Introduction

Both socio-economic position and gender are social stratifying characteristics that are related to various health outcomes. While there is a clear social gradient in severe psychiatric disorders, there are contradictory results regarding common mental disorders (depression, anxiety and other stress-related disorders). Some studies show associations between low socio-economic position and common mental disorders, whereas others do not.

When studying inequalities in health, indicators of socio-economic circumstances are often used interchangeably. Often one indicator (e.g. occupational class, education or income) is used as a proxy for the whole socio-economic environment. Several researchers question this approach and emphasize the importance of considering multiple indicators of socio-economic position.

Background: There are contradictory results regarding whether there is a social gradient in common mental disorders or not, or if this relation differs for different indicators or by gender. We analysed the relation between various measures of socio-economic position and later psychological distress among men and women in a Swedish context.

Methods: The study is based on data from the Northern Swedish Cohort (N= 1001, 93.5% response rate), a 27-year prospective study. Logistic regression was used to explore the relation between various indicators of socio-economic position at age 30 (occupation, education, financial strain, cash margin, unemployment and living primarily on social welfare or unemployment insurance) and psychological distress (age 42), controlling for earlier psychological distress (age 21) and parental occupational class. Register data were used to measure unemployment. All other variables were self-reported, and measured by a questionnaire.

Results: Financial strain and living on social welfare or unemployment insurance at age 30 were associated with psychological distress at age 42 for men and women. Poor cash margin and unemployment were only associated with psychological distress in women, after controlling for potential confounders. Low occupational class and low education were not significantly related to later psychological distress.

Conclusion: The two most commonly used measures of socio-economic position, occupation and education, were not significantly associated with psychological distress while other, less studied measures were. This study highlights the importance of measuring socio-economic position in several ways when studying common mental disorders, as well as to take gender into account.

Which socio-economic measures are associated with psychological distress for men and women? A cohort analysis

Ida Linander1,2, Anne Hammarström1, Klara Johansson1

1 Department of Public Health and Clinical Medicine, Umeå University, Umeå, Sweden
2 Umeå Centre for Gender Studies, Umeå University, Umeå, Sweden

Correspondence: Ida Linander, Department of Public Health and Clinical Medicine, Family Medicine, Umeå University, SE-901 85 Umeå, Sweden. Tel: +46 736 98 64 83, Fax: +46 90 77 68 83, e-mail: ida.linander@umu.se
of measuring several indicators of socio-economic circumstances in
order to reflect the complexity of the socio-economic environment.
This also allows for a better understanding of how socio-economic
position can lead to social inequalities in health.10,13
Occupation-based classifications are often based on a historically
male-dominated labour force and are therefore more detailed for
these jobs as compared with female-dominated jobs.10,14 Gender is
also relevant in relation to education; the same level of education
leads to higher salaries for men than for women.11 Even though the
different living conditions of men and women are well known, they
are rarely taken into consideration when measuring socio-economic
position or interpreting findings.14 In some studies, gender is
ignored. Because the socio-economic environment is complex,
other unmeasured factors in a gendered environment may make
individuals of one sex more vulnerable to certain risk factors.15
For instance, Kosidou et al.16 found that in a Swedish context,
income is more important for women's mental health, while type
of occupation is more important for men.
Occupation, education and income are the measures most
commonly included in studies of the social gradient of common
mental disorders.6 In prior research, there have been contradictory
results, particularly in relation to occupation and education.12–19
Several other dimensions of individual socio-economic position
can also be measured, such as unemployment, wealth, poverty,
social deprivation or material deprivation.10,11
Because common mental disorders often are undiagnosed, it can
be hard to study them through clinical samples, and thus,
population studies with self-reported subjective measures are
needed.20,21 One way to identify individuals who have, or are at
risk of developing common mental disorders is through indexes of
self-reported psychological distress based on questionnaires about
symptoms of depressed and anxious mood or malaise.22
A challenge of studying socio-economic factors as determinants of
common mental disorders is that causal relations can be reversed,
i.e. that mental health problems could hinder social mobility or
cause loss of social position (health-related selection). Several
previous studies use a cross-sectional design and have not been
able to make assumptions regarding the causal direction of the
relations.8,10,19 The aim of this longitudinal study was to analyse
various measures of socio-economic position as possible determin-
ants of psychological distress among men and women, controlling
for earlier psychological distress.

Methods
Participants
The Northern Swedish Cohort consists of all pupils (n = 1083; 506
girls and 577 boys) who attended their last year of compulsory
school in 1981 (age 16) in all schools in Luleå, a middle-sized
town in the north of Sweden. The cohort was originally set up to
study the health consequences of youth unemployment.23 The
response rate at the most recent follow-up in 2007 was 93.5%
(n = 1001) of those still alive (original cohort of n = 1071). The
response rates of earlier follow-ups were 98.1% in 1986 and 96.3%
in 1995, but only respondents who participated in all follow-ups
were included in the current study. The low attrition was due to
several factors: an extensive effort to contact all participants, invit-
ations to class reunions and provision summary results to the
participants. A more detailed description about the cohort is
published elsewhere.23 The internal non-response rate was <5%
for all variables except for occupational class (see below for
analyses of non-respondents).

Procedure
All participants responded to a comprehensive questionnaire at ages
16, 18, 21, 30 and 42 (Autumn 2007). The questionnaire consisted of
about 90 questions, mostly derived from well-known and validated
questionnaires,23 regarding employment, school, socio-economic
conditions, health and health behaviours. Most of the questions
were repeated at the follow-up surveys.

Register data of the number of unemployment days per year during
1992–1995 were obtained from the Longitudinal Integration
Database for Sick Leave and Labour Market Studies (LISA) from
Statistics Sweden.

Ethical approval
The Regional Ethics Vetting Board in Umeå approved the study (dnr
07-057M).

Study design and analyses
Questionnaires data at ages 16 (1981), 21 (1986), 30 (1993) and 42
(2007), and register data were used.

Dependent variable: psychological distress
Psychological distress at age 42 was measured with a question24
asking whether the respondent had experienced restlessness, concen-
tration problems, worries/nervousness, palpitations, anxiety or other
nervous distress during the last 12 months. Factor analysis showed
that all items fell out in one factor. The items were summed to form
an index (range 0–6), with a Cronbach’s alpha of 0.77. Because the
index was not normally distributed, it was dichotomized at the 75th
percentile. This was the equivalent of reporting at least one item.
The question is derived from the Swedish Survey of Living Conditions24
and has been used in several previous studies on gender and
inequalities in health.25,26

Independent variables
Exposure: Several different measures of socio-economic position
were used from age 30:
‘Occupational class’ was based on self-report of occupation, and
coded into three groups according to the Swedish SES classification
from Statistics Sweden:27 upper white-collar, lower white-collar and
blue-collar. Unemployed were asked to report their latest
occupation. Self-employed (n = 33) were categorized according to
their educational level. Occupational class had an internal non-
response of 7.3% (n = 73); most of whom were students at the
time (n = 38). Respondents and non-respondents were not signifi-
cantly different with regard to the outcome, potential confounders
or gender. Occupational class was also available at age 42 and was
used in sensitivity analyses.
‘Education’ was measured with a question about highest
completed education and dichotomized into ‘less educated’
(elementary school and upper secondary school), and ‘highly
educated’ (academic degree or other postsecondary education).
‘Cash margin’ was measured with a question asking if the re-
spondents could obtain SEK 13 000 (about EUR 1500) in a week
from their own assets.
‘Financial strain’ was measured as a validated index (range 0–22)
and based on 11 questions asking if respondents had had to abstain
from any of the following for lack of financial recourses during the
last 12 months: a cooked meal, buying clothes that they or
their family needed, paying bills on time, going to the cinema/
concert/theatre, inviting friends home, travelling to see relatives or
friends in other places, buying a present, going on holiday,
subscribing to the daily newspaper, spending time on a hobby or
leisure activity or going to a restaurant/pub. Each question had a
three-grade scale (0–2). Financial strain was used as a continuous
variable. Due to relatively high internal non-response rate, an
imputation was performed for those respondents (n = 52) who had
missed one or two items. For them, the missing items were coded as
0 (never/not applicable), as we believe that they assumed they
did not need to answer items that did not apply to them. There were no significant difference between these 52 and those who answered all items with regard to the outcome, potential confounders or gender. Respondents who missed more than two items were considered as internal non-respondents for the whole index (n = 33).

Receiving ‘social welfare and/or unemployment insurance’ was measured with a question asking what the respondent primarily had been living on in the last 12 months. Respondents were split into two categories—those who primarily lived on social welfare or unemployment insurance, and those who did not.

Register data were used to measure ‘unemployment’. The annual total number of days of unemployment was available from 1992 to 1995. This variable was transformed into months of unemployment and used as a continuous variable.

**Potential confounders**

‘Psychological distress at age 21:’ To control for potential health-related selection, psychological distress at age 21 (the follow-up closest in time before the exposure) was coded the same way as the dependent variable (psychological distress at age 42).

‘Parental occupational class’ was measured at age 16 with two questions regarding the occupation of their mother and father, and one question regarding which parent the participant lived with. Respondents were classified into two groups according to the social group classification: two working-class parents, or at least one white-collar parent. For those who were living with one parent or had one unknown or deceased parent, only the occupation of the parent they lived with was considered (a more detailed description has been published elsewhere).

**Analyses**

Descriptive statistics are presented in table 1, and differences between men and women were tested with \( \chi^2 \) -tests or Mann–Whitney U tests. Crude and multivariate logistic regression was used to test the relationship between the various indicators of socio-economic position and psychological distress (age 42) and to control for parental occupational class and health-related selection, i.e. psychological distress at age 21. Regressions were done separately for men and women for each of the indicators of socio-economic position. When the associations differed between men and women, additive interaction analyses were performed in order to test for interaction between the exposure and gender, and relative excess risk due to interaction (RERI) with 95% confidence interval (CI) was reported as suggested by Andersson et al. SPSS version 21 was used for all data analyses, and a tool provided by Andersson and colleagues was used to calculate the confidence interval for RERI.

### Results

More women than men reported psychological distress at ages 42 and 21, but the difference was only significant at age 42. At age 30, there were more men in the upper white-collar group and more women in the lower white-collar group. Women were more likely to have postsecondary school education than men.

More women (more than half) than men had poor cash margin at age 30, and more women reported financial strain. There was no difference between men and women regarding months of unemployment or whether they lived primarily on social welfare and/or unemployment insurance during the last year (about 18% in each group).

In the logistic regression analyses (table 2), there were no significant relations between occupational class or educational level and psychological distress at age 42 for men or women. Sensitivity analyses have been performed with occupational class measured at age 42 and psychological distress at the same age (controlling for earlier health at age 30 and parental class). These analyses did not show any significant associations either (data not shown).

Financial strain and living on social welfare and/or unemployment insurance at age 30 were significantly associated with self-reported psychological distress for men and women in bivariate analyses and after controlling for psychological distress at age 21 and parental occupational class. Poor cash margin was significantly

<table>
<thead>
<tr>
<th>Variable</th>
<th>n</th>
<th>Women (n = 481)</th>
<th>Men (n = 514)</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychological distress at age 42, %</td>
<td>995</td>
<td>42.2</td>
<td>32.1</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Psychological distress at age 21, %</td>
<td>992</td>
<td>30.2</td>
<td>26.8</td>
<td>0.068</td>
</tr>
<tr>
<td>Parental occupational class</td>
<td>991</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>At least one white-collar parent, %</td>
<td></td>
<td>63.4</td>
<td>60.6</td>
<td>0.354</td>
</tr>
<tr>
<td>Two working-class parents, %</td>
<td></td>
<td>36.6</td>
<td>39.4</td>
<td></td>
</tr>
<tr>
<td>Socio-economic position indicators at age 30</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Occupational class</td>
<td>928</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper white-collar, %</td>
<td></td>
<td>37.2</td>
<td>37.1</td>
<td>0.005</td>
</tr>
<tr>
<td>Lower white-collar, %</td>
<td></td>
<td>23.8</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>Blue collar, %</td>
<td></td>
<td>39</td>
<td>46.9</td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td>970</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High, %</td>
<td></td>
<td>41.9</td>
<td>31</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Low, %</td>
<td></td>
<td>58.1</td>
<td>69</td>
<td></td>
</tr>
<tr>
<td>Cash margin</td>
<td>984</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Good, %</td>
<td></td>
<td>47.4</td>
<td>61.7</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Poor, %</td>
<td></td>
<td>52.6</td>
<td>38.3</td>
<td></td>
</tr>
<tr>
<td>Financial strain</td>
<td>968</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean score (SD)</td>
<td></td>
<td>6.3 (5.5)</td>
<td>4.5 (5.4)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>No financial strain, %</td>
<td></td>
<td>22.2</td>
<td>40.1</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Living primarily on social welfare or unemployment insurance the last 12 month</td>
<td>989</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No, %</td>
<td></td>
<td>82.8</td>
<td>82.7</td>
<td>0.96</td>
</tr>
<tr>
<td>Yes, %</td>
<td></td>
<td>17.2</td>
<td>17.3</td>
<td></td>
</tr>
<tr>
<td>Unemployment between 1992–1995</td>
<td>983</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of unemployment months, mean (SD)</td>
<td></td>
<td>5.0 (7.9)</td>
<td>6.4 (9.6)</td>
<td>0.451</td>
</tr>
<tr>
<td>No unemployment days, %</td>
<td></td>
<td>52</td>
<td>53.7</td>
<td>0.59</td>
</tr>
</tbody>
</table>

P values for categorical variables were calculated using the \( \chi^2 \) test, and for continuous variables using the Mann–Whitney U test. Bold font represents a significant coefficient.

a: An index of self-reported symptoms, dichotomized at the 75th percentile.
associated with psychological distress in all models for women but not for men. Additive interaction analysis (table 3) showed significant interaction between gender and cash margin, meaning that the additional risk of combining two risk factors (being a woman and having low cash margin) was significantly above zero.30

The number of unemployment months between 1992 and 1995 was associated with psychological distress. The association was significant for men and women in the crude analyses but remained significant only for women after controlling for earlier psychological distress (age 21) (model 1). Because the variable is continuous, the odds ratio (OR) of 1.03 for women means that for each month of unemployment, the odds of psychological distress increased by 3%.

Discussion

On the results

A socio-economic gradient in psychological distress was found for financial strain and living on social welfare and/or unemployment insurance at age 30 for men and women, and for poor cash margin among women only. For unemployment, there were bivariate associations with psychological distress for both men and women, but among men, this association seemed to be largely due to health selection into unemployment. Our findings that the prevalence of psychological distress increases between age 21 and 42 is consistent with results from the Swedish Survey of Living Conditions from the same time period and age groups.31

Low occupational class and low education were not significantly related to later psychological distress, in spite of the fact that these measures have been shown to be important determinants of mortality and morbidity for many other health conditions.5,12,32–34 However, earlier research has also shown that low occupational class and low education have weaker associations with psychological distress and common mental disorders compared with measures of economic hardship.8,15,17–19

Table 2 Logistic regression analyses for psychological distress (age 42)–separate regression for each indicator and presented as crude and adjusted OR with 95% CI, for women and men separately

<table>
<thead>
<tr>
<th>Indicator</th>
<th>N</th>
<th>Crude OR (95% CI)</th>
<th>Model 1 OR (95% CI)</th>
<th>Model 2 OR (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Women</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Occupational class</td>
<td>438</td>
<td>Upper white-collar 1 1 1</td>
<td>Lower white-collar 0.99 (0.61–1.63) 1.06 (0.64–1.75) 0.98 (0.58–1.64)</td>
<td>Blue-collar 0.97 (0.63–1.51) 0.92 (0.59–1.44) 0.85 (0.54–1.35)</td>
</tr>
<tr>
<td>Education</td>
<td>455</td>
<td>High 1 1 1</td>
<td>Low 1.11 (0.76–1.62) 1.11 (0.75–1.64) 1.07 (0.72–1.58)</td>
<td>Cash margin 1 1 1</td>
</tr>
<tr>
<td>Financial strain</td>
<td>467</td>
<td>Good</td>
<td>Poor 1.98 (1.36–2.87) 1.91 (1.30–2.81) 1.86 (1.26–2.74)</td>
<td></td>
</tr>
<tr>
<td>Living primarily on social welfare or unemployment insurance the last 12 months</td>
<td>468</td>
<td>No</td>
<td>Yes 1.86 (1.14–3.02) 1.80 (1.10–2.96) 1.75 (1.06–2.89)</td>
<td></td>
</tr>
<tr>
<td>Number of months of unemployment</td>
<td>465</td>
<td>1.04 (1.02–1.06) 1.03 (1.01–1.06) 1.03 (1.01–1.06)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Men</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Occupational class</td>
<td>471</td>
<td>Upper white-collar 1 1 1</td>
<td>Lower white-collar 1.70 (0.96–3.03) 1.80 (1.00–3.23) 1.69 (0.93–3.06)</td>
<td>Blue-collar 1.28 (0.82–2.01) 1.19 (0.76–1.89) 1.08 (0.67–1.74)</td>
</tr>
<tr>
<td>Education</td>
<td>496</td>
<td>High 1 1 1</td>
<td>Low 0.95 (0.63–1.44) 0.90 (0.59–1.37) 0.81 (0.52–1.26)</td>
<td>Cash margin 1 1 1</td>
</tr>
<tr>
<td>Financial strain</td>
<td>499</td>
<td>Good</td>
<td>Poor 1.28 (0.87–1.90) 1.24 (0.83–1.85) 1.18 (0.78–1.77)</td>
<td></td>
</tr>
<tr>
<td>Living primarily on social welfare or unemployment insurance the last 12 months</td>
<td>502</td>
<td>No</td>
<td>Yes 2.03 (1.26–3.27) 1.77 (1.08–2.89) 1.68 (1.02–2.77)</td>
<td></td>
</tr>
<tr>
<td>Number of months of unemployment</td>
<td>498</td>
<td>1.03 (1.01–1.05) 1.02 (1.00–1.04) 1.02 (1.00–1.04)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Model 1: Adjusted for earlier psychological distress (age 21).
Model 2: Adjusted for earlier psychological distress (age 21) and parental occupational class.
Bold font represents a significant coefficient.

a: An index of self-reported symptoms, dichotomized at the 75th percentile.

Table 3 Additive interaction analysis for cash margin and gender—presented as adjusted OR with 95% CI and RERI with 95% CI

<table>
<thead>
<tr>
<th>Gender</th>
<th>Adjusted OR (95% CI)*</th>
<th>RERI (95% CI)b</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men with good cash margin</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Men with poor cash margin</td>
<td>1.19 (0.79–1.79)</td>
<td></td>
</tr>
<tr>
<td>Women with good cash margin</td>
<td>1.36 (0.92–1.99)</td>
<td></td>
</tr>
<tr>
<td>Women with poor cash margin</td>
<td>2.49 (1.73–3.58)</td>
<td>0.94 (0.11–1.78)</td>
</tr>
</tbody>
</table>

a: Adjusted for earlier psychological distress (age 21) and parental occupational class.
b: Relative excess risk due to interaction. Confidence interval above zero means there is a significant interaction.
Pulkki-Raback et al. discuss the role of the welfare state as a possible explanation for why occupation and education have weaker associations with common mental disorder. Why this does not apply to other health conditions is not discussed. In a welfare state, with its equalizing policies and strong labour unions, occupation and education may be imprecise measures of socio-economic disadvantages. Socio-economic inequalities not only encompass unequal distribution of economic resources, but also other material, political, social and cultural resources. These various resources could be of different importance in determining different health conditions. This is one possible explanation of why occupation and education are important determinants of other health conditions but seem less important in determining common mental disorders. This issue needs to be explored further. To measure occupational class at age 30 can be problematic, as participants might not have established a position on the labour market at that age. However, sensitivity analysis with occupational class at age 42 showed similar results. Our results are also consistent with other studies measuring occupational class later than age 30.

For low cash margin, additive interaction analysis confirmed an interaction with gender, meaning that having low cash margin is significantly worse for women’s mental health than for men. In an earlier study, income was more important for predicting common mental disorders among women than among men. The authors suggest that this could be due to the double burden of paid and unpaid work for women. Wealthier families might have greater access to household services that relieve those women of some of the unpaid work.

Mental health consequences from unemployment are well known, and earlier studies on this cohort show that unemployment is a determinant of both physical and mental ill health among men and women. The results here indicate that unemployment is an important determinant of common mental disorders at least among women, while among men there might be a health selection into unemployment, meaning that earlier psychological distress could be a cause of unemployment.

Living primarily on social welfare or unemployment insurance is an aspect of the socio-economic environment that is seldom studied as an indicator of socio-economic position. Galobardes et al. (2007) argue the importance of studying various indicators of socio-economic position in order to better understand the pathways between exposure and outcome. The indicator ‘living primarily on social welfare or unemployment insurance’ could reflect both an economic aspect and social stigma. Our results indicate that this measure of socio-economic position could be an important determinant of common mental disorders among both women and men.

If we had only used the two most commonly studied indicators of socio-economic position (occupation and education), we would have missed the socio-economic gradient in psychological distress. Using several indicators is important because the various indicators can better capture different aspects of the socio-economic environment and thus provide better opportunities to capture a potential social gradient.

Overall, there is a lack of public health research regarding how different indicators can be understood and used in relation to different health conditions. There is a need for more research and discussion about how the context (for example, a welfare state with equalizing policies) and how unequal distribution of various resources in the socio-economic environment affects the relation between socio-economic position and common mental disorders.

**On the methods**

The main strengths of this study are the longitudinal design, long follow-up and high response rate. The high response rate is especially important when examining socio-economic position, as it is known that socially marginalized individuals are overrepresented among non-respondents. Another strength is the use of register data on unemployment.

To measure exposure at a follow-up earlier than the outcome, and the health selection before that, is a research design that strengthens the conclusions. However, the time-period between measures of exposure and outcome is quite long here, which increases the risk of getting non-significant results where there is in fact a social gradient. Thus, it is interesting that we did find associations with the outcome for financial strain, unemployment and low cash margin, which are more likely to change over 12 years, but not for education and occupation, which are less likely to change.

Previous analyses indicate that this cohort is representative of the country with regard to socio-demographics and health status. However, the cohort is closed, and therefore relatively homogenous in ethnicity. Our study confirms the importance of performing separate analyses for men and women to study if the relation between the exposure and outcome differs. In datasets with a more heterogeneous population with regard to age and ethnicity, separate analyses by those dimensions would also be interesting.

**Conclusions**

Socio-economic position plays a significant role for later psychological distress, but this relation depends on the measure of socio-economic position. The two most commonly studied indicators, occupation and education, seem to be weaker determinants of common mental disorders. Economic hardship, unemployment and source of income seem to be stronger determinants of common mental disorders. Cash margin significantly interacts with gender, and is a determinant of psychological distress for women but not for men. This study highlights that it is important to measure socio-economic position in several ways in public health research, as well as to take gender into account. Future research needs to address the role of context, and how distribution of different resources in the social environment affects the risk for common mental disorders.

**Acknowledgement**

The authors would like to thank all the study participants.

**Funding**

The study was financed by grants from FORMAS, grant number 259-2012-37, the County Council of Västerbotten, grant number 322941, and the Swedish Research Council, grant number 344-2011-5478.

**Conflicts of interest:** None declared.

**Key points**

- Previous research is inconclusive concerning the association between various measures of socio-economic position and common mental disorders and whether the relation differs between different measures of socio-economic position.
- This longitudinal study found an association between socio-economic measures and later psychological distress, but only for less commonly studied measures.
- Two of the most commonly used measures, occupation and education, were not associated with psychological distress. Economic hardship and unemployment seem to be stronger determinants of common mental disorders.
- Future research needs to consider the complexity of the socio-economic environment. Research is needed about
the effect of context and how distribution of different resources is related to common mental disorders.

- Men and women may have different exposure to, and impact of socio-economic position. This is something that needs to be considered in future research.

References