Author's response to reviews

Title: Child and adolescent psychiatric patients and later criminality.

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Author's response to reviews: see over
We are hereby resubmitting our revised manuscript MS: 1063609851289714 - Child and adolescent psychiatric patients and later criminality.

One reviewer, Helinä Hakko, stated that: "The authors have conducted a major revision. The result is satisfactory and the article is now publishable" and no remarks or suggestions were given.

The other reviewer, Ellen Kjelsberg wrote: "The manuscript is greatly improved. Even so, I have a number of comments and suggestions". With great respect for the valuable and constructive remarks and suggestions given by Dr Kjelsberg we have made essential revisions and point-by-point responses are given below:

**Minor Essential Revisions**

1. As I understand Table 1, only 534 patients (38 % of 1400) were given diagnoses within group F, mental and behavioural disorders, and a further 4 were diagnosed with disorders within groups G and E. In my opinion, Z and X diagnoses cannot be counted as psychiatric diagnoses, at least not without a proper discussion of the issue. Hence, the statement (p. 5) "In a third of the cases a psychiatric diagnosis was not given" should be corrected to "In two-thirds of the cases a psychiatric diagnosis was not given".

Authors respond:

The paragraph on page 5 has been rewritten and clarified:

Depending on the history and assessment, patients visiting the outpatient CAP unit do not always receive a psychiatric diagnosis. For one third of the patients (35%) no diagnosis was given. A psychiatric diagnosis (group F, mental and behavioural disorders) was given to 534 patients (38%). Every fifth patient (23%) received a Z group diagnosis (Factors influencing health status and contact with health services). Investigations of relationship problems within the family usually lead to such a diagnosis. Suicide attempts (X60-X84 Intentional self-harm) constituted 5%. The distribution of diagnoses in groups is shown in Table 2.

2. At least for a person not familiar with Swedish legislation it is hard to understand the two first paragraphs under the heading 'Information on crimes' (p. 5). Please clarify.

Authors respond:

The sentences on page 5 has been revised as follows:

For this presentation, the Swedish statistics on crimes have been used. From the BRÅ, The Swedish National Council for Crime prevention (NCCP), the authority in Sweden responsible for Crime statistics) the following is cited: “Comparisons between countries that are based on their
individual crime statistics require caution since such statistics are produced differently in different countries.”. Swedish statistics on crimes is presented in detail in several languages on the BRÅ-web-page [http://www.bra.se/extra/pod/?action=pod_show&id=13&module_instance=11](http://www.bra.se/extra/pod/?action=pod_show&id=13&module_instance=11) (Brottsförbyggande rådet (BRÅ), 2006a) 

Criminality over time in Sweden, where “since 1950 overall reported criminality has increased dramatically”, is also presented by BRÅ (Brottsförbyggande rådet (BRÅ), 2006b)

**The information on different types of convictions of offences was removed since that is explained later, in Information from registers**

3. In Statistical methods (p. 6) the authors use the term ‘rate ratio – RR’. RR usually means Relative Risk in these contexts. Could the authors please expand?

**Authors respond:**

It may be confusing for the reader that the acronym RR is used for Risk Ratio as well as for Rate Ratio why it has been removed.

4. Under the heading ‘Criminality and admission to…’ (p. 8), I would be very interested in knowing the actual number of patients in the various sub-populations, not only p-values, particularly as only a fraction of the 1400 had indeed been diagnosed in childhood. This makes me question the representativity of the results.

**Authors respond:**

The paragraph on page 8 has been rewritten in accordance to the observation as follows:

In childhood, during CAP care, those convicted of offences were admitted more often because of behavioural disorder (180/524; 34%) than hose not convicted (112/865; 13%) (P <0.001) and relationship problems (116/524; 22% vs. 142/865; 16%), (P = 0.008).

As adults, they had a significantly higher rate of substance-related diagnoses (51/241; 21%) than those not convicted (7/297; 2%), (P = 0.000) and personality disorder diagnoses (31/241; 13% vs. 19/297; 6%), (P = 0.010).

Those convicted of offences had a significantly lower percentage of schizophrenia (12/241; 5% vs. 29/297; 10%), (P = 0.038); neurotic, stress-related, and somatoform disorders (42/241; 17% vs. 90/297; 30%), (P = 0.001); and behavioural syndromes that are associated with physiological disturbances and physical factors (16/241; 7% vs. 37/297; 13%), (P = 0.024).

5. In Table 1 the last 2 lines are confusing. Did 23 % of all CAP patients end up with a criminal record (in that case: what was the % for boys?), or did 23 % of boys and 3 % of girls become criminals? Please specify.

**Authors respond:**

The table has been revised and specified, 16% of the CAP patients had a criminal record, 23% of the boys and 3% of the girls.

6. Table 6 needs some additional explanations, even seen in conjunction with Statistical methods (p. 6).

**Authors respond:**

Some additional explanations have been added to the table:

*Note: P-value and odds ratio from chi-square tests, valid for each variable separately, is shown in plain text. The binary logistic regression odds ratios and p-values are shown in Italic in connection to each variable. See also statistical methods.*
**Discretionary Revisions**

1. The hypotheses should be stated in the past tense.

**Authors respond:**

The hypothesis has been stated in past tense.

2. The abbreviation GenP is used only a few times. It could be dropped. At least, the abbreviation should be explained only once. Now the explanation re-appears in the first paragraph describing the study sample (p.4).

**Authors respond:**

The abbreviation has been dropped and the term “general psychiatry” is used instead.

3. In the same paragraph: “12 had emigrated”.

**Authors respond:**

The sentence has been revised.

4. P. 3: The number of inpatient beds has been reduced by nearly 90 %…”

**Authors respond:**

The sentence has been revised.

5. On p. 4 it is stated that every fifth patient had been in inpatient treatment. I would like to know the mean duration of these hospitalisations.

**Authors respond:**

Following sentences (p. 4) has been added:

In Sweden there have been efforts to shorten the duration of inpatient treatment and to promote out-patient care from the 1990s and onward. This means that the duration of hospitalizations were rather long during the period from 1975-1990, with an average of 90 days and the range 1-449 days.

And does the age 12.1 years pertain to the whole group (1400) or only to those that had been hospitalised?

**Authors respond:**

The age 12.1 years pertain to the whole group. The sentence containing average age has been moved up to the first paragraph to clarify that.

6. The paragraph ‘Although a protocol…’ on p. 5 should be moved to the Discussion. And it is ‘…a limitation of the study’.

**Authors respond:**

The paragraph has been moved to the Discussion (p.13).

7. Under the same heading, the sentence ‘In this study a total of more…’ should be moved to the Results section. The rest of the paragraph should remain where it is.

**Authors respond:**

The sentence has been moved to the Results section (p. 6).

8. The info in the sentence ‘Criminal code crimes are…’ in the first paragraph on p. 6 has already appeared in paragraph 7 on p. 5: ‘With legal categorisation…’

**Authors respond:**

The info has been removed since it had already appeared.
9. 315 is 59 % of 530, not 63 %, as stated at the bottom of page 6.

Authors respond:

The whole paragraph withholding this sentence has been rewritten (p. 7):

A total of 315 (59%) reoffended; 223 patients (42% of those convicted) were reconvicted within three years of the first conviction, and 129 (24% of those convicted) reoffended within one year.

10. And in the last part of the same paragraph: ‘58 % re-offended within one year’. 58 % of the 315, I presume? A bit confusing, as it is stated along with another percentage based on the 530. And this is only ‘one down’ from the total percentage of re-offenders, 59 %.

Authors respond:

See previous revision.

11. In the middle of p. 7 it would be better to substitute ‘…when it comes to sex…’ with ‘…regarding gender…’.

Authors respond:

We have followed the suggestions given by the reviewer and the text is changed.

12. The statement ‘17 % of the females were involved in violent crimes’ in the 9th paragraph on p. 7, is superfluous, as it has already been stated in the 3rd paragraph on the same page. Moreover, the sentence in question does not, as the heading of the paragraph announces, compare males versus females.

Authors respond:

In accordance to the remark we have removed the statement mentioned.

13. In the 2nd paragraph on p. 8 you write ‘double sided p-value: 0’. The test may be double sided, not the p value. And the p value is never zero.

Authors respond:

This has been revised to “P<0.001”

14. I propose that in the ‘Discussion’ you begin with a comparison of the results from your study with those from the Stockholm study (and other relevant Swedish studies) and then move on to studies from abroad.

Authors respond:

The Discussion section has been revised as suggested and the first heading has been changed to “A comparison with a 20-year prospective follow up study in Stockholm and other studies” instead of adding additional headings.

15. In the 2nd paragraph of the ‘Discussion’, the authors state that 44 % of all in-patients had a criminal record at follow-up. This information should be given in the Results section.

Authors respond:

The information has been moved to the Results section (p. 6)

16. The last sentence in the 1st paragraph on p. 9 does not make sense.

Authors respond:

The sentence has been rewritten:

To compare the Jämtland cohort to the Stockholm cohort, the sub-sample of the Jämtland cohort with a full 20-year follow-up period was selected. This group, 608 cases (325 males and 283 females) was compared to the Stockholm group using the variables described in Table 7.

17. In the 3rd complete paragraph on p. 10, the parenthesis should start with (and co-morbid...).
Authors respond:

This has been revised

*In the same paragraph, the last part of the last sentence, “using sophisticated analyses”, may as well be dropped.*

Authors respond:

The last part of the sentence has been dropped.

18. *The first sentence after the heading ‘Possible mechanisms…’ on p. 12 is awkward.*

Authors respond:

The sentence has been revised (p. 12):

Patients admitted to CAP care are a more vulnerable group compared to average children and youth, why their risk for future criminality might be increased.

19. *The next paragraph should be in the past tense.*

Authors respond:

The paragraph has been rewritten in past tense.

20. *The first sentence in the paragraph preceding ‘Limitations’ is long and confusing.*

Authors respond:

The sentence has been rewritten and hopefully clarified (p. 13).

The population in Jämtland, living in one of Sweden’s smallest county councils, may not be representative for the average Swedish population, why the generalisation of the results could be limited.

21. *Table 3 should supply information about the total number of males and females.*

Authors respond:

Information about total number of males and females has been added in a note to the table.

22. *Table 4 could also give information on males convicted versus males not convicted, in line with what is provided for females.*

Authors respond:

The table has been revised and information on males convicted versus males not convicted has been added.

23. *Table 7: Age at end of follow-up should read ‘31.6 years or above’ or something like that.*

Authors respond:

Age at end of follow up has been change in accordance to the suggestion.