

Mental Health Problems-Depression from an Interdisciplinary Perspective

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Abstract

The paper highlights one of the most severe mental problems of our time and specifies, the importance and relevance of research on the topic. Mental health problems are on the rise worldwide. Depression is one of the most common mental illnesses in the world. The research used data from 29 and 30 European countries from 2014 and 2019. Pearson's linear correlation was used to examine the relationship between the proportion of participants with a higher level of education and the proportion of participants with current depressive symptoms. A positive weak-medium and almost significant correlation may be found (in the case of no change in the trend, this can be demonstrated using a larger sample size) of $r=0.252$; $p=0.054$. There is no clear causal relationship between the two variables, and co-occurrence is likely - the effect of a third or more variable(s) is involved in the correlation. Further research should support the investigation of the influence of associated factors on depression.

Keywords: Depression, Education, Mental health, Psychology, Health science, Well-being.

Introduction

Mental health problems, such as depression, one of the most common mental illnesses, are one of the greatest challenges of our time. Over the past several decades, mental illness has been a growing and severe health problem for society [12]. Nearly one trillion US dollars is the annual cost to the global economy of depression and anxiety [16].

More than 280 measures of depressive severity were developed and published from 1918 to 2009 [14]. However, information on personal well-being, including feelings of having a depressed mood, sadness, worthlessness, guilt, hopelessness, and somatic symptoms, has always been a sensitive topic for individuals and even society [2, 13]. The importance of recognizing these depressive symptoms in time can be significant for avoiding suicide or burnout. Major depression is a risk factor for suicide [9]. Identifying these symptoms can be difficult for individuals and those around them. Treating depression has been identified as one of the keys to suicide prevention [4]. A piece of research from Korea found that a significant proportion of those who attempt suicide have mental disorders. In Korea, only 15% of those estimated to have depressive disorders are actively receiving medical treatment, exacerbating the increasing suicide rate [9].

Education and investment in education are very important for society as a whole - even with regard to early childhood experiences - it contributes to the economic growth of a country [7]. Studies have explored the effects of socioeconomic status on depression. Many shows that a higher level of education reduces the likelihood of depression. Also, it is interesting that people with disadvantaged backgrounds benefit from a stronger protective effect of higher education against depressive symptomology than people with more advantaged backgrounds. [3] However, higher educational attainment has been found to

negatively relate to depression (in Korea), and the effects of education differ among societies [10].

Materials and Methods

The research used data from 29 and 30 European countries from 2014 and 2019 from the Eurostat database on self-perceived current depressive symptoms and educational level. Sample 1 ($n=29$; $yr=2014$) included Austria, Bulgaria, Croatia, Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany (until 1990 the former territory of the FRG), Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Türkiye, and the United Kingdom. Sample 2 ($n=30$; $yr=2019$) included Austria, Belgium, Bulgaria, Croatia, Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany (until 1990 the former territory of the FRG), Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, and Türkiye. Current depressive symptoms refer to the distribution of the population with symptoms that accord to the following definitions:

- Major depressive symptoms: if respondents score at least 'more than half the days' on items MH1A or MH1B and five or more items of MH1A to MH1H
- Other depressive symptoms: if respondents score at least 'more than half the days' on items MH1A or MH1B and 'more than half the days' two, three, or four items on MH1A to MH1H.
- Any depressive symptoms: if 'major depressive symptoms' or 'other depressive symptoms' are recorded.

MH1A: Extent of having little interest or pleasure in doing things over the last two weeks.

MH1B: Extent of feeling down, depressed or hopeless over the last two weeks

MH1H: Extent of moving or speaking so slowly that other people could have noticed or being so fidgety or restless, over the last two weeks.

‘Higher level of education’ refers to tertiary education involving levels 5-8:

- Level 5 – Short-cycle tertiary education
- Level 6 – Bachelor’s or equivalent level
- Level 7 – Master’s or equivalent level
- Level 8 – Doctoral or equivalent level

In line with the scientific literature and related findings, I attempted to examine the relationship in terms of the share of

participants with a higher level of education and those reporting depressive symptoms. Based on the sample size and the quantitative variables, Pearson’s linear correlation was used to measure the strength of the stochastic relationship. The statistical tests were undertaken using Microsoft Excel and SPSS.

Results

No significant correlation could be found between the proportion of participants with a higher level of education and the proportion of participants with current depressive symptoms in Sample 1 ($r=0.203$; $p=0.291$). See Table 1.

2014				
Pearson Correlation	1	0,203	r	p
Sig (2-tailed)		0,291	0,203	0,291
N	32	29		
Pearson Correlation	0,203	1		
Sig (2-tailed)	0,291			
N	29	29		

Table 1: Descriptive statistics and correlation coefficients of the variables presented in the analysis for Sample 1.

No significant correlation could be found between the proportion of participants with a higher level of education and

the proportion of participants with current depressive symptoms in Sample 2 either ($r=0.290$; $p=0.120$). See Table 2.

2019				
Pearson Correlation	1	0,29	r	p
Sig. (2-tailed)		0,12	0,29	0,12
N	30	30		
Pearson Correlation	0,29	1		
Sig. (2-tailed)	0,12			
N	30	30		

Table 2: Descriptive statistics and correlation coefficients of the variables presented in the analysis for Sample 2.

Analysis of the two years under study in combination (Sample 1 and Sample 2) finds a positive weak-medium and almost significant correlation (in the case of no change in the trend, this can be demonstrated by a larger sample size) of $r=0.252$;

$p=0.054$ between the proportion of participants with a higher level of education and the proportion of participants with current depressive symptoms, which is a positive trend. See Table 3.

2014 & 2019				
Pearson Correlation	1	0,252	r	p
Sig. (2-tailed)		0,054	0,252	0,054
N	62	59		
Pearson Correlation	0,252	1		
Sig. (2-tailed)	0,054			
N	59	59		

Table 3: Descriptive statistics and correlation coefficients of the variables presented in the analysis in Sample 1 and Sample 2 combined

Discussion

Pearson's linear correlation was used to examine the relationship between the proportion of participants with a higher level of education and the proportion of participants with current depressive symptoms. No significant correlation could be found either in 2014 ($r=0.203$; $p=0.291$) or in 2019 ($r=0.290$; $p=0.120$). Therefore, it is not evident from the individual year breakdown that as the proportion of participants with a higher level of education increases, the proportion of depressed people also increases or decreases. However, analysis of the two years under

study in combination (Sample 1 and Sample 2) identified a positive weak-medium and nearly significant correlation of $r=0.252$; $p=0.054$ (i.e., the greater the proportion of educated people, the larger the proportion of depressed individuals). There is no clear causal relationship between the two variables, and co-occurrence is more likely, i.e., the effect of a third or more variable(s) is involved in the correlation.

In line with the scientific literature and related findings, I propose that doing sports and engaging in physical activity can

reduce stress, anxiety, and depression levels at the individual level. Tatar et al.'s research found that doing sports and physical activity had significant positive effects only on non-professional sportspersons [15]. Some findings suggest a difference in mental health benefits between individual and team sports for professional athletes. In terms of individual sports, athletes are more likely to report anxiety and depression than team sports athletes [11]. Another variable that may be relevant, depending on the depressed person's physical status, is their digestive condition. GI Psychology focuses on digestive problems that affect the mood, range of emotions, and stress levels. It can be used to optimize digestion and influence the brain-gut connection. Digestive issues can increase stress levels and interfere with well-being, although they can be ameliorated with the appropriate diet and/or scientifically validated therapies. Nowadays, diversity is also under the spotlight, including neurodiversity, which may be a factor in depression and anxiety. A survey by the Birkbeck University of London, Neurodiversity at Work, reported that 65% of those with neurodiversity fear discrimination [8]. An addiction to social media, the use of mobile phones, and online activities related to games, shopping, and entertainment can also reinforce depressive symptoms. Some results indicate that the duration of mobile phone use may be associated with the level of depression. [6] Scientific studies provide evidence that debt is associated with depression, anxiety, and other mental health problems. Further research focuses on the factors influencing the relationship between debt and mental illness [1].

These are only a few of the variables that can influence depression. However, great emphasis should still be placed on understanding the causes of this mental illness, the above-mentioned and other variables, and how these interact in complex ways. Further research should support the investigation of the influence of these factors with linear models and/or structural equation modelling. Currently, Semmelweis University and the Budapest University of Technology and Economics are jointly researching a speech analysis application that can support the early recognition of depression. This kind of innovation may reduce economic costs and prevent severe health damage. [5] The paper highlights the importance and relevance of research on the topic of mental health problems, especially depression and anxiety.

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