly, this article contributes to the debates about the future of work. Most of the proposed solutions for rising unemployment levels, such as neo-liberal free market ‘race to the bottom’, reduction of the labour supply through extended education and early retirement, have focused on reducing levels of unemployment. This article took a different theoretical perspective and focused on how work in society could be organised differently.

The findings from this study suggest a possible solution that connects with Beck's (2000) vision of a multi-activity society, that is engaging unemployed individuals in voluntary work supported by generous unemployment benefits. The findings indicate that financial support during periods of unemployment remains crucial for well-being and mental health. Although individuals can boost one dimension of their own well-being (feeling that their life is worthwhile) by exercising their agency through engaging in work that is an alternative to paid work, such engagement without any financial support can also damage their mental health. These findings suggest that financial support for the unemployed – through unemployment benefits, guaranteed basic income (Gorz, 1989), citizens income (Standing, 2011), etc – should occupy a central position in theoretical perspectives focusing on reducing the negative effects of unemployment.

Secondly, the findings from this study highlight the limitations of the 'sociological bias' (Portes, 1998) currently dominating the research on the outcomes of voluntary work. As Portes has pointed out, '... it is our sociological bias to see good things emerging out of sociability' (1998: 15). This sociological bias has been especially strong within the field of studying the consequences of voluntary work for volunteers, as the vast majority of studies have focused on its beneficial effects (Kamerāde, 2015). However, as Merton (1957) has emphasised, any social activity or institution can also have negative consequences. The results from this study suggest that in some countries under certain conditions, such as countries with less generous unemployment benefits, regular volunteers can actually have lower levels of mental health than non-volunteers. This finding suggests that further theoretical developments and empirical evidence is needed to explore a more balanced picture on the effects of voluntary work, considering both negative and positive aspects.

Thirdly, the results from this study highlight the importance of a cross-national comparative perspective when examining the potential effects of voluntary work during

unemployment. While the cross-national differences in unemployment experiences are well documented (e.g. Gallie and Paugam, 2000), most of the studies on the outcomes of voluntary work have been conducted in the USA and a selected number of European countries, mainly in the UK, Netherlands, Sweden and Germany (Kamerāde, 2015). Most of these countries have relatively generous unemployment benefits and long historical traditions of formal voluntary work (Salamon and Anheier, 1999). This raises questions as to how far the findings from these institutional settings can be generalised to other cultural contexts with a very recent history of democracy and voluntary work, such as post-Soviet countries (Kamerāde et al., 2016). As this article demonstrates, a comparative cross-national perspective might lead to unexpected and theoretically important discoveries, such as the beneficial nature of regular voluntary work for unemployed people in one social and institutional context, but not in another.

There remain important caveats to the present study. This study utilises cross-sectional data and the causal direction assumed is that the link between the frequency of volunteering and mental health is moderated by the generosity of unemployment benefits. The reverse of this is also theoretically possible, i.e. that unemployed people with better mental health are more likely to volunteer. However, the finding that regular volunteers actually have poorer mental health than non-volunteers in countries with less generous unemployment benefits challenges the latter assumption. It is possible though, that while unemployed people who have better mental health are more likely to engage in voluntary work, the effects of this work on their mental health depends significantly on the generosity of welfare in their country. To untangle the causal relationship in more detail, comparable data from several panel studies with large enough samples from countries with varied rates of welfare generosity would be needed. To our knowledge, such data are not currently available, especially from the countries paying very low benefits.

The findings have two key policy implications. Firstly, given that voluntary work is positively related to life fulfilment and mental health, in countries with generous welfare benefits it is advisable to provide the unemployed with opportunities to engage in volunteering so they can benefit from these positive effects. Likewise, the positive effects of regular voluntary work on mental health and well-being can be maximised with generous unemployment benefits. Concerns that regular volunteering and generous unemployment benefits may result in the so-called ‘lock-in effect’ (Røed and Raaum, 2006), by discouraging the unemployed from searching for paid work in the labour market may be unfounded given that van der Wel and Halvorsen (2015) found that welfare generosity is not detrimental to employment commitment and motivation to work. Furthermore, if voluntary work does improve mental health, then it has the potential to increase the capability of someone who is unemployed to find a paid job.

The findings by no means suggest that unemployment benefit claimants should be pressurised to do ‘voluntary’ work, as that already happens in England (BBC, 2015) despite there being no robust evidence that such activities increase their chances of securing paid work (Kamerāde and Ellis Paine, 2014). Voluntary work is by definition work undertaken voluntarily; it is not compulsory labour. The well-being and mental health benefits that are generated through voluntary work may not exist at all if the unemployed are forced to carry out compulsory community work or have their benefits cut.

This article concludes that voluntary work during unemployment can have positive effects on well-being and mental health which increase with higher rates of unemployment benefit, while volunteering regularly and getting little in the way of welfare support can damage one’s mental health.

Acknowledgements

The authors thank the editor and anonymous reviewers for providing valuable feedback on earlier versions of the manuscript.

Funding

This article was produced as a part of the 'Third Sector Impact' research project which received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no 613034.

Notes

1 a) Keeping your home adequately warm; b) Paying for a week's annual holiday away from home (not staying with relatives); c) Replacing any worn-out furniture; d) A meal with meat, chicken, fish every second day if you wanted it; e) Buying new rather than second-hand clothes; f) Having friends or family for a drink or meal at least once a month.

References

- Artazcoz L Benach J Borrell C and Cortas I (2004) Unemployment and mental health: understanding the interactions among gender, family roles, and social class. *American Journal of Public Health* 94(1): 82-88.
- Baines S and Hardill I (2008) 'At least I can do something': the work of volunteering in a community beset by worklessness. *Social Policy and Society* 7(3): 307-317.
- Barbieri P (2009) Flexible employment and inequality in Europe. *European Sociological Review* 25(6): 621-628.
- BBC. (2015) David Cameron: Unemployed young 'should do community work'. Available at: <http://www.bbc.co.uk/news/uk-politics-31500763>.
- Beck U (2000) *The Brave New World of Work*, Cambridge: Cambridge University Press.
- Brand JE (2015) The far-reaching impact of job loss and unemployment. *Annual Review of Sociology* 41(1): 359-375.
- Brennenstuhl S Quesnel-Vallee A and McDonough P (2012) Welfare regimes, population health and health inequalities: a research synthesis. *Journal of Epidemiology and Community Health* 66(5): 397-409.

Burchell B (1994) The effects of labour market position, job insecurity, and unemployment on psychological health. In: Gallie D Marsh C and Vogler CM (eds) *Social Change and the Experience of Unemployment*. Oxford: Oxford University Press, 188-212.

CIA. (2015) The World Factbook. Gini Coefficient. Available at: <https://www.cia.gov/library/publications/the-worldfactbook>.

Corden A and Sainsbury R (2005) *Volunteering for Employment Skills: a Qualitative Research Study*, York: Social Policy Research Unit, University of York.

Creed PA and Macintyre SR (2001) The relative effects of deprivation of the latent and manifest benefits of employment on the well-being of unemployed people. *Journal of Occupational Health Psychology* 6(4): 324-331.

Darity W and Goldsmith AH (1996) Social psychology, unemployment and macroeconomics. *The Journal of Economic Perspectives* 10(1): 121-140.

Diener E Lucas RE and Shigehiro O (2005) Subjective well-being: the science of happiness and life satisfaction. In: Snyder CR and Lopez SJ (eds) *Handbook of Positive Psychology*. New York: Oxford University Press: 63-73.

Diener E and Tov W (2012) National accounts of well-being. In: Land KC Michalos AC and Sirgy MJ (eds) *Handbook of social indicators and quality of life research*. Dordrecht: Springer: 137-157.

Dolan P Layard R and Metcalfe R. (2011) *Measuring Subjective Well-being for Public Policy*. Available at: <http://eprints.lse.ac.uk/35420/1/measuring-subjective-wellbeing-for-public-policy.pdf>.

EFILWC (2014) *European Quality of Life Survey, 2011-2012 [data collection]*, UK Data Service. SN:7316. Available at: <http://dx.doi.org/10.5255/UKDA-SN-7316-2>

Ervasti H and Venetoklis T (2010) Unemployment and subjective well-being: an empirical test of deprivation theory, incentive paradigm and financial strain approach. *Acta Sociologica* 53(2): 119-139.

Esping-Andersen G (1990) *The Three Worlds of Welfare Capitalism* London: Polity.

ETUC and ETUI (2013) *Benchmarking Working Europe 2013*, Brussels: ETUC and ETUI.

Fenger M (2007) Welfare regimes in Central and Eastern Europe: Incorporating post-communist countries in a welfare regime typology. *Contemporary Issues and Ideas in Social Sciences* 3(2): 1-30.

Ferge Z and Kolberg JE (1992) *Social Policy in a Changing Europe*, Bergen: Campus Verlag.

Ferrer -i-Carbonell A and Frijters P (2004) How important is methodology for the estimates of the determinants of happiness? *The Economic Journal* 114(497): 641-659.

Fryer D (1986) Employment deprivation and personal agency during unemployment: A critical discussion of Jahoda's explanation of the psychological effects of unemployment. *Social Behaviour* 1(1): 3-23.

Fryer D (1992) Psychological or material deprivation: why does unemployment have mental health consequences? In: McLaughlin E (ed) *Understanding Unemployment: New Perspectives on Active Labour Market Policies*. London: Routledge: 103-125.

Fryer D (2001) Labour market disadvantage, deprivation and mental health. In: De Wolff CJ Drenth PJD and Thierry H (eds) *A Handbook of Work and Organizational Psychology*. 2 ed. London: Psychology Press: 215-225.

Gallie D and Paugam S (2000) *Welfare Regimes and the Experience of Unemployment in Europe*, Oxford: Oxford University Press.

Gallie D Paugam S and Jacobs S (2003) Unemployment, poverty and social isolation: is there a vicious circle of social exclusion. *European Societies* 5(1): 1-31.

Glucksmann MA (1995) Why 'work'? Gender and the 'total social organization of labour'. *Gender, Work & Organization* 2(2): 63-75.

Gorz A (1989) *Critique of Economic Reason*, London: Verso

Green F (2011) Unpacking the misery multiplier: How employability modifies the impacts of unemployment and job insecurity on life satisfaction and mental health. *Journal of Health Economics* 30(2): 265-276.

Griep Y Hyde M Vantilborgh T Bidee J De Witte H and Pepermans R (2015) Voluntary work and the relationship with unemployment, health, and well-being: A two-year follow-up study contrasting a materialistic and psychosocial pathway perspective. *Journal of Occupational Health Psychology* 20(2): 190-204.

Guichard S and Rusticelli E (2010) *Assessing the Impact of the Financial Crisis on Structural Unemployment in OECD Countries*, Paris: OECD Publishing.

ILO. (2015) Main statistics (annual) -Unemployment. Available at: <http://laborsta.ilo.org/applv8/data/c3e.html>.

Jahoda M (1981) Work, employment, and unemployment: values, theories, and approaches in social research. *American Psychologist* 36(2): 184-191.

Jahoda M (1982) *Employment and Unemployment: A Social-Psychological Analysis*, Cambridge: Cambridge University Press.

Jefferis BJ Nazareth I Marston L Moreno-Kustner B Bellan J Svab I, et al. (2011) Associations between unemployment and major depressive disorder: Evidence from an international, prospective study (the predict cohort). *Social Science & Medicine* 73(11): 1627-1634.

Kamerāde D Crotty J and Ljubownikow S (2016) Civil liberties and volunteering in six former Soviet Union countries. *Nonprofit and Voluntary Sector Quarterly*, Online First, doi: 10.1177/0899764016649689 (accessed 19 May 2016)

Kamerāde D (2015) Third sector impact on human resources and community: a critical review. TSRC Working Paper Series No.134//TSI Working Paper Nr. 3. Seventh Framework Programme (grant agreement 613034), European Union. Brussels: Third Sector Impact. Available at: <http://www.birmingham.ac.uk/generic/tsrc/documents/tsrc/working-papers/FP7-IMPact-review-TSRC-working-paperfor-website-20150915.pdf>

Kamerāde D and Ellis Paine A (2014) Volunteering and employability: implications for policy and practice. *Voluntary Sector Review*, 5(2): 259-273.

Krueger AB and Schkade DA (2008) The reliability of subjective well-being measures. *Journal of Public Economics* 92(8/9): 1833-1845.

Low N Butt S Ellis Paine A and Davis Smith J. (2007) Helping Out: a National survey of Volunteering and Charitable Giving. Available at: http://www.ivr.org.uk/images/stories/Institute-of-Volunteering-Research/Migrated-Resources/Documents/H/OTS_Helping_Out.pdf.

McKee-Ryan F Song Z Wanberg CR and Kinicki AJ (2005) Psychological and physical well-being during unemployment: a meta-analytic study. *Journal of Applied Psychology* 90(1): 53.

Merton RK (1957) *Social Theory and Social Structure*, Glencoe, IL: Free Press.

Nichols G and Ralston R (2011) Social inclusion through volunteering: the legacy potential of the 2012 Olympic Games. *Sociology* 45(5): 900-914.

Ockenden N and Hill M. (2009) A Gateway to Work? The Role of Volunteer Centres in Supporting the Link Between Volunteering and Employability. NCVO/VSNR Researching Voluntary Sector Conference. Warwick, UK.

OECD (2013) *OECD Guidelines on Measuring Subjective Well-being*: OECD Publishing.

Paul KI and Batinic B (2010) The need for work: Jahoda's latent functions of employment in a representative sample of the German population. *Journal of Organizational Behavior* 31(1): 45-64.

Paul KI and Moser K (2009) Unemployment impairs mental health: meta-analyses. *Journal of Vocational Behavior* 74(3): 264-282.

Pavot W and Diener E (1993) Review of the satisfaction with life scale. *Psychological Assessment* 5(2): 164-172.

Pavot W Diener ED Colvin CR and Sandvik E (1991) Further validation of the Satisfaction with Life Scale: Evidence for the cross-method convergence of well-being measures. *Journal of Personality Assessment* 57(1): 149-161.

Portes A (1998) Social capital: its origins and applications in modern sociology. *Annual Review of Sociology* 24: 1-24.

Prosser T. (2015) Dualization or liberalization? Investigating precarious work in eight European countries. *Work, Employment & Society*. (accessed November 5, 2015).

Røed K and Raaum O (2006) Do labour market programmes speed up the return to work?*. *Oxford Bulletin of Economics and Statistics* 68(5): 541-568.

Salamon LM and Anheier HK (1999) Social origins of civil society: explaining the nonprofit sector cross-nationally. *Voluntas* 9(3): 213-247.

Sandvik E Diener E and Seidlitz L (1993) Subjective well-being: the convergence and stability of self-report and non-self-report measures. *Journal of Personality* 61: 317-342.

Snijders TAB and Bosker RJ. (1999) *Multilevel Analysis. An Introduction to Basic and Advanced Multilevel Modeling*. London: Sage.

Standing G (2011) *The Precariat: The New Dangerous Class*, London: A&C Black.

Taylor R (2004) Extending conceptual boundaries: work, voluntary work and employment. *Work, Employment and Society* 18(1): 29-49.

Taylor R (2015) Volunteering and Unpaid work. In: Edgell S Gottfried H and Granter E (eds) *Sage Handbook of Sociology of Work and Employment*. London: Sage, 485-501.

Tilly C and Tilly C (1994) Capitalists Work and Labour Markets. In: Smelser NJ and Swedberg R (eds) *The Handbook of Economic Sociology*. New York: Russel Sage Foundation, 283-312.

Topp CW Østergaard SD Søndergaard S and Bech P (2015) The WHO-5 Well-Being Index: a systematic review of the literature. *Psychotherapy and Psychosomatics* 84(3): 167-176.

Van der Wel KA and Halvorsen K (2015) The bigger the worse? A comparative study of the welfare state and employment commitment. *Work, Employment & Society* 29(1): 99-118.

Wanberg CR (2012) The individual experience of unemployment. *Annual Review of Psychology* 63(1): 369-396.

Warr P Jackson P and Banks M (1988) Unemployment and mental health: some British studies. *Journal of Social Issues* 44: 47-68.

Weich S and Lewis G (1998) Poverty, unemployment, and common mental disorders: population based cohort study. *British Medical Journal* 317(7151): 115-119.

WHO. (2014) Mental health: a State of Well-being. Available at:
http://www.who.int/features/factfiles/mental_health/en/.

World Bank. (2011) International Comparison Program Database. Unemployment, total (% of total labor force)(modeled ILO estimate). Available at:
<http://data.worldbank.org/indicator/SL.UEM.TOTL.ZS>.

Daiga Kamerāde is a Senior Lecturer in Quantitative Research Methods at the University of Salford. Her research interests include quantitative research methods, changing nature of employment, relationships between paid and unpaid work and well-being.

Matthew R. Bennett is a Lecturer in Social Policy at the University of Birmingham. His research interests are in the causes and consequences of prosocial behaviour; social identity; intergroup contact; and quantitative methods.

Tables and Figures

Table 1. Descriptive statistics of dependent variables and key independent variables by country

Country	Mental health	Happiness	Satisfaction	Life worthwhile	No volunteering	Volunteers occasionally	Volunteers regularly	Unemployment rate	GDP	Unemployment benefit generosity	Income inequality
Austria (AT)	60.71	7.11	6.61	3.79	0.61	0.25	0.14	4.10	44.03	55.00	26.30
Belgium (BE)	58.00	7.00	6.41	3.64	0.72	0.17	0.10	7.10	40.95	63.00	25.90
Bulgaria (BG)	67.88	6.16	4.49	3.83	0.89	0.10	0.01	11.30	15.28	38.00	45.30
Croatia (HR)	62.94	7.12	6.49	4.01	0.73	0.17	0.10	13.40	20.57	37.00	32.00
Czech Republic (CZ)	52.84	5.72	4.56	3.35	0.63	0.28	0.09	6.70	28.60	51.00	24.90
Denmark (DK)	65.96	8.06	7.94	4.19	0.49	0.32	0.19	7.60	43.31	69.00	24.80
Estonia (EE)	52.24	5.82	4.70	3.49	0.73	0.18	0.09	12.50	23.58	42.00	31.30
Finland (FI)	63.23	7.74	7.29	4.00	0.68	0.16	0.16	7.70	40.25	62.00	26.80
France (FR)	58.01	6.78	5.98	3.73	0.64	0.16	0.20	9.20	37.33	57.00	30.90
Germany (DE)	57.78	5.92	5.29	3.16	0.78	0.13	0.08	5.90	42.08	53.00	27.00
Greece (EL)	54.71	5.72	5.40	2.91	0.79	0.19	0.02	17.70	26.68	22.00	34.40
Hungary (HU)	58.70	6.23	4.52	3.05	0.84	0.15	0.01	10.90	22.52	38.00	24.70
Iceland (IS)	64.86	8.46	8.21	4.11	0.68	0.25	0.07	7.10	39.62	66.00	28.00
Ireland (IE)	59.31	6.90	6.36	3.92	0.53	0.24	0.24	14.60	44.91	74.00	33.90
Italy (IT)	61.62	6.57	5.71	3.77	0.79	0.13	0.08	8.40	35.90	24.00	31.90
Latvia (LV)	53.36	5.88	5.10	3.49	0.90	0.05	0.06	16.20	19.41	48.00	35.20
Lithuania (LT)	57.53	6.70	6.15	3.57	0.83	0.12	0.05	15.30	22.53	42.00	35.50
Luxembourg (LU)	52.76	6.90	5.19	3.71	0.81	0.19	0.00	4.90	91.47	64.00	30.40
Malta (MT)	44.84	6.00	6.21	4.00	0.79	0.16	0.05	6.50	28.18	49.00	27.90
Netherlands (NL)	52.65	7.16	6.48	3.94	0.58	0.16	0.26	4.40	46.39	68.00	25.10
Poland (PL)	58.73	6.86	6.41	3.57	0.88	0.10	0.03	9.60	22.33	41.00	34.10
Portugal (PT)	64.04	6.81	5.55	3.57	0.80	0.15	0.05	12.70	26.93	58.00	34.20
Romania (RO)	58.27	6.47	5.77	4.13	0.77	0.20	0.03	7.40	17.36	30.00	27.40
Slovak Republic (SK)	52.35	5.95	5.20	3.17	0.85	0.14	0.02	13.50	25.07	39.00	26.00
Slovenia (SI)	55.39	6.46	6.16	3.78	0.73	0.18	0.09	8.20	28.49	52.00	23.70
Spain (ES)	62.76	7.65	6.73	3.87	0.71	0.23	0.06	21.70	32.67	50.00	34.00
Sweden (SE)	57.63	6.94	6.86	3.91	0.53	0.37	0.10	7.80	43.71	60.00	23.00
Turkey (TR)	56.10	5.90	5.45	3.69	0.78	0.13	0.09	9.80	17.91	23.00	40.20
Great Britain (GB)	51.93	6.59	5.85	3.67	0.71	0.08	0.21	7.80	36.55	51.00	32.30
Mean	58.46	6.63	5.90	3.63	0.75	0.16	0.09	11.36	30.88	47.46	31.60

Table 2. Multilevel mixed-effects linear regression models predicting mental health, happiness, satisfaction, a worthwhile life.

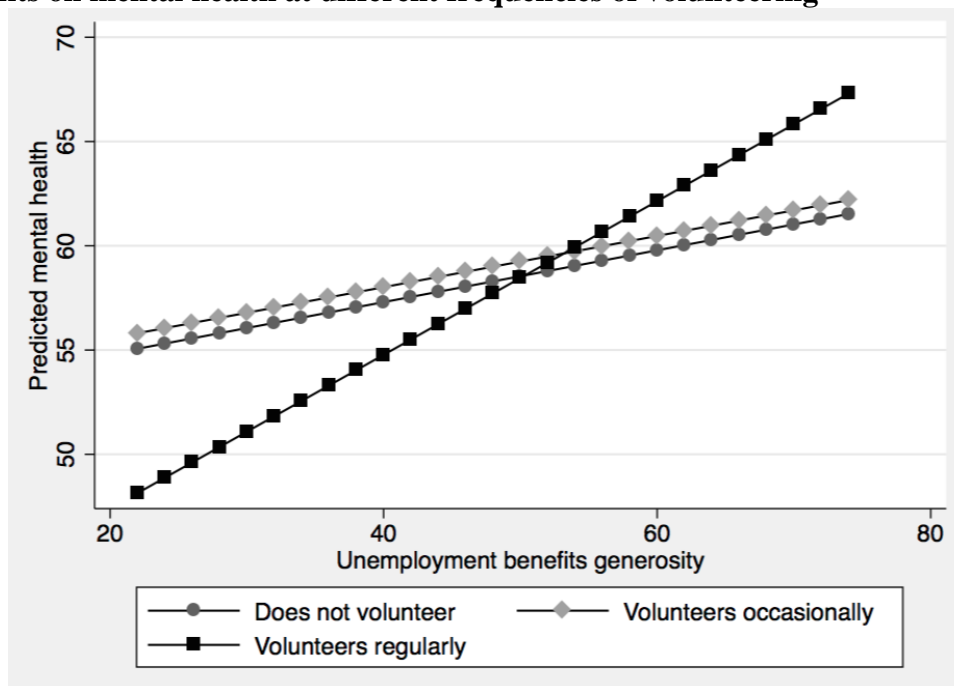
Variables	Mental Health		Happiness		Satisfaction		Worthwhile	
	1a	1b	2a	2b	3a	3b	4a	4b
<i>Background Characteristics</i>								
Volunteer status (ref. no volunteering)								
Volunteers occasionally	0.953 (1.113)	1.185 (1.269)	0.104 (0.106)	0.108 (0.106)	0.154 (0.123)	0.139 (0.123)	0.136* (0.054)	0.131* (0.055)
Volunteers regularly	0.279 (1.449)	-1.227 (1.756)	-0.025 (0.137)	-0.017 (0.165)	-0.037 (0.159)	-0.026 (0.182)	0.177* (0.070)	0.221** (0.076)
Female (ref. male)	-1.683* (0.833)	-1.716* (0.832)	0.387*** (0.079)	0.388*** (0.079)	0.239** (0.092)	0.237** (0.092)	0.058 (0.041)	0.059 (0.041)
Age Category (ref. <25)								
Age Category (25 -44)	-1.570 (1.273)	-1.510 (1.271)	-0.159 (0.121)	-0.162 (0.121)	-0.452** (0.140)	-0.453** (0.140)	-0.039 (0.062)	-0.040 (0.062)
Age Category (>44)	0.012 (1.457)	0.010 (1.454)	-0.177 (0.138)	-0.174 (0.138)	-0.359* (0.161)	-0.355* (0.160)	0.035 (0.071)	0.035 (0.071)
Education (ref. secondary)								
Primary	-2.587+ (1.460)	-2.397 (1.460)	-0.090 (0.137)	-0.095 (0.137)	0.093 (0.161)	0.088 (0.161)	-0.085 (0.071)	-0.091 (0.071)
Tertiary	-1.529 (1.140)	-1.448 (1.142)	0.061 (0.108)	0.065 (0.108)	0.072 (0.125)	0.065 (0.126)	0.201*** (0.055)	0.198*** (0.055)
Marital status (ref. married)								
Separated / divorced	-0.066 (1.230)	0.006 (1.228)	-0.757*** (0.116)	-0.758*** (0.116)	-0.354** (0.135)	-0.355** (0.135)	0.038 (0.060)	0.037 (0.060)
Widowed	-2.593 (2.170)	-2.717 (2.166)	-0.740*** (0.204)	-0.737*** (0.203)	-0.678** (0.235)	-0.676** (0.235)	-0.060 (0.104)	-0.058 (0.104)
Single	0.907 (1.082)	0.979 (1.080)	-0.509*** (0.103)	-0.508*** (0.103)	-0.434*** (0.119)	-0.437*** (0.119)	-0.160** (0.053)	-0.162** (0.053)
Housing tenure (ref. mortgage)								
Own outright	1.615	1.471	-0.009	-0.015	-0.016	-0.016	-0.018	-0.015

	(1.328)	(1.328)	(0.126)	(0.126)	(0.147)	(0.147)	(0.065)	(0.065)
Rent	1.128	1.146	-0.051	-0.065	-0.168	-0.170	-0.036	-0.038
	(1.300)	(1.300)	(0.123)	(0.123)	(0.144)	(0.144)	(0.063)	(0.063)
Rent free	0.242	0.241	-0.077	-0.082	-0.102	-0.105	0.059	0.059
	(2.155)	(2.152)	(0.204)	(0.203)	(0.237)	(0.237)	(0.105)	(0.105)
Other tenure status	-10.649**	-11.096**	-0.836*	-0.850*	-1.032**	-1.032**	-0.200	-0.185
	(3.605)	(3.605)	(0.347)	(0.347)	(0.398)	(0.398)	(0.175)	(0.175)
Religious Service attendance	1.234**	1.298**	0.043	0.042	0.119*	0.118*	0.044*	0.043*
	(0.421)	(0.421)	(0.040)	(0.040)	(0.047)	(0.047)	(0.021)	(0.021)
Deprivation index	-2.510***	-2.508***	-0.277***	-0.276***	-0.352***	-0.352***	-0.101***	-0.101***
	(0.235)	(0.235)	(0.022)	(0.022)	(0.026)	(0.026)	(0.011)	(0.011)
Unemployment benefits	0.131	0.189	-0.168+	-0.172*	-0.158	-0.159	-0.090*	-0.092*
	(0.914)	(0.913)	(0.087)	(0.087)	(0.101)	(0.101)	(0.044)	(0.044)
General health	7.561***	7.531***	0.486***	0.488***	0.355***	0.358***	0.137***	0.139***
	(0.458)	(0.457)	(0.043)	(0.043)	(0.051)	(0.051)	(0.022)	(0.022)
Long term unemployed	1.629+	1.614+	0.056	0.056	-0.080	-0.080	-0.052	-0.052
	(0.839)	(0.838)	(0.079)	(0.079)	(0.092)	(0.092)	(0.041)	(0.041)
Number of children in household	-0.011	-0.030	0.020	0.023	0.084	0.084	0.038	0.038
	(0.480)	(0.480)	(0.045)	(0.045)	(0.053)	(0.053)	(0.023)	(0.023)
Frequency of face-to-face contact with friends/neighbours	1.930***	1.944***	0.211***	0.211***	0.124*	0.121*	0.068**	0.068**
	(0.448)	(0.448)	(0.042)	(0.042)	(0.049)	(0.049)	(0.022)	(0.022)
<i>Country characteristics</i>								
Unemployment rate	-0.041	-0.043	0.017	0.017	0.015	0.016	-0.021+	-0.020+
	(0.198)	(0.199)	(0.020)	(0.020)	(0.031)	(0.031)	(0.012)	(0.011)
GDP	-0.182*	-0.179*	-0.005	-0.005	-0.013	-0.014	-0.007+	-0.007+
	(0.079)	(0.079)	(0.008)	(0.008)	(0.011)	(0.011)	(0.004)	(0.004)
Unemployment benefit generosity	0.157*	0.151*	0.025***	0.028***	0.029**	0.029**	0.010**	0.011**
	(0.069)	(0.062)	(0.007)	(0.007)	(0.010)	(0.011)	(0.004)	(0.004)
Inequality	0.323+	0.331*	-0.005	-0.006	-0.027	-0.028	0.015	0.015

	(0.166)	(0.166)	(0.017)	(0.017)	(0.025)	(0.025)	(0.009)	(0.009)
Cross-level interactions								
Volunteers occasionally X unemployment benefit generosity		-0.026 (0.091)		-0.006 (0.008)		0.007 (0.009)		0.002 (0.004)
Volunteers regularly X unemployment benefit generosity		0.240* (0.122)		-0.011 (0.011)		-0.006 (0.013)		-0.007 (0.005)
Constant	59.529*** (1.973)	59.479*** (1.970)	7.069*** (0.191)	7.084*** (0.190)	6.631*** (0.242)	6.638*** (0.242)	3.693*** (0.101)	3.697*** (0.101)
<i>Variance components</i>								
Country-level variance	8.565*** (0.231)	8.408*** (0.237)	0.094*** (0.207)	0.092*** (0.209)	0.251*** (0.182)	0.0249*** (0.184)	0.033*** (0.185)	0.032*** (0.189)
Random effect - volunteer occasionally		8.060***		0.063**		0.024***		0.051***
Random effect - volunteer frequently		11.16***		0.092**		0.063**		0.041**
Individuals	2420	2420	2431	2431	2440	2440	2420	2420
Countries	29	29	29	29	29	29	29	29
<i>Goodness of fit indicators</i>								
Deviance	21266.7	21261.1	9911.13	9909.01	10691.72	10690.45	6632.87	6630.39
Intraclass correlation	0.022	0.068	0.027	0.051	0.052	0.064	0.035	0.035
R2 - individual-level	22.55	22.1	23.06	23.26	18.92	19.08	7.45	7.56
R2 - country-level	46.76	47.14	74.73	75.53	58.44	58.77	59.76	60.98
AIC	21323	21313	9967	9962	10748	10744	6689	6686
BIC	21485	21475	10129	10124	10910	10906	6851	6849
Number of parameters	25	27	25	27	25	27	25	27

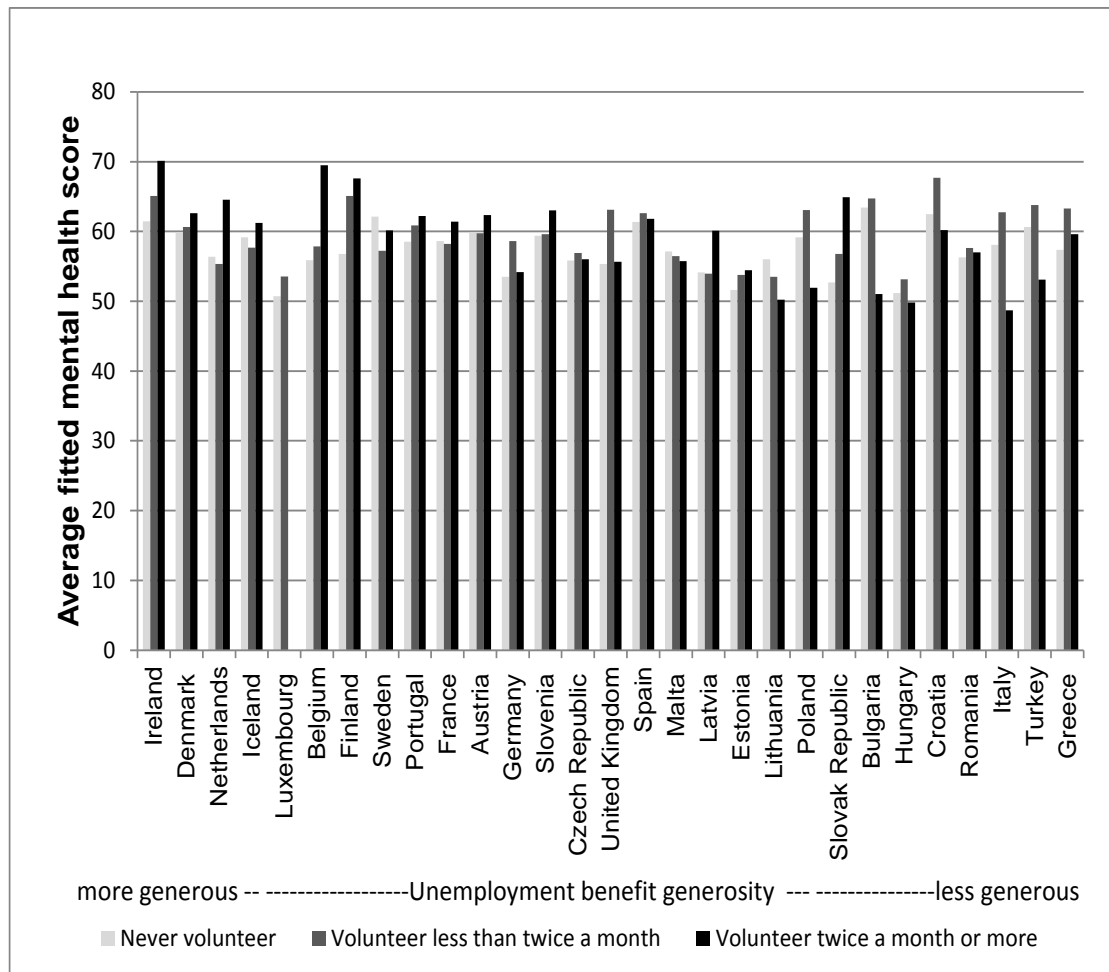
Source: European Quality of Life Survey 2011. Notes: + $p < 0.10$ * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$. Standard errors in parentheses.

Figure 1. Cross-level interaction estimating the effect of country unemployment benefits on mental health at different frequencies of volunteering



Note: This figure represents the non-mean-centred unemployment benefit generosity variable for ease of interpretation.

Figure 2. Volunteering while unemployed, benefit generosity and mental health, by country



Appendices

Table A1. Descriptive statistics for dependent and independent variables.

	Mean/ proportion	SD	Min	Max
<i>Dependent variables</i>				
Mental health	58.46	22.31	0	100
Happiness	6.63	2.17	1	10
Satisfaction	5.90	2.47	1	10
Worthwhile	3.63	1.04	1	5
<i>Background characteristics</i>				
Volunteer frequency				
No volunteering	0.75		0	1
Volunteers occasionally	0.16		0	1
Volunteers regularly	0.09		0	1
Female	0.52		0	1
Age (<25)	0.15		0	1
Age category (25-44)	0.46		0	1
Age category (>44)	0.39		0	1
Education				
Primary	0.10		0	1
Secondary	0.74		0	1
Tertiary	0.17		0	1
Marital status				
Divorced	0.15		0	1
Married	0.50		0	1
Widowed	0.04		0	1
Single	0.31		0	1
Housing tenure				
Mortgage	0.15		0	1
Own outright	0.43		0	1
Rent	0.36		0	1
Rent free	0.05		0	1
Other tenure	0.01		0	1
Religious service attendance	1.87	1.04	1	5
Deprivation	2.62	2.02	0	6
Benefits	0.56		0	1
Health	3.73	0.97	1	5
Long term unemployed	0.55		0	1
Number of children in hhld	0.62	0.95	1	5
Freq. face-to-face contact with friends/neighbours	4.29		1	5
<i>Country Characteristics</i>				
Unemployment rate	11.36	4.61	4.10	21.70
GDP (PC PPP)	30.88	10.70	15.28	91.47
Unemployment benefit generosity	47.46	12.96	22.00	74.00
Inequality	31.60	4.98	23.00	45.30

Table A2 . Correlation matrix between key variables.

		Dependent variables				Background characteristics						Country characteristics			
		Mental health	Happiness	Satisfaction	Worthwhile	No volunteering	Volunteers occasionally	Volunteers regularly	Deprivation	Benefits	Long term unemployed	Unemployment rate	GDP PC PPP	Unemployment benefits	Inequality
Dependent variables	Mental health	1.00													
	Happiness	0.50	1.00												
	Satisfaction	0.42	0.66	1.00											
	Worthwhile	0.35	0.42	0.41	1.00										
Background characteristics	No volunteering	-0.04	-0.07	-0.08	-0.12	1.00									
	Volunteers occasionally	0.04	0.06	0.07	0.08		1.00								
	Volunteers regularly	0.02	0.03	0.03	0.09			1.00							
	Deprivation	-0.30	-0.39	-0.39	-0.29	0.12	-0.09	-0.07	1.00						
	Benefits	-0.05	-0.05	-0.04	-0.06	-0.05	0.00	0.07	-0.01	1.00					
	Long term unemployed	-0.04	-0.07	-0.09	-0.08	0.07	-0.09	0.00	0.16	-0.03	1.00				
Country characteristics	Unemployment rate	0.04	0.06	0.03	0.01	0.02	0.02	-0.06	0.12	-0.18	0.01	1.00			
	GDP PC PPP	-0.02	0.09	0.10	0.04	-0.14	0.07	0.12	-0.27	0.34	-0.05	-0.33	1.00		
	Unemployment benefits	0.01	0.13	0.13	0.10	-0.15	0.06	0.14	-0.22	0.37	-0.04	-0.18	0.64	1.00	
	Inequality	0.06	-0.02	-0.07	0.04	0.10	-0.07	-0.05	0.17	-0.32	0.02	0.46	-0.47	-0.37	1.00

Notes: bold correlations indicate statistical significance at $p < 0.05$

Figure 1A. Bivariate relationship between well-being and unemployment benefits

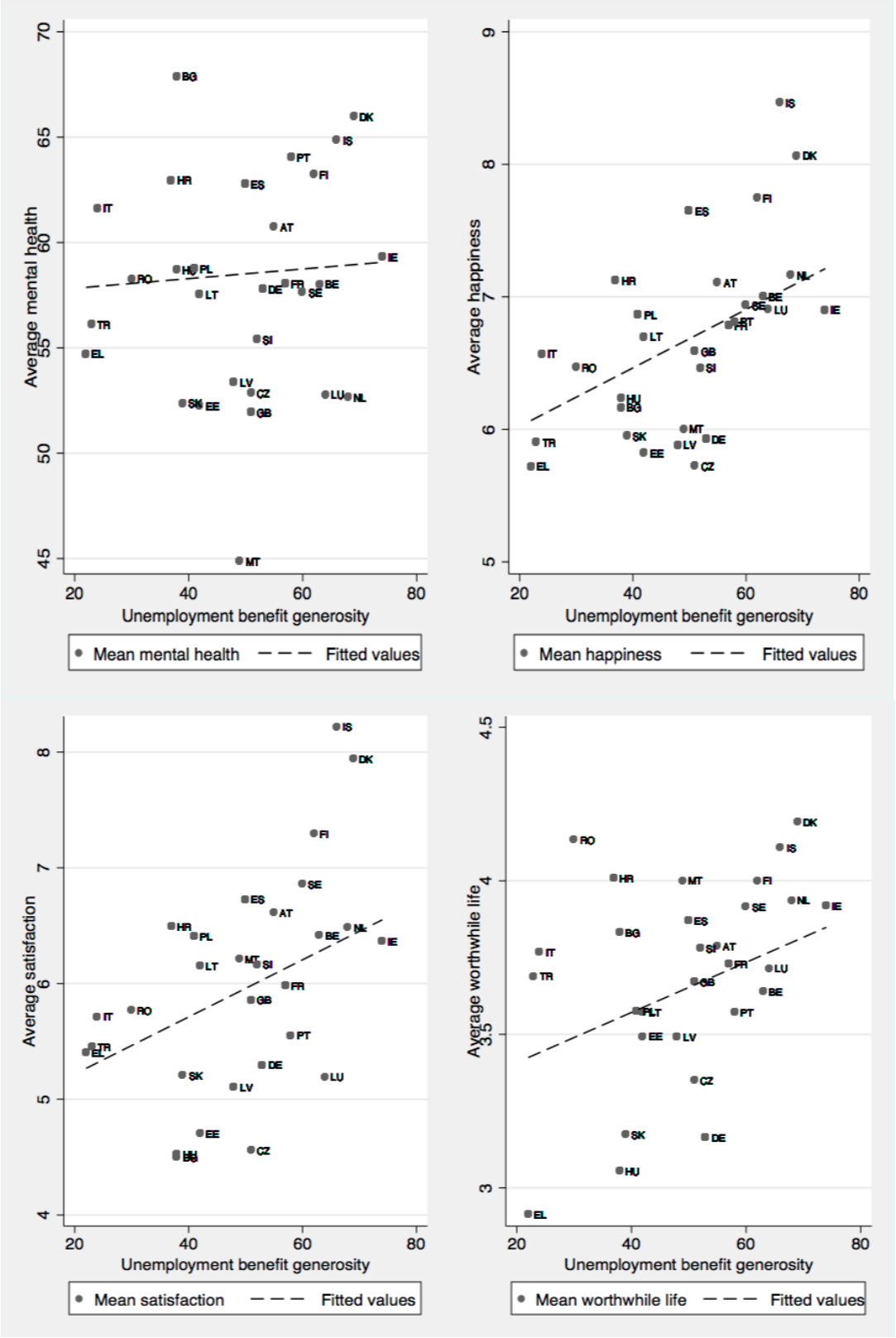


Figure 1A depicts bivariate relationship between the country averages of each dependent variable with a best-fit line to aid interpretation (Figure 1A). The figure demonstrates there are no obvious outliers or clusters of countries that are likely to influence the relationships. It depicts a positive relationship between unemployment benefit generosity and the outcome variables: happiness ($r = .46, p < .000$), satisfaction ($r = .40, p < .000$), and life being worthwhile ($r = .35, p < .000$). The relationship between unemployment benefit generosity and mental health was positive but not statistically significant ($r = .01, p < .077$).

Likewise, Figures 2A – 5A depict a clear relationship between each of our dependent variables and benefit generosity at different levels of volunteering. Those that volunteer regularly have the highest levels of well-being and mental health, those that volunteer occasionally have the second highest levels while those that do not volunteer at all have the lowest levels. These differences are also bigger at higher levels of unemployment benefits.

Figure 2A. Relationship between mental health and unemployment benefits by frequency of volunteering.

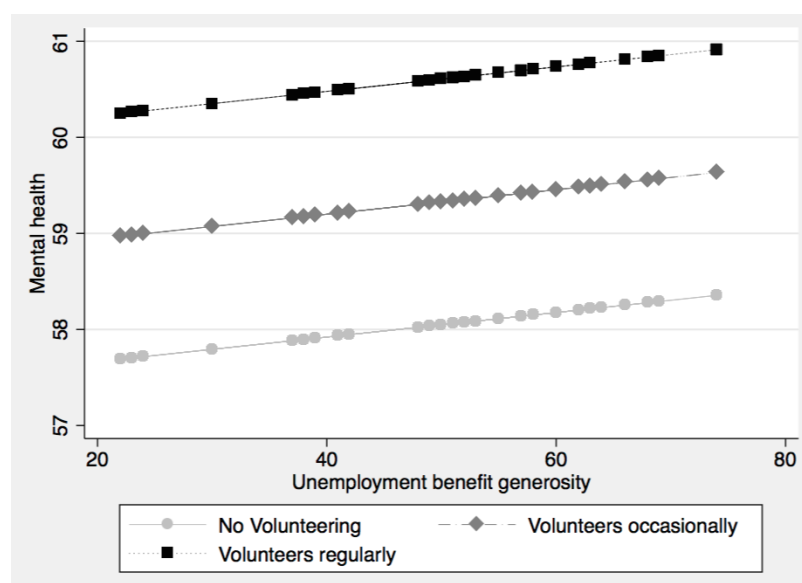


Figure 3A. Relationship between happiness and unemployment benefits by frequency of volunteering.

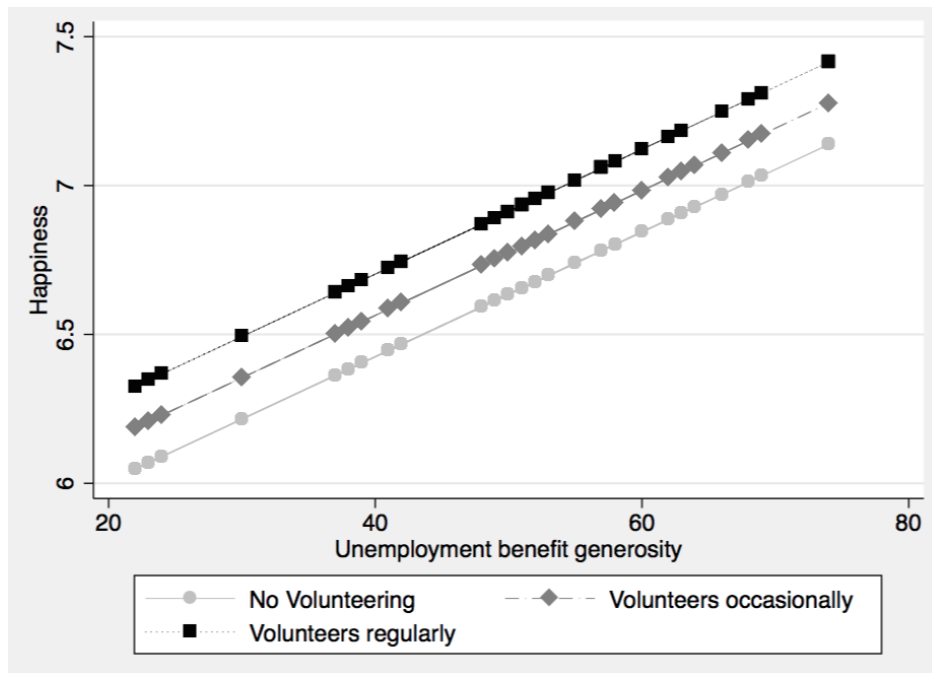


Figure 4A. Relationship between life satisfaction and unemployment benefits by frequency of volunteering.

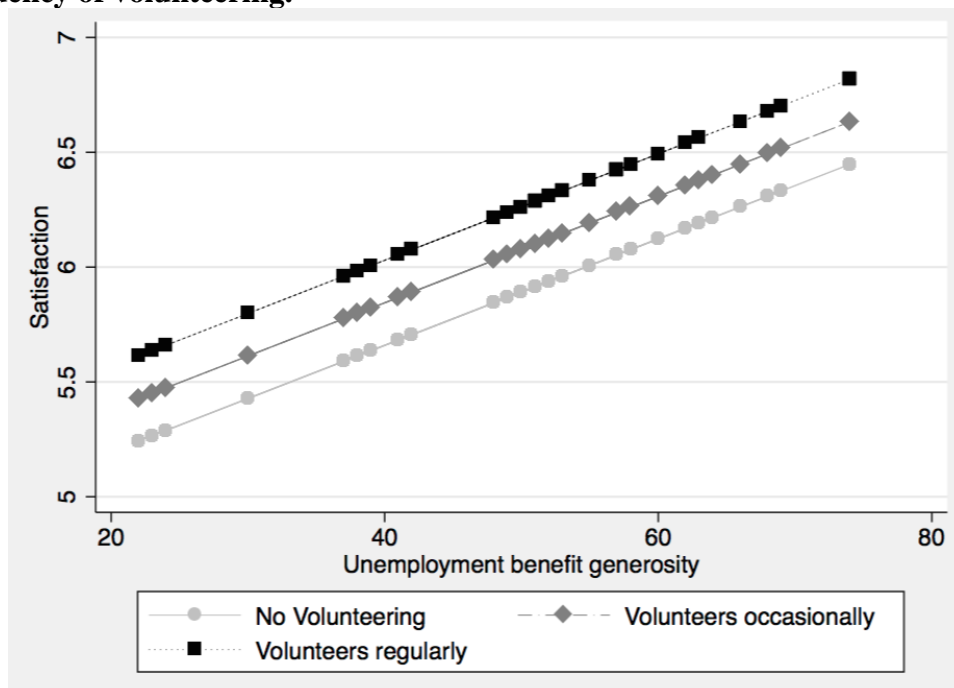


Figure 5A. Relationship between feeling that life is worthwhile and unemployment benefits by frequency of volunteering.

