Disability pension due to common mental disorders and healthcare use before and after policy changes: a nationwide study

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Introduction

Worldwide, especially in Europe, common mental disorders (CMDs), i.e. depressive and anxiety disorders, are widespread and have become more prevalent. By 2030, unipolar depressive disorder has been predicted to be the leading cause of loss of disability adjusted life years in high-income countries. CMDs have a strong impact on individuals’ lives, among others, adverse effect on social and occupational functioning, leading to long-term sickness absence and consequently disability pension (DP). Therefore, these disorders range among the main causes for labour market marginalization in The Organisation for Economic Co-operation and Development (OECD) countries.

Securing employment for a larger number of individuals with disabilities, including CMD, is an important objective of policies in many European countries. Nevertheless, some with CMD can be anticipated to have limited possibilities to economically support themselves through paid work if the work incapacity from the CMD is severe. Social benefits, such as DP, can then provide a secure income. On the other hand, CMDs are known to be positively affected by treatment and rehabilitation efforts and are likely to worsen with inactivity. Adequate healthcare measures before considering a DP claim is, therefore, crucial to prevent transition to DP. A previous study reported an increase in antidepressant prescription among patients, before being granted DP and a decrease afterwards. To the best of our knowledge, there is to date no published study on trajectories of healthcare use in the years before, during or after being granted DP due to CMD.

Here, both psychiatric and somatic healthcare should be considered due to the known comorbidity of CMD with somatic disorders. Moreover, separate consideration of inpatient care from specialized outpatient care might shed light on healthcare use with varying medical severity. Incidence of DP is associated with age, sex, education and family situation. Regional differences in DP have also been reported. Therefore, studies in this field need to take such aspects into consideration.

The prevalence and incidence of DP are affected also by changes in social insurance policies. In Sweden in 2008, the eligibility requirements for DP were tightened in two ways. One is that the possibility for temporary DP was removed for people from age 30 years, the other that the threshold regarding medical limitations was set higher. The changes in the policies were followed by a sharp decline in the incidence of DP, which probably also was related to a previous very large decrease in number of people on long-term sickness absence. This means that also healthcare use around the time being granted DP among those granted DP due to CMD before and after the changes in 2008 could vary. This is due to the anticipation that individuals being granted DP after the policy changes had a higher impact of their medical condition on their work capacity, suggesting also a higher medical severity. Therefore, they also might have used specialized healthcare more before granted DP than individuals being granted DP before the introduction of the stricter rules did.

Aims

The aims were (i) to study in- and specialized outpatient healthcare use before and after being granted DP due to CMD and (ii) whether...
these trajectories differed before and after the introduction of stricter DP granting criteria in Sweden in 2008.

**Methods**

Two cohorts were studied using longitudinal data.

**Study population**

Individuals with incident DP due to CMD before (wave 1, 2005–06, \(n = 25,435\)) and after (wave 2, 2009–10, \(n = 4722\)) the earlier mentioned changes in social insurance policies, aged 19–64 years when granted DP, living in Sweden were included. Individuals who died or emigrated in the 3 years after granted DP were not included in the study populations. Due to missing information on socio-demographic covariates, 1137 (4.5%) and 666 (14.1%) individuals were excluded from waves 1 and 2, respectively. The final cohorts consisted of 24,298 individuals for wave 1 and 4056 individuals for wave 2. Sensitivity analyses indicated the comparability of results in the study populations with and without exclusion due to missing values.

**Register data**

Information linked at individual level, based on the unique 10-digit personal number of all resident in Sweden, from the following four nationwide registers was used:

1) Longitudinal integration database for health insurance and labour market studies (LISA) held by Statistics Sweden (age, sex, country of birth, type of living area, education, family situation and emigration)

2) i) Nationwide patient register (date and main diagnosis of in- and specialized outpatient care) and (ii) Cause of death

3) Micro-data for analyses of social insurance (date, grade and main diagnosis of DP from the Social Insurance Agency)

4) Nationwide registers was used

**Disability pension due to common mental disorder and healthcare use**

All residents in Sweden aged 19–64 years, whose work capacity is reduced due to disease or injury, can be granted DP from the Social Insurance Agency. DP can be granted for 25, 50, 75 or 100% of ordinary working hours. In 2008, the eligibility requirements for DP were tightened somewhat. Before the regulatory changes, all aged 19–64 could be granted temporary DP. After the change, people aged 30 years or above could not be granted temporary DP. This means that the regulatory change meant the introduction of a stricter assessment, people’s work incapacity had to be deemed not only as long-standing but also as permanent; the medical condition needed to be more severe. Before being granted DP, the individual, register (date of death) from the National Board of Health and Welfare

**DP and out-of-pocket healthcare costs**

Socio-demographic variables, namely sex, age, education, type of living area, country of birth and family situation were measured on 31 December of the preceding year of DP granting and categorized as in Table 1.

**Table 1** Descriptive statistics of the 28,354 women and men, aged 19–64 years, living in Sweden and granted DP in 2005–06 or in 2009–10 due to CMDs

<table>
<thead>
<tr>
<th>Sex</th>
<th>All n (%)</th>
<th>Wave 1 (2005–06)</th>
<th>Wave 2 (2009–10)</th>
<th>P values for difference between waves</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>28,354 (100%)</td>
<td>24,298 (100%)</td>
<td>4056 (100%)</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>9023 (31.8)</td>
<td>7541 (31.0)</td>
<td>1482 (36.5)</td>
<td>(P &lt; 0.001)</td>
</tr>
<tr>
<td>Female</td>
<td>19,331 (68.2)</td>
<td>16,757 (69.0)</td>
<td>2574 (63.5)</td>
<td></td>
</tr>
<tr>
<td>Main DP diagnoses</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depressive disorders</td>
<td>13,285 (46.8)</td>
<td>11,413 (47.0)</td>
<td>1872 (46.2)</td>
<td>(P &lt; 0.001)</td>
</tr>
<tr>
<td>Anxiety disorders</td>
<td>6854 (24.2)</td>
<td>5668 (23.3)</td>
<td>1186 (29.2)</td>
<td></td>
</tr>
<tr>
<td>Stress-related mental disorders</td>
<td>8215 (29.0)</td>
<td>7217 (29.7)</td>
<td>998 (24.6)</td>
<td></td>
</tr>
<tr>
<td>Age (in years) when granted DP</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19–29</td>
<td>2053 (7.2)</td>
<td>1310 (5.4)</td>
<td>743 (18.3)</td>
<td>(P &lt; 0.001)</td>
</tr>
<tr>
<td>30–64</td>
<td>26,301 (92.8)</td>
<td>22,988 (94.6)</td>
<td>3313 (81.7)</td>
<td></td>
</tr>
<tr>
<td>Education (in years)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;9 (elementary school)</td>
<td>6326 (22.3)</td>
<td>5406 (22.2)</td>
<td>920 (22.7)</td>
<td>(P &gt; 0.05)</td>
</tr>
<tr>
<td>10–12 (high school)</td>
<td>13,633 (48.1)</td>
<td>11,655 (48.0)</td>
<td>1978 (48.8)</td>
<td></td>
</tr>
<tr>
<td>≥13 (college or university)</td>
<td>8395 (29.6)</td>
<td>7237 (29.8)</td>
<td>1158 (28.6)</td>
<td></td>
</tr>
<tr>
<td>Type of living areaa</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Big cities</td>
<td>10,988 (38.8)</td>
<td>9377 (38.6)</td>
<td>1611 (39.7)</td>
<td>(P &lt; 0.05)</td>
</tr>
<tr>
<td>Medium-sized cities</td>
<td>9547 (33.7)</td>
<td>8156 (33.6)</td>
<td>1391 (34.3)</td>
<td></td>
</tr>
<tr>
<td>Small cities/villages</td>
<td>7819 (27.6)</td>
<td>6765 (27.8)</td>
<td>1054 (26.0)</td>
<td></td>
</tr>
<tr>
<td>Country of birth</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sweden</td>
<td>22,156 (78.1)</td>
<td>19,083 (78.5)</td>
<td>3073 (75.8)</td>
<td>(P &lt; 0.001)</td>
</tr>
<tr>
<td>Other Nordic and EU25</td>
<td>1841 (6.50)</td>
<td>1587 (6.5)</td>
<td>254 (6.3)</td>
<td></td>
</tr>
<tr>
<td>Rest of the world</td>
<td>4357 (15.4)</td>
<td>3628 (14.9)</td>
<td>729 (18.0)</td>
<td></td>
</tr>
<tr>
<td>Family situationb</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married/cohabiting with no children at home</td>
<td>5145 (18.1)</td>
<td>4435 (18.3)</td>
<td>710 (17.5)</td>
<td>(P &lt; 0.001)</td>
</tr>
<tr>
<td>Married/cohabiting with children at home</td>
<td>8063 (28.4)</td>
<td>7124 (29.3)</td>
<td>939 (23.2)</td>
<td>(P &lt; 0.001)</td>
</tr>
<tr>
<td>Single without children living at home</td>
<td>11,031 (38.9)</td>
<td>9079 (37.4)</td>
<td>1952 (48.1)</td>
<td>(P &lt; 0.001)</td>
</tr>
<tr>
<td>Single with children living at home</td>
<td>4115 (14.5)</td>
<td>3600 (15.1)</td>
<td>455 (11.2)</td>
<td>(P &lt; 0.001)</td>
</tr>
</tbody>
</table>

- **Family situationa**: Type of living area: big cities: Stockholm, Gothenburg and Malmo; medium-sized cities: cities with more than 90,000 inhabitants within 30 km distance from the centre of the city; small cities/villages.
- **Family situationb**: Single means living without partner and includes divorces, separated or widowed.
along with rehabilitation measures, has repeated medical and work-capacity assessments from physicians, and sometimes also from other health professionals, and finally from the Social Insurance Agency officer.\textsuperscript{23} Since 2003, for individuals aged 19–29 years, temporary DP is possible if the work capacity is reduced for at least 1 year or to complete upper-secondary education.\textsuperscript{24} All residents are covered by a public healthcare insurance, entitling them to strongly subsidized healthcare. For each physician consultation, the patient in 2005 paid Swedish crowns (SEK) 200–300 (€21–32) with an upper ceiling of SEK 900 during a 12-month period. Inpatient care cost SEK 80 (€9) per 24 h. These amounts were similar for all the studied years.\textsuperscript{28,29}

**Ethical approval**

The project was approved by the Regional Ethical Review Board of Stockholm, Sweden. Dnr: 2007/762-31.

**Statistical analyses**

Analyses were based on annual diagnosis-specific healthcare use spanning over a 7-year observation window for each individual. The year of DP granting was defined as time point '0' and the 3 years of observation for both before and after the zero year comprised $t-3$ to $t-1$ and $t+1$ to $t+3$, respectively. Initially, the between-wave differences in socio-demographic characteristics and annual prevalence of healthcare use were assessed by Chi\textsuperscript{2} test. To adjust for between-wave variations with regard to socio-demographics, estimated annual prevalence of healthcare use (in- and specialized outpatient care due to psychiatric or somatic diagnoses) with 95% confidence intervals (CI) were assessed during the 3 years before, the DP granting year and the 3 years after DP. Hereby, repeated measure logistic regression analysis with generalized estimating equations (GEE) method and autoregressive (AR) correlation structure were used.\textsuperscript{30} GEE is a repeated measure regression that can take into account the interdependence between the repeated intra-individual measurements by assigning correlation between measurements in longitudinal studies. Moreover, GEE does not depend on the normal distribution of the data and can incorporate subjects in the models even if they have missing values on the dependent variable. The following time points were compared pre-DP period (years $-$3 to $-$1), DP transition period (years $-$1 to $+$1) and post-DP period (years $+$1 to $+$3) in each wave and for each outcome measure, i.e. in- and specialized outpatient care due to psychiatric and somatic diagnoses.

All models were adjusted for sex, age, education, type of living area, country of birth and family situation and differences are shown as odds ratios (OR) with 95% CI. Significant between- and within-wave differences were assessed by introducing interaction terms between period and wave in the model. All analyses were conducted in SPSS v. 20.

**Results**

In waves 1 and 2, 24,298 and 4056 individuals were granted DP due to CMD, respectively (table 1). In both waves, more than two-thirds were women, whereas, the proportion of young individuals (19–29 years) was more than three times higher in wave 2 than in wave 1 (18.3% vs. 5.4%). The proportion of individuals being single without children living at home was also higher in wave 2 (48.1%) compared with those in wave 1 (37.4%). Moreover, the proportion of individuals born outside Nordic countries and EU 25 was higher in wave 2 (18.0%) than in wave 1 (14.9%).

Proportions who had had psychiatric healthcare use was generally significantly higher in wave 2 than in wave 1 (table 2, $P$-values $<$ 0.001). In the year preceding DP, 4.6 and 19.2% of individuals had had psychiatric in- and specialized outpatient care, respectively, in wave 1, compared with 7.9 and 46.6% in wave 2. Stratified analyses for the similar time points show that corresponding figures in younger individuals were 11.8 and 38.4% in wave 1 and 14.3 and 65.1% in wave 2 (data not shown) and for the older individuals 4.1 and 18.2% in wave 1 and 6.5 and 42.5% in wave 2 (data not shown).

Crude and multivariate adjusted prevalence of inpatient healthcare due to psychiatric diagnoses was higher in the year preceding DP and lower thereafter in both waves (table 2, figure 1). Compared with the year of granting DP, ORs of inpatient care due to psychiatric diagnoses in wave 1 increased from 0.8 to 1.2 ($t-3$ to $t-1$) and later decreased to 0.8 at $t+3$ (figure 2). There was significant between-wave difference of this trajectory in the transition period, showing steeper decline in wave 2 ($P < 0.05$, Supplementary table S3).

Trajectories of specialized outpatient care due to psychiatric diagnoses followed similar patterns as those of psychiatric inpatient care, with exception of an increasing trend after being granted DP in wave 1 (table 2). Adjustment for socio-demographic characteristics did not alter these patterns (figures 1 and 2). There were significant between-wave differences in trajectories of specialized psychiatric outpatient care at all three phases (pre-, transition and post-DP) (Supplementary table S3).

In accordance with psychiatric healthcare use, specialized care due to somatic disorders was significantly more common in wave 2 than in wave 1 (table 2, $P$-values $<$ 0.001). In wave 1, annual prevalence

### Table 2 Annual prevalence of healthcare use among individuals aged 19–64 years, living in Sweden and granted DP in 2005–06 (n = 24 298) or in 2009–10 (n = 4056) due to CMDs according to the type of DP diagnoses and DP granting year\textsuperscript{a}

<table>
<thead>
<tr>
<th>Time points\textsuperscript{b}</th>
<th>Psychiatric diagnoses</th>
<th>Somatic diagnoses</th>
<th>Psychiatric diagnoses</th>
<th>Somatic diagnoses</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Inpatient n (%)</td>
<td>Outpatient n (%)</td>
<td>Inpatient n (%)</td>
<td>Outpatient n (%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$t-3$</td>
<td>766 (3.2)</td>
<td>1931 (7.9)</td>
<td>2283 (9.4)</td>
<td>8950 (36.8)</td>
</tr>
<tr>
<td>$t-2$</td>
<td>1051 (4.3)</td>
<td>3260 (13.4)</td>
<td>2436 (10.0)</td>
<td>9635 (39.7)</td>
</tr>
<tr>
<td>$t-1$</td>
<td>1107 (4.6)</td>
<td>4677 (19.2)</td>
<td>2203 (9.1)</td>
<td>9796 (40.3)</td>
</tr>
<tr>
<td>$t0$</td>
<td>948 (3.9)</td>
<td>5515 (22.7)</td>
<td>2286 (9.4)</td>
<td>9645 (39.7)</td>
</tr>
<tr>
<td>$t+1$</td>
<td>815 (3.4)</td>
<td>6082 (25.0)</td>
<td>2243 (9.2)</td>
<td>9710 (40.0)</td>
</tr>
<tr>
<td>$t+2$</td>
<td>774 (3.2)</td>
<td>6501 (26.8)</td>
<td>2388 (9.3)</td>
<td>10 084 (41.5)</td>
</tr>
<tr>
<td>$t+3$</td>
<td>757 (3.1)</td>
<td>6210 (25.6)</td>
<td>2452 (10.1)</td>
<td>10 512 (43.3)</td>
</tr>
</tbody>
</table>

\textsuperscript{a} Wave 1—DP granted during 2005–06 (before); wave 2—DP granted during 2009–10 (after stricter DP rules were introduced).

\textsuperscript{b} $t-3$: 3 years before DP, $t-2$: 2 years before DP, $t-1$: 1 year before DP, $t0$: year of DP grant, $t+1$: 1 years after DP, $t+2$: 2 years after DP, $t+3$: 3 years after DP.

\textsuperscript{*} between-wave differences were tested statistically by Chi\textsuperscript{2} and were significant at level $P<0.001$. 

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corresponded to 9.1 and 40.3% of somatic in- and specialized outpatient care, respectively (table 2). The corresponding figures for wave 2 were 13.6 and 50.6%. There were no clear within-wave trends in somatic healthcare observable in the pre-, transition and post-DP periods (table 2, figures 1 and 2). Still, slopes differed significantly in the transition period between waves due to a relatively stronger decline in wave 2 than in wave 1 (Supplementary table S1).

Discussion

To the best of our knowledge, this is the first study about trajectories of diagnosis-specific healthcare use among individuals granted DP due to CMD. The study is also unique in comparing these trajectories in two waves, here, before (wave 1) and after (wave 2) implementation of stricter DP granting regulations in 2008.
Incidence of DP due to CMD was almost six times higher in wave 1 than in wave 2. A similar decline has previously been observed in number of overall DP regardless of underlying diagnosis in wave 2. On the other hand, proportions of individuals who had had healthcare use were higher in wave 2 than in wave 1. Moreover, we found that in both waves inpatient psychiatric healthcare increased before granting of a DP due to CMD, after which it decreased. With regard to outpatient care due to psychiatric diagnoses, trajectories continued to rise after granting of DP in wave 1. Trajectories in the specialized somatic healthcare use did not follow any obvious pattern.

**Methodological considerations**

Main strengths of this study include the use of high-quality population-based nationwide registers with longitudinal data from different registers. Further strengths include the use of large study groups and that all people granted DP during the studied years could be included, i.e. not using a sample. The register data also means that the study is not affected by recall bias regarding exposure and outcome. Moreover, there was nearly no loss to follow-up and diagnoses of DP are set by physicians, i.e. not self-reported. Another strength is that a wide range of potential confounders could be included, like education, type of living area, country of birth and family situation. For the sake of this study, it was an advantage that the temporal difference between the two waves was short. Moreover, the chosen statistical method provides a flexible approach to analyses of longitudinal data by accounting for correlations between outcomes across time within the same individual and allowing for specification of both time-varying effects and individual differences in variables.

Some limitations of the study should be mentioned. The validity of DP diagnoses is often discussed but there is so far no study on this issue. A Swedish study from 1991 concluded that sick-leave diagnoses have high validity when compared with diagnoses from medical records. Additionally, granting of DP is preceded by a long process of medical evaluation and work-capacity assessments. Moreover, the stigma around psychiatric diagnoses lets us assume that a psychiatric diagnosis is given as a main DP diagnosis only when the patient actually has a mental disorder and when the main reason of work disability cannot be contributed to a somatic diagnosis. In other words, this means that people with a psychiatric DP diagnosis are likely to have a psychiatric disorder. Then again, this also means that some people with psychiatric disorders were not given a psychiatric DP diagnosis as a main, and thus, were not included in this study. This can be seen as a strength, as our cohort of individuals with DP due to CMD is more strictly defined. Further studies are required regarding these issues. It should also be noted, that there are indications of regional differences with regard to specialized outpatient care services reporting information on diagnoses and treatment to the National Board of Health and Welfare during the first years of reporting, which might have led to an underestimation during the years before DP granting for wave 1. Still, there is no reason to anticipate that this considerably affected the trajectories reported in this study.

**Discussion of findings**

We found considerable differences regarding incidence of DP in wave 1 compared with in wave 2, which is in line with published reports. We showed, in both waves, trajectories of psychiatric healthcare use followed a similar pattern in the pre-DP period, namely a steep increase up until a year prior to DP granting. This is in line with previous studies showing an increase in prescription of psychotropic drugs as well as in self-reported symptoms of depression and anxiety just before granted DP. The patterns of between-wave differences were consistent also when adjusted for socio-demographic factors such as, sex, age, education, type of living area, country of birth and family situation. Such increase in healthcare use might be related to the severity of the medical condition just before DP granting, which in fact might lead to applying for DP—but could also be due to needing assessments from specialists when claiming DP, or even that the stricter regulations for DP granting lead physicians to intensify related treatment to prevent the disabling process before DP granting.

Our analyses also indicated that in general, use of specialized psychiatric healthcare decreased after being granted DP due to CMD. This resembles findings from similar recent research on prescribed psychotropic drugs and reported symptoms of depression and anxiety. The decline may be related to improvements in symptoms and/or relief from psychosocial work demands, the patient being referred to primary healthcare, or, as most of those people have been on long-term sick leave, not having to worry about whether the physician will certify a prolongation of the sick-leave spell, and if the Social Insurance Agency will deny the sickness-benefit claim. With regard to trajectories after granted DP, there were differences between the two waves. Although outpatient psychiatric healthcare declined in wave 2, it continued to increase in wave 1. Reasons for such dissimilarities might arise from differences in the rehabilitation processes before granted DP, discrepancies in the medical severity of individuals granted DP and specificities in the regulations related to waves 1 and 2. It is possible that DP did not have a strong association with the trajectories of specialized psychiatric outpatient care in individuals from wave 1 with temporary DP, possibly due to the more frequent temporal nature and the lower medical severity of the underlying disorder compared with individuals granted DP in wave 2. Future research is warranted to elucidate this potential explanation.

Our results showed that annual prevalence of in- and specialized outpatient care use due to psychiatric diagnoses were considerably higher among the individuals granted DP in 2009–10 (wave 2) than in 2005–06 (wave 1), and the same was true for psychiatric healthcare use. Specifically, in terms of specialized outpatient healthcare use due to psychiatric diagnosis prior to DP, a much higher proportion of individuals from wave 2 (27–47%) had had that before being granted DP than their peers from wave 1 (8–19%). Such differences in healthcare use may point to a worse medical condition of the much fewer individuals granted DP with the stricter criteria in 2009–10 compared with those granted DP in 2005–06.

Nevertheless, although a larger proportion had received specialized care before being granted DP in the wave 2, still <50% had had such healthcare, meaning that the majority of the individuals did not receive specialized healthcare for psychiatric diagnosis a year prior to DP with CMD. This finding is in line with a Finish study, indicating inadequate psychiatric healthcare before granted DP with depression. This fact requires further investigation if any variation in background factors, e.g. sex and age, provide part of the explanation of such low healthcare and the wave differences. Adequate healthcare before DP might prevent a number of people from premature exclusion from the labour market. It is very important to provide suitable treatment and rehabilitation options for the individuals with CMD in both pre- and post-DP periods, as these disorders are usually treatable and likely to relapse or worsen otherwise.

Not only psychiatric healthcare but also somatic healthcare was much more prevalent among individuals in wave 2 compared with in wave 1. However, the trajectories of specialized somatic healthcare use did not follow a specific pattern during the study period. This is the first study investigating trajectories of specialized somatic healthcare use in relation to DP granting due to CMD. We recently showed that around 24% of individuals on DP due to CMD had somatic comorbidity. Possibly these somatic disorders are of a chronic nature, requiring regular somatic healthcare not directly affected by or related to the timing of DP granting, although this requires future studies.
Conclusion

Despite higher proportions of individuals receiving specialized healthcare after introduction of stricter DP granting criteria, half of the individuals still did not get specialized psychiatric healthcare before being granted DP due to CMD. It is, therefore, important to assure optimal psychiatric treatment to prevent permanent exit from the labour market. In general, being granted DP due to CMD seems to be associated with decline in specialized healthcare use, except regarding specialized outpatient psychiatric care. After the introduction of stricter DP granting criteria, the number of people granted DP decreased substantially and those granted DP with CMD seemed to have more severe medical conditions. The results from this study also suggest that after being granted DP, the use of specialized psychiatric healthcare is lower.

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Conflicts of interest: None declared.

Supplementary data

Supplementary data are available at EURPUB online.

Key points

- Transition to disability pension (DP) due to common mental disorders (CMDs) seems to be associated with changes in psychiatric healthcare use.
- Overall, specialized healthcare use due to psychiatric diagnoses increased until the year preceding DP and declined thereafter.
- Introduction of stricter DP granting criteria led to a substantial decrease in incidence of DP.
- Individuals being granted DP due to CMD after the introduction of stricter criteria seem to have higher morbidity compared with individuals being granted DP before the changes.

References

Healthcare utilization among urban homeless followed by an outpatient clinic: more intensive use by migrant groups

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Introduction: The increasing share of homeless represents a challenge for the healthcare system. In Rome, Italy, a large ambulatory care centre for the homeless had adopted several measures to improve access to health care facilities by migrants. We aimed to determine the rate of utilization among migrants as compared to the Italian homeless. Methods: We collected data on 2604 homeless adults who had their first medical examination between 2007 and 2011. We conducted Poisson regression to analyse the association of medical and demographic variables with the number of revisits within 1 year after the first contact. Results: As compared to the Italian-born homeless, the number of revisits among the migrants which included undocumented migrants, homeless EU citizens, forced migrants and refugees, was increased. These differences were also noted among those with chronic conditions detected on the first contact. The differences were substantial among males but not among females. A greater frequency of revisits was also observed among the uneducated and those who were not registered with the National Health Service. Conclusion: The specialised services in this clinic were able to achieve relatively high rates of revisits among the homeless of foreign background. This suggests that the utilization of health care services by these people may be effectively increased by the implementation of a series of migrant-oriented practices.