

Twenty-four-hour movement behaviours in the early years in Tanzania: Sunrise pilot study

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Abstract

During the early years, children's physical activity, sedentary behaviour, and sleep play a crucial role in their development. The SUNRISE International Surveillance Study Protocol was assessed in Tanzania for its feasibility. Physical activity and screen time were assessed with ActiGraph accelerometers, while sleep and screen time were assessed via parent reports. The feasibility of the protocol was assessed based on the recruitment of 103 children aged 3- to 4-years-old and the ability of the researcher, preschool staff, participants, and parents to follow the SUNRISE protocol and successfully complete the measurements. Study feasibility was high; 95% of eligible children were enrolled in the study, 65% completed the accelerometer protocol, and 94% of parents completed the questionnaire. Eighty-five percent of children met the WHO 2019 guidelines for total physical activity, 94% for moderate- to vigorous-intensity physical activity, 63% for sleep time, 43% for sedentary screen time, 37% for restrained sitting time, and 23% for all guidelines combined. Physical activity, sleep time, and restrained sitting time differed significantly between rural and urban children $p=0.001$, $p=0.003$, and $p<0.001$ respectively. This pilot study will inform the SUNRISE main study in Tanzania.

Key terms: Physical activity, sedentary behaviour, sleep, Tanzania.