

Losing more than a job: unemployment experience and the behavioural and social dimensions of mental wellbeing

Jorge Céspedes-Rico^{ID} and Maria A. Davia^{ID}

*Department of Spanish and International Economics, Econometrics and
Economic History and Institutions, Universidad de Castilla-La Mancha,
Albacete, Spain*

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Abstract

Purpose – This paper aims to examine the association between the experience of unemployment and mental wellbeing and explores whether health-related behavioural and perceived social support deprivation account for part of the wellbeing gap between employed and unemployed individuals.

Design/methodology/approach – Microdata from the 2023 Spanish Health Survey are used to compare individuals facing short- and long-term unemployment spells with those in employment. The unemployment-wellbeing association is split into direct and indirect components following the strategy described in [Kesavayuth et al. \(2022\)](#).

Findings – Unemployment, particularly if long-term, is negatively associated with mental wellbeing. Health-related behavioural deprivation and perceived social support deprivation are both linked to unemployment and to lower wellbeing and account for part of the observed wellbeing gap associated with unemployment.

Originality/value – The paper provides nuanced evidence by distinguishing short- and long-term unemployment in Spain and estimating how much of the unemployment – wellbeing gap is accounted for by behavioural and social support deprivation. The findings suggest that labour market policies may benefit from considering these dimensions beyond income losses.

Keywords Unemployment duration, Mental wellbeing, Health-related behaviours, Social support

Paper type Research paper

1. Introduction

Employment status and job quality are closely related to mental health and subjective wellbeing. In [Jahoda's \(1982\)](#) classic framework, work functions not only as an economic

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relation, but also as a social institution that provides time structure, social contact, collective purpose, status and activity. When employment is lost or becomes insecure, these functions may be weakened, with relevant implications for mental wellbeing and social cohesion.

Seminal contributions by [Clark and Oswald \(1994\)](#) and [Winkelmann and Winkelmann \(1998\)](#) show that unemployed individuals report lower life satisfaction, beyond income differences alone. Moreover, the unemployment – wellbeing gap extends beyond income losses or material deprivation and is also related to psychosocial and behavioural components, such as unhealthy coping behaviours and weaker social support networks ([Colombo *et al.*, 2018](#); [Morrish and Medina-Lara, 2021](#)).

This paper contributes to this literature by examining whether the wellbeing gap between employed and unemployed individuals is larger among the long-term unemployed and the extent to which health-related behavioural deprivation and perceived social support deprivation account for this gap. We decompose this association into direct and indirect components linked to health-related behavioural deprivation and perceived social support deprivation. Spain constitutes a relevant case study, given its high structural unemployment. Long-term unemployment has been associated with poorer mental health outcomes in Spain, both during the Great Recession ([Farré *et al.*, 2018](#)) and the COVID-19 disruption ([Escudero-Castillo *et al.*, 2021](#)).

2. International evidence

International evidence consistently shows that unemployment is related to poorer mental health and subjective wellbeing. Seminal longitudinal studies helped address concerns about reverse causality and unobserved heterogeneity, showing that transitions into unemployment are followed by sizeable declines in subjective wellbeing, only weakly attenuated by social networks and civic engagement ([Winkelmann, 2009](#)). Further evidence reports persistent wellbeing disadvantages among individuals experiencing repeated or prolonged unemployment spells, even after re-employment ([Farré *et al.*, 2018](#); [Hammarström *et al.*, 2024b](#); [Stauder, 2019](#); [Strandh *et al.*, 2014](#)). Consistently, recent systematic reviews and meta-analyses show that longer unemployment duration is associated with poorer mental health and wellbeing ([Picchio and Ubaldi, 2024](#)).

Research has also examined intermediate dimensions in the employment status – wellbeing relationship. Evidence from Australia identifies financial hardship, low personal control and limited social support as relevant dimensions in the association between employment status and depression ([Crowe and Butterworth, 2016](#)). [Kesavayuth *et al.* \(2022\)](#) formalise this type of approach by decomposing wellbeing disparities into direct and indirect components linked to behavioural and social dimensions.

Health-related behaviours are also relevant to the unemployment–wellbeing relationship. Depression and alcohol consumption [1] are more prevalent among young long-term unemployed individuals in Finland ([Lappalainen *et al.*, 2017](#)), while regular exercise appears to be associated with better health outcomes in contexts of economic hardship ([Colombo *et al.*, 2018](#)). Recent evidence further points to bidirectional relationships between mental health and behaviours such as smoking and physical activity, suggesting that economic stress, psychosocial strain and unhealthy coping behaviours are closely interrelated ([Yang and Zikos, 2023, 2025](#)).

Social support and social connectedness constitute another key dimension. Joblessness is frequently accompanied by weaker everyday social interactions, loneliness and social exclusion. Unemployed individuals spend more time alone and report lower affective wellbeing ([Hoang and Knabe, 2025](#)), while loneliness and social exclusion account for part of the association between prolonged unemployment and lower life satisfaction ([Friehe and Pfeifer, 2025](#); [Kim, 2025](#)). Although social support may buffer the mental health

disadvantage associated with unemployment, it does not fully substitute the psychosocial functions provided by paid work (Mikucka, 2014; Morrish and Medina-Lara, 2021).

This study therefore examines whether health-related behavioural deprivation and perceived social support deprivation account for part of the observed unemployment–wellbeing gap.

2.1 Conceptual framework and hypotheses

The preceding evidence suggests that unemployment is linked to mental wellbeing through interrelated material, psychosocial and behavioural dimensions. Joblessness may involve uncertainty, reduced purpose, weaker social recognition and disrupted routines, all of which are relevant to mental health (Jahoda, 1982). Health-related behaviours and perceived social support may also be linked to this association, and their relevance may vary by unemployment duration. Long-term unemployment is therefore expected to be associated with greater behavioural and social support deprivation. We formulate the following hypotheses:

- H1. Being unemployed is negatively associated with mental wellbeing, with a stronger association among the long-term unemployed.
- H2. Unemployment is positively related to health-related behavioural and perceived social support deprivation.
- H3. Health-related behavioural deprivation and perceived social support deprivation account for part of the observed unemployment–wellbeing association.

3. Data

The empirical analysis is based on microdata from the 2023 Spanish Health Survey (SHS), a nationally representative cross-sectional survey with information on health, lifestyle habits, socioeconomic conditions and labour market status (Spanish Ministry of Health, 2025). Its cross-sectional design prevents observing individual trajectories before and after job loss.

The analysis focuses on the economically active population aged 15 and over living in private households, including employed ($n = 9,313$) and unemployed individuals ($n = 1,537$). Official sampling weights are applied throughout to ensure national representativeness, corresponding to 21,467.8 thousand employed individuals and 4,012.2 thousand unemployed individuals at the population level. Following the ILO/OECD convention, unemployment is categorised as short-term (spells lasting less than 12 months) and long-term unemployment (those lasting 12 months or more).

3.1 Key dependent variable: mental wellbeing

Mental wellbeing is measured using the WHO-5 Well-Being Index Scale, which captures positive aspects of mental wellbeing over the previous two weeks through five items scored from 0 (“at no time”) to 5 (“at all times”) (World Health Organization, 1998). These items are:

- I have felt cheerful and in good spirits;
- I have felt calm and relaxed;
- I have felt active and vigorous;
- I woke up feeling fresh and rested; and
- My daily life has been filled with things that interest me.

The raw score (0–25) is multiplied by 4 to obtain a 0–100 index, with higher values indicating better wellbeing.

3.2 Health-related behavioural deprivation

Health-related behavioural deprivation is captured through four behavioural risk dimensions: physical inactivity, dietary habits, tobacco use and alcohol consumption. Each component is coded from 0 to 1, with higher values indicating greater deprivation. Following the deprivation-counting logic of [Alkire and Foster \(2011\)](#), components are weighted by the inverse of their average prevalence and aggregated into a 0–100 health-related behavioural deprivation index. [Appendix 1](#) reports the exact coding, thresholds, weights and normalisation procedure. Robustness checks using each component separately are reported in the Online Supplementary Material.

3.3 Perceived social support deprivation

Social support is measured using the three-item Oslo Social Support Scale (OSSS-3), described in [Kocalevent et al. \(2018\)](#). This instrument captures the number of close contacts, perceived interest and concern from others and the perceived ease of obtaining practical help from neighbours. These dimensions are combined into a composite deprivation measure, as described in [Appendix 1](#). The index ranges from 0 to 100, with higher values indicating greater perceived social support deprivation. It is interpreted as an observed deprivation dimension associated with the unemployment – wellbeing relationship, rather than as a causal mechanism.

3.4 Descriptive patterns

[Table 1](#) describes the distribution of the dependent variable (mental wellbeing index), the health-related behavioural deprivation index and the perceived social support deprivation index, by labour market status for the economically active population. It also captures the share of individuals reporting unhealthy behaviours and different sources of social deprivation. Panel A shows lower wellbeing amongst unemployed individuals (particularly those in long-term unemployment) compared to those in employment. Panel B points to more prevalent health-related behavioural deprivation (higher levels of sedentary behaviour, smoking and unhealthy dietary patterns) among unemployed individuals. Panel C reveals higher levels of perceived deprivation in social support among the unemployed, particularly if long-term.

While consistent with the hypothesised role of health behaviours and social support, the above displayed descriptive evidence may partly reflect compositional differences across labour market groups [\[2\]](#). The next section examines these relationships in a multivariate econometric framework, adjusting for a broad set of observed characteristics and decomposing the association between unemployment and wellbeing into direct and indirect components.

4. Methodology

This section describes the main Kesavayuth-type linear decomposition used to split the unemployment – wellbeing association into total, direct and indirect components.

[Figure 1](#) summarises the conceptual framework guiding the empirical analysis, where unemployment status is associated with mental wellbeing directly and through these connecting components.

Table 1. Descriptive statistics by labour market status

Indicator	Mean (s.d.)	Employ	Short-term unempl	Long-term unempl	Total
<i>Panel A. Mental wellbeing</i>					
Mental wellbeing index (range 0–100)		75.74 (19.53)	72.61 (21.50)	68.51 (24.70)	75.01 (20.17)
<i>Panel B. Health-related behavioural deprivation</i>					
No unhealthy behaviour deprivation ⁱ (%)		50.59	41.89	43.86	49.48
Physical inactivity: sedentary/leisure (%)		26.66	31.56	34.36	27.55
Dietary habits: low fruit intake (%)		16.42	23.42	19.64	17.15
Tobacco: daily or occasional smoking (%)		20.84	28.53	27.31	21.85
Alcohol: frequent alcohol intake (%)		6.50	7.23	8.59	6.70
Health related behavioural deprivation index (range 0–100)	Mean (s.d.)	31.40 (19.91)	35.50 (21.47)	33.82 (21.67)	31.87 (20.19)
<i>Panel C. Perceived social support deprivation</i>					
No perceived social deprivation ⁱⁱ (%)		85.27	80.07	80.32	84.54
Limited number of trusted contacts (%)		0.75	1.68	2.69	0.95
Low perceived interest of others (%)		2.10	3.79	5.67	2.47
Difficulty in obtaining practical help from neighbours (%)		12.91	16.94	15.59	13.39
Social support deprivation index (range 0–100)	Mean (s.d.)	17.73 (15.03)	20.38 (17.09)	21.87 (19.06)	18.21 (15.55)
Number of observations		9,313	776	761	10,850

Note(s): Indices are normalised to a 0–100 scale, with higher values indicating greater deprivation. Percentages are survey-weighted and capture the share of individuals meeting the specified deprivation threshold in each indicator (see [Appendix 1](#)). Number of observations refers to the unweighted analytical sample. i: interviewees do not report any type of unhealthy behaviour; ii: individuals who do not report any kind of deprivation regarding social support

Source(s): Authors' own calculations based on the Spanish Health Survey (2023)

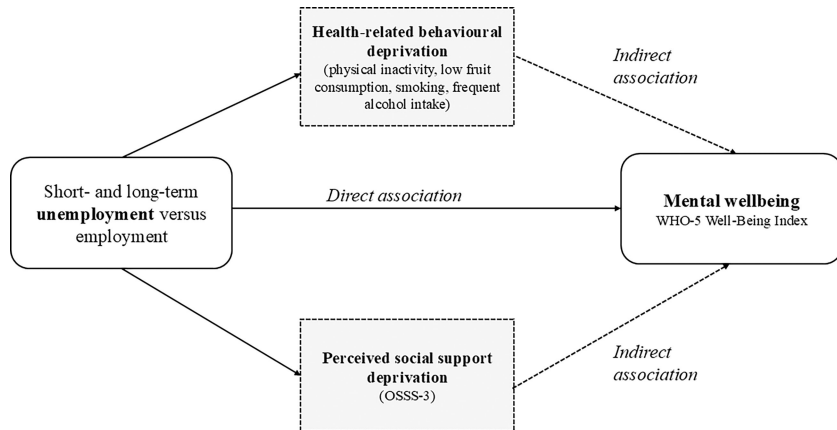


Figure 1. Conceptual framework linking labour status, observed deprivation dimensions and wellbeing
Source: Authors' own elaboration

In a first approach, we use a linear specification to predict mental wellbeing and implement the decomposition proposed by [Kesavayuth et al. \(2022\)](#), which allows the total association between unemployment and mental wellbeing to be decomposed into a direct component and two indirect components associated with health-related behavioural deprivation and perceived social support deprivation.

Let Y_i denote the mental wellbeing index, B_i the health-behavioural deprivation index and S_i the social support deprivation index. We observe short-term (U_{1i}) and long-term (U_{2i}) unemployment spells, with employed individuals as the reference category.

The associations between short- and long-term unemployment and the observed deprivation dimensions are estimated as:

$$B_i = \alpha_b + \gamma_{b1}U_{1i} + \gamma_{b2}U_{2i} + Z_i' \beta_b + \varepsilon_{bi} \quad (1)$$

$$S_i = \alpha_s + \gamma_{s1}U_{1i} + \gamma_{s2}U_{2i} + Z_i' \beta_s + \varepsilon_{si} \quad (2)$$

The association between short- and long-term unemployment and wellbeing is first estimated as:

$$Y_i = \alpha_y + \gamma_{y1}U_{1i} + \gamma_{y2}U_{2i} + X_i' \beta_y + \varepsilon_{yi} \quad (3a)$$

where γ_{y1} and γ_{y2} denote the total associations between short- and long-term unemployment, respectively, and mental wellbeing. Finally, the direct association (conditional on the two mediators) is denoted by δ_{dj} and is expressed as follows:

$$Y_i = \alpha_d + \delta_{d1}U_{1i} + \delta_{d2}U_{2i} + \theta B_i + \vartheta S_i + X_i' \beta_d + \varepsilon_{di} \quad (3b)$$

where the coefficients θ and ϑ represent the overall relationships between the two mediators and mental wellbeing. X_i , Z_i include a set of sociodemographic control variables, including region (autonomous community) fixed effects in the wellbeing equations to enable spatial heterogeneity in labour market and health contexts. Sociodemographic controls comprise

sex, age, educational attainment and occupational social class capturing individuals' position in the occupational hierarchy, based on their current or most recent occupation, and nationality (foreign versus national). To allow for exclusion restrictions the sets of covariates vary across equations [3].

The error terms are assumed to have conditional mean zero:

$$E(\varepsilon_{ki}|U_i, X_i, Z_i) = 0, k \in \{y, b, s, d\}$$

$$Var(\varepsilon_{ki}|U_i, X_i, Z_i) = \sigma_{ki}^2$$

Under this linear specification, the total association between short- and long-term unemployment and wellbeing can be decomposed as:

$$\gamma_{yj} = \delta_{dj} + (\gamma_{bj} \times \theta) + (\gamma_{sj} \times \vartheta), j = 1, 2 \quad (4)$$

where δ_{dj} captures the direct association between unemployment duration category j and well-being, $\gamma_{bj} \times \theta$ represents the indirect association through health-related behavioural deprivation and $\gamma_{sj} \times \vartheta$ captures the indirect association through perceived social support deprivation. This decomposition is interpreted in associational rather than causal terms.

The cross-sectional nature of the data raises concerns about reverse causality and omitted-variable bias. Poorer mental wellbeing may be related to unhealthy habits, weaker perceived social support and labour market status, while unobserved characteristics, such as pre-existing health conditions, personality traits or family background, may shape all these dimensions. Although the inclusion of controls reduces observable confounding, it cannot eliminate potential bias from reverse causality or selection on unobservables. The estimates are therefore interpreted as conditional associations. Oster's (2019) coefficient-stability approach is used as a sensitivity analysis to assess how strong selection on unobservables would need to be, relative to selection on observables, to explain away the association. Oster-type bounds are reported in Appendix 2.

As a robustness check, we estimate a linear conditional mixed process (CMP) model (Roodman, 2011), jointly modelling the deprivation and wellbeing equations while allowing correlated errors. We compare total and direct associations in the baseline specification and test the robustness of the total unemployment–wellbeing association to alternative controls in the health-behaviour equation. These models are not interpreted as a separate identification strategy. Results are reported in the Online Supplementary Material.

5. Results

This section presents the main empirical results from the multivariate analysis. In line with the cross-sectional nature of the data, the estimates are interpreted as conditional associations rather than causal effects. Following the decomposition approach proposed by Kesavayuth *et al.* (2022), the analysis distinguishes between total, indirect and direct associations, focusing on the role of health-related behavioural deprivation and perceived social support deprivation in the unemployment–wellbeing relationship.

5.1 Unemployment and mental wellbeing

Table 2 reports the estimated coefficients. Full estimates, including region-specific fixed effects are reported in Table S2 in the Online Supplementary Material [4]. The table includes the mediator equations for health-related behavioural and perceived social support deprivation, the

Table 2. Direct and indirect associations between short- and long-term unemployment and mental wellbeing

Variable/statistic	eq (1) Health-related behavioural deprivation	eq (2) Perceived social support deprivation	eq (3a) Total association with mental wellbeing	eq (3b) Direct association with mental wellbeing
Short-term unemployment	3.096*** (0.746)	2.016*** (0.583)	-4.747*** (0.749)	-3.960*** (0.726)
Long-term unemployment	2.421*** (0.759)	3.943*** (0.591)	-5.971*** (0.773)	-4.928*** (0.750)
Health-related behavioural deprivation index				-0.117*** (0.009)
Perceived social support deprivation index				-0.275*** (0.012)
Constant	40.473*** (0.692)	17.460*** (0.712)	85.917*** (0.962)	95.496*** (1.034)
Observations	10,850	10,850	10,850	10,850
R-squared	0.069	0.075	0.067	0.124
Adj. R-squared	0.068	0.073	0.063	0.121
F-statistic	79.92	36.34	23.37	43.58
Prob > F	0.000	0.000	0.000	0.000
Log-likelihood	-47.755	-45.034	-47.647	-47.305
AIC	95,533	90,119	95,362	94,681
BIC	95,613	90,301	95,610	94,944

Note(s): Robust standard errors in parentheses (*** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$). Full estimates, including all control-variable coefficients, are reported in Table S2 of the Online Supplementary Material

Source(s): Authors' own calculations based on the Spanish Health Survey (2023)

total association for mental wellbeing and the direct association equation including both mediators.

Unemployment is negatively and significantly associated with mental wellbeing. Before mediators are considered (equation 3a), short-term unemployment is related to a reduction of around 4.75 points in wellbeing index, while long-term unemployment is associated with a reduction of almost 6 points. Upon inclusion of mediators (equation 3b), negative coefficients for both unemployment categories remain, with a somewhat larger wellbeing gap among the long-term unemployed, and the coefficients slightly decrease in absolute value. Regarding the mediator equations (equations (1) and (2)), unemployment is positively associated with both health-related behavioural deprivation and perceived social support deprivation. The association with health-related behavioural deprivation is very similar for short- and long-term unemployment, while perceived social support deprivation shows a clearer duration gradient, with a stronger association among the long-term unemployed. Results are largely consistent across specifications.

The results also show relevant sociodemographic gradients. Women report significantly lower mental wellbeing than men, even though they tend to display lower deprivation in health-related behaviours. Age is negatively associated with wellbeing, especially among adults and older individuals. Education is more clearly related to health-related behaviours than to wellbeing itself, with higher educational attainment generally associated with lower behavioural deprivation. Foreign nationality is related to higher wellbeing and lower behavioural deprivation, but also to higher perceived social support deprivation.

Household and socioeconomic variables are also related to perceived social support deprivation, although associations across household types are heterogeneous. Less advantaged occupational groups tend to report higher deprivation, whereas smaller municipalities are generally related to lower perceived social support deprivation. Household income does not show a clear monotonic association with wellbeing.

5.2 Direct and indirect associations

Table 3 presents the formal decomposition of the unemployment – wellbeing association. The mediator equations indicate that unemployment is associated with greater health-related behavioural and social support deprivation [5]. The association with health-related behaviour is positive for both short- and long- term unemployment and relatively similar across

Table 3. Decomposition of the unemployment–wellbeing association through health-related behavioural deprivation and social support deprivation

Component	Short-term unempl.	Long-term unempl.
(A) indirect through health-related behavioural deprivation ($\gamma_{bj}\theta$)	-0.364*** (0.097)	-0.284*** (0.100)
(B) indirect through perceived social support deprivation ($\gamma_{sj}\vartheta$)	-0.554*** (0.175)	-1.084*** (0.204)
(A + B) total indirect association ($\gamma_{bj}\theta + \gamma_{sj}\vartheta$)	-0.918*** (0.203)	-1.369*** (0.239)
(C) direct association (δ_{dj})	-3.960*** (0.782)	-4.928*** (0.859)
(A + B + C) decomposed total association ($\delta_{dj} + \gamma_{bj}\theta + \gamma_{sj}\vartheta$)	-4.878*** (0.803)	-6.296*** (0.899)
Total indirect/ decomposed total association	18.8%	21.7%

Note(s): * $p < 0.10$; ** $p < 0.05$; and *** $p < 0.01$. Standard errors are reported in parentheses. The reference category is employed individuals. Indirect associations are computed as products of coefficients following the linear decomposition approach of Kesavayuth *et al.* (2022). Statistical significance of the indirect associations is assessed using the delta method after jointly estimating the mediator and outcome. This corresponds to a Sobel-type test of the product of coefficients

Source(s): Authors' own calculations based on the Spanish Health Survey (2023)

duration categories. By contrast, perceived social support deprivation displays a clearer duration gradient, with long-term unemployment showing a stronger association than short-term unemployment.

When both mediators are included in the wellbeing equation, the unemployment coefficients are reduced but remain statistically significant. This attenuation indicates that health-related behaviours and perceived social support account for part, but not all, of the unemployment–wellbeing association. The overall indirect association represents 18.8% of the decomposed total association for short-term unemployment and 21.7% for long-term unemployment.

The relative size of the two indirect components is also informative. Perceived social support deprivation accounts for a larger share of the indirect association than health-related behavioural deprivation, especially among the long-term unemployed. Therefore, while both indirect components are statistically significant, perceived social support appears to be more important than unhealthy habits in the association between unemployment duration and mental wellbeing.

5.3 Robustness checks

As a sensitivity analysis to omitted-variable bias, [Table A1](#) reports Oster-type bounds for the total unemployment–wellbeing association.

Additional robustness checks assessing alternative specifications and sample definitions are reported in the Online Supplementary Material. Table S6 reports linear CMP estimates as a robustness check, following the multiequation approach used by [Kesavayuth et al. \(2022\)](#). In the baseline specification, the direct unemployment–wellbeing associations are smaller in absolute magnitude than the corresponding total associations, consistent with the main decomposition. The total associations also remain virtually unchanged when municipality size or residential environmental precariousness is additionally controlled for in the health-behaviour equation.

The CMP robustness check indicates statistically significant correlations across the equation errors, suggesting that behavioural and social-support dimensions are interrelated observed components of the unemployment–wellbeing association. This is coherent with previous evidence linking unhealthy behaviours with social isolation and weaker social connectedness ([Amate-Fortes et al., 2023](#)), and coping-related behaviours with social resources, economic stress and employment conditions ([Crowe and Butterworth, 2016](#)). Given the cross-sectional design, these correlations are interpreted as joint unobserved variation across equations, rather than as causal relationships between the mediators.

6. Discussion

6.1 Unemployment and mental health

Our findings align with international evidence documenting lower mental wellbeing among unemployed individuals ([Malisauskaite et al., 2022](#)). Consistent with *H1*, this association remains after accounting for household income, suggesting that the unemployment – wellbeing gap extends beyond income losses alone and is larger among those experiencing prolonged joblessness ([Amin et al., 2023](#); [Blanchflower and Oswald, 2004](#); [Knabe and Rätzl, 2011](#); [Winkelmann and Winkelmann, 1998](#)).

In addition, the wellbeing disadvantage linked to unemployment status differs by the elapsed duration of the unemployment spell, in line with previous evidence for Spain ([Urbanos-Garrido and González López-Valcárcel, 2013](#)). The results indicate a larger wellbeing gap among long-term unemployed individuals, consistent with previous studies reporting lower mental wellbeing among individuals experiencing longer or repeated

unemployment spells (Clark, 2006; Knabe and Rätzel, 2011; Strandh *et al.*, 2014), as well as recent longitudinal and life-course evidence (Hammarström *et al.*, 2024b; Stauder, 2019).

This pattern is consistent with meta-analytical evidence indicating that the lower mental wellbeing observed among unemployed individuals increases with duration across different contexts (Gedikli *et al.*, 2023; Picchio and Ubaldi, 2024).

Existing research also shows that the unemployment–mental health relationship varies across contextual and institutional settings, particularly in high-unemployment and dual labour market countries such as Spain. In this sense, Escudero-Castillo *et al.* (2022) show that unemployment and adverse labour market conditions are robustly associated with poorer mental health, even after accounting for socioeconomic characteristics and potential selection mechanisms. The observed duration gradient is therefore consistent with prior Spanish evidence and supports examining behavioural and social dimensions in the lower WHO-5 scores reported by unemployed individuals.

6.2 Observed deprivation dimensions: health-related behavioural deprivation and lack of social support

Our results also support *H2*. Unemployment is associated with greater health-related behavioural deprivation across duration categories. This association is already observed among the short-term unemployed and remains present among the long-term unemployed, suggesting that behavioural differences may emerge even in shorter unemployment spells (Yang and Zikos, 2023). The disaggregated results nevertheless indicate some heterogeneity across behavioural components.

Secondly, the estimates reveal that unemployment is systematically linked to higher levels of perceived lack of social support, with stronger associations among the long-term unemployed. This is coherent with previous research (Hoang and Knabe, 2025; Mikucka, 2014; Morrish and Medina-Lara, 2021).

Our results also support *H3*, namely, that health-related behavioural and perceived social support deprivations account for part of the observed unemployment – wellbeing association, although they do not exhaust it.

Finally, the persistence of the unemployment wellbeing gap in the presence of perceived social support and behavioural deprivation suggests that these two dimensions do not fully account for the lower wellbeing reported by unemployed individuals. Instead, the results point to multiple interrelated dimensions associated with the unemployment – wellbeing gap (Yang and Zikos, 2025).

7. Conclusions

This paper examines the mental wellbeing gap associated with unemployment in Spain, distinguishing between short- and long-term unemployed individuals and decomposing this gap into direct and indirect components linked to health-related behavioural deprivation and perceived social support deprivation. Using microdata from the 2023 SHS, the results show that unemployment is negatively associated with mental wellbeing, with a larger gap among the long-term unemployed.

The decomposition indicates that both deprivation indices account for part of this gap, although they do not exhaust it. Health-related behavioural deprivation is positively associated with unemployment and displays relatively similar associations across short- and long-term unemployed individuals. By contrast, perceived social support deprivation shows a clearer duration gradient, with higher deprivation among the long-term unemployed. These findings suggest that behavioural and social dimensions are not equally related to

unemployment duration, and that perceived social support accounts for a larger share of the indirect relationship, especially among the long-term unemployed.

The findings point to relevant implications for labour market and social policies. Despite the cross-sectional nature of the data preventing causal interpretation, the results suggest that policies aimed at unemployed individuals may benefit from going beyond income replacement and job-search assistance. Previous research suggests that supportive active labour market policies may be more beneficial for mental wellbeing when they preserve structure, engagement and social participation (Bastiaans *et al.*, 2024; Puig-Barrachina *et al.*, 2020; Sage, 2015). Crucially, programme design matters: supportive interventions tend to be more conducive to psychological wellbeing than activation regimes based on strict conditionality or sanctions (Tübbicke and Schiele, 2024). Finally, the relevance of household structure and social embeddedness suggests that policies targeting unemployed individuals in isolation may be insufficient in high-unemployment contexts (Kim, 2025; Mikucka, 2014; Morrish and Medina-Lara, 2021).

This study is not without limitations. Its cross-sectional design prevents strong causal claims and does not allow us to fully capture the dynamic nature of unemployment trajectories. In addition, reliance on self-reported measures may introduce reporting bias. While the modelling strategy helps describe observed direct and indirect components of the unemployment – wellbeing association, these constraints call for caution in causal interpretation.

Future work should further examine heterogeneity across groups, household contexts and regions, preferably using longitudinal data. Advancing in this direction is important for understanding the broader welfare implications of unemployment and for designing labour market policies that improve both employment and wellbeing outcomes.

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Ethics statement

This study is based on anonymised secondary microdata from the Spanish Health Survey 2023. As the analysis relies exclusively on anonymised, publicly available secondary data, no additional ethical approval was required.

AI declaration

The authors declare that artificial intelligence tools were used exclusively for language editing and minor stylistic improvements. No AI system was used in the research design, data analysis, interpretation of results or substantive content.

Notes

- [1.] Previous evidence documents a dose-response relationship between unemployment duration and alcohol use (El Haddad *et al.*, 2023). Excessive alcohol consumption in early adulthood has also been shown to mediate part of the long-term scarring effects of youth unemployment on later depressive symptoms (Hammarström *et al.*, 2024a).
- [2.] Additional descriptive statistics by more detailed unemployment duration categories are reported in Table S1 in the Online Supplementary Material.
- [3.] Equation (1) includes sex, age, education and nationality. Equation (2) additionally includes occupational social class, household type and municipality size. Finally, the wellbeing

equations (3a and b) include sex, age group, educational attainment, nationality, household income and region fixed effects.

- [4.] The Online Supplementary Material also includes Kesavayuth-type robustness checks (Table S3), alternative estimations for the wellbeing equation displaying each health-related behaviour component separately (Table S4); an alcohol-specific decomposition (Table S5); linear CMP specifications (Table S6) and a specification extending the detailed labour-market-status classification to include economically inactive individuals (Table S7).
- [5.] Alternative specifications displaying each component of the composite health-behaviour index separately are reported in the Online Supplementary Material (Table S4). They show that the unemployment – wellbeing relationship remains negative and significant across all components, although alcohol intake displays a different pattern from the other health-related behaviours.

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Appendix 1. Construction of the deprivation indices

Composite indices are constructed following a deprivation-counting approach inspired by [Alkire and Foster \(2011\)](#), a method increasingly used in labour economics to capture multidimensional precariousness ([García-Pérez et al., 2020](#)).

For health-related behaviours, four dimensions are considered: physical activity, fruit consumption, tobacco use and alcohol intake. Each is transformed into a 0–1 ordinal deprivation score, with higher values indicating greater behavioural risk. Physical-activity deprivation ranges from 0 (regular weekly training) to 1 (sedentary leisure time), with intermediate values of 0.33 for monthly activity and 0.66 for occasional activity. Dietary deprivation is proxied by fruit consumption and ranges from 0 (daily intake) to 1 (less than weekly or no consumption at all), with intermediate values of 0.25, 0.50 and 0.75 for 4–6, 3 and 1–2 times per week, respectively. Tobacco-use deprivation ranges from 0 (never-smoker) to 1 (daily smoker), with intermediate values for former (0.33) and occasional smokers (0.66). Finally, alcohol-related deprivation ranges from 0 (abstainers) to 1 (daily or almost daily consumption), with intermediate values of 0.20, 0.40, 0.60 and 0.80 for occasional, 1–2 days/week, 3–4 days/week and 5–6 days/week consumption.

Similarly, social support is measured using the three items of the Oslo Social Support Scale (OSSS-3): network size, perceived emotional concern and access to practical help. The items are measured on ordinal scales: the number of close confidants ranges from 1 (“none”) to 4 (“five or more”); perceived interest and concern from others ranges from 1 (“none”) to 5 (“a lot”) and perceived ease of obtaining practical help from neighbours ranges from 1 (“very difficult”) to 5 (“very easy”). Since the original items are not expressed in the same direction, the first item is reversed so that higher values indicate lower perceived support. Severe deprivation is then identified in each dimension: having one/two or no trusted contacts, reporting little or no interest from others, and finding it difficult or very difficult to obtain help from neighbours. Each severe deprivation indicator is weighted by the inverse of its prevalence in the sample. Therefore, less frequent forms of deprivation receive greater weight.

Following [García-Pérez *et al.* \(2020\)](#), both indices use inverse-prevalence weights, giving greater importance to rarer forms of deprivation. The weighted scores are then aggregated and normalised to a 0–100 scale, with higher values indicating greater behavioural or social support deprivation.

Appendix 2. Oster-type sensitivity

Given the cross-sectional nature of the data, [Oster’s \(2019\)](#) bounds assess how strong selection on unobservables would need to be relative to selection on observables to reduce the unemployment – wellbeing coefficient to zero ([Table A1](#)).

The results suggest that the unemployment–wellbeing association is robust to omitted-variable bias. Under $\delta = 1$, the adjusted coefficients remain negative in all specifications. For long-term unemployment, δ is positive and large, indicating that selection on unobservables would need to be substantially stronger than selection on observables to reduce the coefficient to zero. For short-term unemployment, the negative δ values reflect that adding controls makes the coefficient more negative rather than attenuating it.

Table A1. Oster's bound sensitivity analysis

Exposure to unemployment	Short-term	Long-term	Short-term	Long-term
<i>Specification</i>	Separately	Separately	Jointly	Jointly
β in "uncontrolled" model	-3.000	-6.356	-3.500	-6.626
β in "controlled" model	-4.064	-5.392	-4.747	-5.971
R^2 for "uncontrolled" model	0.002	0.006	0.008	0.008
R^2 for "controlled" model	0.061	0.063	0.067	0.067
$R_{\max}$	0.080	0.082	0.087	0.087
δ for $\beta = 0$	-12.026	8.926	-10.633	10.907
β adjusted for $\delta = 1$	-4.407	-5.031	-5.201	-5.716

Note(s): The outcome is the WHO-5 wellbeing index. The "separately" specification estimates short- and long-term unemployment in separate models, whereas the "jointly" specification includes both unemployment-duration indicators simultaneously. In uncontrolled models short- and long-term unemployment status are the only explanatory variables. Controlled models add the full set of controls: sex, age group, education, nationality, household income and region fixed effects. $R_{\max}$ is set to $1.3 \times R^2$ from the controlled model. δ indicates how strong selection on unobservables would need to be, relative to selection on observables, to reduce the estimated coefficient to zero. The adjusted β assumes $\delta = 1$, that is, selection on unobservables is as strong as selection on observables

Supplementary material

The supplementary material for this article can be found online.

Corresponding author

Jorge Céspedes-Rico can be contacted at: Jorge.Cespedes@uclm.es