

## Peer Review Report

# Review Report on Lifestyle behaviours of children and adolescents during the first two waves of the COVID-19 pandemic in Switzerland and their relation to well-being: an observational study

Original Article, Int J Public Health

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### EVALUATION

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

Adherence to lifestyle recommendations varied across periods pre- and post pandemic, with a marked decrease in meeting recommendations during the 1st wave, with partial recovery during the 2nd wave, but still staying at lower levels than before the pandemic. Adherence to higher number of lifestyle recommendations was associated with the better reported well-being indicators.

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

Strengths: well-written, methodologically sound, relevant topic, information on participants and non-participants.

Limitations: low response rate, particularly in St. Gallen and Graubunden; different methodology used in ZH makes comparisons / pooling of data difficult a bit the interpretation.

#### **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.

The authors studied reported physical activity, screen time and sleep duration before and during the 1st and 2nd pandemic waves, and the association of these lifestyle factors during the 2nd wave with life satisfaction and health perception on 3018 Swiss children and adolescents. The manuscript is well-written, methodologically sound, and the topic is relevant and of interest to readers of the International Journal of Public Health. I comment here below on points that may benefit from clarification.

Major comments:

- Methods page 7, statistical analysis: Did the authors investigate if there was an interaction between the exposures (number of recommendations met, adherence patterns) and parental education? If not, they may consider testing this, as the effect of the exposures on well-being indicators could be modified by socioeconomic factors.
- Methods / Limitations: COVID prevalence / incidence among participants is not mentioned in the manuscript. Could the authors elaborate on whether they consider that an infection could to some extent may have affected response rate and reporting of life style factors and well-being?
- Methods pages 4-5 / table 1: Table 1 describes 3 assessments (questionnaires) for ZH and 2 for TI, SG and GR. In the limitations (line 311-312) the authors acknowledge that life-style factors were assessed retrospectively for the pre-pandemic and the 1st wave: does this apply to all cantons? Also to Zurich? I would suggest to clarify the description of the number of assessments in the methods section. The authors could consider creating a timeline figure with the assessment periods to help to understand and visualize the measurement time intervals.

- Results / Table 4: I would suggest to present also unadjusted regression results, in adherence to STROBE reporting recommendations.
- Results, page 8, line 158: The response rate and differences between participants and non-participants is well documented in supplementary material, I commend the authors. I would suggest to mention the number of total eligible patients in the text too for further transparency, and following the STROBE recommendations.

Minor comments:

- Abstract: I am aware of length constrains, but I think it would be informative to mention the study design and time frame.
- Methods page 7, statistical analysis, line 150: it is unclear what the p-value of the interaction refers to, i.e. the p-value of the interaction term in the model with the interaction, or to the likelihood ratio test comparing the model with vs without the interaction? I would assume the latter, but I suggest to clarify this.

#### 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?

Yes.

**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?)

Yes

#### 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.

