



SEACO POLICY BRIEF 002

Self-Measurement of Central Adiposity

South East Asia Community Observatory
(SEACO):
Research for a Healthy Community

This research based evidence brief highlights potential policy options

Who is this Policy Brief for?

Policy makers and other stakeholders who are interested to address the problem based on research evidence

Why was it prepared?

To inform stakeholders about health policies and interventions by summarizing the best available research based evidence about the problem

What is Research Based Evidence Brief for Policy?

Research Based Evidence Brief for Policy is generated from the studies implemented by SEACO, an ISO accredited health and demographic surveillance site which acts as a research platform for health related research

Full Publication

The research based evidence is described in detail in the SEACO publication

Reidpath DD, Cheah JCH, Lam FC, Yasin S, Soyiti I, Allotey P. Validity of self-measured waist and hip circumference: results from a community study in Malaysia. Nutrition Journal. 2013;12:135

<https://nutritionj.biomedcentral.com/articles/10.1186/1475-2891-12-135>

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The Problem:

Overweight and obesity (excess adiposity) are associated with an increased risk of diabetes, arthritis, cardiovascular disease and certain cancers. There is evidence that proxy measures of central adiposity, waist circumference (WC) and waist to hip ratio (WHR), are better predictors of adverse health events including mortality than body mass index (BMI). These measures need a tape which is lighter to carry into the field than a stadiometer and a set of weighing scales.

However, due to the lack of validated studies on self-measurement of WC and WHR, there is a barrier to use these inexpensive tools as an alternative method to replace health professional assisted measurement of central adiposity.

Evidence to Support Policy Options:

SEACO conducted a community based validation study in Segamat where the study participants measured their own waist and hip circumference in a private curtained area after watching a training video and a live demonstration on the appropriate methods to conduct self-measurement. These waist and hip circumferences were measured using constant tension measuring tape (model: Orbitape), which reduces the individual variation in how tight the tape is pulled to determine circumference. In order to compare the results, measurements of the same participants were taken by medical students who were unaware of the original results.

The results of this study supported the use of waist and hip self-measurement as the study found that there is little divergence between self and assisted measurement. Researchers created the Bland Altman plots and found that most of the points lie within the 95% limits of agreement. Besides, the correlation between the measures of central adiposity and BMI, blood pressure and blood glucose were similar for self and assisted measures.

Recommendation:

The study findings highlight that self-measurement of central adiposity is a favourable alternative to health professional assisted measurement, especially in the population based surveillance where there are issues of either cost or personal privacy to inhibit the screening process.