

# Which interventions to promote healthy dietary and/or physical activity behaviours could work best among adolescents in sub-Saharan Africa? A realist synthesis

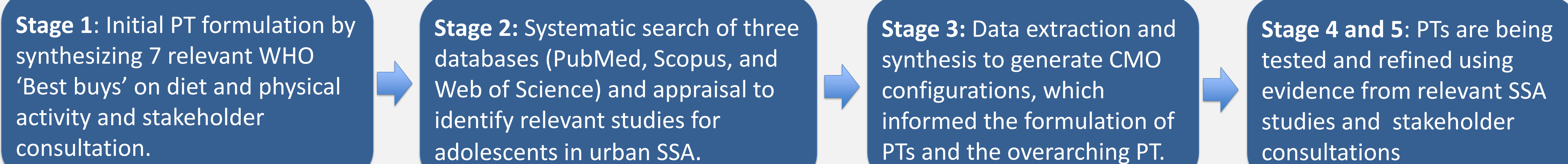
Amevinya, G.S; Lorenzo N; Kingma P; Pradeilles R; Landais E; Beune E; Sherar L; Griffiths P; Laar A; Asiki G; Bosmans J. E; Agyemang C; Vandevijvere S; Booth A; Holdsworth M

## Background

- Ghana and Kenya are experiencing the rapid nutrition transition typical of many Sub-Saharan African (SSA) countries largely due to unhealthy food environments and decreased opportunities for physical activity.
- Those designing and delivering interventions to promote healthy dietary and physical activity behaviour need to understand how to activate the underlying mechanisms that contribute to positive behaviour change.
- As part of a project code-named Generation-H, we identified programme theories (PTs) that capture key context-mechanism-outcome (CMO) configurations. These theories will help us to develop evidence and theory informed components of a multi-component intervention to improve adolescent diet and physical activity behaviours in urban Ghana and Kenya.

## Methods

A protocol was registered on PROSPERO (ID: CRD42024537862). A realist synthesis was conducted using a 5-stage iterative process<sup>1</sup>.



## Results

- A total of **67 CMO configurations** were generated through an annotation coding process using realist logic.
- Using consolidation techniques, **10 PTs** were developed by grouping CMOs with similar contextual features.
- These 10 PTs were then synthesized to develop **an overarching PT**, as detailed in *Box 1*.
- **Stakeholder consultations** on the overarching PT led to a revised version, which is presented in Figures 1 and 2 as core and supporting intervention components for the Generation H Project.

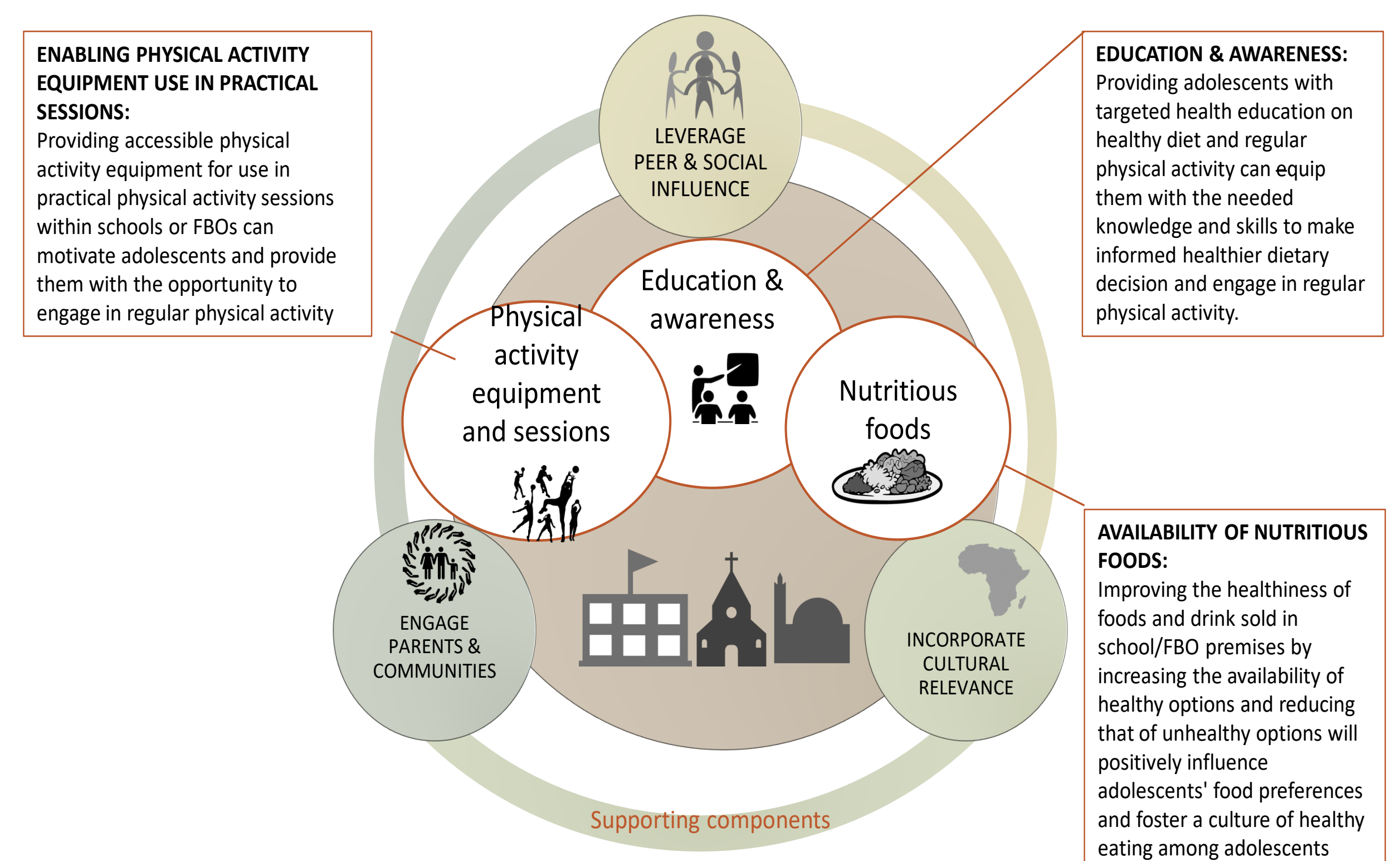


Fig.1 : Core components of Generation-H intervention

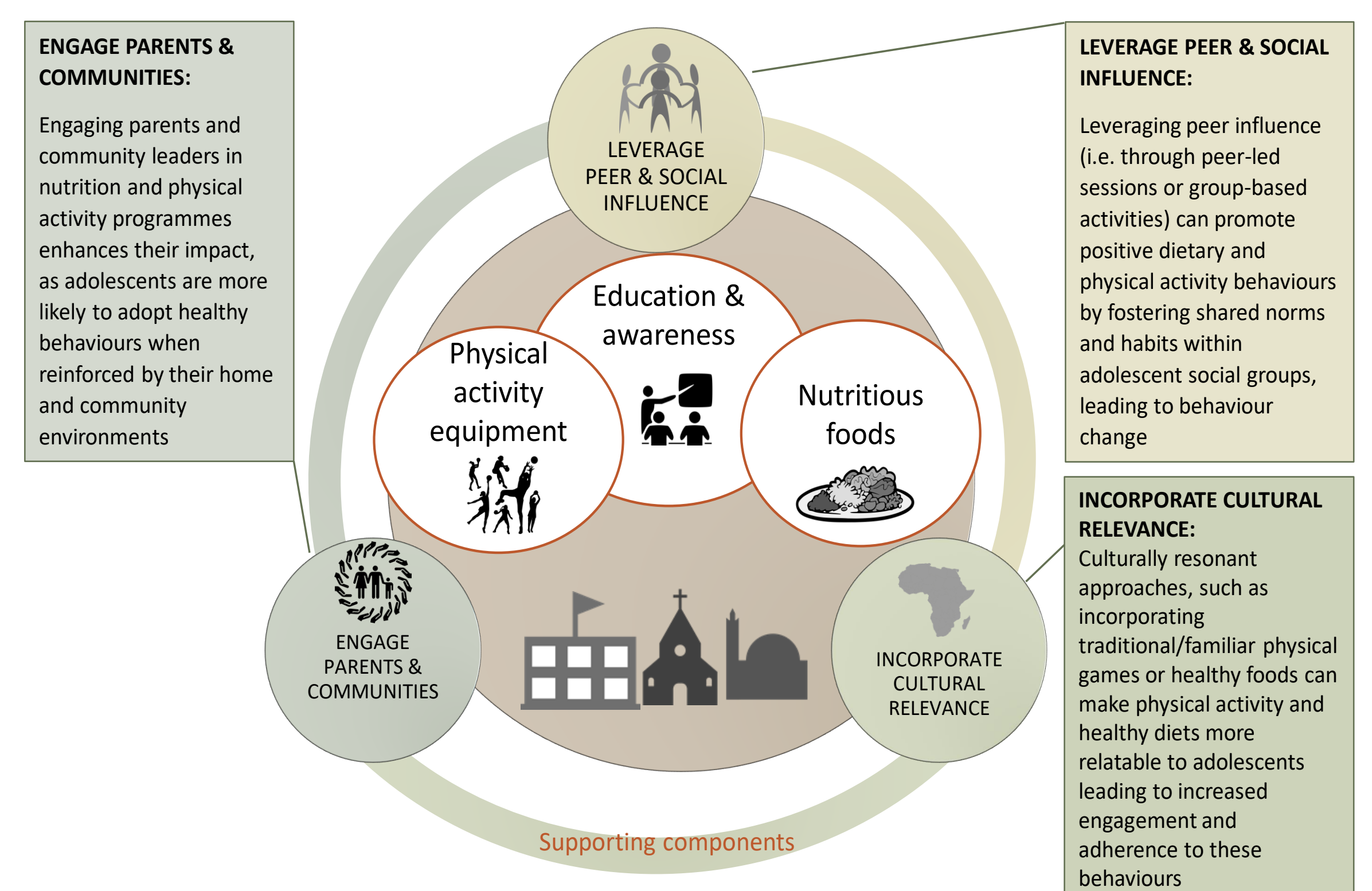


Fig.2 : Supporting components of Generation-H intervention

*Box1:* "Physical activity and healthy eating interventions are most effective when they operate through three interconnected systems: education and awareness, enabling environment, and social support. Success requires institutions to establish supportive scheduling [PT1] and curriculum structures [PT3], reinforced by trained and engaged teachers who can effectively implement nutrition education and physical activity programmes [PT2, PT3]. These institutional elements must be supported by adequate enabling environment, including accessible physical activity equipments/tools [PT5] and nutritious food options [PT6], with consideration for socioeconomic barriers that might limit access [PT7]. The intervention's impact is then amplified through a comprehensive social support system where peer influence [PT8], parental engagement [PT9], and community involvement create reinforcing behavioural norms [PT4], while cultural and religious relevance [PT10] ensures sustained participation."

## Conclusion

Multi-component interventions could work by creating a system where education, enabling environment, and social reinforcement work in synergy to normalise and facilitate healthy dietary and physical activity behaviours of adolescents. The testing and further refinement of the PTs and the overarching grant PT are currently underway to arrive at the final version of an overarching PT.

## Reference

1. Pawson R, Greenhalgh T, Harvey G, Walshe K. Realist review - a new method of systematic review designed for complex policy interventions. *Journal of Health Services Research & Policy*. 2005;10 (1\_suppl):21-34. doi:10.1258/1355819054308530