

Impact of socioeconomic position and distance on access and treatment of patients with depressive disorders in Denmark

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By [Aake Packness](#), RN, MPH, MPQM, Ph.D.

Primary Advisor: Frans Boch Waldorff, MD, GP, Ph.D., professor

English resumé

Background

The principle of the Inverse Care Law has an impact in Denmark, with a lack of general practitioners seen in remote areas and a concentration of specialists in the municipalities just north of Copenhagen. Common mental disorders such as depression and anxiety are widespread and seem to be increasing. It is known that depression is strongly associated with socioeconomic position (SEP) and deprived citizens experience a higher morbidity rate. It is not known what characterizes depressed patients who use mental health services versus those who do not use such services.

Aim

The aim of the thesis is to explore if the Danish health care system provides equal access and treatment of patients with depression, and if not, then to explore the reasons why, by addressing three objectives:

- I. To determine the impact of socioeconomic position and distance to provider on outpatient mental health care utilization among incident users of antidepressants.
- II. To examine if the severity of symptoms of depression is associated with mental health care (MHC) treatment received, independent of SEP, in both type and frequency of treatments and highest gained treatment level within six months following a symptom score in a survey study.
- III. To evaluate if the perceived barriers to accessing MHC differ across individuals with symptoms of depression, according to their SEP.

Methods

Study I: A one-year, nationwide, Danish register-based follow-up study on the impact of distance and SEP on type and frequencies of MHC use after initial treatment with antidepressants. Analyses were conducted using multivariable logistic regression and Poisson regression.

Study II: Register-based six-month follow-up study on participants from the Danish General Suburban Population Study (GESUS) with symptoms of depression. MHC treatment of the participants was tracked in national registers for the four months prior and six months after their Major Depression Inventory (MDI) score. MHC treatment was graduated in levels; SEP was defined by years of formal postsecondary education and income categorized in three levels. Data was analysed using multivariable logistic regression and Poisson regression analyses.

Study III: Cross-sectional questionnaire-based population survey from the Lolland-Falster Health Study (LOFUS). A set of five questions on perceived barriers to accessing professional care for a mental health problem was prompted to individuals responding with symptoms of depression (MDI score > 20). Data was analysed using multivariable logistic regression.

Results

Study I: 50,374 person-years were observed. Persons in low SEP were more likely to have outpatient psychiatrist contacts (odds ratio (OR) 1.25; confidence interval (CI) 1.17–1.34), but less likely to consult a co-pay requiring psychologist (OR: 0.49; CI 0.46–0.53) and less likely to get mental health counselling from a GP (OR: 0.81; CI 0.77–0.86) compared to persons in high SEP after adjusting for socio-demographics, comorbidity, and vehicle access. Furthermore, persons in low SEP who had contact with any of these therapists tended to have lower rates of visits compared to those in high SEP.

When distance to services increased by 5 kilometres, the rate of visits to outpatient psychiatrist tended to decrease by 5% in the lowest income group (incidence rate ratio (IRR) 0.95; CI 0.94–0.95) and 1% in the highest (IRR 0.99; CI 0.99–1.00). Likewise, contact with psychologists decreased by 11% in the lowest income group (IRR 0.89; CI 0.85–0.94) when distance increased by 5 kilometres, whereas rate of visits did not interact.

Study II: Of 19,011 selected respondents from GESUS, 988 had symptoms of depression. For 547 respondents with moderate to severe symptoms of depression there was no difference across SEP in use of services, contact (yes/no), frequency of contact, or level of treatment, although respondents with low SEP had more frequent contact with their GP. However, of the 547, 10% had no treatment contacts at all, and 47% had no treatment beyond GP consultation. Among respondents with no/few symptoms of depression, postsecondary education ≥ 3 years was associated with more contact with specialized services (OR 1.92; CI 1.18–3.13); however, this difference did not apply for income; additionally, high SEP was associated with fewer prescriptions of antidepressants (education: OR 0.69; CI 0.50–0.95; income: OR 0.56, CI 0.39–0.80) compared to low SEP.

Study III: 5,076 participants had entered LOFUS by the end of 2017, whereof 372 had symptoms of depression; of these, 314 (84%) completed the survey questions regarding their experiences of barriers to MHC access. Worry about expenses related to seeking or continuing MHC was considered a barrier for 30% of the individuals responding, and as such ranked the greatest problem. 22% perceived stigma as a barrier to accessing MHC, but there was no association between perceived stigma and SEP. Transportation was the barrier of least concern for individuals in general, but also the issue with greatest and most consistent socioeconomic disparity (OR 2.99; CI 1.19–7.52) for lowest versus highest educational groups, and likewise concerning expenses (OR 2.77; CI 1.34–5.76) for the same groups.

Conclusions

Study I: Patients in low SEP treated with antidepressants have relatively lower utilization of mental health services even when services are free at delivery; it is likely that co-payments aggravate disparities in healthcare utilization between patients in high and low SEP; increasing distance to MHC seems to increase social inequality in care.

Study II: Participants with symptoms of depression were treated according to the severity of their symptoms, independent of SEP; however, more than half with moderate to severe symptoms received no treatment beyond GP consultation. People with low SEP and no/few symptoms of depression were more often treated with antidepressants.

Study III: Issues associated with *Expenses* and *Transport* are more frequently perceived as barriers to accessing MHC for people in low SEP compared to people in high SEP. Stigma showed no association to SEP.

All three studies in brief: GPs treat patients with symptoms of depression according to the symptoms, independent of SEP. However, the Danish healthcare system does not provide equal treatment across socioeconomic groups initiating treatment with antidepressants. This seems to be caused by structural barriers. Distance to services and transport is a problem correlated with low SEP; expenses and most likely out-of-pocket payments for psychologists is also a problem for persons in low SEP.

Many with symptoms of moderate to severe depression seem to go untreated even though they consult their GP. The missed treatment opportunities may be a shortcoming of service and thus indicate a need for greater awareness of symptoms of depression by the GPs. Or, if considered an issue of mental health literacy, these missed opportunities can be viewed as an indication of a need to inform the public about symptoms and possibilities for treatment.

Related publications:

- I. Packness A, Waldorff FB, Christensen RD, et al. Impact of socioeconomic position and distance on mental health care utilization: a nationwide Danish follow-up study. *Soc Psychiatry Psychiatry Epidemiol* 2017;10-1437.: doi: 10.1007/s00127-017-1437-2.
- II. Packness A, Halling A, Hastrup LH, et al. Socioeconomic position, symptoms of depression and subsequent mental healthcare treatment: a Danish register-based 6-month follow-up study on a population survey. *BMJ Open* 2018;8(10): e020945. doi: 10.1136/bmjopen-2017-020945 [published Online First: 2018/10/06]
- III. Socioeconomic position and perceived barriers to accessing mental health care for individuals with symptoms of depression: results from the Lolland-Falster Health Study. (In review, *BMJ Open*)