Author’s response to reviews

Title: Institutional trust and alcohol consumption in Sweden. The Swedish National Public Health Survey 2006.

Authors:

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Version: 3 Date: 13 May 2008

Author’s response to reviews: see over
2008-05-13

Dear Editor,


We are very grateful to the valuable comments raised by the reviewer, which have substantially improved our manuscript. Thank you very much.

We have responded to all the comments as shown below. Also changes in the manuscript are indicated in red.

We hope that you will find the revised manuscript improved and interesting for the readership of BMC Public Health.

Sincerely,

Johanna Ahnquist

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Reviewer's report (1)

Title: Social capital, institutional trust and alcohol consumption in Sweden. The Swedish National Public Health Survey 2006.

Version: 2 Date: 19 February 2008

Reviewer: Kim Bloomfield

Reviewer's report:

This is an interesting paper that contributes to the research on the relationship of social capital to health status and health behaviours. However, the paper could be improved considerably by strengthening its theoretical and empirical analysis of the relationship of the dimension of institutional trust to the larger concept of social capital.

Introduction

1. The authors introduce the concept of social capital briefly and then focus on the component of trust and institutional trust for the present analysis. In this section, they introduce trust as a social construct, page 4, line 3, but fail to explain what a social construct is. This would be helpful to those not involved in social-psychological research. As a social construct, is not trust still an attitude? How do attitudes fit into health behaviour theory? Discretionary revision

Response 1:

We have now erased the phrasing “trust” as a “social construct”, and instead emphasise that both social capital and one of its key components trust concerns not characteristics of individuals but rather what happens in the relations between individuals and groups of individuals. We think that this is a clearer description than the phrasing “social construct”. We have also further on in the introduction section specified in what way low trust (in other people as well as in institutions) as an “attitude” may affect a health related behaviour such as alcohol consumption (see point 2 below).

2. The review of the literature is rather brief and does not distinguish very specifically what previous research has precisely investigated trust as its own construct. For example, the work by Lindstrom has examined not only trust but this in combination with social participation as well. Minor essential revision

Response 2:

2. We have now added to the text in the introduction that social participation and trust are two different dimensions of social capital that are not necessarily highly correlated with each other. We now also clearly and specifically give the reason why we study generalized (horizontal) trust in other people (also known as interpersonal trust) and institutional (vertical) trust in this study but not social participation. In a previous study (Lindström, 2005 in Alcohol and Alcoholism) it has been demonstrated that low trust in other people but not social participation was significantly associated with high alcohol consumption. We also now present the plausible causal background for these patterns of associations.

3. In sum, more precise, theoretical specification of trust as an element of social capital is needed; i.e., how does trust relate to social participation, social support, social networks? What distinguishes this element from the rest of the components of social capital? How does the paper's hypothesis, i.e., that low institutional trust is related to harmful alcohol consumption, relate then to the other elements of social capital? The question is being begged: what then do the other elements of social capital contribute to the field research? Is trust carrying the explanatory power of the construct? Major compulsory revision
Response 3:
Social support is not an aspect of social capital. We have now added to the text that social participation/social networks and trust are two different dimensions of social capital that are not necessarily highly correlated with each other, and why the horizontal and vertical aspects of trust are studied in this manuscript but not social participation (see point 2 above). We have also specified why trust is related to harmful alcohol consumption, and thus why it plausibly carries the explanatory power of the construct in relation to harmful alcohol consumption (see point 2 above).

Methods
4. It would be helpful to see how the questions regarding institutional trust were phrased and how the individual items were scored. Major compulsory revision

Response 4:
The method section has now been complemented with a text explaining how the questions regarding institutional trust were phrased and how the individual items were scored (p.10).

“Institutional trust was measured based on the question; “How much trust do you have in the following institutions in society?” a) health care, b) school system, c) social welfare services, d) labor office, e) social insurance office, f) police, g) court of law, h) parliament, i) politicians at county council level and j) politicians at municipal level. Response options were; “Very high”, “Fairly high”, “Low”, “No trust at all” and “No opinion”. Because the internal consistency reliability was high (0.84), we constructed an index of institutional trust by summing up trust from all these ten institutions. Institutional trust was categorized as; (i) “Very high” (very high or fairly high trust in all ten institutions), (ii) “Moderately high” (low or no trust in 1-2 institutions), (iii) “Moderately low” (low or no trust in 3-5 institutions), (iii) “Very low” (low or no trust in 6-10 institutions). The response “No opinion” was recorded as missing.”

5. How variables were entered into the multivariate regression models? Major compulsory revision

Response 5
We have added to the method section that all variables were simultaneously entered in the regression model (p.11).

6. Were interaction terms considered? If so, what were the results? Major compulsory revision

Response 6
We have done analyses on the association between institutional trust and alcohol consumption after stratification on interpersonal trust (Table 4).

Results
7. Is there the possibility to control for the other elements of social capital in the analysis; i.e., social support, social networks and social participation? This would be highly desirable in that one could examine to what degree institutional trust is responsible for the relationships found between the broader concept of social capital and health behaviour. A stepwise regression procedure would then be appropriate. Major compulsory revision if possible

Response 7:
We have added in the discussion, on page 14 that “Additionally we did not find statistically significant correlation between institutional trust and psychological distress (measured by...
It seems likely that institutional trust may comprise a structural component of how institutions are perceived in general. It should be noted that institutional trust does not seem to be correlated with indicators of social capital at individual level. In the present paper we found a weak and statistically not significant correlation of institutional trust with instrumental social support \((r=0.08)\), with emotional social support \((r=0.07)\) nor with social participation \((r=0.03)\). These results are similar to other previous findings [6]. Nevertheless, even after further adjustment for psychological distress, social support and social participation, the association between low institutional trust and harmful alcohol consumption remained statistically significant.”

8. It would be interesting to investigate potential interactions between trust and financial stress and employment status as the latter two variables are also highly predictive of harmful alcohol use, and a possible relationship to trust would make sense theoretically. Major compulsory revision

Response 8
Analyses of the interactions between SES (financial stress and employment status) and trust in relation to alcohol consumption are outside the scope of the present paper. This research question is being tested in another ongoing paper.

9. It might also be good to elaborate on the relationship between interpersonal and institutional trust. They must be highly correlated as well. Major compulsory revision

Response 9;
To minimise the confounding of interpersonal trust on the association between institutional trust and alcohol consumption, we have adjusted for and stratified on interpersonal trust. Results from the stratified analyses are presented in table 4 (p.24). The results showed that all levels of lower institutional trust were associated with harmful alcohol consumption even in presence of high interpersonal trust (see results section, page 13).

10. There has been some criticism that social capital can be highly correlated with psychological states. Is it possible to control for mental health status in the analysis? Major compulsory revision if possible.

Response 10
We have added in the discussion, on page 14 that “Additionally we did not find statistically significant correlation between institutional trust and psychological distress (measured by GHQ-12) \((r=0.09)\). It seems likely that institutional trust may comprise a structural component of how institutions are perceived in general. It should be noted that institutional trust does not seem to be correlated with indicators of social capital at individual level. In the present paper we found a weak and statistically not significant correlation of institutional trust with instrumental social support \((r=0.08)\), with emotional social support \((r=0.07)\) nor with social participation \((r=0.03)\). These results are similar to other previous findings [6]. Nevertheless, even after further adjustment for psychological distress, social support and social participation, the association between low institutional trust and harmful alcohol consumption remained statistically significant.”

Discussion
11. As mentioned regarding the introduction, the paper could be strengthened considerably if it could make a concrete contribution to specifying the place of the institutional trust in the larger concept of social capital. The paper, after all begins with talking about social capital and even has the term in its title, but drops any treatment of it in the analysis and in the paper. All conclusions are based on
institutional trust very separately. In such a case, the authors should then argue (with evidence) to abandon social capital as a broader concept or show where institutional trust fits theoretically and empirically into the larger concept and how it relates to the components of the broader concept. Major compulsory revision
Thus would then be an excellent contribution to the field of social capital research in the area of public health.

Response 11
We have elaborated further on this issue both in the introduction and in the discussion, pages 14-15.

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions
Level of interest: An article of importance in its field
Quality of written English: Needs some language corrections before being published
Statistical review: No, the manuscript does not need to be seen by a statistician.
This is a strong and eloquent study, readable by nonspecialists and measured in its consideration of the inevitable limitations of the research. The brevity of the manuscript is noteworthy and surprising in the context of a venue without page limits. However, the paper’s engagement with major theoreticians on institutional trust suffices. Treatment of the broader issues connected with the complexity of the concept of social capital is not really addressed here. Therefore, the part of the title referring to social capital might optionally be dropped for accuracy. The data and methods are aptly tailored to the study goals.

- **Major Compulsory Revisions:**
  None.

- **Minor Essential Revisions**
  Truly minor revisions are called for:

  Although the paper is well-written, there are a few glitches.

  In the Abstract, there are a few minor points:
  1. Data from the 2006 Swedish National Survey of Public Health WERE (agreeing with the plural data).
  2. The word Alcohol should be cut after World Health Organisation.
  3. On page 8, employed is misspelled and the word inactive is repeated in the categorization of employment status.
  4. Page 9: The first occurrence of "than women" following "Men were more likely" should be deleted as it is mentioned at the end of the sentence.
  5. Page 10: A word was missing: In spite OF the fact.
  6. A dash rather than comma should follow the clause institutional and Interpersonal

**Response 1-6;**
We have corrected all the above (1-6) mentioned typos.

- **Discretionary Revisions**

  These are recommendations for improvement which the author can choose to ignore. For example clarifications, data that would be useful but not essential.

**Response;**
We have added to the text in the methods section clarifications on the alcohol and institutional trust measures (p. 8-10).

  1. P. 9. A brief statement of why the analyses were conducted for men and women separately would be welcome. This analytical approach is not unusual, but should still be justified.

**Response;**
We have added to the methods section that analyses were conducted for men and women separately because of known gender differences in health and determinants of health (p.11).

2. P. 11: The first full sentence is long and awkward; perhaps it could be broken into two sentences.

**Response:**
The sentence have been rewritten and now reads; “This is because trust is perceived to be a complex and multi-dimensional phenomenon, consisting of a mix of trust in strong ties, weak ties, institutions, and personal traits including a possible psychological component of paranoia or aggressiveness [44]. Thus trust may be considered to be a less objective measure of real trust levels for institutions.” (p. 13)

**What next?:** Accept after minor essential revisions
**Level of interest:** An article of importance in its field
**Quality of written English:** Acceptable
**Statistical review:** No, the manuscript does not need to be seen by a statistician.
**Declaration of competing interests:**
I declare that I have no competing interests.
Reviewer's report (3)

Title: Social capital, institutional trust and alcohol consumption in Sweden. The Swedish National Public Health Survey 2006.

Version: 2 Date: 19 March 2008

Reviewer: Mitch Earleywine

Reviewer's report:

This study of a large data set reveals statistically significant links between a measure of trust in institutions and a summary score of three items from a popular measure of alcohol problems. The question is well defined.

Compulsory Revisions

1. Although the idea is intriguing, a close look at the paper reveals a low response rate, small effects, and unclear aspects of the measures, which make the results less compelling. Because the response rate is only 60%, it’s unclear what to make of the size of these effects. Perhaps the non-responders are by far the most distrusting of institutions, making the estimates of the effects unclear. Would these non-responders have been the most distrusting and also the heaviest drinkers? The authors should comment on this limitation in markedly more detail.

Response 1;

We have added in the discussion page 16 that “Third, the non-response rate of 37%, which included a large proportion of men, socially disadvantaged, and inhabitants in metropolitan areas is problematic. Unfortunately, we did not have information on the level of alcohol consumption and trust, however it is this sub-group that is usually at a high risk for harmful alcohol consumption [47]. Thus results presented here may be an under-estimation of prevalence of harmful alcohol consumption and of the magnitude of true associations demonstrated in the present paper”.

2. The choice of 3 items from the AUDIT seems odd and the explanation of the scoring is hard to follow. A rationale for the choice, an explanation of why the other items weren’t included, and clarification of scoring is essential. The items have considerable intuitive appeal, but they are scored from 0 to 4, a scale that isn’t explained. So, what does a ‘4’ mean on “how often have you drunk alcohol in the past 12 months?” Then, after creating some sort of interval scale, for reasons that are unclear, the results are dichotomized into “hazardous” and “not”, but with different cut-offs for men and women, again for reasons that are unclear. (There’s actually a typo in this section that makes it sound as if two different scores were used for women.) Perhaps letting the variable keep some variance will make the effect larger. Clarifying this decision to dichotomize and choose different cut-offs based on gender is essential. Personally, I’d prefer the full range of scores, which I sincerely hope leads to larger effects.

Response 2;

We have clarified the measure of alcohol consumption in the methods section, pages 8-10 that "In this study harmful alcohol consumption is categorized based on the three consumption items of the Swedish version of AUDIT [34]. The Swedish version of the full version of AUDIT has been shown to have satisfactory internal and test-retest reliability [34]. Several previous studies have implicated that the three AUDIT items (sometimes discussed as AUDIT-C) is approximately equal in accuracy to the full AUDIT and can be employed as a stand-alone screening measure when time or other resources do not permit administration of the full AUDIT [35-39]. The three items includes; (i) “How often have you drunk alcohol in the past 12 months?” Response options were; never (0 points); monthly or less (1 point); 2 to 4 times a month (2 points); 2 to 3 times a week (3 points); 4 times a week or more (4 points), (ii) “How
“many glasses containing alcohol do you have on a typical day when you are drinking?” (One drink is equivalent to to 5-8 cl of wine or 4 cl of alcoholic liquor, e.g whisky). Response options were; 1 to 2 drinks (0 points); 3 to 4 drinks (1 point); 5 to 6 drinks (2 points); 7 to 9 drinks (3 points); or 10 or more drinks (4 points), (iii) “How often do you have six drinks or more at one occasion?” Response options were; never (0 points); less than monthly (1 point); monthly (2 points); weekly (3 points); or daily or almost daily (4 points). Hence, each item scored from 0 to 4 points with a maximum score of 12. Dichotomization of this score using well-established cut-off points has been suggested to identify hazardous or harmful habits [37]. In the present study, the cut-off for harmful alcohol consumption was set at 5 points for men and at 4 points for women [37]. This gender specific cut-off score has previously been recommended [40]. This is because women’s metabolism system breaks down alcohol slower than men’s thus often showing a higher blood-alcohol level than men after consuming the same amount of alcohol consumed per kg body weight. Additionally the risks for medical alcohol-related harm, e.g. liver cirrhosis and cognitive disorder, are higher for women than for men [41]."

We have run new analyses based on this new cut-off point.

3. The huge sample makes the effects statistically significant, but they are actually odds ratios of 1.5 for men and 1.3 for women. It is hard to get excited about odds ratios below 2.0 for data like these. The authors should make a stronger case for why effects this small matter, particularly on this scale. What does it really mean to say that men are 50% more likely to be hazardous drinkers if they distrust institutions?

Response 3:
In the statistical theory, it is known that with large samples the ORs tend to be smaller than for small samples. For instance an OR of 2.5 for a prevalence of an outcome with N= 150 may be not be considered to be a larger risk than an OR of 1.3 related with a prevalence of an outcome with N=600. In the real sense, these two ORS may actually be equivalent. This is further demonstrated in Modern Epidemiology by Kenneth J. Rothman, Sander Greenland, 1998.

4. The authors should comment more on alternative explanations for the results. Is distrust for institutions serving as a proxy for some personality variable with established links to drinking habits? (Perhaps law abidance, sensation seeking, or impulsivity are really what matters!)

Response 4
We have added in the discussion section, pages 13-14 that “We considered interpersonal trust in the analyses. This is because trust is perceived to be a complex and multi-dimensional phenomenon, consisting of a mix of trust in strong ties, weak ties, institutions, and personal traits including a possible psychological component of paranoia or aggressiveness [44]. Thus trust may be considered to be a less objective measure of real trust levels for institutions. However our analyses stratifying for interpersonal trust do not seem to support this possibility. We found that low levels of institutional trust even in presence of high interpersonal trust increased the likelihood of harmful alcohol consumption. Additionally we did not find statistically significant correlation between institutional trust and psychological distress (measured by GHQ-12) (r=0.09). It seems likely that institutional trust may comprise a structural component of how institutions are perceived in general. It should be noted that institutional trust does not seem to be correlated with indicators of social capital at individual level. In the present paper we found a weak and statistically not significant correlation of institutional trust with instrumental social support (r=0.08), with emotional social support (r=0.07) nor with social participation (r=0.03). These results are similar to other previous findings [6]. Nevertheless,
even after further adjustment for psychological distress, social support and social participation, the association between low institutional trust and harmful alcohol consumption remained statistically significant.”

5. The article will need some editorial work to reach the standards of reporting. There are typos, errors in English idiom, and unclear spots. Generally, if the authors want to use the word “this,” an antecedent in the previous sentence should be astounding obvious. Alternatively, the word after “this” should help explain what “this” refers to.

Response 5:
The manuscript has been revised and hopefully we now have managed to correct all typos.