

PeerJ Review

Policies and opportunities for physical activity engagement in Austrian schools: a census survey

(#94858)

CLR 2-2024

1. Basic Reporting

Clear and unambiguous, professional English used throughout.

I have made some editorial/grammatical suggestions, to improve clarity.

Literature references, sufficient field background/context provided.

The authors established the need for their survey. Some references cited will need to be revised to match APA style, particularly when referencing multiple works at one time. For example, in the Introduction, line 51: "...performance (Singh et al., 2019) (Poitras et al., 2016) (Janssen & Leblanc, 2010). ..." These references should be collected into one parenthetical phrase.

Professional article structure, figures, tables. Raw data shared.

The article is professional in its structure, and the use of tables is appropriate.

Figures should be relevant to the content of the article, of sufficient resolution, and appropriately described and labeled.

NA

All appropriate raw data have been made available in accordance with our Data Sharing policy.

The authors state there were a total of 130 principals responding...but in the raw data table, the ID numbers go up to 166. What happened to the other 36 respondents' data? If the data were incomplete and thus the respondent removed from analyses, the authors need to state this.

Importantly, for the strength of the study, the response rate would improve, but with 36 responses not complete, the authors' comments about whether the data is representative (in the Limitations section) would be further emphasized.

See my comment under Validity about other data and its presentation in the manuscript

Self-contained with relevant results to hypotheses.

The submission should be 'self-contained,' should represent an appropriate 'unit of publication,' and should include all results relevant to the hypothesis.

Coherent bodies of work should not be inappropriately subdivided merely to increase publication count.

2. Experimental design

Original primary research within [Aims and Scope](#) of the journal.

Research question well defined, relevant & meaningful. It is stated how research fills an identified knowledge gap.

The submission did clearly define the research question, and was relevant and meaningful

Rigorous investigation performed to a high technical & ethical standard.

The authors secured ethical approval, and stated participants completed informed consent to complete the survey.

Methods described with sufficient detail & information to replicate.

My only question in this area is about the CSPER instrument. The authors described the "questionnaire was generated using an expert consensus process involving both scientists and school personnel. The final instrument comprised a combination of single- and multiple-choice questions relating to the movement friendliness of schools." However, how was this instrument validated; was it adapted from a previously validated instrument? Would the authors make this instrument available for others?

3. Validity of the Findings

Impact and novelty not assessed. Meaningful replication encouraged where rationale & benefit to literature is clearly stated.

Decisions are not made based on any subjective determination of impact, degree of advance, novelty or being of interest to only a niche audience. We will also consider studies with null findings. Replication studies will be considered provided the rationale for the replication, and how it adds value to the literature, is clearly described. Please note that studies that are redundant or derivative of existing work will not be considered. Examples of "acceptable" replication may include software validation and verification, i.e. comparisons of performance, efficiency, accuracy or computational resource usage.

All underlying data have been provided; they are robust, statistically sound, & controlled.

The data was available. Please revise Table 1. The manuscript discusses swimming halls but Table 1 does not include them.

Also, the total sample n in Table 1 is listed as 127. Please explain how this is possible if the total n of principals is 130.

Finally, in Table 1, the last row is "Gym" with a total n of 9! That is inconsistent with the statements in the abstract, the manuscript and in the raw data. The raw data shows 2 columns

related to gymnastics halls: Column I and Column J. When I summed the columns, the totals were 158 and 207 respectively.

Conclusions are well stated, linked to original research question & limited to supporting results.

The conclusions were appropriately stated, and connected to the original question investigated. They were limited to those supported by the results. See my comments in the manuscript about suggested writing/sentence structure revisions.

Suggested edits/revisions for clarity.

ABSTRACT:

Line 26: The methods section says the surveys were mailed in early 2023.

Lines 27-31. Include the number (n) and percentages in the description. Confirm these numbers based on the raw data first (see comments in the Validity of Findings section) SUGGESTED presentation, to be consistent with RESULTS section:

A total of ~~n~~=130 principals answered the survey, a response rate of 38%. While most schools (___%, n=111) had a gym, only one third (37%, n=___) had access to a swimming hall. On average, ~~the~~ schools had 4.2 ± 2 PA facilities with significant variation between school types (e.g., high schools: 5 ± 2 vs. primary schools: 3.5 ± 2). The most common facilities were meadow areas (89%, n=___), sports fields (71.7%, n=___), and playgrounds (64.6%, n=___). Almost half of the schools...

Line 37: should read: ...additional sports offerings...

INTRODUCTION:

Lines 52-53: Revise ... recommends a minimum of 60 minutes of moderate to vigorous PA per day to maintain or improve health in children and adolescents.

Line 57: eliminate "the" from "majority of adolescents..."

Lines 62-64: Revise and replace "They": Hence, primary schools should also be considered when implementing activity-based health promotion strategies (Carrasco-Uribarren et al., 2023) (Masini et al., 2020).

Line 69: insert "with": ... available outdoor facilities such as soccer fields or playgrounds to be associated with motor skill...

Line 76: replace "another" with "an" since the sentence begins "In addition..." In addition to the availability of PA facilities, school policy appears to represent an essential...

Lines 80-82: revise: Other suggested policy measures for schools to increase PA include involvement in projects such as active school or active commuting (Messing et al., 2019; Norris et al., 2020).

Line 84: eliminate the space after the dash of movement-friendly

Lines 86-90: suggestion to tighten and clarify:

Particularly, the translation of knowledge about the value of PA facilities into practice is largely unknown as no study has evaluated the PA-friendliness of multiple schools on a large scale. Our investigation aimed to analyze the availability and accessibility of PA facilities (e.g., sports

courts, swimming pools, athletic tracks) and the PA policy of all the schools in one state in Austria.

MATERIALS & METHODS

Line 99: insert “the”: ...was reviewed and approved by the Ethics Council of the University of...

Lines 107-108: confirm dates and match/update Abstract

Line 111: eliminate comma at the end of the line

Line 123: eliminate space after dash in Likert-scaled

Line 136: Is Jamovi a brand? Does it need a year or edition reference?

RESULTS

Lines 142: to be consistent with the ABSTRACT, eliminate “n=” before 130.

Line 147: eliminate space in 1294; either insert a comma, e.g.: 1,294 or no space at all

Line 151: replace comma with decimal: 87.4%

Line 167: Say more about these relationships. In what way did you see the relationships? HS v Primary? Urban v rural? Other ways type and PA facilities were related?

Lines 172-178: Suggested revision for clarity:

With regard to the PE teachers’ educational level, three quarters of the schools reported appointment of qualified teachers only, while almost one quarter had classes taught by both qualified and non-qualified (no academic degree in PE) personnel (table 2). Middle schools demonstrated the lowest percentages of PE classes with qualified PE teachers (____%). High schools had the highest percentages of PE classes with qualified PE teachers (____%). In most schools, PE classes were cancelled less than 20% of the time. *what does this mean? To cancel PE? More than four in five schools had at least 80% of students participating in PE classes I assumed you were asking about the percentage of students participating in classes in general as might be measured by schedules or enrollment in classes—or did you mean participating in a physically active way during the class period?* Vocational high schools showed the lowest participation (____%).

Line 182: replace “physical activity” with PA (*to be consistent*)

Lines 192-193: revise for accuracy: ...promotion at their school. More than 80% of the principals *agreed their schools were movement friendly* *Your survey did not address whether they were convinced about it.* (table 3). Eliminate the paragraph space at the end of this sentence.

Lines 194-196: *Say more about these relationships. In what way did you see the relationships? Higher PA facilities = more offerings? fewer? Similarly, participation is higher or lower with more or less facilities?*

Line 195: replace “offers” with “offerings”: ...non-curricular PA offerings...

DISCUSSION

Line 200: suggested edit: Schools, if designed to be movement-friendly, represent pivotal elements of PA promotion for youth.

Line 203: eliminate “inter alia” *it is not at all a common term.*

Line 211: eliminate “global”—*it could be misinterpreted that this survey was a world-wide survey or that this is the first survey in the world of its kind. Both seem to be exaggerations, and the use of the word “global” is just not necessary.*

Line 218: replace “does” with “do”

Line 222: remove “about” and replace “lots” with “many” (“lots” is too colloquial/casual)

Lines 223-225: **With regard to the specific number, Haug et al. (2010) found out that four of eight infrastructural characteristics were significant predictors for daily PA.** *Explain this sentence better—what are the four? What does it mean when you say 4 of 8 are significant predictors?*

Line 231-232: *say more about this correlation in the results section, so that in the discussion, you can reinforce it.*

Line 236: eliminate “best possibly”

Line 243-245: revise: Improving the amount, variety and condition of activity facilities in primary schools is a highly relevant strategy to increase PA levels throughout the school career.

Line 248-252: revise: These findings align with a previous study (Morton, Corder, et al., 2016) which showed a more positively perceived physical environment, and a greater amount of extracurricular physical activity offerings in high schools than in primary schools. In addition, the high schools in our study also had PE teachers with the highest educational level. ...

Line 259: spell out “minutes” and revise: “...reduction of about 40 fewer minutes of breaktime was seen, and in secondary schools, the decrease amounted more than one hour. The morning break duration of 15-20 minutes in both primary and secondary schools is consistent with our findings....”

Line 263: replace “a revision” with “an increase”

Lines 266-274: rework this paragraph. An option:

Our study has a variety of practical implications, underscoring the need for appropriate infrastructure for schools to act as a place for sustainable health education. Our study showed that the provision of PA infrastructure may depend on the type of school, and while the number of facilities is generally high, primary and middle school display lower counts. Seeking to increase facilities in primary and middle schools could more effectively support children’s and public health. However, merely providing infrastructure may not be sufficient to fully exploit the potential of PA promotion in schools. We recommend the involvement of schools in PA projects and initiatives which aim to provide children with sufficient time to engage in PA (e.g., longer break durations and/or extracurricular PE lessons).

Line 278: replace “principles” with “principals”

Line 279-282: revise:

The calculated **response rate of 38%** is satisfactory; however, representativeness of the entire Carinthia principal population cannot be safely assumed. Nor can this sample be suggested to represent principals in other states in Austria or in other countries.

Note: Please verify the response rate considering my comments in the Basic Reporting section. Also, this line was a supposition without basis—unless you sent the emails with read receipt and know principals didn’t open them? If that’s the case, mention this in the Methods section. particularly when considering that the actual response rate is likely to

be higher due to the fact that not all principals may have received and read the email invitation.

Line 283: *When you say “their views may be biased,” I assumed you were referring to PE teachers. Consider revising these last sentences for clarity—this is only suggestion:*

We decided to approach school principals as the leaders who would have the most “whole school” perspective. PE teachers may have more granular-level knowledge about what happens in their classes and elsewhere with PA which may have skewed their responses about the school facilities and policies (positively or negatively). We also acknowledge that in some cases, principals may not have had sufficient insight into the micro-level PA promotion (e.g. in the PE classes). Therefore, future studies may conduct similar surveys with other stakeholders such as teachers, students, and parents.

Tables

As indicated above, the total sample in each of the tables doesn't match the response n of 130. Please explain how/why the total sample would be different for each table in the methods section above.

Table 1: Swimming is missing altogether, and the gym data is inaccurate.

Table 2: suggest using the word “policy” versus “political” as they are not the same.

Table 3: remove the “r” next to the % sign. The other two tables do not have this.