Reviewer's report

Title: Pattern of fractures across pediatric ages: analysis of individual and lifestyle factors.

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Reviewer: Georg Singer

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In their manuscript the authors describe the pattern of fractures in a series of pediatric patients treated at the Children Hospital in Naples. They included 382 children and adolescents sustaining a fracture and analyzed gender, location, dynamics, place of injury, daily calcium intake, time spent in sports activity as well as sedentary behaviors.

Even though there are a couple of grammatical mistakes and some confusing sentences, the manuscript in generally well prepared and deals with a relevant question. The methods and statistics used are standard and sufficient.

Below find some comments and improvements.

Major compulsory revisions:

1) Review of the manuscript by a native speaker would certainly upgrade the quality of the manuscript.

2) The youngest analyzed group was the preschoolers starting at an age of 2 years. Why were younger children excluded from the study?

3) Did none of the children sustain a fracture of the skull or were those fractures excluded from the study?

4) Figure 3: How can preschoolers have an accident at school?

Minor essential revisions:

1) Abstract:
   a) Results: ….progressively increasing with age…
   b)

2) Background:
   a) Omit the statement about osteoporosis in the elderly. This manuscript deals with children.
   b) Second Paragraph, first sentence: This sentence is confusing and incorrect. Please rephrase to something like: “The majority of childhood fractures affect the upper limb. While fractures more often occur in males, girls usually sustain fractures at a younger age compared to boys.”
   c) Second Paragraph, second sentence: I agree that illnesses influencing bone
metabolism may influence the occurrence of fractures, but the statement that fractures also may affect healthy children is too weak since the majority of children with fractures are otherwise healthy.

d) Second paragraph, last sentence: rephrase to “....that a first fracture at a young age is associated with an increasing risk of sustaining subsequent fractures.”

e) Third paragraph: Studying the epidemiology.....

f) Fourth paragraph, first sentence: this is not a large sample, but a series of children and adolescents sustaining fractures. The authors should omit “large sample”.

3) Methods:

a) ...fractures were classified to their anatomic location, place....

b) The study also included questionnaire...

c) That a p value < 0.05 was considered significant does not have to be mentioned twice.

4) Results:

a) Please rephrase the sentence “With regard to anatomic location, upper and lower limb fractures....”

b) Same paragraph, next sentence: Change to: “The upper limb was more frequently involved than the lower limb (…) independently of age class.

c) The distinction in arm, wrist/forearm and hand is a bit confusing. I would change it to humerus or upper arm, forearm/wrist and hand.

d) Last paragraph, first sentence: change “referred” to “sustained”.

5) Discussion:

a) Second page: “In order to identify preventive strategies...”: In the study the authors did not identify preventive strategies but describe the location, pattern or fractures.... in children sustaining a fracture, but do not deal with preventive strategies. This would be the next step.

b) Third page: “It would be expected that sedentary ...”. Sedentary behavior does not cause inactivity, but is a form of inactivity.

c) Fourth page: …was almost totally involved, please rephrase and omit totally.

d) Fifth page: ..emerged in a large number of children, please change to were found in a large number....

e) Fifth page: bone mineral density at all sites. Which sites do the authors mean?

6) Tables: Please include a caption for Table 1.

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Needs some language corrections before being
published

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.