Reviewer's report

Title: Prevalence and gender patterns of mental health problems in German youth with experiences of violence: the KiGGS study.

Version: 1 Date: 6 March 2013

Reviewer: Gizem Erdem

Reviewer's report:

The manuscript, entitled “Prevalence and gender patterns of mental health problems in German youth with experiences of violence: The KiGGS study” presents findings from a nationally representative, cross-sectional study of mental health problems and violence involvement among German adolescents. The manuscript is an important contribution to the literature with potential clinical and social policy implications. However, several methodological, stylistic and organizational issues should be addressed to improve the quality and clarity of the manuscript.

Major Compulsory Revisions

The current sample comes from a cross-sectional and nationally representative study of German adolescents. However, the manuscript includes conclusions and interpretations that imply causality. For instance, results section of the abstract includes the following statement “However, multiple risk constellations were found for all violence-affected youth including both internalizing and externalizing mental health problems which points at violence as a potential common cause of these problem behaviors.” I believe the current study does not provide evidence to conclude that. Violence was measured for the last 12 months while mental health issues were asked for the past 3 months. Despite there are different time frames used for various questions, they were still administered at the same time point. Please review the manuscript, especially discussion section, to change referrals to causality and such misleading interpretations.

The last paragraph of the introduction lists three study objectives and results section also presents findings for each research objective. However, findings regarding objective 1 have not been interpreted in the discussion section. This is particularly important given that there is scarcity of research on prevalence rates of internalizing and externalizing behaviors and violence involvement by gender among German adolescents. Please interpret and discuss findings as the space permits. For instance, one of the striking findings regarding objective 1 (prevalence rates) is that disordered eating behaviors are found to be very high among adolescents (28.9% among girls and 15.4% among boys) compared to other mental health issues (range 2.1% to 11.9%). Please discuss this finding.

One major methodological issue in the current study is that it does not differentiate between peer violence/bullying and intimate partner violence. It is unclear what type(s) of violence adolescents are reporting. Authors should clarify
Another major issue is internalizing/externalizing ‘behaviors,’ ‘problems,’ and ‘clinical diagnoses’ are used interchangeably in the manuscript. It is mentioned in methods section that the measures assess ‘symptoms’ and also ‘behaviors,’ so they do not necessarily indicate diagnosis. However, clinical cut off scores were used to examine adolescents who report clinically significant mental health issues. Authors address this issue towards the end of the manuscript in discussion section. I think manuscript would be more clear if they keep the language consistent (only use one term). In addition, introduction should clarify whether the authors’ interest on clinical mental health issues vs. problematic behavior.

Methods section refers to Kurth et al., 2008 publication for details on study design. Therefore, it is understandable authors provide short description of the study in the manuscript. However, I believe there are several important details missing. For instance, sampling strategy is unclear (method section, under subtitle ‘sample’). Are adolescents recruited from schools or neighborhoods? Parents reported on ADHD diagnosis of their child – then, are adolescents and their parents were recruited as dyads? How many parents were there in the sample who agreed to provide that data? One option is you can include a diagram showing the sampling strategy and study procedure in the manuscript. Another option is to include 2-3 more sentences on some essential issues regarding study procedures. I think interested readers who need more information can use the methods paper (Kurth et al., 2008), but some fundamental information still needs to be mentioned in the current manuscript.

Socio-demographic characteristics of the sample have not been mentioned in the manuscript. Please include a demographic table in the end of the paper if space permits. Another option is to have a short paragraph in methods section under the subtitle ‘sample.’ If you choose to have a table, please report sample and subsample characteristics. Given that this is a sample from nationally representative study, it is especially important to have descriptive information on the sample and the extent to which it represents German adolescents.

There is no justification for why ADHD diagnosis was assessed via parent report. Please explain (in introduction or in methods)

In methods – statistical analysis section, authors report using logistic regression. Authors need to justify why they chose to utilize logistic regression, rather than any other test. For instance, the group comparisons could be done using cluster analysis. Or more sophisticated analysis could be done using multilevel modeling (i.e., HLM) because subjects were nested in schools (or neighborhoods) or in dyads (parent-adolescent). One strategy could be analyzing the data as nested within violence involvement groups. Given the study design, multilevel modeling seems more appropriate.

There is a mismatch between statistical analysis section and the results section. Last paragraph of the methods reads ‘adjustments were also made for age,
socio-economic status and family status.’ Findings and tables do not report those adjustments. Also, it would help greatly if you could provide the equation for logistics regressions in the text.

One of the most striking finding of the study is how perpetrating victims were found to be at higher risk of mental health issues than other violence-involved youth. I think authors should discuss this finding more fully. In addition, authors suggested that this result revealed how some youth had ‘anxious-aggressive behavioral style.’ There is no data to draw that conclusion because assessment of violence involvement does not specify dynamics of the incident (i.e., nature of the event, peer vs. IPV, no assessment of self-defense.)

Another striking finding is gender-cross over effects and authors are recommended to talk more about existing theories to explain and discuss that phenomenon. In addition, authors should be especially cautious to avoid ‘gendered’ language. For instance, the paragraph before ‘limitations section’ includes a sentence ‘possibly, the lack of conformity with specific role expectations exacerbates maladjusted behaviors in vulnerable girls and boys in the respective direction.’ This sentence implies that once adolescents do not fit in gender roles, there is something wrong with them. However, there is research suggesting how gender roles can create distress on the young adults and (gender) stereotype threat can have negative consequences. I also wonder if gender-cross over effects may occur through different socialization practices among boys and girls. It is common that girls socialize to internalize while boys are encouraged to externalize their emotions. For those who show gender cross-over effects, it would be interesting to look at their family background, institutional involvement, and potential traumatic experiences during their childhood. It is possible that for an adolescent girl it was functional to ‘externalize’ the behaviors if there was constant threat for personal safety.

Discussion – limitation section should include the low response rate and how it potentially limits the generalizability of the findings to the general population. However, if 66.6% is an acceptable response rate as seen in similar studies in Germany, authors should include that information to justify external validity of the study.

Minor Essential Revisions

Methods section of the abstract includes information on the sample size and age range. More information is needed to inform the reader about sampling and design of the study.

Results paragraph of the abstract should include p values, odd ratios, and coefficients. Please report major findings in the abstract with relevant statistics in the parentheses.

Second paragraph of the introduction does not flow and it is hard to follow. Please revise the paragraph and organize accordingly.

Measures section in methods, paragraph regarding ‘violence involvement’ should
include how items were obtained and the original source (i.e., pilot study, previous prevalence study, and citation etc.)

Under subtitle ‘emotional and conduct problems’ of methods section, please indicate how many item each scale included and what type of Likert scale and response categories were used (i.e., 5 point Likert scale, 7 point Likert Scale vs. dichotomous yes/no.). Also, change “a” to “#” (alpha). It looks like there is a typo. Finally indicate German cut off scores in parenthesis.

Methods section, subtitle ‘frequent drinking and illicit drug use’ should include information on time frame. Please clarify what ‘current’ alcohol use refers to (a week? a month? Etc.) Also, provide citation for 5 standard drink rule.

Results section, second paragraph includes some findings for research objective 1, documenting prevalence of mental health issue. Please report actual percentages here, rather than ‘3 times more’ because it may be misleading. We do not know about the missing data due to non-response in each measure. Valid cases may not match.

Similarly, please report both frequencies and percentages in the text (results section) as well as in the tables. This will allow the reader see valid cases.

Results section, paragraph 3 and 4, please report odd ratios and p values.

Discretionary Revisions
None

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

I declare that I have no competing interests