Author's response to reviews

Title: Child and adolescent psychiatric patients and later criminality.

Authors:

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Author's response to reviews: see over
We are hereby resubmitting our revised manuscript MS: 1063609851289714 with the title changed to “Child and adolescent psychiatric patients and later criminality.” As suggested by the reviewers we deleted “A prospective study” from the title.

First of all we wish to thank the two reviewers for the very valuable and constructive remarks and suggestions and we have made major as well as minor essential revisions according to their comments. As the reviewers in many circumstances have given similar remarks we have answered them in detail in one of the reports and referred to this # when answering the other reviewer. Point-by-point responses are given below:

**Reviewer's report: Ellen Kjelsberg**

**General**

*There is some gold here but it is well hidden. A substantial amount of work is needed, in order to make the manuscript publishable.*

**Authors respond:**

We have reorganised and rewritten the manuscript and we hope that our changes have made the manuscript publishable.

**Major Compulsory Revisions**

1. *In the Abstract the authors state that “This study investigated whether or not risk changed over the past 50 years for former CAP patients to be registered as criminals as adults”. I am not convinced that the study design chosen can answer this research question in a satisfactory manner. I find it hard to accept that the study population from the Child Guidance Clinics in Stockholm recruited during the years in 1953-1955 can be directly compared with the 1975-1990 Jämtland cohort. Firstly, the Stockholm cohort is not properly described. What was the age at CAP treatment in that population? From what I can understand (p. 9) there must have been substantial differences in age at admission to CAP and the psychiatric disorders present in the two cohorts. Systematic information on these issues must be provided. In addition, the Stockholm cohort consisted of out-patients only, while the Jämtland cohort included both in- and out-patients. One population was urban, the other rural. And what about admission rules for entry*
into care? I imagine the treatment regimes were substantially different. What about length of therapy/hospital admissions?

Authors respond:

As there are a number of Swedish prospective studies using similar methods and following up boys and girls over 20-40 years and covering the period from 1928 – 2003 we compared the risk for girls to be registered for criminality in the different available samples and made in more detail the comparison between published data from the Stockholm sample from 1953-1955 to the present sample. We agree with the reviewer’s remark that such a comparison may be problematic.

As we have compared the published results from the Stockholm study with the present results we followed the suggestions to focus on the present results and to move this comparison on similarities/differences between the two samples to the discussion.

The background for the comparison is as follows: The Stockholm study was set up with a research protocol which later became a model for the CAP records/files that were developed from the mid 1950’s and onward when CAP became a nation-wide health organisation for Swedish county councils.

The protocol that was set up for the Jämtland-study in 1994-1995 was based on the hospital records but organized to cover the data that empirically had been found to be of importance from previous Swedish CAP-research incl. the Stockholm Study.

In the Jämtland group primary data was based on based upon information from both out- and inpatient cases while the Stockholm study was based on out-patients. However, in the different age groups of the Stockholm patients 16%-22% of the boys and 1-3 % of the girls were referred to inpatient CAP care during the follow-up period, but the primary data for the follow up was based only on the information from the outpatient protocols. We have summarized our answer about the comparison between Jämtland and Stockholm at comment #8

2. If the authors want to address the issue of changes in criminal activity of CAP patients over time, I suggest that they focus on exploring possible secular trends in their own Jämtland population over the years they have investigated: 1975-1990. They might find it useful to read my research report: Kjelsberg E. “Conduct disordered adolescents hospitalised 1963-1990. Secular trends in criminal activity” published in European Child & Adolescent Psychiatry recently (2005; 14: 191-199). In this article I have explored a very similar material as to changes over time in criminal activity. Their own material spans 15 years and a comparison between cohorts may be warranted, due to changes in the use of illegal drug and increasing adolescent delinquency over the years in question.

Authors respond:

We have with great interest read the article mentioned above. The material consists as well as ours of CAP patients but the Norwegian group is solely inpatients. In some ways the cohorts are comparable but in our material some important information is missing
and that makes a comparison harder. Kjelsberg’s study population was divided into four consecutive cohorts and gender-specific cohort differences in registered criminality were investigated. When comparing the two cohorts it was shown that our study group was younger at admission to CAP than the Norwegian group. That may be explained by the fact that it was a greater part of outpatients in our study and the Norwegian study comprised hospitalized patients. Significant changes in criminal activity in our study group, when dividing it in four cohorts, was that female criminal activity was most frequent in the first cohort (admitted to CAP 1970-1974) and then decreasing.

3. A comparison with the Stockholm study should be confined to the Discussion section, with a short discussion of possible explanations for the differences found, taking into account reasons why the two study populations might not be directly comparable. The Stockholm cohort should also be cited in Table 7.

Authors respond:

We moved the comparison to the Discussion section and have summarized our answer about the comparison between the samples at comment #8

4. One serious shortcoming of the paper is that it does not discuss the vast changes in the illegal drugs scene that has taken place over the last several decades. The authors focus extensively on alcohol consumption and alcohol legislation but do not mention illegal drugs. Illegal drug use is more than alcohol use linked to criminal activity: it is illegal to possess, trade, and use, and drug users do often support their habit through illegal activities.

Authors respond:

See discretionary Revisions #2

5. There seems to be some confusion regarding the classification and categorisation of crimes. There are inconsistencies, between the text and the tables, and between tables. Particularly, the categories used in Table 2 seem odd. Some of the five categories used (Pilfering, Severe property damage, Vandalism, Violence and Narcotics) seem to be overlapping (Serious property damage and Vandalism) while others seem to be missing (Crimes against property). (I can not believe that Crimes against property is meant to be covered by the category Severe property damage?). Usually, Crimes against the Penal Code lists burglary, larceny, aggravated larceny and motor vehicle theft among Crimes against property” while Misdemeanours against the Criminal Code, on the other hand, usually include Petty larceny (what the authors call pilfering?). Other misdemeanours include Inflicting damage to property and Misdemeanour against public order or peace. These terms and definitions may vary between countries, due to differences in legislation, and it is important that the authors clarify if they are used differently in Sweden than in other Western countries.

Authors respond:

We have followed the suggestions given by the reviewers and the text is changed according to their remarks. A section called Information on crimes has been added in the methods section. We have deleted table 2. Although it was based on a similar table from
the Swedish National Council for Crime Prevention valid for the general population, it is obvious that the categorisation of crimes is confusing if you are not familiar with their procedures.

6. As already mentioned, I do not believe that the result from the Värmland should be directly compared to the Stockholm study. But even if such a comparison was valid, I do not believe that the authors can conclude that the differences observed were due to the four reasons listed in the Conclusion of the Abstract. The study design can, at best, demonstrate that changes in criminal behaviour have taken place. It can not conclude as to causal factors. The authors may (and should) discuss these issues but they must be careful not to conclude. And again, illegal drug use has not been listed as a possible contributing factor.

Authors respond:

In prospective follow-ups of Swedish CAP patients (Nylander 1979), of Swedish children of alcoholics (Rydelius 1981) and when describing young alcohol abusers in Sweden (Rydelius 1983) there was a link found between alcohol and illegal drug abuse. There are also annual surveys of the use of alcohol, illegal drugs and smoking habits among teenage school boys and school girls showing that alcohol consumption has gone up considerably among these groups from the 1970’s until today while illegal drug abuse show varying popularity over the years. From these reasons it seems adequate to use alcohol consumption as a risk indicator as it in Swedish samples has been found to be linked to co morbid use of illegal drugs.

7. The diagnostic procedures have to be described in detail. If a plain translation into the DSM-10 system of the clinical diagnoses given at the time of CAP treatment was all they did, this have to be clearly stated, and the inherent weaknesses discussed. Gender specific prevalences of the different disorders should be provided, preferably in a table. The authors state in their research hypothesis (p. 4) that they wanted to investigate CAP patients who “were identified by CAP units as having behavioural and school problems and dysfunctional families” at the two points in time. Does this imply that they selected a sub-population for these analyses? If so, how was this carried through?

Authors respond:

In a new section called Information from hospital records in the methods section this is described.

8. To summarize: My main advice is to revisit the data and concentrate on a proper description of all the interesting findings in the Jämtland data. These data deserve publication, in their own right. Descriptive data should be followed by multivariate analyses eliciting gender-specific predictors for criminal development, as they have already started to do. Comparison with the Stockholm study results should be left to the Discussion.

Authors respond:
The 1953-1955 CAP cohort from Stockholm was one of three studies (CAP-patients, average Stockholm boys and delinquent boys) using the same protocol (which in turn was based on the protocol that JW MacFarlane et al used for their “A developmental study of the behaviour problems of normal children between twenty-one months and fourteen years” Publ Child Dev Univ Calif. 1954;2:1-222).

The Stockholm CAP-patients were then followed over 10, 20 and 30 years using the same register based method. Using the same method, the average Stockholm boys and delinquent boys were followed over 18 years.

The results from the CAP-patients have been presented both in Swedish, in English and in German as follows:


de Chateau P. [30 years later: children attending a counseling service up to 3 years of age] Prax Kinderpsychol Kinderpsychiatr. 1998 Sep;47(7):477-85. German

As the cohort and the results have been presented in detail, we made references to the published data from the 20 year follow up and used these for comparisons. For these comparisons and because of the age ranges in the two cohorts, we did only use patient data in the Jämtland sample from the sub-sample being followed up over 20 yeas.

**Minor Essential Revisions**

1. *Firstly, the paper is in dire need of tightening up. The Background and the Discussion need to be much more focused, and references to international research literature should be incorporated whenever appropriate. Moreover, the discussion should limit itself to discuss issues that are addressed by the current research!*

**Authors respond:**

As mentioned above we have reorganised and rewritten the manuscript and we hope that our changes have made the manuscript publishable.

2. *I find the title of the article somewhat misleading. The authors have not conducted a proper prospective investigation. They have, at the time of the follow-up, re-visited old hospital records. Hence, the study could, at best, be called quasi-prospective.*

**Authors respond:**

Since both reviewers considered the title misleading or confusing it has been changed.
During 1994-1995 were all hospital files reassessed according to the same protocol to have comparable information on the patients. For diagnostic purposes the diagnoses were reassessed according to ICD-10 (Introduced in Sweden in 1997). These protocols were used to assess the information at the time from the admittance to the CAP-care, the information from the care and onwards up to 2003. You could say, as primary information from 1975-1990 was used for the follow-up, that the study has a prospective rather than a retrospective design, especially from 1995 and onwards.

The title has been changed to: “Child and adolescent psychiatric patients and later criminality.”

3. The Abstract needs to be re-written, in order to reflect the contents of the article. Routine statistical procedures need not appear in the Methods section of the Abstract.

Authors respond:

The abstract has been rewritten.

4. The Background starts with mentioning a number of Swedish research findings, with the references (1-14) lumped together at the end of the paragraph. The different research results cited need to be linked up to the articles where they originated.

Authors respond:

Each reference has been linked up to an article.

5. The authors do often make statements without giving proper references, for example on p. 8: “… a comparison between CAP inpatients in Jämtland and Stockholm in 1981 …”. Proper references to the article/report/book must be provided.

Authors respond:

The study mentioned is an unpublished prospective study where data on consecutive CAP-patients admitted for inpatient care at a Stockholm CAP-clinic, were collected during one year, 1981, together with data on their parents and siblings to form the basis for a 25 year follow up study. The group was described in 1981 but all data have been stored and will be further analysed when the data from the follow-up is completed in 2008.

6. I am not able to follow the argument put forth in the middle paragraph on p. 9.

Authors respond:

This part has been extensively revised to be clear.

7. The Table headings need improving.

Authors respond:
We have tried to improve the table headings.

8. The authors need to substantiate their claim that the rise in crime rates has been higher in CAP patients than in the general population. In the manuscript they only cite point prevalences.

Authors respond:
When controlling available crime statistics 1995 to 2003 it was shown that the crime rates was significant higher in the CAP patients group than in the general population (15 years and older) every year except one year (1999).

**Discretionary Revisions**

1. **Table 6: Why was not significance testing carried out on the demographical data?**

Authors respond:
That has been done, see table 6.

2. **Figure 1 states that during the years 1910-1950 there was “Alcoholism in men only”. This statement can not be taken seriously. Furthermore, the Figure seems to be out of context in this article.**

Authors respond:
Figure 1 is based on official data from Swedish Statistics on alcohol consumption and on research findings from the period. It shows how the long period of temperance laws (1916 – 1977) and alcohol restrictions (1918 – 1955) in Sweden, as illustrated in Figure 1, may have had real impact on the secular trend.

There is an interesting previous finding in Swedish CAP research worth mentioning in this respect. Among the four pioneering Swedish theses in CAP using genetic epidemiology as the method (Ahnsjö S: Delinquency in Girls and its prognosis, Acta Paediatrica vol XXVIII. Suppl III, 1941; Otterström E: Delinquency and children from bad homes, Acta Paediatrica, vol XXXIII. Suppl V, 1946; Ramer T: The prognosis of mentally retarded children. A follow-up study of 626 special-class cases and 589 control cases born 1905-1917, 1946; Hallgren B. Specific dyslexia (congenital word-blindness); a clinical and genetic study, Acta Psychiatrica et Neurologica, Suppl 65, 1950) Edith Otterström in her study found that children of alcoholics in those days (although a tendency in this direction was found in her data) did not become alcoholics themselves more often than children from non-alcoholics but however, developed criminality.

In the discussion the following has been added to clarify the change over time that has been found when comparing Swedish CAP-studies:
“In Rydelius’ prospective study of “Children of alcoholic fathers” from 1958-1978 [4] it was found that boys of alcoholic fathers more often than boys of control fathers developed both criminality and alcohol addiction (an co morbid use of illegal drugs as well). Concerning boys, similar results were also found by Nylander & Rydelius [19] when comparing “Children of alcoholic fathers from excellent versus poor social conditions” followed from 1961-1967 up to 1981. In these three previous studies similar results were found for girls who showed a low risk of later criminality. This indicates the effects of a secular trend over the past 30 years as more girls were found to be registered for criminality in the present study compared to the CAP patients from the 1950’s. This secular trend with an increasing number of girls later registered for criminality is in line with Kjelsgard’s recent findings in Norway using sophisticated statistical analysis (Kjelsgard 2005).

The following two scientific opinions on Otterströms thesis from 1946 are supporting the quality of her findings:

Lee N. Robins in St Louis USA, wrote in her book “Deviant children grown up” in 1966: “Edith Otterström (1946) followed all 2346 of the children who came into contact with the Child Welfare board of Malmö, Sweden, between 1903 and 1940 4 to 31 years after referral. She contrasted the outcomes of four groups: the official delinquents; those with delinquent behaviour who had not appeared before a Juvenile Court; children removed from their homes because it was thought the home might encourage delinquency, although delinquent behaviour in the children was still minimal at referral; and children without evidence of delinquent tendencies removed from homes. All four groups were followed through the records of a variety of public agencies. The author was able to compare the four groups to each other and to general population rates with respect to police records, occupation, alcohol use, and marital status. She also related outcome with respect to these variables to behaviour problems in the parents, as reported in the Welfare, Board records. Although little notice has been given this study in the American literature, it is an extraordinary achievement in length of follow-up, size of sample, variety of the criteria for adult adjustment, and objectivity of methods used both in the original categorizing of the subjects and in their later evaluation. This monograph also provides an exhaustive search of the literature up to the date of publication.”

John Cowie, Valerie Cowie, Eliot Slater from the Medical Research Council’s Psychiatric Genetics Research Unit at the Maudsley Hospital in London, UK, wrote in 1968 in their book on “Delinquency in girls”:

A prognostic study of great importance was carried out in Sweden by Edith Otterström (1946). She had the advice and help of Gunnar Dahlberg, at that time one of the world authorities on psychiatric genetics and epidemiology, and a statistical expert of the highest order. The poor lady was, accordingly, set to do her statistical work along the soundest lines, with the result that, though she complains of the laboriousness of the
arithmetic, her estimates of expectancy of criminality in her sample are in the right form for comparison with corresponding expectancies calculated by Dahlberg for the general population.

3. The authors frequently cite p-values = 0.000. P-values are never zero. The term p < .001 etc. should be used. When the computer comes up with p = .000 it really means p < .0005.

Authors respond:

We have revised the text in line with the comment.

Quality of written English: Needs some language corrections before being published

Authors respond:

As mentioned in the Acknowledgements section Judy Petersen, Ph.D., American Writing & Editing AB, copyedited a draft of the manuscript
Reviewer's report: Helinä Hakko

**General**

The purpose of the study was to find out whether or not risk changed over the past 50 years for former CAP patients to be registered as criminals as adults. Two different data sources were used in the study. First, a regional sample of 1400 former CAP patients, whose treatment occurred between 1975 and 1990, was followed up to the year 2003 using national registers. Second, the results were compared to published results for CAP patients who were treated between 1953 and 1955 and followed over 20 years. Together these two "data" covered a follow-up period of about 50 years. In general, the paper is interesting. However, the text and the presentation of results need major modifications. The text throughout the paper is disorganised and needs shortening. Some results are unnecessary. The comparison of findings between Stockholm and Jämtland cohort is difficult due to insufficient and spare information given in the text. The statistical reporting is inaccurate in some parts of the results. The detailed comments are below.

**Authors respond:**

This remark, also given by reviewer 1 has been answered in detail above in # 1 and # 8. by CAP in Stockholm. Table no 6 has been elaborated to be clear and accurate.

**Title of the paper**

- It is misleading, because the study is mainly a descriptive study addressing the characteristics of Jämtland cohort. The psychiatric diagnoses of the cohort memebers have not much investigated in the paper.

**Authors respond:**

Since both reviewers considered the title misleading or confusing it has been changed to “Child and adolescent psychiatric patients and later criminality.”, and as suggested, we deleted “A prospective study” from the title.

As already has been described above and during 1994-1995 all hospital files were reassessed according to the same protocol to have comparable information on the patients. For diagnostic purposes the diagnoses were reassessed according to ICD-10 (Introduced in Sweden in 1997). These protocols have then been used to assess the information at the time from the admittance to the CAP-care, the information from the care and onwards up to 2003. As primary information was used, the study has a prospective design rather than a retrospective design, especially from 1995 and onwards.

**BACKGROUND**

- In the fourth chapter in page 3: The authors write "Mental health staffs in the public schools were minimized. In many places, positions such as school psychiatrics, social workers, and school psychologists were eliminated and just a few school nurses remained". Is it true that in Sweden there actually have been a lot of mental health staff (particularly, psychiatrists) in public schools? Describe that issue more detailed.

**Authors respond:**

In Sweden and in Switzerland and from the 1920’s, school psychiatry was developed as a branch of child and adolescent psychiatry. A school mental health service was
established all over Sweden with psychologists, school social workers and teachers in special education who worked together with the school nurse and the school doctor. In some of the major cities there were also school psychiatrists working. In Stockholm City, school psychiatry was introduced in 1919 and during the 1960’s, there were actually four positions as school psychiatrist working with school mental health. These positions are now re-established.

- *The authors have not introduced whether similar systems like CAP exists also in other countries than Sweden.*

**Authors respond:**

CAP in Sweden was established during the time period 1915-1935. The influence came from Central Europe, mainly Austria, Switzerland and Germany. The establishment of a nation-wide organisation for CAP health service started with Parliament decision in 1957-1958. The CAP organisations in the Nordic countries were published in a series of articles in the Nordic Journal of Psychiatry in 1992-1993 (the article on the Swedish situation was: Rydelius, Per-Anders. Child and adolescent psychiatry in Sweden: From yesterday until today. Nordic Journal of Psychiatry. Vol 47(6) 1993, 395-404). A volume describing CAP in Europe was published in 1999 by Helmut Remschmidt and Herman van Engeland. From these descriptions it is obvious that there are differences in the CAP organisations over the world as well as when comparing the Nordic countries, which is a matter of concern. However, the Nordic tradition to have established nation-based Registers of different kinds (covering health, criminality, social assistance, income, death etc.) together with the unique situation having the census registers makes it possible to run these kinds of studies in the Nordic region but is difficult to run outside this area.

**METHODS**

- Methods -section is messy and it must be reorganized. For example, the chapters may be entitled as follows: CAP Units, Study sample, Information on crimes, Information from hospital records, Comparison groups, Statistical methods

Authors respond:

Methods section has been reorganised in line with the remarks.

- *The diagnostic categories of psychiatric illnesses have not been explained, although authors have analysed schizophrenia, behavioural disorders, etc. in their paper. Describe appropriate diagnostic codes (ICD) in Methods –section.*

Authors respond:

In a new section in the Methods section called “Information from hospital records”, the diagnoses are explained as well as in table 2.
The reliability of data sources (NCCP, hospital records, etc.) must be mentioned in the text.

Authors respond:
This has been added to the text (p6 and in Method discussion).

- The name of the statistical software used in statistical analyses must be mentioned.

Authors respond:
The name of the statistical software (SPSS) have been added.

RESULTS
- In general, the result section is very confused. It must be re-organised and condensed, some text may be placed to the method-section and some irrelevant results may be left out from the paper.

Authors respond:
The Results section has been reorganised.

Registered criminality
- Report also the base number of study population (N=1400) and the percentages for male and females criminals: ... 367 (xx %) males and 163 (xx%) females ...

Authors respond:
That has been added.

- How many persons had committed repeated offences? Report the number and percentage! - The results reporting the comparison of CAP patients with the general population are inaccurate. For example, what means "Male CAP patients were registered more often than average male (5.7/4.1, p<0.001)? 5.7 criminals/offences per 100 000 population?? If rate ratio was used as statistical test, give RR and its 95%CI in the text!

Authors respond:
The actual text has been revised to give this information.

Violent offences
- The first three chapters may be placed to the method section under the subtitle 'Information on crimes"

Authors respond:
The chapters has been moved.

- When analysing the differences between violent crimes vs. other crimes, please, report group percentages before p-value, e.g. ... sex (males: xx% vs. xx%, p = 0.001), split family (xx% vs. xx%, p=0.009) etc. Otherwise, it is not possible to evaluate the magnitude of differences between groups.

Authors respond:
Group percentages have been added.
Drug-related offences
- The frequency of crime by narcotics is reported in the text (page 6) to be 130, while it is in Table 1 129 (61+68)??
Authors respond:
This has been corrected.

- As above, report group percentages (alcohol/drug crimes vs. other crimes) before p-values.
Authors respond:
Group percentages have been added.

Female versus male criminality
- Report the group percentages/means (male vs. female) before p-values.
Authors respond:
Group percentages have been added.

- These results are worth of placing in Table –format.
Authors respond:
A new table (5) has been added showing: Females convicted of offences vs. males convicted of offences, and females convicted of offences vs. females not convicted, significant differences between independent variables

Reoffending
Authors respond:
An explanation of reoffending is given in a new section called “Information on crimes” in the Methods section.

- Table 2: The categorization of the number of frequencies varies between types of crime and refers 'Activity level'. Is this categorization commonly used in earlier studies?
Authors respond:
See below

- In my opinion, Table 2 is unnecessary. The most important results can be reported in the text.
Authors respond:
We have deleted table 2 since the categorisation of crimes was confusing.
Juvenile criminality
- *Table 3 is not very informative. The important results should be reported in the text.*

Authors respond:
We tried to be informative and to keep table 3.

Criminality and admission to general (adult) psychiatry
- *Describe "GenP care" in the Methods –section*

Authors respond:
We hope that GenP care is explained in the new Methods section, see Information from hospital records

- *What was the reference population? … "those convicted of offences" vs. "??????"*

Authors respond:
See the second paragraph in the section.

- *Report the group percentages/means before p-values.*

Authors respond:
Group percentages have been added.

Risk factors
- *This is an interesting part of the results. However, either the risk ratios or the results of a logistic regression models should be presented.*

Authors respond:
See below

- *I suggest that the most informative table would be a combination of table 4 and table 5: Table 4 is more informative, because it includes information on frequency of crimes. However, the risk ratios should be replaced with Odds Ratios, 95%CIs of OR, and p-values. Please, give exact p-values, do not replace them with ‘***’, ‘**’ etc.*

Authors respond:
Table 4 and table 5 have been combined in a new table (6) where RR has been replaced with OR. Exact p-values are given.

- *I think that in Table 5 there is error in ORs for sex and split family, because values are so different for those reported for RR in Table 4.*

Authors respond:
This has been recalculated several times using SPSS with the same result as given.
A comparison with a 20-year prospective follow-up study in Stockholm

- Please, report exact p-values in Table 6.

Authors respond:

That has been changed

- Report also in the footnote of Table 6, what statistical method has been used in comparison of the findings of these two cohorts.

Authors respond:

See table 7.

- Describe also in the footnote of Table 6 the characteristics for "Stockholm cohort" and "Jämtland cohort" in detail, e.g. time periods for data collection. Why is the size of the study sample 608 in Jämtland cohort? Explain it also in the footnote!

Authors respond:

See table 7.

Discussion

- The whole Discussion section must be re-organised and condensed. There is a lot of unnecessary information. It is not very scientific to leave questions in Discussion –section, e.g. fifth chapter in page 10 (This way of thinking …).

Authors respond:

The Discussion section has been revised.

- First chapter of the discussion should include the main findings of the study followed by a theoretical discussion and comparison of their findings with those observed in earlier studies.

Authors respond:

The discussion section is rewritten.

- The reader of the paper should know clearly, what are essential differences between Stockholm cohort and Jämtland cohort. In the present form of the paper it is not easy to find out these differences, and this makes reliable comparison of findings between Stockholm and Jämtland cohort difficult to make.

Authors respond:

See discussion.

Quality of written English: Needs some language corrections before being published

Authors respond:

As mentioned in the Acknowledgements section Judy Petersen, Ph.D., American Writing & Editing AB, copyedited a draft of the manuscript
With best regards,
Sincerely yours,

Ulf Engqvist
Bachelor of Science in Social Work,
Licentiate of Medicine

P-A Rydelius
Ph.D Professor, MD,