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What drives unhappiness? A cross-country analysis

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Abstract
We study the sources of misery (lowest level of life satisfaction) using the European Quality of Life 2016, a cross-sectional survey for 28 European Union countries. We use the decomposition of misery, multivariate analysis and a structural equation model to assess which are the main sources to explain misery: risk of depression (mental health), unemployment, poverty or chronic health problems (physical health). Regardless of the methodological approach followed, we found consistently that the effect of mental health on misery is the largest, exceeding poverty and unemployment. Nonetheless, stigma and low access are the main barriers for mental health attention; therefore, policy goals should proactively promote attention, efficient prevention and early diagnosis of mental health problems.

1 | INTRODUCTION

In the past, the study of happiness was restricted to philosophy and positive psychology. However, in recent decades, there has been significant progress in happiness research from a multidisciplinary perspective, with contributions from fields such as medicine, neuroscience, economics, sociology and political science. As a result, happiness is now considered a new science that seeks to address key questions such as how to measure subjective well-being (SWB), what factors contribute to happiness, and what policymakers can do to improve quality of life. In terms of measuring SWB, Stiglitz et al. (2009) recommended that national statistical institutions collect information on the SWB of the population to better understand the measurement of people's quality of life and its determinants. A decade later, Stiglitz et al. (2018) recognized that there has been tremendous progress in the methodology and availability of SWB data.

As regard to the predictors of SWB, the quantity and quality of studies have risen mainly on what drives happiness, for example money, employment, health and social capital, among others. The best studied question is whether income buys happiness, which derives it to explain the extent to which deprivation hurts. For instance, being unemployed or having a health problem limits opportunities

for personal development, which can further cause unhappiness. Flèche and Layard (2017) argued that mental health has been ignored in happiness studies and, hence, in policy debate, including a mental health variable (depression), they explore for the United States, UK, Australia and Germany the sources of misery defined as those in the lowest levels of life satisfaction. These authors found that depression explains much more misery than poverty, unemployment or physical health. Similarly, in this paper, we study the same sources of misery across 28 European Union (EU) countries using the European Quality of Life Survey (EQLS) 2016.

Health is not only the absence of symptoms, pain or discomfort (physical health), it is also mental health. Over the last years, mental health has become more important in academics, global development agenda and policy goals. The United Nations (2015) Sustainable Development Goals in 2015 recognize the importance of prevention and treatment of mental health.[1] However, persons suffering from mental health disorders still experience discrimination and stigma; they suffer in silence, in some cases without treatment, and dying sooner than people with physical health problems (Quilter-Pinner and Reader, 2018). Furthermore, people with mental health problems could have poor educational and working outcomes and, in societal terms, there are important economic losses. For EU countries, the total cost[2] of mental illness exceeds 4% of Gross National Product (OECD, 2018).

Depression is the most common mental disorder worldwide affecting 4.4% of the population, and it is more common among women (World Health Organization [WHO], 2017). Across EU countries, it affects 4.5% of the population (OECD, 2018), being the second most common mental disorder across these countries (just below anxiety). According to Diener et al. (2003), Stone and Mackie (2013) and Steptoe et al. (2005), life satisfaction is a measure of evaluative well-being, whereas depression captures emotional well-being, experienced well-being or negative affect. Graham (2017) remarked that low levels of life satisfaction are not analogous to depression as the latter is related to negative traits and happiness to positive traits. Using data from Gallup World Poll, the correlation between life satisfaction and negative affect measured by sadness, worry and depression is −0.231 (OECD, 2013). Flèche and Layard (2017) argued that usually misery and poor mental health could be understood as the same thing, but they show that the correlation between misery and depression is between 0.1 and 0.4 across the four countries under scrutiny. Likewise, in this paper, the correlation between misery and risk of depression across 28 EU countries is between 0.08 and 0.36, which confirms the idea that life misery and mental health capture different things (see Figure 1).

2 | LITERATURE REVIEW

2.1 | Income and poverty

Income has been found to be positively associated with happiness within countries since the Easterlin Paradox, and this relationship holds when the basic needs have not been met often named as satiation point (Clark et al., 2008; Di Tella and MacCulloch, 2008; Frey and Stutzer, 2002; Veenhoven, 1991).[3] For 26 European countries, Muresan et al. (2020) found that income buys happiness until a threshold of 35.000 USD. The relationship between life satisfaction and income depends also on the comparison to other's income (reference group), the higher the income is with the reference group, the higher life satisfaction is (Ferrer-i-Carbonell, 2005; Oshio et al., 2011; D'Ambrosio et al., 2020; Acosta-González and Marcenaro-Gutiérrez, 2021). Using the Yitzhaki index, Oshio et al. (2011) found that relative deprivation of income within the reference group is negatively associated with happiness. Those who cannot reach that socially constructed ideal, 'the frustrated achievers' are unhappier (Graham, 2004).

Specifically, Clark (2017) asserted that income determines well-being in some points of the income distribution; that is, there is some difference between high- and low-income individuals or in poverty. In fact, Clark et al. (2016) – using long panel data – found that individuals experience lower life satisfaction when poor compared with the same individual when not poor. There is no adaptation in poverty; this means that when an individual becomes poor until 4 years later, he/she reports the same level of life satisfaction.
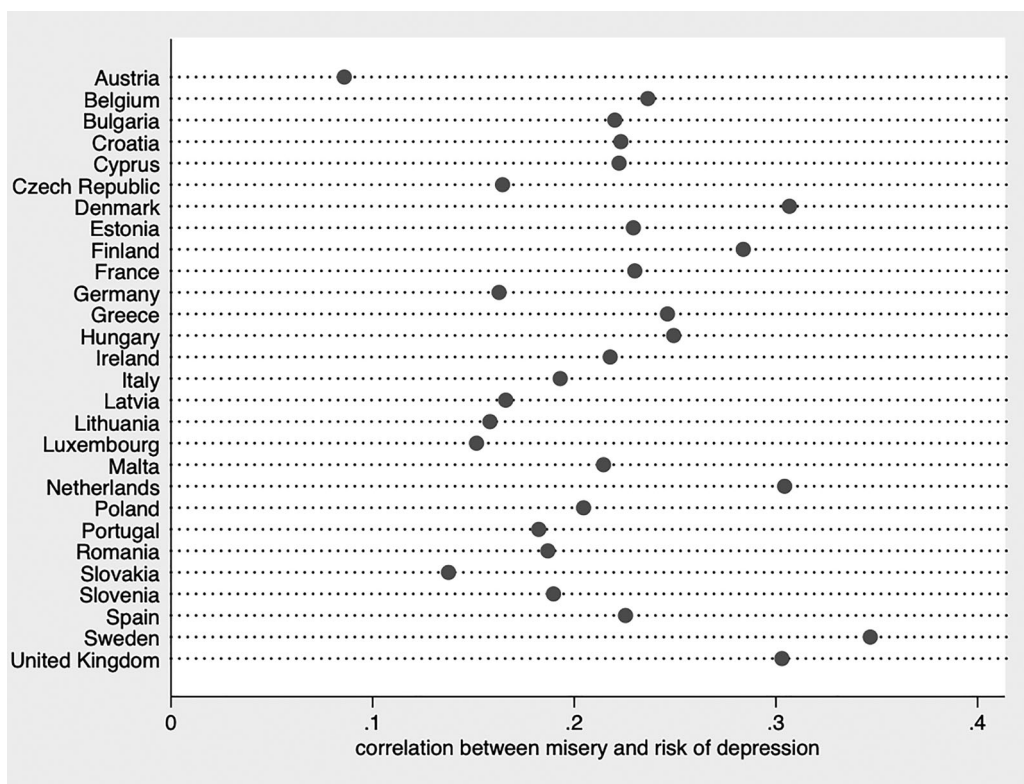
FIGURE 1 Correlation between misery and risk of depression.

2.2 | Unemployment

People in unemployment experience pecuniary cost, which could be partially compensated by unemployment insurance, but they also face non-pecuniary costs or loss in SWB, which is much lower levels of mental well-being than those in work (Wilson and Walker, 1993; Clark and Oswald, 1994; Carroll, 2007). Winkelmann (2014) argued that the negative effect of unemployment on life satisfaction has been well study over the last decades. Luo (2017) supported the fact that unemployment reduces SWB mainly because of its pecuniary effect. The most relevant reference for our study is Wulfgramm (2014) who found, for 21 European countries, that unemployment has a large negative effect on life satisfaction and other many studies support this evidence. Individuals with lower mental well-being suffer approximately twice as much in terms of mental well-being from becoming unemployed than those on average (Binder and Coad, 2015).

2.3 | Chronic health

Mizobuchi (2017) found that the health factor has the most explanatory power to explain SWB across countries. Chronic health problems affect happiness because of interfering in daily activities. Some chronic diseases are negatively associated with lower well-being. McNamee and Mendolia (2014) found a large negative effect of chronic pain on life satisfaction as medical treatment is uncertain. Those with chronic pain report lower levels of life satisfaction (Dong et al. 2020). Likewise, Strine et al. (2008) found that individuals with chronic illnesses such as asthma, arthritis, diabetes or heart disease were more likely to report poor life satisfaction. Among these health conditions, arthritis and heart diseases were the two most debilitating conditions that worsen life satisfaction. Lim (2020)
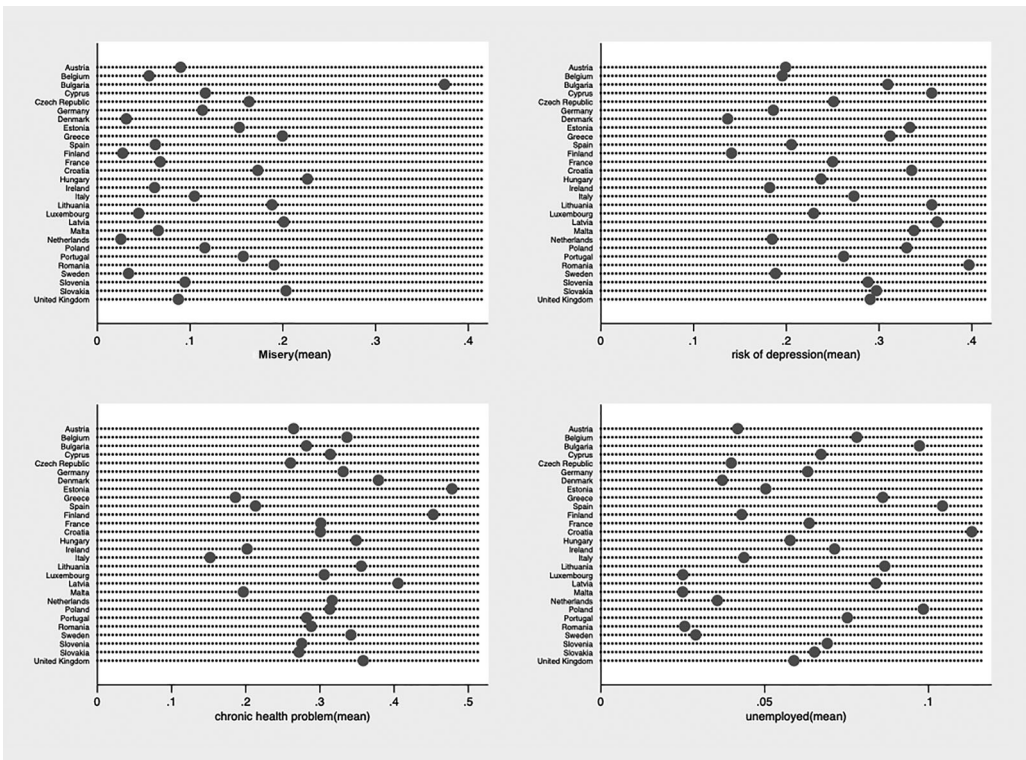
FIGURE 2 Descriptive statistics.

argued that the chronic illness is accompanied by frustration and then deteriorates life satisfaction; the mechanism is via the aspiration gap as people might compare to those in a similar or attainable situation.

2.4 | Depression

Fergusson et al. (2015) found that life satisfaction is strongly associated with major depression and other mental health problems, but they argued that the direction of causation between life satisfaction and mental health problems is reciprocal. Similarly, Koivumaa-Honkanen et al. (2004), using cross-sectional data, found a negative relationship between life satisfaction and depression, whereas using longitudinal data (15-year follow-up), the authors found that the less dissatisfied with life are more likely to have severe/moderate depression compared to those reporting higher life satisfaction. In the same way, Nes et al. (2013) found that individuals with major depressive disorder report lower levels of life satisfaction. Swami et al. (2007) argued that the effect of life dissatisfaction on depression is mediated by health. On the other way of causation, Serin et al. (2010) found that life satisfaction could be predicted by depression. Flèche and Layard (2017) found that depression is the main source of life dissatisfaction (misery).

3 | DATA AND METHODOLOGY

We use the EQLS 2016 (Eurofound, 2018), a cross-sectional survey for analysing the quality of life using objective and subjective measures, for EU countries. Life satisfaction is measured on a scale

TABLE 1 Decomposition of sources of misery

Country	% of those in misery having each characteristic				= relative impact of each characteristic upon misery				× prevalence			
	Poverty	Risk of depression	Unemployment	Chronic health	Poverty	Risk of depression	Unemployment	Chronic health	Poverty	Risk of depression	Unemployment	Chronic health
Austria	17	30	10	26	2	3	2	1	8	19	4	29
Belgium	19	57	24	60	2	3	3	2	8	20	3	34
Bulgaria	17	54	14	42	3	1	2	2	6	29	2	26
Cyprus	17	68	16	49	2	2	2	2	8	33	2	27
Czech Republic	18	51	11	40	2	3	2	1	8	24	2	28
Germany	19	40	21	43	3	3	2	1	7	18	2	33
Denmark	24	58	6	59	3	2	4	2	9	14	4	35
Estonia	22	66	14	66	3	3	2	2	7	32	2	43
Greece	16	58	16	33	2	1	2	2	8	31	2	18
Spain	20	54	26	37	2	2	3	2	10	20	3	22
Finland	28	54	18	68	3	4	4	2	9	15	4	41
France	23	62	19	48	2	3	3	2	10	24	3	29
Croatia	21	67	17	45	2	1	2	2	10	34	2	30
Hungary	17	47	13	46	2	2	2	1	11	23	2	33
Ireland	15	51	16	38	1	2	3	2	11	19	3	20
Italy	25	56	14	23	2	3	2	1	11	27	2	18
Lithuania	22	61	15	49	3	2	2	2	8	31	2	29
Luxembourg	22	54	10	56	2	3	2	2	9	22	2	30
Latvia	20	64	15	58	3	2	2	2	7	34	2	38
Malta	21	72	8	38	2	4	2	2	9	34	2	19
Netherlands	23	78	22	70	3	6	4	2	9	18	4	30
Poland	18	66	18	52	2	2	2	2	7	31	2	29
Portugal	20	53	16	41	3	1	2	1	7	26	2	29

(Continues)

TABLE 1 (Continued)

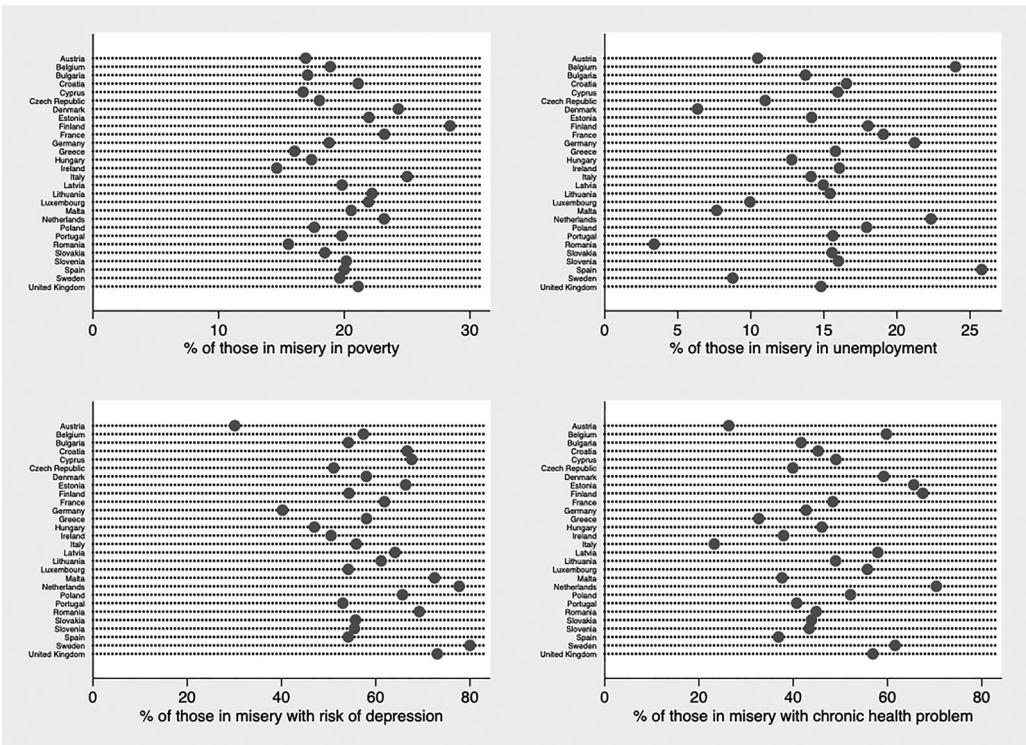| Country	% of those in misery having each characteristic				= relative impact of each characteristic upon misery				× prevalence			
	Poverty	Risk of depression	Unemployment	Chronic health	Poverty	Unemployment	Risk of depression	Chronic health	Poverty	Unemployment	Risk of depression	Chronic health
Romania	16	69	3	45	2	2	2	2	9	36	2	23
Sweden	20	80	9	62	2	4	3	2	8	19	3	32
Slovenia	20	55	16	43	2	2	2	2	9	29	8	27
Slovakia	18	56	16	44	2	2	2	2	9	28	7	23
United Kingdom	21	73	15	57	2	3	2	2	11	28	6	33
Average 28 EU	**20**	**59**	**15**	**48**	**2**	**2**	**2**	**2**	**9**	**26**	**7**	**29**

FIGURE 3   Percentage of those in misery having each characteristic.

from 1 to 10, being 1 very dissatisfied and 10 very satisfied. The dependent variable is *misery* that captures dissatisfaction with life. We define misery as a variable equals '1' if life satisfaction is on a 1–4 scale and equals 0 otherwise. Our sample contains 28 EU countries; misery is approximately the bottom 12%.

Mental health is measured with risk of depression, a variable that equals '1' whether the person has a 50 or lower on the World Health Organization-5 (WHO-5) index and '0' otherwise.[4] The WHO-5 index is based on 5 variables that ask: (i) feeling cheerful and in good spirits, (ii) feeling calm and relaxed, (iii) feeling active and vigorous, (iv) feeling fresh and rested when woke up and (v) life is filled with interesting things. Each question is measured on a scale from 0 (at no time) to 5 (all of the time). If the individual scores 5 on each question, the WHO-5 is 100.

The study of Topp et al. (2015) presented a review of 213 articles to analyse WHO-05 in terms of (i) clinometric validity, (ii) responsiveness/sensitivity in controlled trials and (iii) screening tool for depression. The authors argue that WHO-05 is a valid measure in terms of these three aspects. Other variables used to explain misery are unemployment, poor and chronic health. Following Flèche and Layard (2017), we define poor that equals '1' whether income is the bottom 10%, and '0' otherwise. Chronic health equals '1' if the individual has a long-standing[5] health problem, illnesses or disability.

4 | RESULTS

Figure 2 shows the mean of the four sources of misery across 28 EU countries. Bulgaria is the country with the highest per cent of misery (37%), which is almost three times the average of the whole sample, whereas the country with the lowest percentage of misery is the Netherlands (5%). In terms of risk depression, 20 out of 28 countries have at least 20% of the population at risk of depression.

TABLE 2 Probit model (average marginal effects)

	(1) All variables	(2) Female = 1	(3) Male = 1	(4) Age < 40	(5) Age >= 40	(6) Secondary education = 1	(7) Higher education = 1
Log (income)	−0.031***	−0.027***	−0.034***	−0.021***	−0.036***	−0.023***	−0.008**
	(−10.52)	(−7.28)	(−7.55)	(−9.17)	(−5.28)	(−5.54)	(−3.23)
Unemployed	0.133***	0.109***	0.151***	0.102***	0.136***	0.150***	0.077***
	(10.30)	(6.74)	(7.56)	(7.37)	(6.54)	(7.72)	(3.71)
Risk of depression	0.135***	0.126***	0.147***	0.096***	0.151***	0.152***	0.076***
	(18.75)	(14.55)	(12.07)	(16.88)	(7.85)	(13.69)	(7.25)
Chronic health	0.013*	0.009	0.017	0.007*	0.015	0.0080	0.012
	(2.20)	(1.33)	(1.76)	(2.07)	(0.71)	(0.90)	(1.65)
Age	0.0007***	0.0006**	0.0007**	0.0019	0.0002**	0.0001***	0.0005**
	(4.24)	(2.98)	(2.76)	(0.85)	(3.00)	(4.63)	(2.78)
Secondary education	−0.017**	−0.013	−0.021*	−0.028	−0.013***		
	(−2.99)	(−1.88)	(−2.36)	(−1.74)	(−3.31)		
Higher education	−0.047***	−0.051***	−0.043***	−0.051***	−0.046***		
	(−6.96)	(−5.88)	(−4.20)	(−5.34)	(−5.18)		
Married	−0.152***	−0.023***	−0.018*	−0.023***	−0.028**	−0.019*	−0.020**
	(−3.97)	(−3.58)	(−2.26)	(−4.13)	(−2.82)	(−2.55)	(−3.26)
Female	−0.021***			−0.009***	−0.024	−0.012	−0.014*
	(−3.83)			(−3.60)	(−1.20)	(−1.66)	(−2.31)
N	24515	14023	10492	6537	17978	10225	6767

Note: t statistics in parentheses.

*p < 0.05, ** p < 0.01, ***p < 0.001.

TABLE 3 Probit model by country

Country	Log (income)	Unemployed	Risk of depression	Chronic health	Age	Secondary education	Higher education	Married	Female	N
Austria	−0.034 (−2.67)**	0.05 (1.62)	0.047 (1.96)	−0.01 (−0.69)	0 (−0.83)	0.012 (0.52)	−0.007 (−0.3)	0.033 (2.54)*	0.011 (0.88)	921
Belgium	−0.016 (−1.85)	0.062 (2.22)*	0.107 (4.77)**	0.029 (1.93)	0 (0.27)	−0.013 (−0.94)	−0.03 (−1.95)	−0.023 (−1.58)	−0.016 (−1.27)	932
Bulgaria	−0.124 (−3.62)**	0.122 (1.4)	0.33 (6.29)**	−0.016 (−0.31)	0 (2.51)*	−0.024 (−0.44)	−0.17 (−3.01)**	−0.058 (−1.3)	0.074 (1.74)	858
Cyprus	−0.057 (−3.23)**	0.203 (3.93)**	0.2 (6.01)**	0.056 (1.97)*	0 (0.08)	−0.064 (−2.08)*	−0.075 (−2.16)*	−0.014 (−0.55)	−0.015 (−0.62)	927
Czech Republic	−0.053 (−1.9)	0.036 (0.45)	0.111 (2.51)*	0.004 (0.09)	0 (1.42)	−0.048 (−0.93)	−0.108 (−2.27)*	−0.041 (−1.18)	0.027 (0.74)	682
Germany	−0.008 (−0.7)	0.085 (2.41)*	0.13 (5.9)**	0.004 (0.27)	0.001 (2.2)*	0 (0.52)	−0.015 (−0.79)	−0.023 (−1.49)	−0.017 (−1.16)	1349
Denmark	−0.009 (−4.81)**	0.006 (0.59)	0.084 (5.93)**	0 (−0.16)	0 (−1.38)	−0.001 (−0.26)	−0.007 (−1.35)	−0.01 (−2.13)*	−0.002 (−0.61)	872
Estonia	−0.052 (−4.11)**	0.024 (0.54)	0.085 (3.58)**	0.056 (2.39)*	0.001 (2.47)*	0.007 (0.31)	−0.003 (−0.11)	−0.054 (−2.71)**	−0.047 (−2.21)*	805
Greece	−0.088 (−2.71)**	0.184 (2.98)**	0.315 (7.2)**	0.111 (2)*	0.003 (2.46)*	−0.092 (−1.82)	−0.076 (−1.31)	−0.037 (−0.94)	−0.103 (−2.65)**	955
Finland	−0.004 (−2.14)*	0.087 (3.73)**	0.012 (1.55)	0.004 (0.94)	0 (0.99)	−0.005 (−1.48)	−0.01 (−1.44)	−0.006 (−1.57)	0.004 (1.2)	871
France	−0.002 (−0.95)	0.118 (4.64)**	0.091 (6.37)**	0.017 (1.99)*	−4.21 (−0.02)	−0.014 (−2.11)*	−0.026 (−3.1)**	−0.021 (−2.64)**	−0.025 (−3.57)**	986
Croatia	−0.027 (−1.12)	0.047 (0.71)	0.156 (4.01)**	0.047 (1.04)	0.001 (1.29)	0.032 (0.57)	−0.062 (−0.91)	−0.074 (−2.03)*	0.012 (0.33)	823
Hungary	−0.05 (−2.83)**	0.184 (2.48)*	0.21 (4.4)**	0.009 (0.28)	0.001 (1.78)	−0.051 (−1.52)	−0.058 (−1.29)	−0.03 (−0.97)	−0.017 (−0.58)	756
Ireland	−0.005 (−1.03)	0.034 (1.5)	0.081 (4.83)**	0.013 (1.13)	0 (0.79)	−0.009 (−0.85)	−0.017 (−1.5)	0 (−0.58)	0.005 (0.73)	836
Italy	−0.029 (−3.47)**	0.107 (2.91)**	0.101 (5.8)**	0.029 (1.56)	0 (−1.84)	−0.046 (−2.82)**	−0.072 (−3.85)**	−0.004 (−0.33)	0.005 (0.73)	1613
Lithuania	−0.037 (−2.82)**	0.03 (0.63)	0.166 (4.34)**	−0.044 (−1.48)	0.002 (3.42)**	0.038 (1.05)	−0.057 (−1.6)	−0.083 (−2.47)*	−0.007 (−0.22)	892
Luxembourg	−0.016 (−2.2)*	0.032 (1.44)	0.029 (2.18)*	0.023 (1.97)*	0 (−0.64)	−0.001 (−0.13)	−0.024 (−2.05)*	−0.006 (−0.59)	−0.006 (−0.69)	712
Latvia	−0.005 (−0.35)	0.121 (2.54)*	0.123 (4.33)**	0.026 (1.02)	0.002 (3.98)**	0.006 (0.24)	−0.079 (−2.75)**	0 (−0.32)	−0.021 (−0.92)	830
Malta	−0.01 (−1.84)	0.223 (3.08)**	0.03 (2.4)*	0.016 (1.24)	0 (1.52)	−0.017 (−1.42)	−0.019 (−1.42)	−0.002 (−0.19)	0.006 (0.59)	816
Netherlands	−0.001 (−1.21)	0.075 (4.06)**	0.041 (4.23)**	0.009 (2.4)*	0 (1.3)	0 (−0.16)	−0.003 (−1.37)	0.001 (0.73)	0 (−0.72)	820
Poland	0 (0.11)	0.248 (4.33)**	0.14 (6.42)**	0.022 (1.42)	0.001 (3.29)**	0 (−0.03)	−0.03 (−1.69)	−0.015 (−1.19)	−0.019 (−1.57)	720
Portugal	−0.026 (−1)	0.281 (3.54)**	0.121 (3.38)**	0.078 (2.11)*	0.002 (2.43)*	0.038 (0.85)	( )**	−0.05 (−1.64)	0 (0.01)	612
Romania	−0.044 (−1.89)	−0.128 (−1.16)	0.182 (4.01)**	0.082 (1.73)	3.84 (0)	−0.173 (−3.83)**	−0.112 (−1.59)	−0.044 (−1.04)	0 (−1.57)	812
Sweden	0 (0.36)	0 (0.14)	0.093 (6.5)**	0.001 (0.69)	0 (−0.26)	0 (0.28)	−0.005 (−1.78)	−0.007 (−2.99)**	−0.003 (−1.75)	942
Slovenia	−0.025 (−2.46)*	0.196 (3.9)**	0.061 (2.48)*	0.04 (1.75)	0 (1.93)	−0.013 (−0.59)	−0.081 (−3.05)**	0 (−0.41)	−0.02 (−1.19)	754
Slovakia	−0.011 (−0.48)	0.268 (3.03)**	0.16 (3.37)**	−0.012 (−0.3)	0.002 (1.98)*	−0.062 (−1.52)	−0.153 (−2.94)**	0.005 (0.15)	−0.028 (−0.68)	751
Spain	−0.088 (−0.09)**	0.184 (0.13)	0.315 (0.187)	0.111 (0.037)	0.003 (0)	−0.092 (−0.031)**	−0.076 (0.004)	−0.037 (−0.062)**	−0.103 (−0.03)**	629
United Kingdom	−0.019 (−3.26)**	0.067 (2.09)*	0.12 (6.33)**	0 (−0.3)	0 (0.8)	−0.017 (−1.44)	−0.015 (−1.11)	−0.021 (−1.87)	−0.021 (−1.9)	920

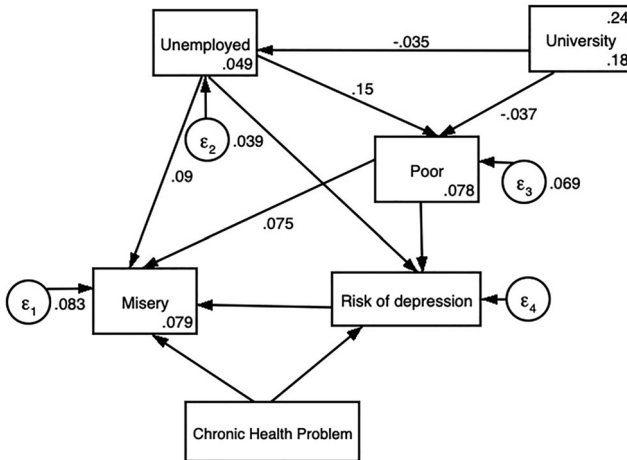*Note:* t Statistics in parentheses.

*p < 0.05, **p < 0.01.

FIGURE 4 Structural Equation Model (SEM) model. Standardized Root Mean Square Residual (SRMR) = 0.02.

Intriguingly, two Nordic countries, Finland and Denmark, have the lowest percentage of risk of depression, whereas another Nordic country – Sweden – has the highest one, despite being at the bottom of the distribution of misery (Figure 2). The percentage of unemployed varies across countries; Croatia has the largest percentage of unemployed (11.1%). On average, 30% of the population in the sample has a chronic health problem, and this variable has less variability than the others described before. Finally, by definition, poor is the bottom 10% for each country.

Following Flèche and Layard (2017), Table 1 and Figure 3 show the decomposition of the sources of misery: risk of depression, chronic health problem, poor and unemployed. *(M)* is the percentage of those in misery having each characteristic that equals the relative impact of each characteristic upon misery multiplied by the percentage of the population who have each characteristic (prevalence). For instance, in Italy, 56% of people in misery are at risk of depression, 23% have a chronic health problem, 25% are poor, and 14% are unemployed. On average for the 28 EU countries, the percentage of those in misery at risk of depression ($M_d = 59\%$) is the largest across all characteristics followed by having a chronic health problem ($M_c = 48\%$), poor ($M_p = 20\%$) and unemployed ($M_u = 15\%$). Furthermore, except for Belgium, Germany, Finland and Luxembourg, in the other 24 EU countries, M_d is greater than the contribution of the other characteristics. In other words, to some extent, being at risk of depression has a higher impact on misery than having a chronic health problem, being poor or unemployed.

We move to multivariate analysis to account for how much our mental illness variable (risk of depression) explains misery considering the effect of other variables. We use a probit model; the dependent variable is misery, and the explanatory variables are the four sources of misery mentioned in the descriptive statistics analysis, except that we include the natural logarithm of income instead of poor as in happiness studies, the relationship between income and life satisfaction has been well established to be concave, then we expect a similar relationship with misery. Moreover, we include other covariables such as age (in years), education,[6] married[7] and sex.[8] Table 2 shows the average marginal effect (AME) of the probit model for the entire sample of the 28 EU countries. Column 1 indicates that the effect (AME coefficient size) and the statistical significance of risk of depression is the greatest across all sources of misery. Additionally, columns 2–7 show the same model for a subsample by sex, age and education; the results in terms of statistical significance do not vary, but for males and younger than 40 where the effect of unemployment is slightly greater than the effect of risk of depression.

Table 3 shows the probit model by each of the 28 EU countries. As the *z*-statistics indicates, the partial effect of risk of depression on misery is the most significant at 5% compared to the effects of the other covariables in 25 out of 28 EU countries (except for Austria, Finland and Spain). Besides,

TABLE 4   Direct and indirect effect of Structural Equation Model (SEM) model for 28 EU countries

	Panel A: direct effects			
	Misery	**Poor**	**Risk of depression**	**Unemployed**
Unemployed	0.157***	0.179***	0.0726***	
	(16.15)	(18.07)	(6.77)	
Poor	0.0703***		0.0703***	
	(9.22)		(9.22)	
Risk of depression	0.165***			
	(33.53)			
Chronic Health Problem	0.0307***		0.220***	
	(7.91)		(38.04)	
University		−0.0464***		−0.0347***
		(−13.07)		(−11.18)
	Panel B: Indirect effects			
	Misery	**Poor**	**Risk of depression**	
Unemployed	0.0270***		0.0150***	
	(13.59)		(18.07)	
Poor	0.0139***			
	(8.49)			
Chronic Health Problem	0.0362***			
	(25.02)			
University	−0.0103***	−0.0062***	−0.0069***	
	(−12.39)	(−9.27)	(−9.54)	

N = 72373

Note: Standardized Root Mean Square Residual (SRMR) = 0.02. *t* statistics in parentheses.
*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.

in 15 of the 25 countries, the coefficient of depression is significant; the size of the AME coefficient for depression is greater than the coefficient of unemployed and chronic health. On the other hand, the size of the coefficient on unemployed is the greatest in the other 10 remaining countries. Taking United Kingdom as reference, on average holding other variables at their observed values, being at risk of depression and unemployed increases an individual's probability of being in misery by 12% and 7%, respectively. In countries like Cyprus, Malta, Poland, Portugal and Slovakia, the AME for risk of depression on misery is greater than 20%.

Adaptation might be the cause of why our mental health variable (risk of depression) explains much more misery than chronic health. Cubí-Mollá et al. (2017) found that chronic illness affects self-health perception, but this effect is counterbalanced by the ability to adapt in longer periods. McNamee and Mendiola (2014) found that women could adapt to chronic pain over a long period. According to Graham et al. (2011) in terms of happiness, mental health problems have a stronger effect than physical health problems. Individuals are more able to adapt to one-time shocks (physical health problems) than to constant uncertainty (mental health problems). In addition, the authors suggest that the negative effects of health problems are larger than the effect of income. In this line, McNamee and Mendiola (2014) suggested that people adapt better to income shocks than to long-term health conditions. As adaptation occurs in long periods, in our paper using cross-sectional data for 28 EU countries, we cannot observe or rule out adaptation.

TABLE 5 Direct and indirect effects in Austria, Spain, Finland, Portugal

	Direct effects				Indirect effects		
	Misery	**Poor**	**Risk of depression**	**Unemployed**	**Misery**	**Poor**	**Risk of depression**
Panel A: Austria							
Unemployed	0.089*	0.148**	0.086		0.017***		0.020***
Poor	0.075*		0.135**		0.007**		
Risk of depression	0.05**						
Chronic Health Problem	−0.022		0.206***		0.011**		
University		0.037**		−0.034***	−0.006**	−0.005*	−0.008*
Panel B: Finland							
Unemployed	0.080*	0.134**	0.004		0.003		0.006**
Poor	0.020		0.045		0.004*		
Risk of depression	0.099***						
Chronic Health Problem	0.023**		0.091***		0.009***		
University		−0.071***		−0.011	−0.002*	−0.001	−0.003
Panel C: Spain							
Unemployed	0.144***	0.124***	0.098**		0.027***		0.006***
Poor	0.078*		0.052		0.008**		
Risk of depression	0.168***						
Chronic Health Problem	0.029		0.249***		0.041***		
University		−0.056***		−0.010	−0.006**	−0.001	−0.004*

Note: t Statistics in parentheses.
*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.

Overall, the multivariate analysis indicates that the risk of depression is the main source of misery followed by unemployment. However, this result cannot be interpreted as a causal effect. In the absence of panel data or an instrumental variable, we cannot solve for any source of endogeneity. Even though in the case of solving for endogeneity, puzzling results might still occur as independent variables might be related to each other before explaining misery.

OECD (2018) mentioned that living with mental ill health might be related to lower educational attainment, a higher probability of being unemployed and may suffer from poor physical health.

Ng and Shanks (2020) exhibited a review of studies of the bidirectional relationship between poverty and mental health. First, the social causation hypothesis states that poverty and deprivation lead to mental health problems. On the other hand, the social selection theory states that mental health problems might explain falling into poverty. The authors describe a potential causal model suggesting that low family socio-economic status increases the risk of early onset of psychological distress that is associated with poverty and unemployment. Besides, in a cross-sectional study, Stankunas et al. (2006) and Mossakowski (2009) found that unemployment is associated with depression. Therefore, in our analysis, a possible path would be that unemployment increases the risk of depression, which in turn explains misery.

We propose a Structural Equation Model (SEM) in Figure 4 for the 28 EU countries. We suggest that having a university degree explains being poor and unemployed, which in turn explains misery. Besides, we expect that chronic health problems are associated with the risk of depression, as there is strong evidence in the literature of comorbidity between mental health problems and physical health (Prince et al., 2007). Firth et al. (2019) in a wide literature review comment that mental health problems are associated with a risk of obesity, diabetes and cardiovascular and cardiometabolic diseases. On the other hand, having a chronic health problem might lead to depression and anxiety. Therefore, the association could be bidirectional, however, considering that our mental health variable is risk of depression we suggest that having a chronic health problem explains risk of depression, which in turn explains misery; risk of depression by itself also explains misery.

The Standardized Root Mean Square Residual of the model in Figure 4 is equal to 0.02 that indicates a close-fitting model. Table 4 shows that all of the direct and indirect effects of the SEM model for 28 EU countries are significant. As well as in the econometric model, across all the sources of misery, the effect of risk of depression has the largest coefficient size and statistical significance. The indirect effect of university on misery is through the channel unemployed-poor-depression; therefore, it includes the indirect effect of poor on misery as having a university degree and being unemployed explains being poor. Risk of depression mediates the relationship between chronic health problem and misery and, as expected, this effect has the greatest significance. Table 5 shows the direct and indirect effects of the SEM model for Austria, Finland and Spain. Only in these three countries, the multivariate analysis indicates that risk of depression does not explain misery. The SEM model shows that the direct effect of risk of depression on misery is significant for all of these four countries and the greatest across all the sources of misery, whereas the size of the coefficient of depression is the greatest in three out of four countries.

5 | CONCLUSIONS

The main sources of happiness in the literature review of SWB are income, employment and physical health; Flèche and Layard (2017) argued that mental health has not been considered in life satisfaction studies; therefore, they explore for United States, UK, Australia and Germany the sources of misery, including depression, as a mental health variable and found that depression explains much more misery than the other sources. In this paper, we use a similar approach to study the same sources of misery across 28 EU countries using the EQLS 2016.

Our mental health variable is being at risk of depression, a variable that equals '1' whether the person has a 50 or lower on the WHO-5 index and '0' otherwise. We decompose the source of misery

and found, for the 28 EU countries, that the percentage of those in misery at risk of depression for the whole sample is 59%, which is the largest contribution compared to other sources of misery. In the multivariate analysis, using a probit model, the partial effect of being at risk of depression is the most significant to explain misery in 25 out of 28 EU countries, and in 15 out of those 25 countries, the coefficient size of being at risk of depression is greater than the coefficient of unemployment and having a chronic health problem. These results cannot be interpreted as a causal effect as we use cross-sectional data, and we cannot solve for any source of endogeneity. We go a step forward than Flèche and Layard (2017) by estimating a SEM and found that the effect of risk of depression has the largest coefficient size and statistical significance across all sources of misery, which confirms the result of previous methods.

In the last decades, SWB studies have become more important in academia and policy agenda. Because of the adverse effects of COVID-19 on people's lives, the importance of mental health has received special attention. According to Eurofound (2020), in the EU countries, in April 2020, life satisfaction was on average 6.3, which is much lower than the previous measure before the pandemic.[9] Moreover, the pandemic had adverse effects on employment changes, for example financial insecurity and disruption in daily life with consequences on people's mental health (Sherman et al., 2020). Preliminary evidence suggests an increase in symptoms of anxiety, depression, stress (Rajkumar, 2020), distress (O'Connor and Peroni, 2021) and pandemic-fear-related (Bäuerle et al., 2020) reduction in psychometric test (Akay, 2022). Policy goals should proactively promote attention, efficient prevention and early diagnosis of mental health problems.

SWB studies have mainly focused to understand the effects of income, employment, physical health and social capital on life satisfaction. This paper outlines the importance of mental health as a crucial dimension of people's well-being. The main implication is that mental health matters more than the other sources of misery. Stigma and low access are the main barriers for mental health attention. According to the WHO[10] in Sweden for each psychiatrist working in mental health, there are four dentists per million people, whereas in Spain, this same ratio is above is 7. Thus, EU countries' policy goals should proactively promote attention, efficient prevention and early diagnosis of mental health problems. The benefits of improving mental health in population are (i) reduce premature mortality and suicides, (ii) positive effects on recovering and living with physical health problems, (iii) improve working and educational outcomes.

CONFLICT OF INTEREST STATEMENT
No potential conflict of interest was reported by the authors.

DATA AVAILABILITY STATEMENT
The data that support the findings of this study are available in Eurofund at https://urldefense. com/v3/__https://www.eurofound.europa.eu/es/surveys/european-quality-of-life-surveys__; !!N11eV2iwtfs!vFH5vJCL3kRvof8E9WONgMbNN86cjZQ_4Icm8bNHjjuySzJeXrEB3aI- m58UmYpIMGb9i6ml1McGMxLjviqu2mQA$. These data were derived from the following resources available in the public domain:—Eurofund, https://urldefense.com/ v3/__https://www.eurofound.europa.eu/es/surveys/european-quality-of-life-surveys__;!! N11eV2iwtfs!vFH5vJCL3kRvof8E9WONgMbNN86cjZQ_4Icm8bNHjjuySzJeXrEB3aI- m58UmYpIMGb9i6ml1McGMxLjviqu2mQA$.

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ENDNOTES

[1] See goal 3 (Good Health and Well-Being) and Target 3.4 (by 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being).

[2] It includes direct costs (health system and social benefits) and indirect costs (lower employment and lower productivity).

[3] On the contrary, Stevenson and Wolfers (2013) argued that there is no well-being dataset that supports the existence of the satiation point

[4] It is not calculated by the authors. EQLS 2016 survey (Eurofound, 2018) includes WH0-5 index.

[5] Long standing means lasted or are expected to last, for 6 months or more.

[6] Secondary education = 1 if the secondary education is completed and = 0 otherwise; university = 1 if the university is completed and = 0 otherwise.

[7] Married = 1 if married and = 0 otherwise.

[8] Female = 1 if female and = 0 otherwise.

[9] According to European Quality of Life Survey (EQLS) 2016, on average life satisfaction in EU countries was 7.4.

[10] Latest data available 2015. Global Health Observatory https://www.who.int/data/gho.

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