

United Nations  
Educational, Scientific and  
Cultural Organization



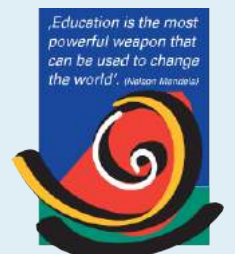
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Swiss Tropical and Public Health Institute  
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# Where we come from: The *DASH* project

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**'Education is the most powerful weapon which can be used to change the world.'** Nelson Mandela (2003)



In 2014, the Nelson Mandela University, together with the University of Basel and the Swiss Tropical and Public Health Institute from Switzerland collaborated in the '*Disease, Activity and Schoolchildren's Health*' (*DASH*) project. The objective was to explore the implementation of a multi-fold school-based intervention aimed at the improvement of the health and wellbeing of schoolchildren in disadvantaged neighbourhoods of Port Elizabeth, South Africa. Important research findings and a Toolkit emanated from the project.

The intervention was applied in two 10-week blocks and comprised 4 elements:

- (1) weekly Physical Activity and Dancing-to-Music lessons;
- (2) Health and Hygiene lessons;
- (3) Nutritional supplementation; and
- (4) Deworming.

Additionally, bathroom facilities were renovated, where necessary, and food preparers were trained. The *DASH* project is continued by the *KaziBantu* project.



# The *KaziBantu* project in a nutshell

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***'Sport has the power to change the world. It has the power to inspire.'*** Nelson Mandela (2013)



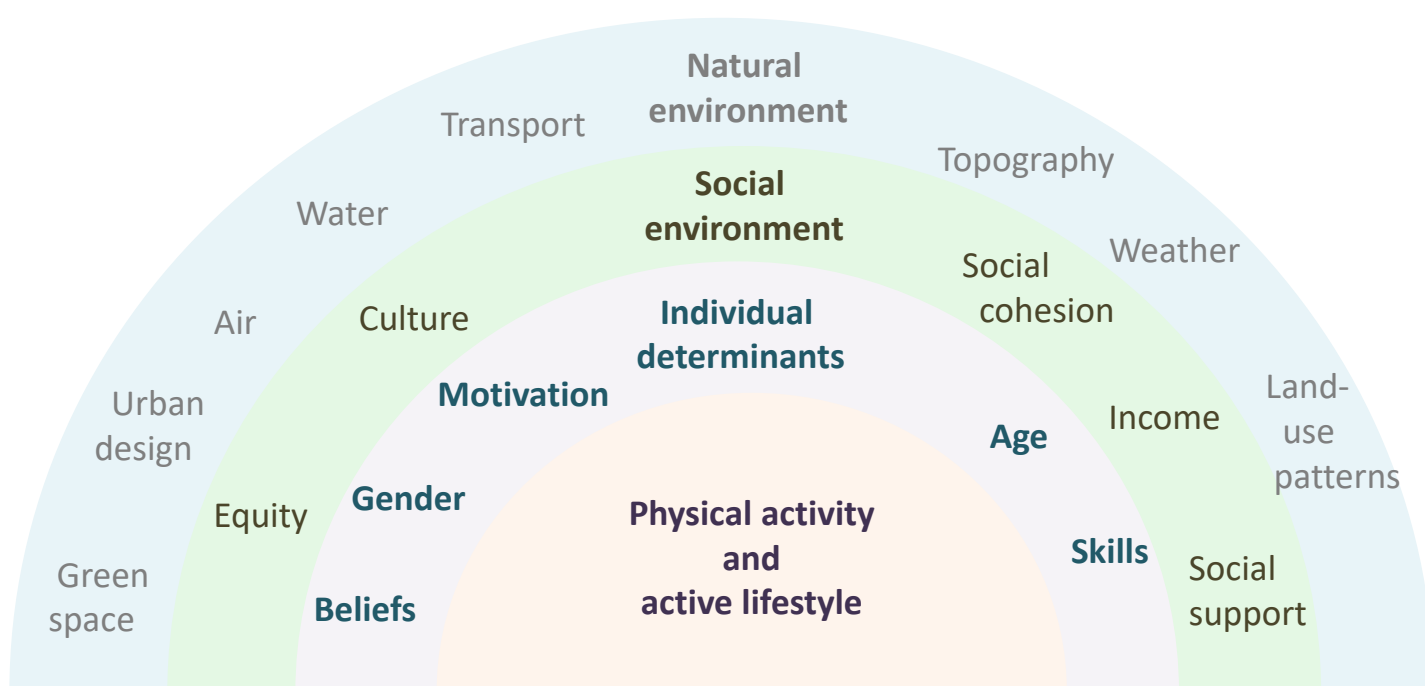
**T**he *KaziBantu* project builds on findings of the *DASH* project and is a specially tailored school-based intervention programme aimed at consolidating the practice of physical education and ensuring the physical literacy and healthy active living of schoolchildren and teachers. The *KaziBantu* Project (*Kazi* means “active” in Swahili and *Bantu* means “people” in Xhosa) is dedicated to developing positive changes in

health and providing opportunities for physical activity, by implementing a multi-faceted approach by addressing the health challenges encountered in disadvantaged settings in South Africa. This will be achieved through two programmes: *KaziKidz* (aimed at children’s health) and *KaziHealth* (aimed at teacher’s health).

# Physical activity & active lifestyle



Experts predict that by the year 2030, 1.3 billion people or approximately 15% of the global population will be classified as overweight.



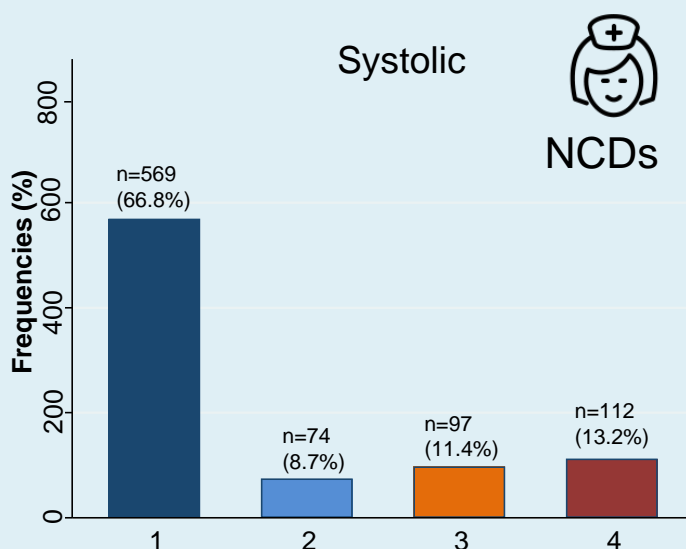
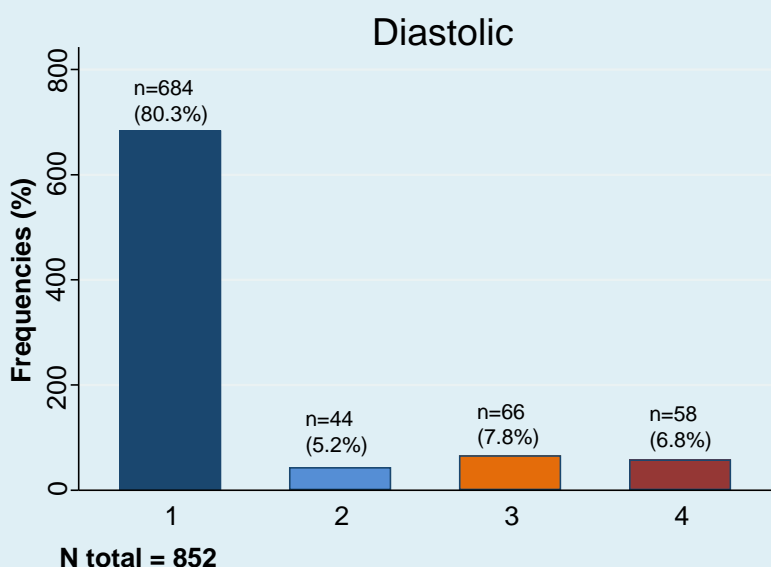
**R**esearch over the past few decades have provided a greater understanding of factors influencing whether a person or community is physically active (which is shown above). Lack of physically active role models in modern families may contribute significantly to this development. Study findings show that children of inactive parents are more sedentary than children of active parents. This development is addressed by the world health organization (WHO) by defining the

Sustainable Development Goals (SDGs), especially to ensure a healthy life and promote the well-being of all ages. Insufficient physical activity is amongst the leading risk factors for death worldwide, and a key risk factor for non-communicable diseases (NCDs), such as cardiovascular diseases, diabetes and cancer. The *KaziBantu* project aims to counteract cardiovascular risk factors in children, as well as in teachers.

## Source:

Edwards, P. & Tsouros, A., 2006. Promoting Physical Activity and Active Living in Urban Environments: The Role of Local Governments (Copenhagen, WHO Regional Office for Europe).

# Blood pressure results from the *KaziBantu* baseline



## Legend\*

- (1) Normotensive: <90<sup>th</sup> percentile;
- (2) Pre-hypertensive: ≥90<sup>th</sup> to <95<sup>th</sup> percentile;
- (3) Stage 1 hypertension: ≥95<sup>th</sup> to <99<sup>th</sup> percentile; and
- (4) Stage 2 hypertension: ≥99<sup>th</sup> percentile +5 mmHG

\*Cut-offs and syntax were applied according to Bernard Rosner, Harvard T.H. Chan School of Public Health, Boston, USA; (*Am J Epidemiol.* 2008 Mar 15;167(6):653-66. doi: 10.1093/aje/kwm348. Epub 2008 Jan 29.) and Falkner, B. *Pediatr Nephrol* (2010) 25: 1219. <https://doi.org/10.1007/s00467-009-1200-3>.

## Method

Children's blood pressure was measured three times, with a calibrated Omron® digital blood pressure monitor, after the child had been seated for five minutes. The cuff was wrapped around the left arm, so that only a finger could fit between the cuff and arm. The bottom of the cuff was placed about 4 cm above the elbow with the palm facing up, while the blood pressure was taken. For children, a cuff size of 17-22 cm was used (Omron® CS2 Small Cuff; Hoofddorp, The Netherlands). Since the first measurement often results in higher values, the average of the second and third measurements

was utilized to estimate systolic and diastolic blood pressure. To analyze the data, children were categorized into a normotensive, pre-hypertensive or hypertensive group, based on percentiles, taking into account the age, sex and height of the children.

## Results

For the diastole measurement, at *KaziBantu* measurement time point T<sub>1</sub> (February 2019), about 15% of the children are categorized as either hypertension stage 1 or stage 2. For the systole measurement, more than 20% (one fifth) of the children are categorized as either hypertension stage 1 or stage 2.



# *KaziKidz* teaching material



**KaziKidz**

*Teaching Material for Schoolchildren*



**KaziKidz** is a holistic educational and instructional tool for primary school teachers. It aims to enhance children's overall health in South African primary schools through the implementation of Physical Education (PE); Moving-to-Music; Health and Hygiene; and Nutrition Education lessons. The lessons are aligned with South Africa's Curriculum and Assessment Policy Statement (CAPS). The objective is to lead children through content, games and activities, partly supported by music, and conducted in a joyful manner that encourages and promotes a healthy lifestyle throughout childhood into adolescence.

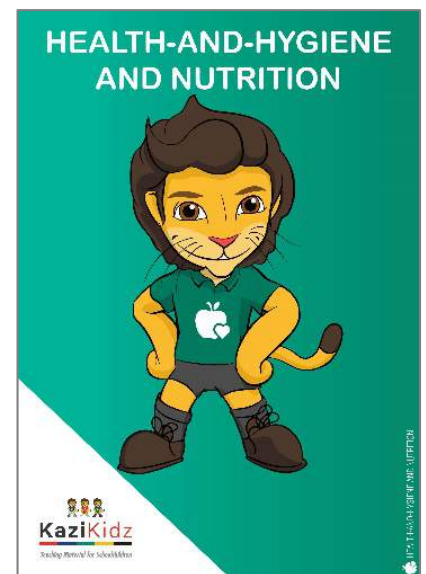


# KaziKidz modules

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By implementing *KaziKidz*, teachers contribute to the overall health and wellbeing of learners.



Through the implementation of...

- (1) Physical Education (PE);
- (2) Moving-to-Music; and
- (3) Health-and-Hygiene, and Nutrition Education lessons;

The toolkit aims to enhance children's overall health in disadvantaged South African quintile 3 primary schools.

The *KaziKidz* material has been designed to encourage healthy and active living for the promotion of the health and wellbeing of our children. We have devised fun and informative lessons which are a handy resource for teachers and enjoyable for the learners as well. Our research has highlighted health-related problems amongst schoolchildren and we have worked towards finding practical solutions.

# Dimensions of teaching quality

Characteristics of good teaching have been identified in general educational research. These characteristics promote the acquisition of competencies and the development of motivation among students independent of the subject.

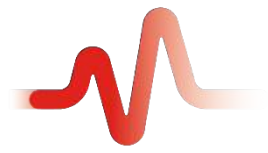


Source:

Herrmann, Christian & Bacchetta, Marina, 2018. Basic dimensions of teaching quality in Physical Education (PE).

# KaziHealth programme

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**KaziHealth**



**KaziHealth** is a teacher's health promotion programme consisting of a behaviour change model that targets health behaviours, as well as perceived levels of stress and mental health outcomes. This includes a health risk assessment, lifestyle coaching and the *KaziHealth* cellphone application. These tools are aimed at lessening cardiovascular and

communicable disease risk, and improving physical activity and physical fitness, nutrition and diet, and psychosocial health. This specially tailored school-based programme has been designed to educate and enact a positive transformation to create healthy schools for healthy communities.

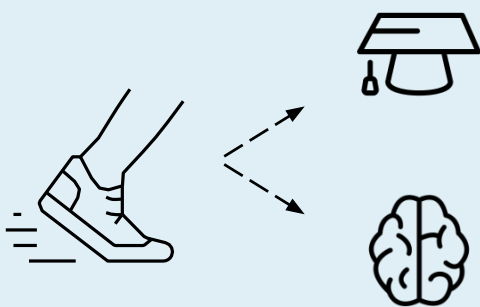
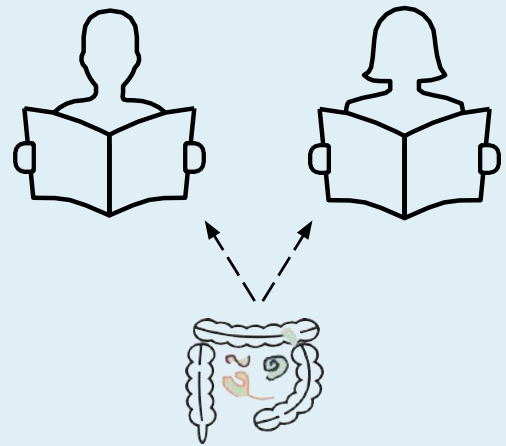


# Media & science release

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*"Worms partly responsible for lower academic results among children"*

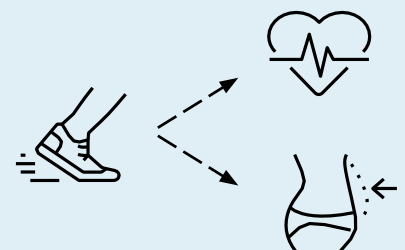
Newspaper article in Dispatch Live;  
May 10<sup>th</sup>, 2017



*"Physical activity contributed to the maintenance of academic performance"*

Newspaper article in The Heralds;  
March 18<sup>th</sup>, 2019

*"A multidimensional, school-based physical activity intervention can reduce the increase of specific cardiovascular risk factors."*



International Journal of Environmental Research and  
Public Health; January 15<sup>th</sup>, 2019

# The way forward

Beyond borders

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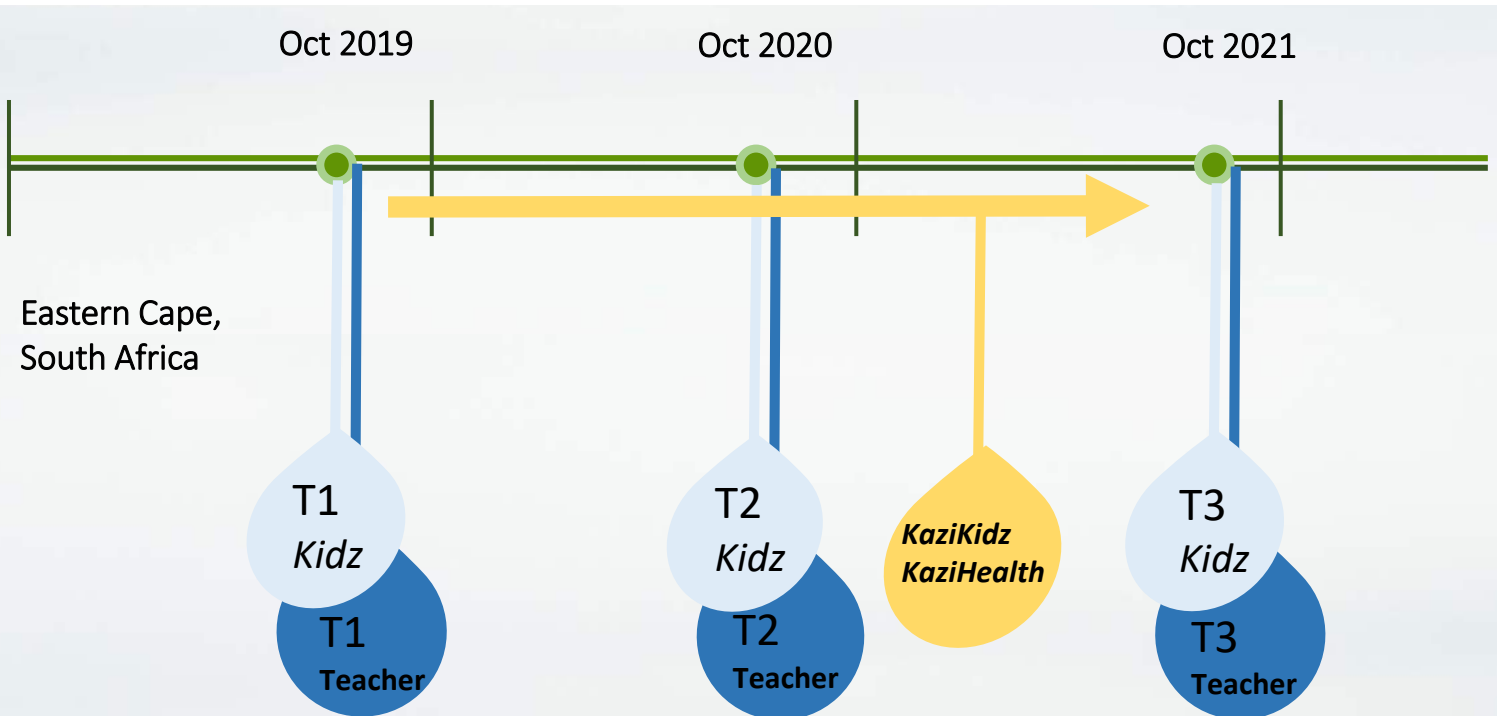
The dissemination of *KaziBantu* will be expanded to 300 quintile 3 primary schools in the Eastern Cape, before being distributed nationally. For these schools, the teaching material will be explained at teacher workshops. Funding is sought for the dissemination and for much needed research on the health and wellbeing of children and teachers in the rural parts of South Africa.

The ultimate goal of the project is to cooperate with other internationally recognized institutions and researchers from Tanzania, Ivory Coast, Namibia, Botswana, Mauritius and European regions. The launch of the *KaziBantu* dissemination strategy will take place in October 2019 at a conference to which all local partners will be invited.



# Timeline of *KaziBantu*

Beyond borders







# KaziBantu

*Healthy Schools for Healthy Communities*



United Nations  
Educational, Scientific and  
Cultural Organization



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for more information

[www.kazibantu.org](http://www.kazibantu.org)



Would you like to be part of our journey?

Please join us...

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