Reviewer's report

Title: Stressful life events and difficulties are associated with mental health symptoms and substance use in young adolescents

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Reviewer: Dorothea Isele

Reviewer's report:

Altogether I think, your paper deals with an important topic and shows very interesting evidence for implications of common life events on adolescents' mental health. Especially the respectable sample size, I really appreciate.

Reading through your scientific work, I took notice of some aspects (listed below), your paper could additionally benefit from. Therefore I recommend you a further elaboration of the following points:

Discretionary Revisions:

1. It took me a while to understand how you conceptualised and assessed „stressful life events“, „difficulties“ or „worry“ and „stress“. – As you mention later in your discussion and methodology, you asked whether they experienced a sort of emotional reaction to common events in their lifetime, but not the occurrence of any event checked by an event lists. I would recommend to elaborate this aspect more clearly.

2. The term „stressful life events“, includes an incredible broad dimension of events, reaching from „common“ or every day life stressors up to potentially traumatic events, like physical or sexual abuse etc.. This is elaborated in your second paragraph. I suggest you to amplify this aspect, maybe by referring to different concepts/work of other authors.

3. You totally excluded the two items „financial problems“ and „sexual relation stress“ from further analysis. Even if they don´t fit to one of your factors, they still might bring interesting additional information.

4. All variables are dichotomized and categorial analysis was done? A dimensional analysis of the data, using continuous variables (e.g. as it comes to depressive symptoms) would have been interesting aswell (?)

5. Only very few statistical expressions are used to describe the results. This information is almost exclusively reduced to the information illustrated by tables and not included in the running text.

6. „Parental or family problems may decrease the family attachment felt by adolescents, which could lead to an increase in involvement with substance-using peers.“ - Is there any literature you could cite, supporting this
assumption?

7. "Mitigating factors between events and symptoms include social support and coping, and therefore, assessment of the adolescent’s social support system and the way he/she is coping with respect to the specific event or difficulty is important. Positive coping skills teaching can include healthy distraction, problem-solving and techniques of healthy emotional regulation....“ There should be quite a lot of literature supporting this ideas, as there is, as far as I know, a lot of research done in the realm of coping and social skills etc..

8. Title
The expression „stressful life events“ comprehends a wide range of events, reaching from every day hassles to potentially traumatic events. This survey explicitly and exclusively focusses „common“ life events. I suggest you to mention this aspect in the title, as you elaborated this point as a strength of your paper.

Minor Essential Revisions

9. A multivariable logistic regression is mentioned to further modell the associations:
Table 4 only shows ORs, p-values and CIs of the analysis. However beta values etc. are not reported. So, there is no information about effect size/strength of the association, etc. I would recommend you to wonder about including this information, too.

10. „Ten percent of participants were pre-pubertal, 70.3% were pubertal, and 1.2% were postpubertal (18.3% were missing data).“ In total 99.8%; what about the other 0.2 %?

11. „Cigarette and marijuana use have been associated with parental discord, separation, and divorce in the few extant studies in non-clinical adolescent populations [49-53].“ – This association aswell has been found in this paper, don’t forget to mention.

12. „In contrast to previous research that typically examined only 1-2 stressors in relation to a single outcome, our approach examined 6 sources of stress in relation to several mental health and substance use outcomes.“ – which studies does this refer to?

# Actually, I think there are a lot of papers, assessing multiple stressors and consequences to mental health, e.g. in PTSD research etc.

13. The appraisal/perception/ emotional reaction of/to stress was dichotomized, so there are adolescents which are just „a little bit stressed“ and those who were „a lot“ stressed put together. This point should be discussed aswell.

14. Abstract
In the abstract, I suggest you to rewrite the conclusions, directly mentioning the
urge of preventing psychopathology as a consequence of common stressors/events.

15. There has been a problem with one of your references: „37, 45, 46{Menning, 2006 #8347, 47, 48}“, and sometimes there are space characters missing.

Major Compulsory Revisions

16. As it comes to the assessment of „illicit drugs“, I could not find any hints about how this was done in the methodology part of the paper.

17. „In adults, stressful life events often precede mental health problems [20], whereas in adolescents, mental health symptoms may lead to stressful life events [21, 22].“

- This sentence seems to be very misunderstanding to me. In adolescents, life events also may result in psychopathology, don’t you think?

18. Hints about the univarite analysis, „the separate logistic regression analysis“, are only mentioned in the abstract and table 4. This information is missing in the methodology /analysis part of the paper.

19. Table 1 and 2 show p-values of statistical test of differences. These analysis/tests are not mentioned in any part of the paper. So it is difficult to understand, what has been done.

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.