

What do systems approaches for physical activity look like?

Findings from our scoping review of peer-reviewed literature 2010-2021



Systems approaches for physical activity (PA) are endorsed by the World Health Organization (WHO) Global Action Plan on PA.

Barriers to the use of systems approaches in other areas of public health, have included a lack of understanding about what they are and how to use them in practice.

We did a scoping review of the peer-reviewed literature to find out how systems approaches for PA have been understood and applied since the WHO's call to action.

What did we do?

1



Searched 4 research databases for English language studies 2010-21 that explicitly used systems approaches or methods for population PA

2



Adapted a framework to classify PA studies according to stage of systems approach and predominant methodology

3



Screened and classified studies and selected case studies to illustrate different stages of a systems approach for PA

What did we find?



155 relevant papers

out of 2,480 identified through literature searches



Prediction and Theorising

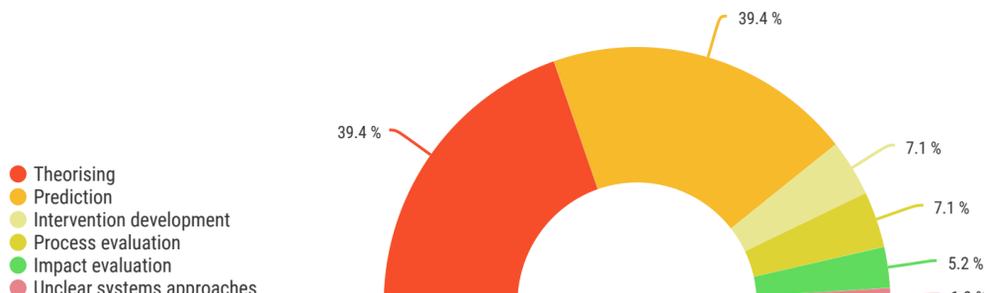
were the dominant stages of a systems approach in the studies



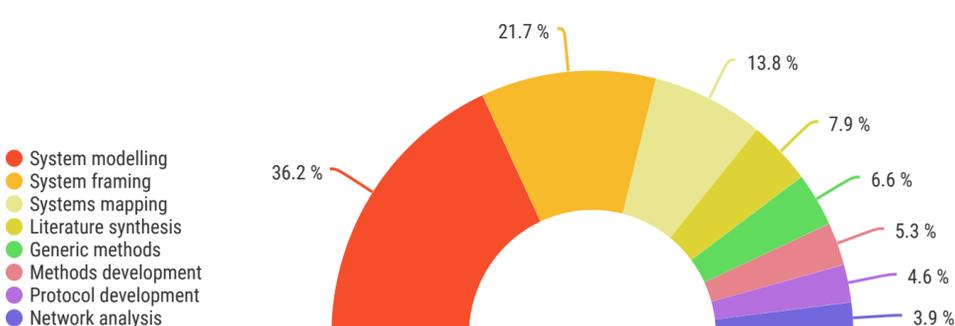
System modelling and Framing

were the most common methodological approaches

Studies according to stage of systems approach (n=155)



Studies according to methodological approach (n=152)



Some observations

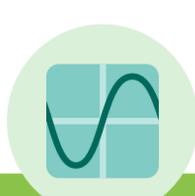
Few studies engaged robustly with systems concepts e.g.

- feedback and adaption
- dynamic interactions
- non-linearity
- self-organisation and emergence



Emphasis on theorising i.e.

- understanding the system (mapping)
- prediction (modelling)



Apparent lack of cross-sectoral perspective

- except in studies using community-wide approaches
- emphasis on built environment determinants



Limitations to note



Review was limited to peer-reviewed articles. Relevant examples may exist outside formal academic literature.



There may be applications of implicit systems approaches not captured by this review.



Our classifications are based on the information reported in the studies.

What are the opportunities for improvement?

1

Greater shift towards development, implementation and evaluation



2

Build evidence base for the effectiveness of systems approaches



3

Modelling should aim to be used to inform decision making and policy



4

Prioritise action on systems-level interventions (e.g. leadership, multisectoral partnerships, legislation and regulation)



What does this mean?

The use of systems approaches within the field of physical activity is at a relatively early stage of development with a focus on descriptive approaches and lack of more complex analyses.

There needs to be greater movement towards more sophisticated research agenda spanning the development, implementation, and evaluation of system-level interventions.

Further information about this study can be found at: Nau T, Bauman A, Smith BJ, Bellew W. A scoping review of systems approaches for increasing physical activity in populations. Health Res Policy Sys 20, 104 (2022). <https://doi.org/10.1186/s12961-022-00906-2>

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For more information about the Australia Systems Approaches to Physical Activity (ASAPa) project, visit <https://preventioncentre.org.au/research-projects/employing-physical-activity-to-prevent-chronic-disease/#project-about>