Reviewer's report

Title: Systematic review on measurement properties of questionnaires assessing the neighbourhood environment in the context of youth physical activity behaviour

Version: 2 Date: 6 April 2013

Reviewer: José Cazuza Farias Júnior

Reviewer's report:

Abstract

The authors needs to inform the data search and the bases used.

What kind of instrument revised? Questionnaires and scales? It's necessary show this information.

What was the percentage of studies with low and high quality? This sentence is very imprecise: “While several studies had weak methodological quality”.

Introduction

It is important that the authors show that their concern is with the subjective measures of the environment, particularly with young people.

Methods

The authors should present the reliability and validity concepts. There wasn’t consensus on this concept in literature.

It's necessary to revise this position: “However, we presume that the neighbourhood environment is a formative construct that is, in contrast to reflective constructs, determined as a combination of its indicators [28]. Items of formative constructs are not necessarily associated with each other [29]. Similarly, attributes of the neighbourhood environment (e.g. accessibility of parks or pavement of streets) usually represented by single items may not be correlated with each other. Therefore, statistical procedures assuming inter-item relationships, such as factor analysis or internal consistency, are not appropriate for expressing measurement properties of questionnaires measuring formative constructs [30, 31]. However, to date the scientific literature has not specified the measurement models for neighbourhood environmental constructs (formative or reflexive). According to these arguments, estimates of internal consistency and structural validity have not been considered for evaluating questionnaires, and the methodological quality of the studies on internal consistency and structural validity have not been rated in this review.” This issue is only rarely addressed in the scientific literature on physical environmental constructs in relation to physical activity behavior. Furthermore, it is important to consider that
some instruments are based on theoretical models and their items are specific by environment domains, while others do not.

Why did data analysis wasn't separated by children and adolescents?

Results

The characteristics of the studies (Characteristics of included studies) should come before the instruments (General characteristics of reviewed instruments).

It’s necessary review this sentence: Screenings of reference lists and citations of included articles resulted in a review of eight additional full text papers; however, none of these articles met the eligibility criteria. Thus, 13 studies were included in this systematic review. Many things are repeated (Thus, 13 studies were included in this systematic review). Furthermore, “Screenings of reference lists and citations of included articles resulted in a review of eight additional full text papers; however, none of these articles met the eligibility criteria” should be early in sentence.

Add references number for each result displayed. For example: The number of items ranged from 4 (What were the studies?) to 66 (What were the studies). “…Seven studies were conducted in the United States…”; “Ten articles examined the questionnaires' internal consistency…”; “Six studies examined the convergent validity of the questionnaires, six studies the structural validity and one study the criterion validity”; “…Six studies assessed the structural validity using an exploratory factor analysis”. And so on.

Change in all paper N by n.

Why does results aren't show separately by age or groups: children vs adolescents?

Discussion

I recommend that the authors delete this sentence: “Considering the items of the COSMIN checklists, current gaps in instrumentation and best-practice models were identified and are discussed below”.

Report all recommendations for future studies at the end of the article.

It would be important to show and discuss the operational concepts about neighborhood used in the studies, and your implications on studies on relationship physical activity and environmental attributes. For exempla, some studies used 10 a 15 min, others 1 a 1.5km.

One important question: How much we can to believe that this evidence applies to children and or adolescent? Data analysis has not considered age of youth (children or adolescents), but it is very important information.
What were the environment characteristics that showed the most of psychometric properties?

I suggest the authors shown ordered by publication year or alphabetically and separately children and adolescents studies.

There is a problem with the formatting of the table 4.

What results are derived from studies with children and which are derived from studies with adolescents?

The authors should report information on which environment characteristics frequently were measured by the instruments analyzed (security, access, availability, etc.). Of these instruments, which had better psychometric properties by one type of environmental characteristic assessed. Which was the most commonly used scales (Likert, dichotomous)? The authors should comment about implications of these results on research in this area.

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

**Quality of written English:** Acceptable

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

I declare that I have no competing interests' below