



## Considerations for using a single item physical activity self-report measure for young people (17 years and younger)

Accurate and feasible measures of physical activity (PA) are required for assessing population trends and assessing the effectiveness of interventions and programs designed to increase PA participation for younger people<sup>1</sup>. Wearable devices (e.g. accelerometers) are generally recommended for measurement of PA, however, this may not always be possible (i.e. expensive, large sample size, logistical and practical constraints, added layer of consent, low adherence to device wear, participant burden) and such devices can underestimate activities such as swimming and cycling<sup>1</sup>. Thus, self-report recall questionnaires continue to be widely used. In some cases, single-item measures might be more appropriate to ascertain a quick approximation of PA levels when the feasibility of administering long self-report PA measures can be problematic, as indicated by single item measures of PA being the most widely used method for assessing population trends in younger people<sup>2</sup>.

The single item measure for Adolescents (SIM-A) developed by Scott et al. (2015)<sup>3</sup> has been widely used to assess the PA levels of adolescents by asking them:

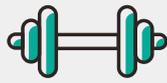
**In the past week, on how many days have you done a total of 60 minutes or more of physical activity, which was enough to raise your breathing rate?**

[This may include sport, exercise and brisk walking or cycling for recreation or to get to and from places.]

Respondents are asked to select one option between 0-7 days.



## Strengths of the SIM-A



- It provides a measure of moderate to vigorous PA (MVPA) related to sport, leisure or transport
- The SIM is suitable for use for the following purposes:
  - Measuring MVPA at a single time point (compares favourably with longer self-report measures for younger people).<sup>1,3</sup>
  - Detecting insufficiently active adolescents (those not meeting the current Australian PA guidelines).<sup>4,5</sup>
  - When time is limited (easy to administer as part of the registration process in community settings).
  - Promotion of PA data harmonisation by including in larger public health surveys of multiple health indicators for younger people (e.g. PA, healthy eating, mental health, etc.).
  - When we want to reduce the burden on participants.

## Limitations of the SIM-A



- The SIM is NOT suitable for the following purposes:
  - Detecting sufficiently active adolescents (those meeting current Australian PA Adolescent guidelines)\*
  - Measuring PA levels of children under 12, adults or older adults.
  - When there is a need to assess types of activities undertaken (e.g. time spent in sport versus time spent in active transport).
  - Evaluating change in MVPA (e.g. administer before and after participation in community programs)\*\*.

\* CSSI (2020), those from other Australian studies,<sup>4</sup> and large studies based on over 20,000 cases<sup>6</sup> have suggested that less than 10% of adolescents reach PA guidelines according to accelerometry data.

\*\* This recommendation is based on data from 176 adolescents that showed the Single Item Measure – Adolescent is not sensitive to change, when using accelerometry data as the comparator<sup>5</sup>.



## References

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