Peer Review Report

Review Report on Gender and age influence on Emergency Department admissions for non-suicidal self-injuries in school aged children in Italy: an eleven-year retrospective cross-sectional study

Original Article, Int J Public Health

Reviewer: William Pickett
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EVALUATION

Q 1 **Please summarize the main findings of the study.**

This study documents the prevalence of non-suicidal self harm behaviours in children observed in an Italian emergency department setting over several years. Patterns are described epidemiologically. This descriptive piece is meant to highlight the importance of these behaviours as a public health and clinical problem.

Q 2 **Please highlight the limitations and strengths.**

Limitations

1. The prevalence estimates are based upon events per 100,000 visits. Repeat events by the same person are not accounted for. And the estimates are based on a denominator of visit and not the population at risk, which addresses a slightly different issue than true "risk".

2. The analysis is obviously confounded by the willingness of people to attend the ER, particularly during the pandemic, and the availability of alternative forms of primary care which might change over time. Hence, the "risks" may be affected by other factors.

3. The utility of the regression analysis is not really apparent ... not sure what it adds on top of the descriptive data that are presented.

4. The manuscript is obviously written in a language that is not the first language of the authors, at is plagued with grammatical and spelling errors. It needs a good edit.

Strengths

1. This is an important topic, and data are scarce at the population level for this topic

2. The basic descriptive analyses and their interpretation are fairly sound.

Q 3 **Please provide your detailed review report to the authors. The editors prefer to receive your review structured in major and minor comments. Please consider in your review the methods (statistical methods valid and correctly applied (e.g. sample size, choice of test), is the study replicable based on the method description?), results, data interpretation and references. If there are any objective errors, or if the conclusions are not supported, you should detail your concerns.**

Thank you for the opportunity to review your original submission to the IJPH.

The topic under study is of obvious clinical and public health importance, and I agree with you that we need foundational data on patterns and trends in these non-suicidal self-harm episodes to direct the planning of medical care, and for public health policies and interventions.

I have a number of suggestions for your consideration.

First, the fact that this is written in a language that does not appear to be your first language shows, and the manuscript could benefit from a careful edit by a colleague with strong writing skills. This detracted from the quality of your work.

Second, you describe this study variably as a cross-sectional study, as a descriptive study, and at one point as a longitudinal study. These terms are not that accurate. I think that this is a simple descriptive piece of epidemiology to examine patterns of visits over time.

Third, your analysis is based upon reports of these emergency visits that are later reported and coded by clinicians and administrative staff within the emergency department. It would be helpful to have some sort of sense of the validity of these reports, and whether there were efforts over time to address the coding of these specific events, which could have affected prevalence levels.

Fourth, while I respect the local ethics customs, I find the rationale for using these personal data without ethics clearance to be unconvincing. I believe that patient medical records are typically available for quality control purposes within hospitals (which gets round the need for ethics), but particularly for something as sensitive as these medical events, surely there must be some process in place to protect the human rights of the patients, and the integrity of the researchers. In our country (and I know there is variability), there would at least have to be an expedited review of the proposed research prior to its conduct.

Fifth, I do wonder about the justification for creating "rates" (prevalences) per 100,000 visits as opposed to rates per 100,000 people, and why you chose to approach these calculations in the way that you did. Were the population figures not available? Or ... is this an attempt to get at a sense of burden to the hospital ... some sort of justification of why you employed the denominator that you did would be helpful.

Sixth. These events are not independent, as there are likely some repeat visits to hospital by the same person. This is recognized in the manuscript. It is therefore inappropriate to use basic chi-square tests (which assume independent of observations) and even CI's without acknowledging the potential for clustering of events or the lack of independence of these events ... if you had the person's individual code, could you not have excluded repeat visits?

Seventh, more detail about the standardization process would be helpful. What was the population standard, what age groups were used, etc ... and how was the direct standardization performed?

Eighth, I appreciated the fact that you recognized that the prevalence of these visits declined during the pandemic because people were avoiding hospitals. This would make both your numerators and denominators suspect for the estimation of prevalence values or even rates ... and it is difficult to interpret things because you would have lots of missing cases who went elsewhere or who were not cared for medically, and you would have lots of missing people in your denominator who avoided the medical system to avoid illness.

Finally, there are lots of implications surrounding these data and these events, and I can see that you tried to provide some evidence-based strategies for their management and prevention. I do wonder whether this section goes beyond your data ... and would be more suited to etiological studies or interventional studies that aimed to get at the origins of these behaviours, and their prevention and treatment. Your data are very simple and quite descriptive ... still valuable ... but the discussion doesn't really fit the study opportunity.

I do wish you well in your work and any revisions.

PLEASE COMMENT

Q 4 **Is the title appropriate, concise, attractive?**

Yes.

Q 5 Are the keywords appropriate?

Yes.

Q 6 Is the English language of sufficient quality?

It is not. The piece is plagued by minor grammatical errors, and errors of expression.

Q 7 Is the quality of the figures and tables satisfactory?

Yes.

Q 8 Does the reference list cover the relevant literature adequately and in an unbiased manner?)

I don't know this literature well, but it does appear to be comprehensive enough to make the case for this study, and to assist interpretively.

QUALITY ASSESSMENT

Q 9	Originality	■■■■■
Q 10	Rigor	■■□□□
Q 11	Significance to the field	■■■□□
Q 12	Interest to a general audience	■■■■□
Q 13	Quality of the writing	■□□□□
Q 14	Overall scientific quality of the study	■■□□□

REVISION LEVEL

Q 15 Please make a recommendation based on your comments:

Major revisions.