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Psychiatry and insurance: How do mental disorders differ from each other and how do they relate to insurance?

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1. INTRODUCTION

I have written this report for Finance Finland at the commission of Deputy Managing Director Esko Kivisaari. In this report, I discuss the more common and the more severe groups of disorders. It is not within the limits of this report to examine the nature of all psychiatric disorders in relation to the insurance sector.

Psychiatry is a medical specialty focused on the diagnosis and treatment of psychiatric disorders. In Finland, psychiatry and neurology formed a single discipline of neuropsychiatry until the 1960s, when they diverged into their own branches. For the last few decades, these two specialties have gradually grown closer once more, and most psychiatrists now regard psychiatric disorders as part of a broader group of brain disorders.

The currently used Tenth Revision of the International Classification of Diseases (ICD-10) includes a range of widely different diseases, whose treatment, prognosis and impact on functional capacity differ significantly. Some of the disorders do not significantly affect a person's functional capacity or their quality of life, while others cause severe disability and subjective suffering.

The topic is very broad, and I will therefore focus only on the diseases that have notable relevance for the insurance sector due to their prevalence or adverse impact on the ability to work and function.

- Organic, including symptomatic, mental disorders
- Mental and behavioural disorders due to psychoactive substance use
- Schizophrenia, schizotypal and delusional disorders
- Mood (affective) disorders
- Neurotic, stress-related and somatoform disorders
- Behavioural syndromes associated with physiological disturbances and physical factors
- Disorders of adult personality and behaviour
- Mental retardation
- Disorders of psychological development
- Behavioural and emotional disorders with onset usually occurring in childhood and adolescence

Table 1: The main categories of ICD-10 Chapter V on mental and behavioural disorders

2. CURRENT AND LIFETIME PREVALENCE OF PSYCHIATRIC DISORDERS

Psychiatric disorders are very common in the general population. According to a comprehensive American study, the lifetime prevalence estimates of the most relevant disorders are as follows: anxiety disorders 28.8%, mood disorders 20.8% and substance use disorders 14.6%; the lifetime prevalence of any psychiatric disorder is 46.4% (Kessler et al., 2005). The twelve-month prevalence estimates are as follows: anxiety disorders 18.1%, mood disorders 9.5% and substance use disorders 3.8% (Kessler et al., 2005b). If we focus on diseases that substantially impair a person's ability to function or cause significant suffering, these figures are somewhat overestimated because in many phobias (such as fear of heights or snakes), for example, the percentage of affected people seeking treatment is relatively low.

In Finland, the prevalence of diseases has been studied for example in the Health 2000 survey and its follow-up, Health 2011. The data collected for the Health 2000 survey showed that within the past year, 7.3% of the adult population aged 30 or older was diagnosed with depression, whereas in the Health 2011 survey, this figure reached 9.6%. Depressive disorders are growing more common especially in women, among whom the prevalence of depression was 12.2% in 2011 (Markkula et al., 2015). Depression is twice as common among women as it is among men. On the other hand, substance use disorders are more common among men than among women. In the Health 2000 survey, the twelve-month prevalence of alcohol problems was 4.5% and that of anxiety disorders was 4.1% (Pirkola et al., 2005). The lifetime prevalence of psychoses is 3.5% in Finland (Suvisaari et al., 2012), with the prevalence of the most common psychotic disorder, schizophrenia, being 1%. The demand for ADHD assessments has increased exponentially. The prevalence of ADHD in the adult population is 2.5–3.4% (Korkeila & Leppämäki, 2021).

A fundamental problem that concerns practically all psychiatric disorders is that they are still inadequately recognised in general healthcare, which delays the starting of treatment. Timely treatment improves the prognosis of these diseases. Psychiatric specialised healthcare is massively overburdened at the moment, meaning that the available resources do not match the demand for services.

3. PSYCHIATRIC DISORDERS HAVE HIGH COSTS TO SOCIETY

In Europe, direct healthcare costs totalled EUR 1,260 billion in 2010, a quarter of which was spent on brain disorders. The total costs of brain disorders were estimated to be four times higher than those of cancer and cardiovascular diseases, the other two widespread groups of chronic diseases (Lindsberg et al., 2014). The individual disorders that cause the highest direct costs are mood disorders, psychotic disorders and memory disorders (Figures 1 and 2).

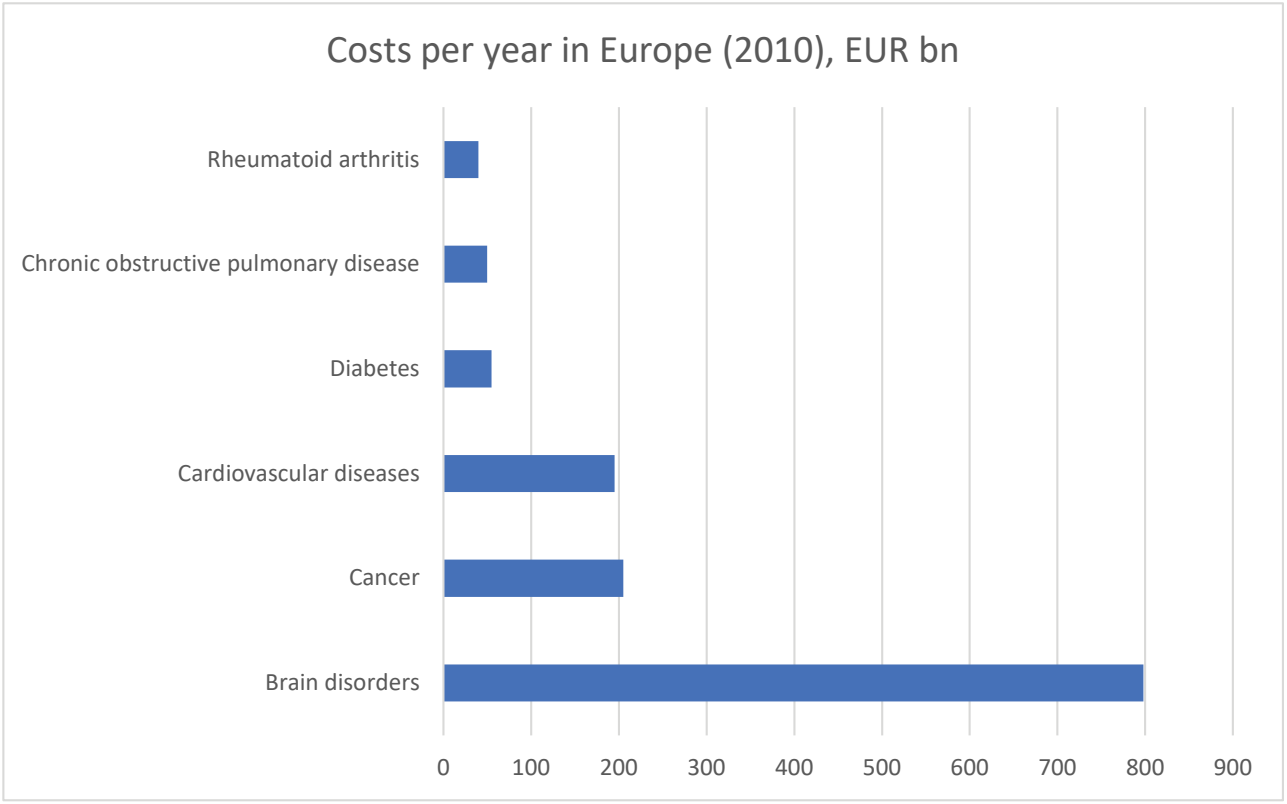


Figure 1. Brain disorders are our most expensive chronic diseases (source: Lindsberg P et al.)

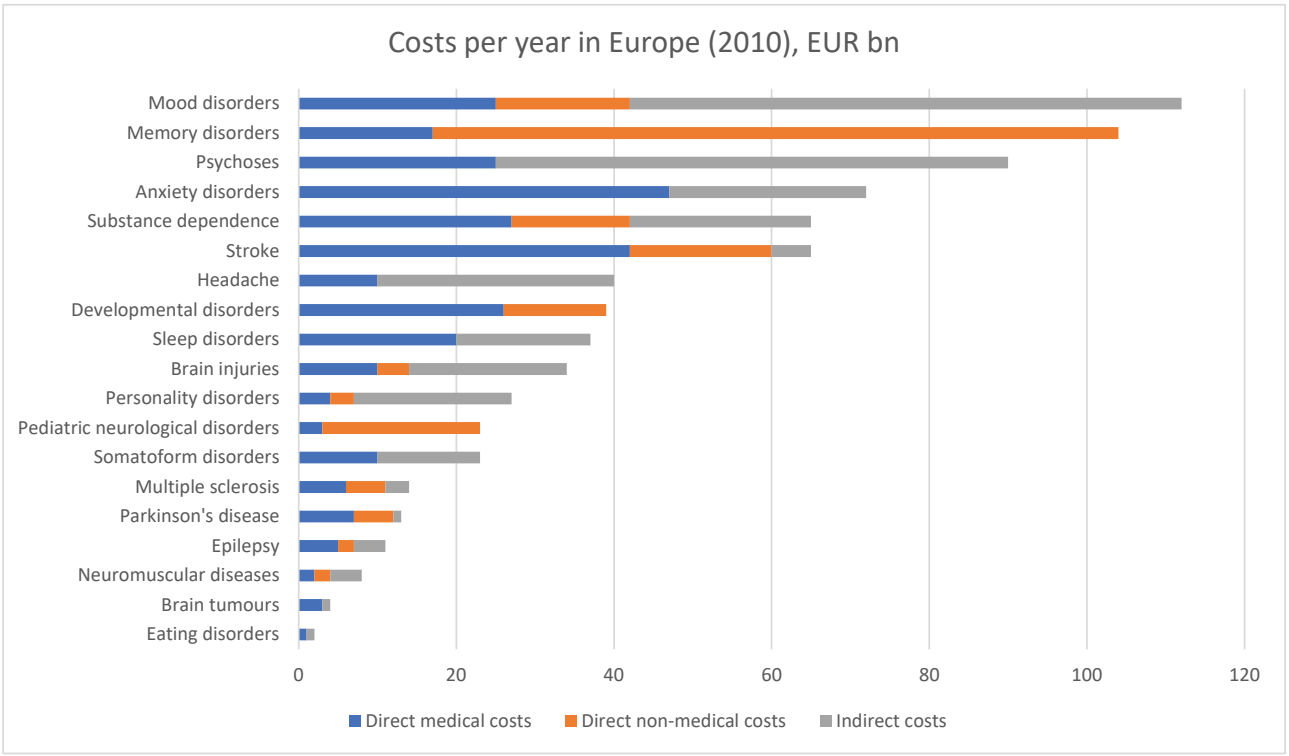


Figure 2. Total costs of 19 brain disorders (source: Lindsberg P et al.)

4. RETIREMENT

In recent years, mental disorders have increased in proportion and are now the leading cause for disability pension (Figure 3).

Closer examination of the psychiatric reasons for disability pension shows that depression forms a special group of its own. In thirty years, the number of persons retiring due to depression has grown ten-fold (figures 4 and 5), while the number of people retiring because of other psychiatric disorders has decreased steadily.

It is clear that some psychiatric disorders, such as schizophrenia, are significantly disabling in terms of the patient's ability to work and thus frequently lead to disability pension. But why does depression – a disorder that, in principle, many patients can recover from – now stand out in pension statistics? There are probably many underlying reasons. The treatment of depression is still frequently delayed, the methods of treatment are not used optimally and the requirements of working life have increased so that persons with even relatively mild post-symptoms of depression (e.g. memory problems, inability to concentrate, lack of initiative) are unable to cope at work.

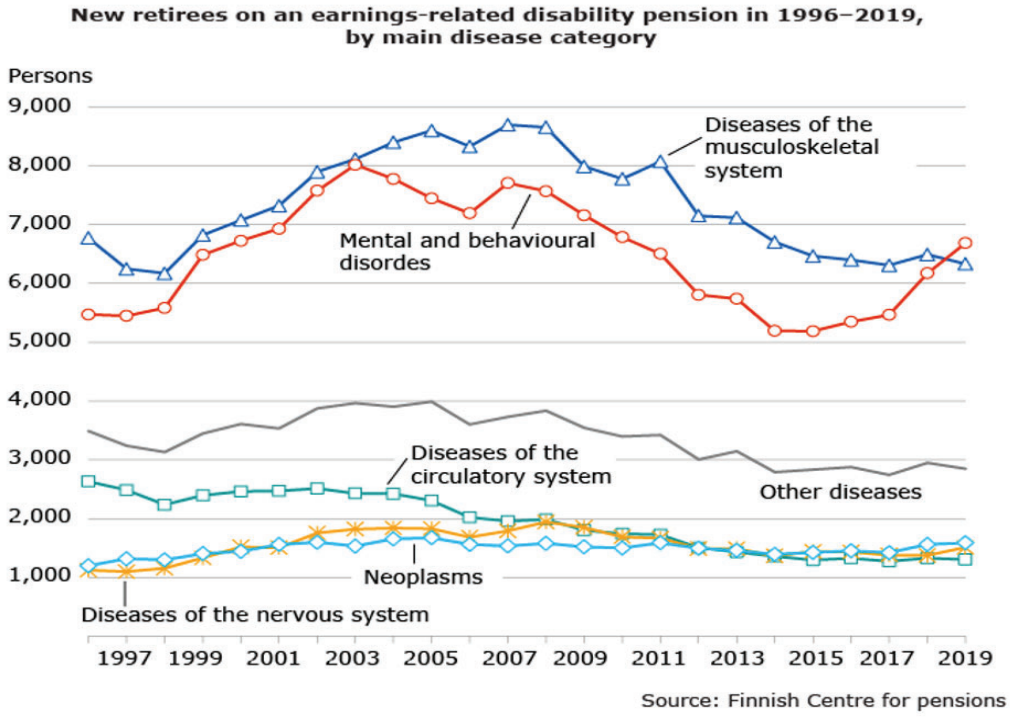
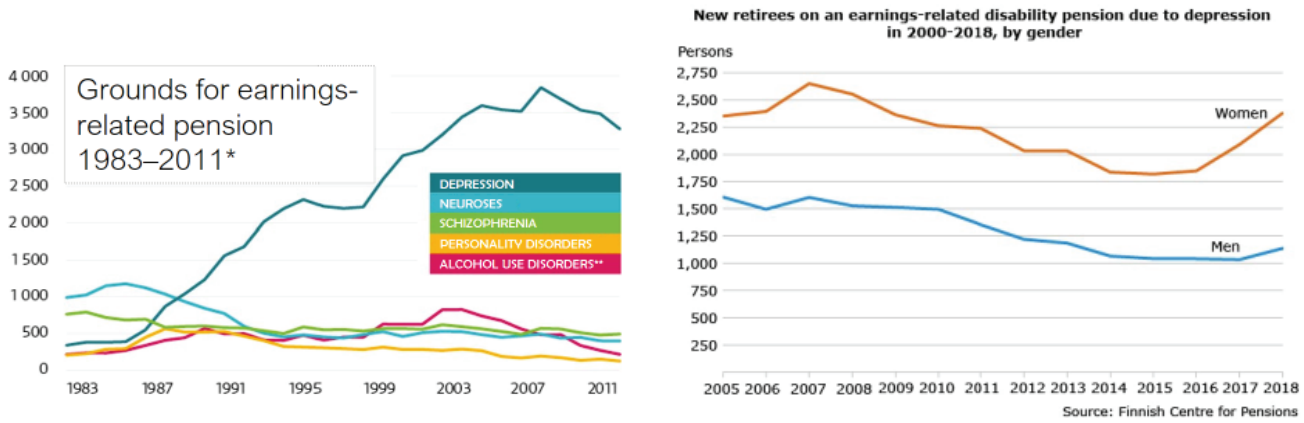


Figure 3. New retirees on disability pension, by main disease category.



Figures 4 and 5. New retirees on disability pension due to psychiatric reasons, particularly depression.

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5. HOW DO PSYCHIATRIC DISORDERS AFFECT MORTALITY?

Most psychiatric disorders increase mortality, as many other disorders and diseases naturally do. The overall mortality rate among patients with a psychiatric disorder is about double compared to the general population. The median years of potential life lost is 10 years (and up to 15–20 years for patients with psychosis). However, it is important to note that 63.7% of patients suffering from psychiatric disorders die of natural causes (i.e. other diseases), and only 17.5% of these patients die of unnatural causes (suicide, violence) (Walker et al., 2015). The major causes of death are in fact the same as in the general population, with unnatural causes forming a clear minority. During a five-year follow-up study of a cohort of first episodes of psychosis, 2.4% died of suicide (Gonzalez-Pinto et al., 2007). Although the mortality hazard from cardiovascular diseases has decreased in the general population, most of the excess mortality among persons suffering from severe psychiatric disorders is still caused by cardiovascular diseases, not by suicide (Newcomer & Hennekens, 2007).

It is likely that most of the studies conducted on the subject overestimate the direct mortality hazard rate from psychiatric factors in these patients. A large-scale follow-up study was conducted on a cohort of 80,000 persons. The psychiatric disorders of the study subjects were surveyed annually since 1957, and this data was linked with the cause of death register (Druss et al., 2011). The most common causes of death among patients suffering from psychiatric disorders were cardiovascular diseases (33.9%), cancer (21%) and pulmonary diseases (13.5%). Only 5.4% of the deaths were from unnatural causes, whereas the corresponding figure for those without a psychiatric disorder was 4.7%. Controlling for demographic variables, socioeconomic status, physical condition and access to healthcare services, the mortality of psychiatric patients reduced to 82% and their hazard ratio dropped to 1.19.

Psychiatric disorders are more common among people with a lower socioeconomic status. A large-scale, systematic review of studies conducted in several countries highlighted a clear association between income inequality and poorer adult mental health at the subnational level (Tibber et al., 2022). But the correlation and causality between the two is a complex matter. Psychiatric disorders can lead to a lower socioeconomic status because they decrease the person's ability to engage in their studies, for example, or social disadvantages can cause stress, which can then increase the hazard of psychiatric disorders. It is also a fact that economic recession causes an increase in depressive symptoms, self-harm and suicide (Frasquilho et al., 2015; Guerra & Eboreime, 2021).

The results of an American study suggest that the risk of suicide is increased by factors including male gender, white ethnicity, parents' low education and physical occupations, being the youngest child, and if the mother had complications or smoked during the pregnancy. The risk of suicide is therefore affected by many variables of early development. It has been proposed that good prenatal care and the mitigation of socioeconomic differences are key goals in the reduction of suicides (Vidal-Ribas et al., 2022). In conclusion, studies indicate mortality is influenced by socioeconomic factors such as social exclusion, access to healthcare services and socioeconomic status, and not directly by psychiatric disorders as such.

Anxiety disorders do not increase mortality hazard in general (Miloyan et al., 2016). Patients with diabetes who are also diagnosed with an anxiety disorder have been found to outlive diabetics without an anxiety disorder (Huang et al., 2017). People suffering from an anxiety disorder often have timid and sensitive personalities and may thus lead healthier and more responsible lives than 'healthy' people.

6. PSYCHIATRIC DISORDERS AND RESPONSIBILITY IN LIFE

Laypersons may be under the impression that psychiatric disorders reduce a person's sense of responsibility. Some psychotic disorders and personality disorders (e.g. antisocial personality disorder and borderline personality disorder) may do so, but anxiety disorders, for example, frequently involve an inflated sense of responsibility instead (Sugiura & Fisak, 2019). The same usually applies for persons suffering from depression (Pozza & Déttore, 2014), although the loss of initiative associated with the disorder may mitigate this tendency. Psychotic disorders, on the other hand, often affect cognitive processes and consequently also decision-making capacity and responsibility (Mosiolek et al., 2016).

7. EFFECT OF PSYCHIATRIC TREATMENT AND REHABILITATION

The effectivity of methods of treatment can be measured and compared using two key indicators, namely effect size (ES) and number needed to treat (NNT). Effect size is a quantitative value that in this context refers to the standardised mean difference between the intervention and control groups. Effect size is usually interpreted so that 0.2 is small, 0.5 is medium and 0.8 is large. If the effect size is 1.3 or larger, the effect is considerable. For example, the effect size of antibiotics in acute bronchitis is 0.21 (Bent et al., 1999). NNT indicates the number of patients that need to be treated for one patient to benefit from the treatment. For example, the NNT for blood pressure medications is 125 for one prevented death.

When the efficacy of both pharmacotherapy and psychotherapy for all adult psychiatric disorders is reviewed, the average effect size of the treatments is 0.5 (Huhn et al., 2014).

In light of these figures, the treatment of psychiatric disorders is on a relatively good level compared to the level of medical intervention in general.

However, there are substantial differences between different methods of treatment and different diseases. The pharmacotherapeutic treatment of anorexia nervosa, for example, has an effect size of 0.21, while the psychotherapeutic treatment of the same disorder has an effect size of 0.99. In contrast, the pharmacotherapeutic treatment of schizophrenia has an effect size of 0.92, whereas certain methods of psychotherapy can even be harmful for patients suffering from schizophrenia (Huhn et al., 2014).

A large meta-analytic review of psychotherapies compared the effects of fifteen evidence-supported therapies for adult depression. Psychotherapy had a combined effect size of 0.72 and an NNT of 4.04 (Cuijpers et al., 2020). These figures prove that psychotherapy is a very effective method of treatment.

For comparison, I have listed below the NNT values of some pharmacotherapeutic treatments as collected from www.thennt.com, which also contains the source references for all of the NNT values: blood pressure medication (prevented death) 125, blood pressure medication (prevented stroke) 67, antibiotics for acute sinusitis (faster resolution of symptoms) 17, proton pump inhibitors for acute peptic ulcer bleeding (preventing rebleeding) 15, sumatriptans for acute migraine attacks (pain-free) 4.

The ten-year follow-up of the Helsinki Psychotherapy Study conducted in Finland was published in 2016. At the end of the follow-up, altogether 74% of the patients had recovered and their work ability had also improved (Knekt et al., 2016). The patients in the project mainly suffered from mood or anxiety disorders.

Antidepressants alleviate symptoms in the short term for about two thirds of the patients, but slightly less than half attain full remission. In the long term, depression becomes chronic for about 10% of patients (Isometsä 2021).

Psychotic disorders typically substantially impair a person's ability to function. Pharmacotherapeutic treatment is in a key role with these disorders. The efficacy of antipsychotics has been proven to be substantially superior compared to placebo, although the effect size is not remarkable (Leucht et al., 2022).

The life expectancy of patients with psychosis is nevertheless significantly reduced compared to the general population, although the use of antipsychotics lengthens it considerably (Figure 6) (Taipale et al., 2020).

In this context, there is good reason to examine a specific group of pharmacotherapeutic drugs in more detail. This group is antidepressants, the use of which has grown ten-fold in about three decades (Figure 7). The growth can be attributed especially to the introduction of selective serotonin reuptake inhibitors (SSRIs) in the 1980s and the improved diagnostics of depression. Many studies show an inverse correlation between the use of modern antidepressants and the number of suicides (Pompili et al., 2010).

In recent years, a novel group of methods of psychiatric treatment used especially for depression has emerged with the development of various brain stimulation therapies, of which transcranial magnetic stimulation (TMS) is the most common. TMS is a non-invasive treatment that uses a magnetic field to stimulate the cortex through the cranium. Other brain stimulation therapies have also been developed, but their role in the treatment of depression is still marginal.

The Social Insurance Institution of Finland (Kela) surveyed the effectiveness of different kinds of rehabilitation methods (including psychotherapy) in autumn 2021. The survey was conducted by Success Clinic Oy (a summary of the results is available in Finnish at https://yhdessakuntoon.fi/wp-content/uploads/2021/12/Kela-Kysely-kuntoutuksesta-joulukuu-2021.pdf). The survey participants included organisation representatives N=70, service providers N=886, decision-makers N=762, and doctors and other medical care actors (labelled 'Doctors' in the figures and tables) N=93. The survey sought to assess the current state and future of rehabilitation interventions in Finland. The majority of respondents considered rehabilitation effective (Figure 8).

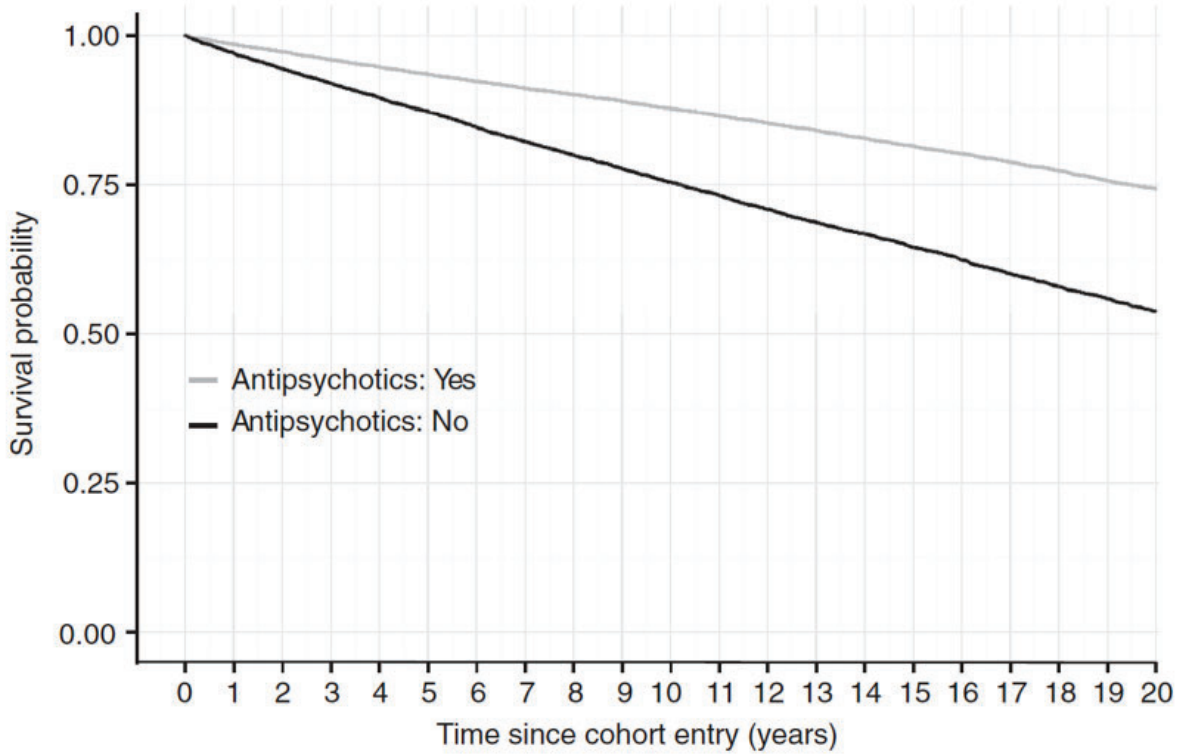

Figure 6. The life expectancy of psychosis patients in relation to the use of antipsychotics.

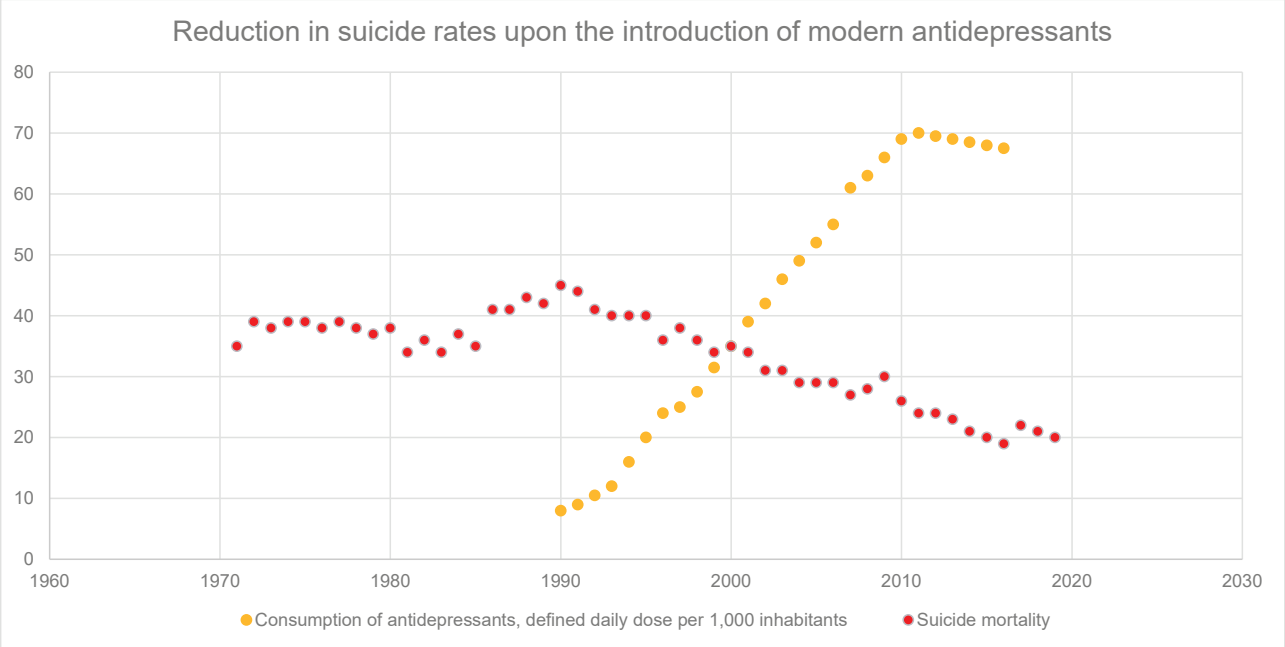

Figure 7. Reduction in suicides upon the introduction of modern antidepressants. Source: Fimea and Statistics Finland.

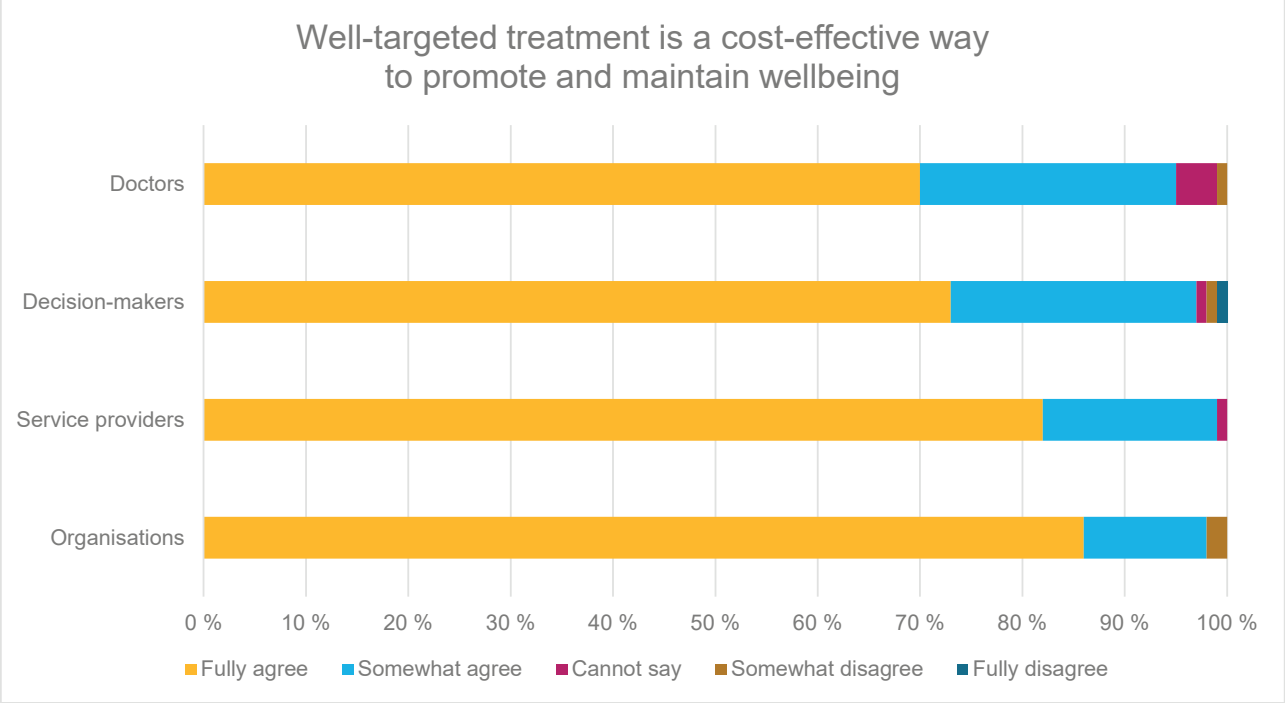

Figure 8. Respondents' evaluation of the benefits of rehabilitation.

A recent publication reported specifically on the effectiveness of rehabilitative psychotherapy subsidised by Kela. With a sample consisting of 35,083 individuals, the study compared patients who had received rehabilitative psychotherapy with patients who had not been granted such rehabilitation, for example due to budgetary reasons. After adjusting for background variables, the study ended up with two samples: those who had received psychotherapy (12,046 subjects) and the control group (2,047 subjects).

The key findings of the study were that compared to the control group, the individuals who had received psychotherapy had, on average, a six-percentage-point higher employment rate, EUR 2,100 higher annual earnings and a six-percentage-point lower probability of becoming a disability benefit recipient (Peutere et al., 2022).

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8. CONCLUSIONS

Psychiatric disorders are a highly heterogenic group of different conditions, which cannot be justifiably grouped into a single category. The treatment of psychiatric disorders is relatively effective, but these disorders still cause significant subjective suffering and impaired functional ability for some of the patients. Most of the patients nevertheless live responsibly, and the premature deaths related to these disorders are associated more with social factors rather than the disorders themselves.

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