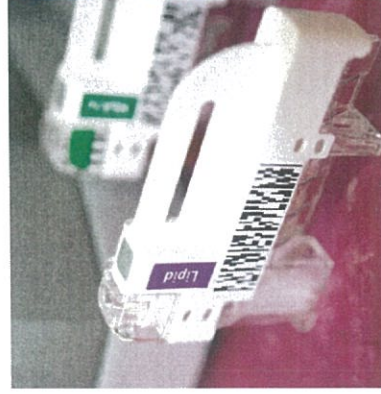


KaziBantu



Healthy Schools for Healthy Communities

Nelson Mandela University Engagement Colloquium

Cheryl Walter

NELSON MANDELA
UNIVERSITY



PassPORT to Health

**Taken out of
comfort zone**

**Confronted with
real challenges**

**Put theory
into practice**

**Conduct
needs analysis**

**Draft
funding proposal**

Obtain funding

**Research
interventions**

**Implement
interventions**

**Facilitate sports
coaching**

**Leadership camps
for prefects**

**Project
evaluation**

Self - reflection

Change the World

PassPORT TO HEALTH

Aim: Promoting physical activity and school sport at disadvantaged schools

Project Leader: Dr Cheryl Waller • Department of Human Movement Science • Tel: 041-5042628 email: cheryl.waller@nmnu.ac.za

Where?
2010 schools: Gqeberha, Port Elizabeth, Port Alfred, Port Shepstone
2011 schools: Grahamstown, Port Elizabeth, Port Alfred, Port Shepstone
2012 schools: Grahamstown, Port Elizabeth, Port Alfred, Port Shepstone

How?
Human Movement Science students are part of their experimental learning, where they apply their knowledge and engagement interventions to promote physical activity and school sport at selected disadvantaged schools.

Before

Process

Marking, painting, digging, drilling, hammering... transforming schools

HMS students conduct leadership camps for prefects, facilitate sports coaching, and provide support for health at schools.

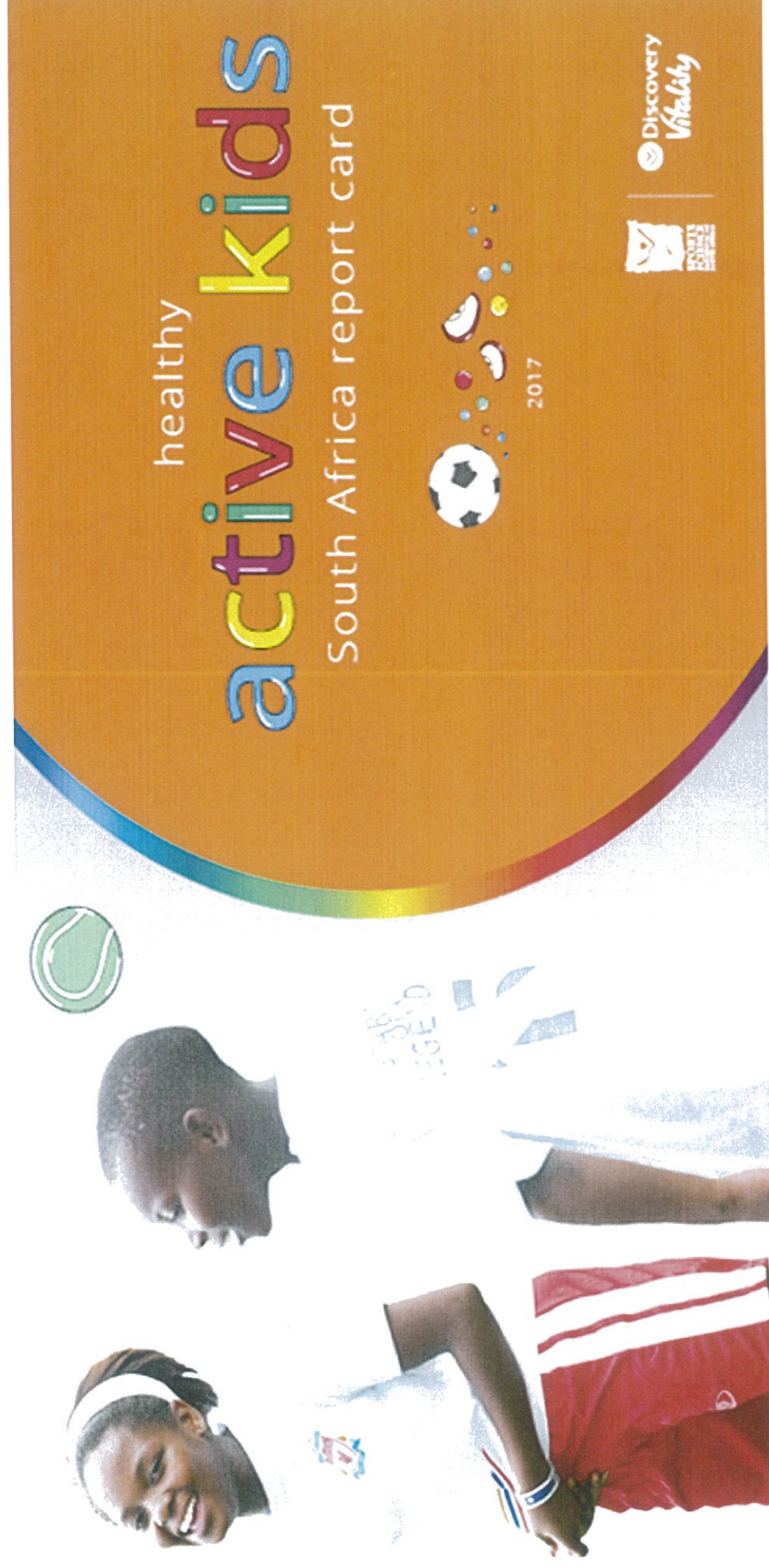
RESEARCH:

- Children's physical activity
- Low-cost interventions aimed at promoting physical activity

After

HMS students together with teachers and parents create physical activity-friendly environments... bringing much joy

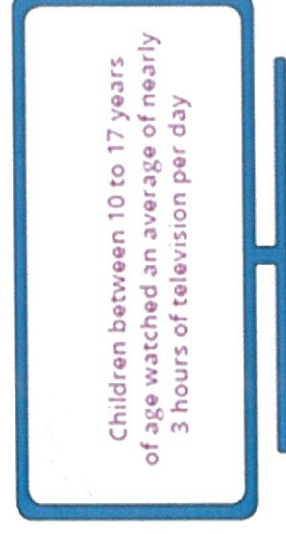
Health Active Kids South Africa (HAKSA) Report Card Launch 2016



Health Active Kids South Africa (HAKSA)



The implementation of physical education (PE) in schools remains compromised...and primary school children still have low levels of in-school physical activity.



Health Active Kids South Africa (HAKSA)



Levels of overweight and obesity continue to rise among SA children.

In one study, South African researchers showed boys who were obese between the ages of 4 and 8 were 20 times, and girls 42 times more likely to be obese when they were 16 to 18 years old.

overweight
and obesity



under-
nutrition



Under-nutrition in South African children is decreasing at a slow pace, but continues to co-exist with over-nutrition. This co-existence is most evident in low socio-economic living conditions, with boys mostly affected.

Health Active Kids South Africa (HAKSA)

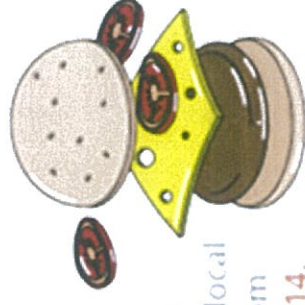


sugar-sweetened

beverages, added sugar 
and salty snacks

- South African teens drink an average of more than one soft drink per day; have a weekly sugar intake 3 times higher than recommended;

fast food 
intake



Average intake of fast food items **11 times** by adolescents per week.

Fast food is experiencing exponential growth with local consumers increasing from 66% in 2009 to **80% in 2014**.



Advantaged Schools vs Disadvantaged Schools



Wednesday, 13 February 2019



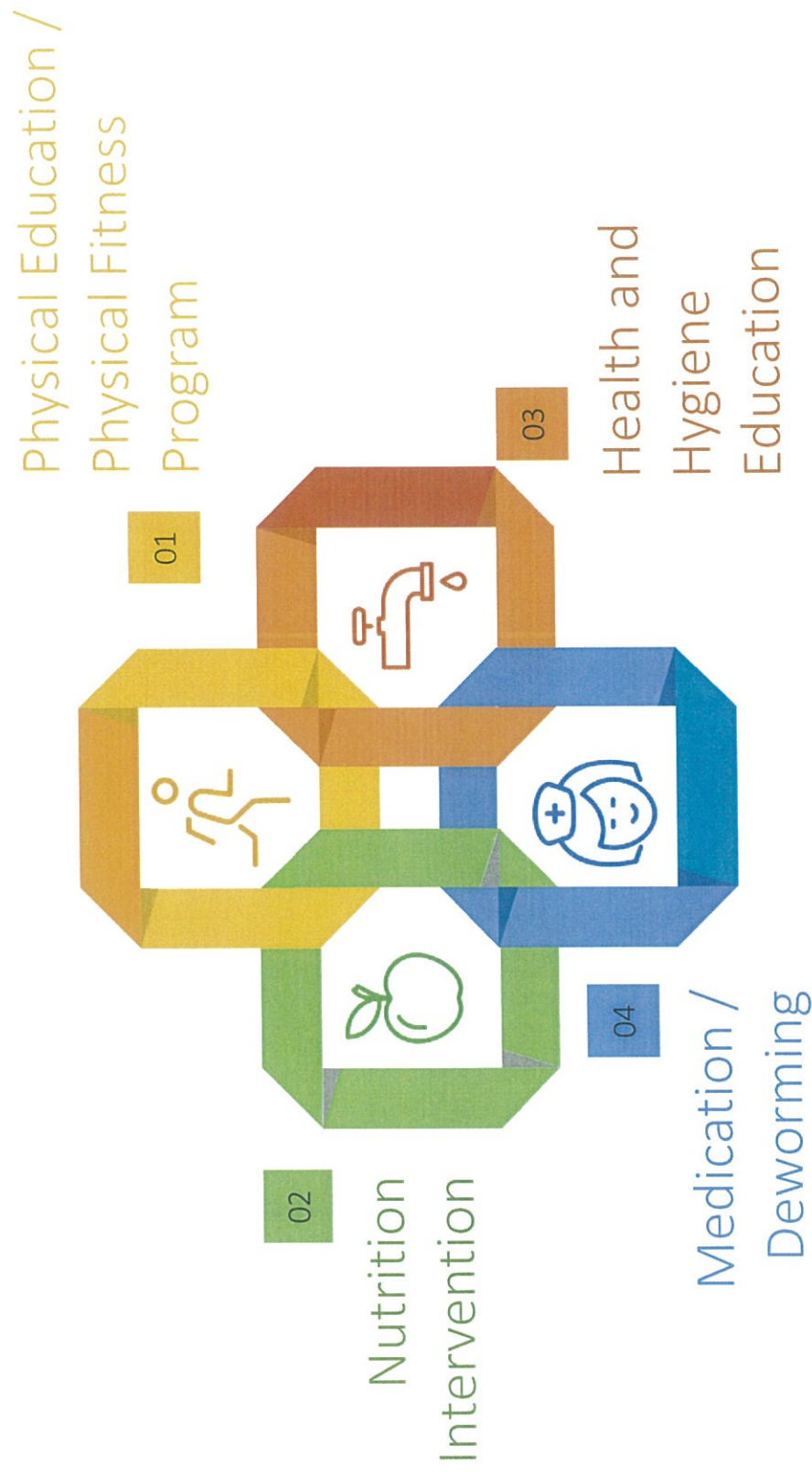
"Effect of Disease Burden on Schoolchildren's Physical Fitness and Psychosocial Health in Port Elizabeth, South Africa"

Disease, Activity and Schoolchildren's Health

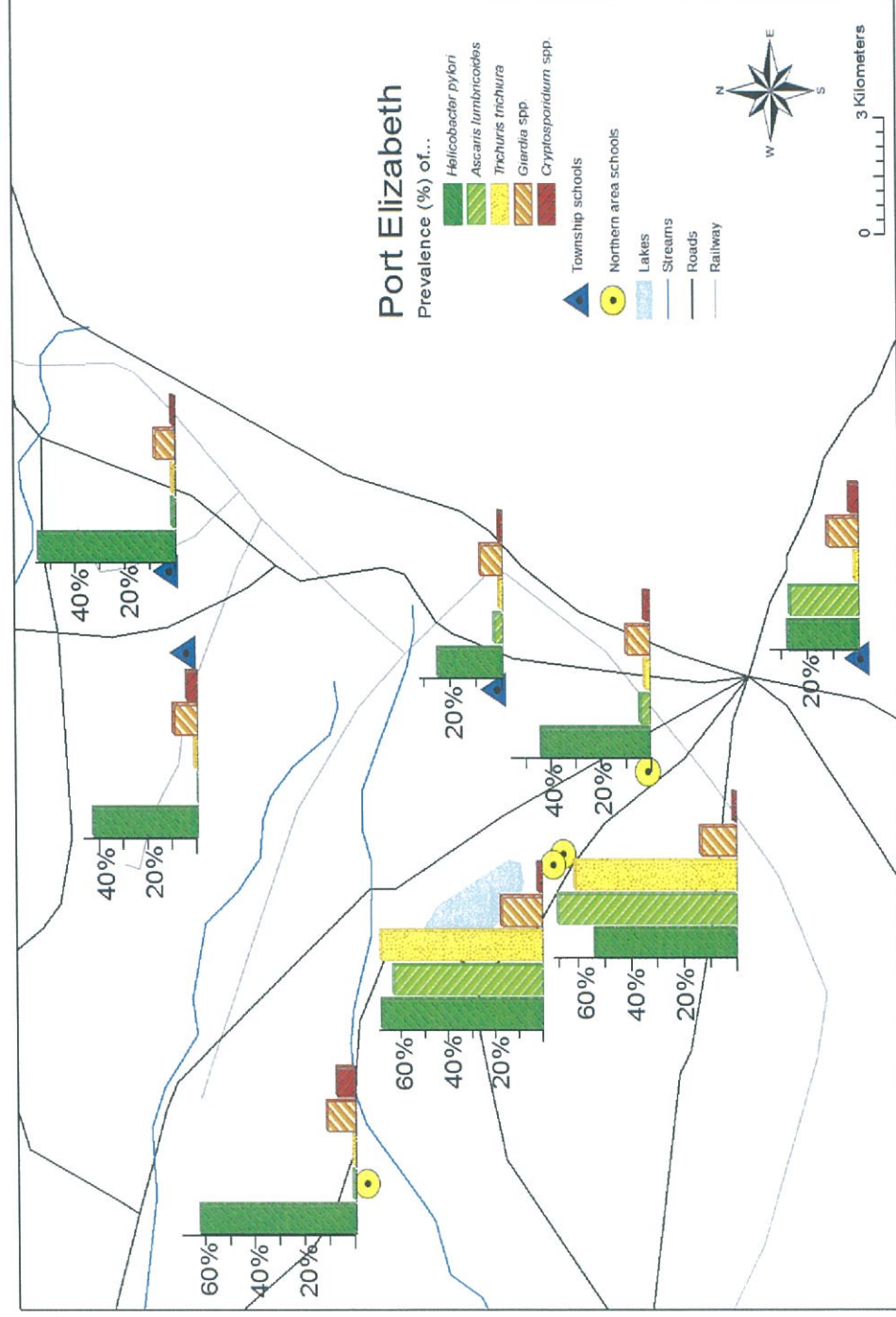
The **DASH** study
2014 – 2017



DASH Interventions – 4 Modules



Study Results: School Disease Profile



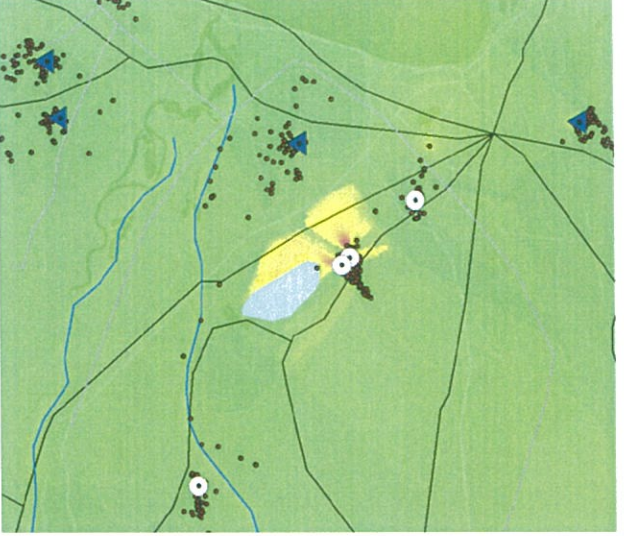
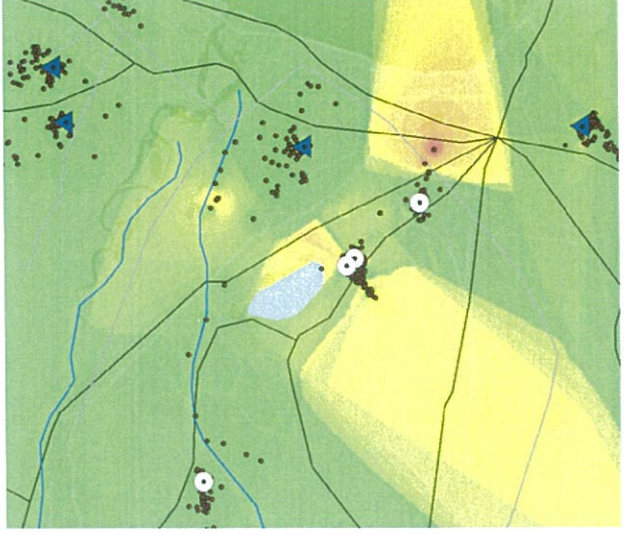
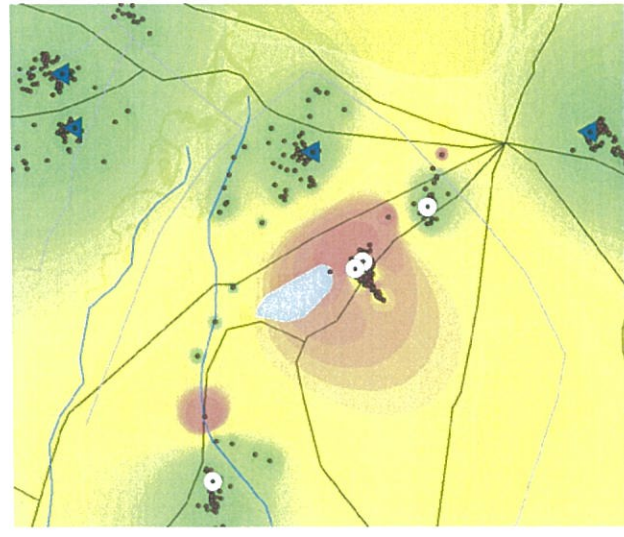
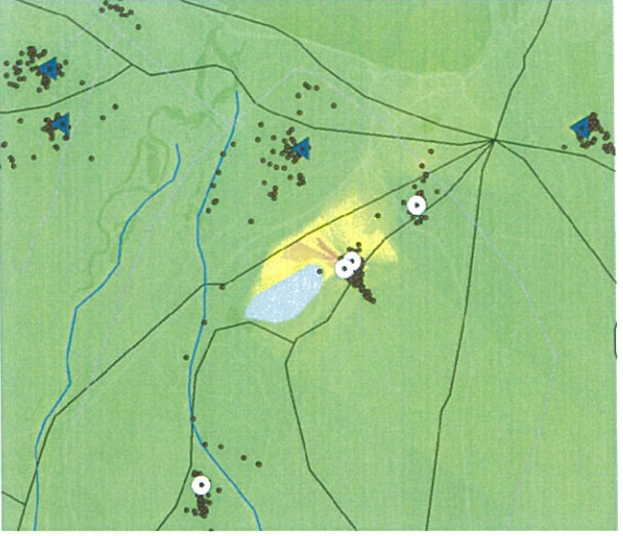
T1 (March 2015)



T2 (October 2015)



T3 (May 2016)



Wednesday, 13 February 2019

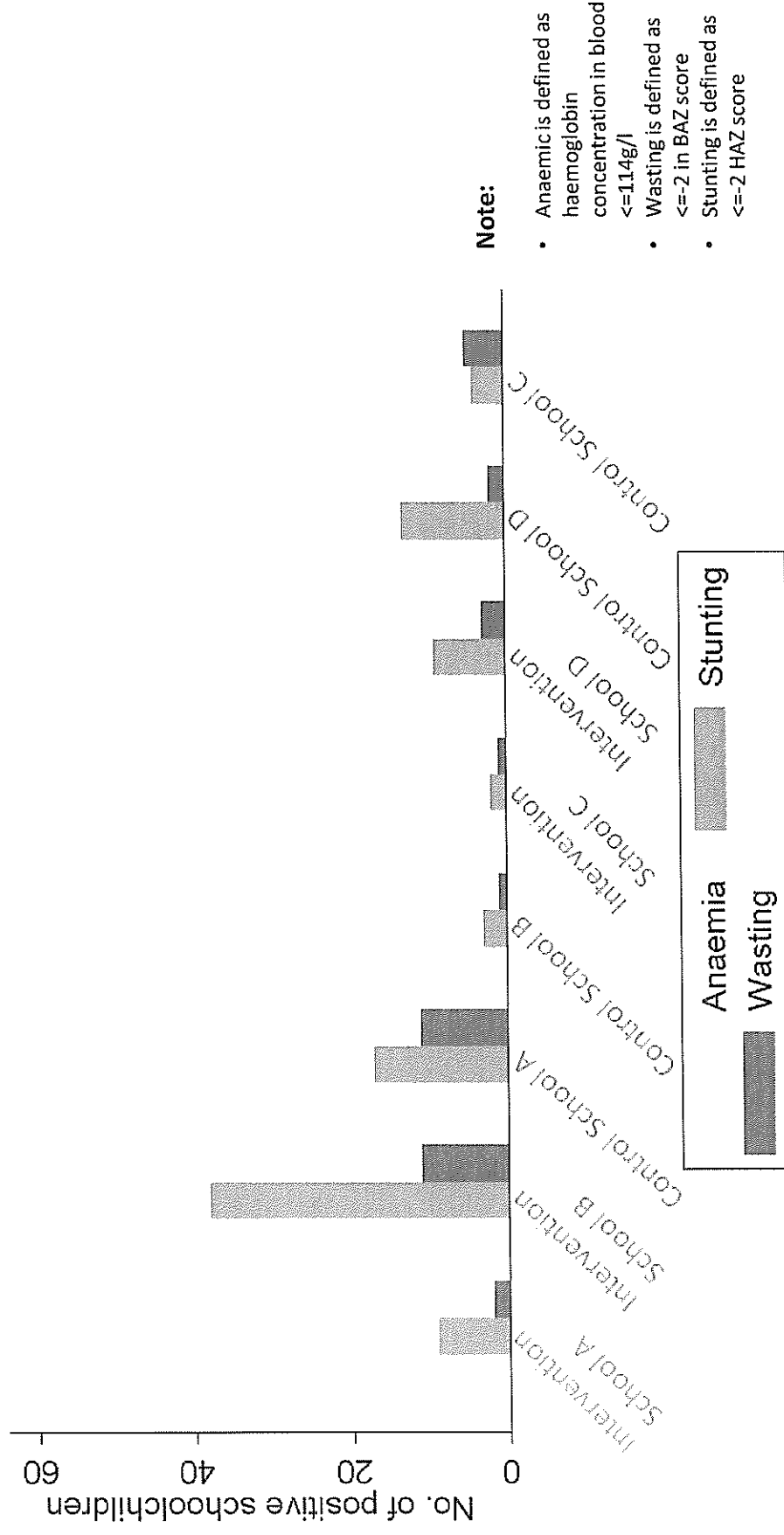


0 5 km

Intensity of *T. trichiura*

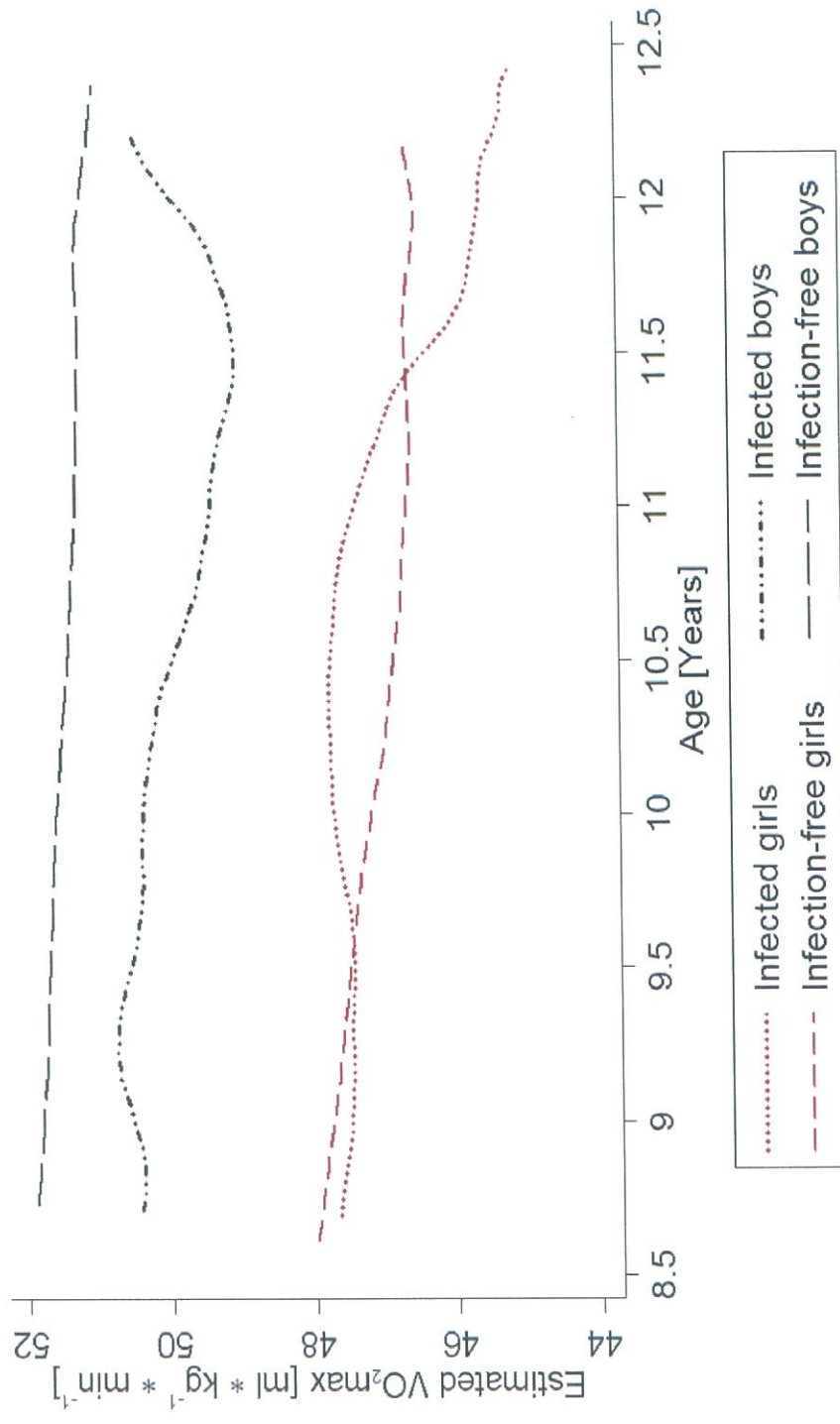
Intensity of *A. lumbricoides*

Study Results: Anaemia, Stunting and Wasting



Study Results Physical Fitness

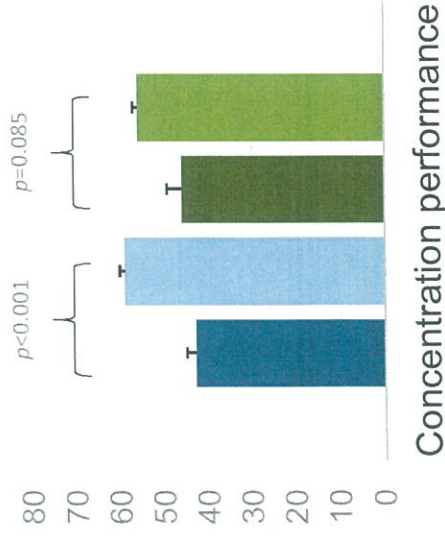
Cardiorespiratory Fitness and *Ascaris Lumbricoides* Infections



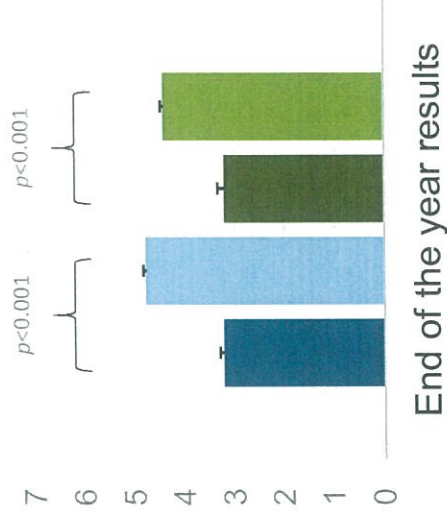
Study Results

STH, Stunting and Cognition

Selective Attention



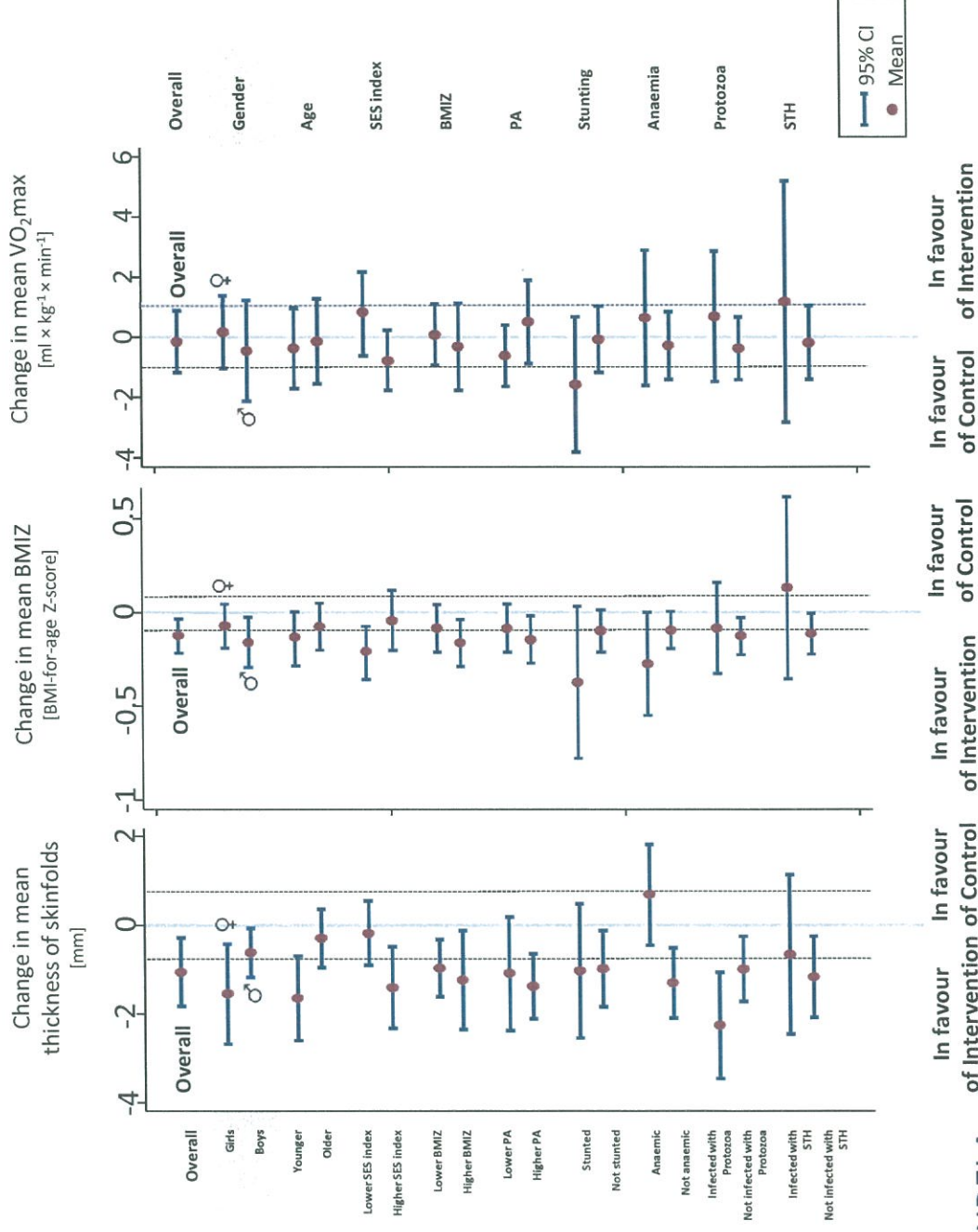
Academic Achievement Scores



STH infections and stunting appear to hamper children's capacity to pay attention and impede their academic performance

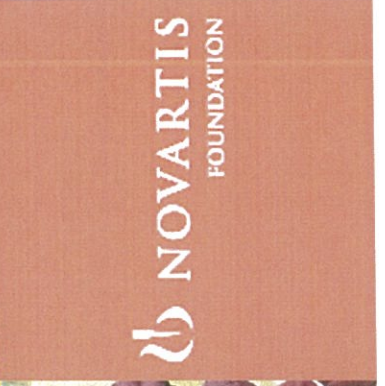
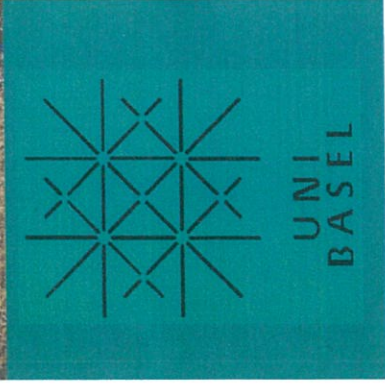
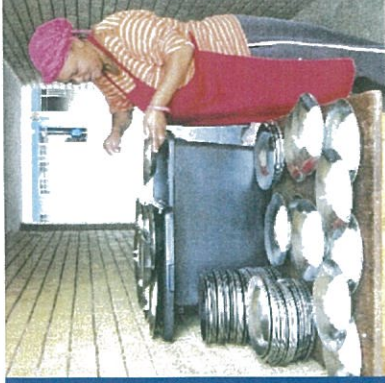
Study Results

Effect of the Physical Activity Intervention



The *KaziBantu* Project





DASH Study Symposium

Disease, Activity and Schoolchildren's Health

11 October 2017 in Port Elizabeth, South Africa

Department of Sport, Exercise and Health, University of Basel, Basel, Switzerland
 Swiss Tropical and Public Health Institute Basel, Switzerland and
 Nelson Mandela University, Port Elizabeth, South Africa



Swiss TPH



Nelson Mandela
 Metropolitan
 University

FNSNF



National
 Research
 Foundation





The Novartis
Foundation

NELSON MANDELA
UNIVERSITY



Deutscher Sport-Bund



www.kazibantu.org



KaziBantu

Healthy Schools for Healthy Communities

The KaziBantu project 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 school children and teachers.

(Kazi – active, Bantu – people: KaziBantu Active People)

Project Overview

The *KaziBantu* Project is dedicated to creating long-lasting positive changes in health, and to providing opportunities for **physical activity**, by implementing a **multi-faceted approach** to address the health problems faced within disadvantaged settings. This will be achieved through two programmes:



KaziKidz
Teaching Material for Schoolchildren

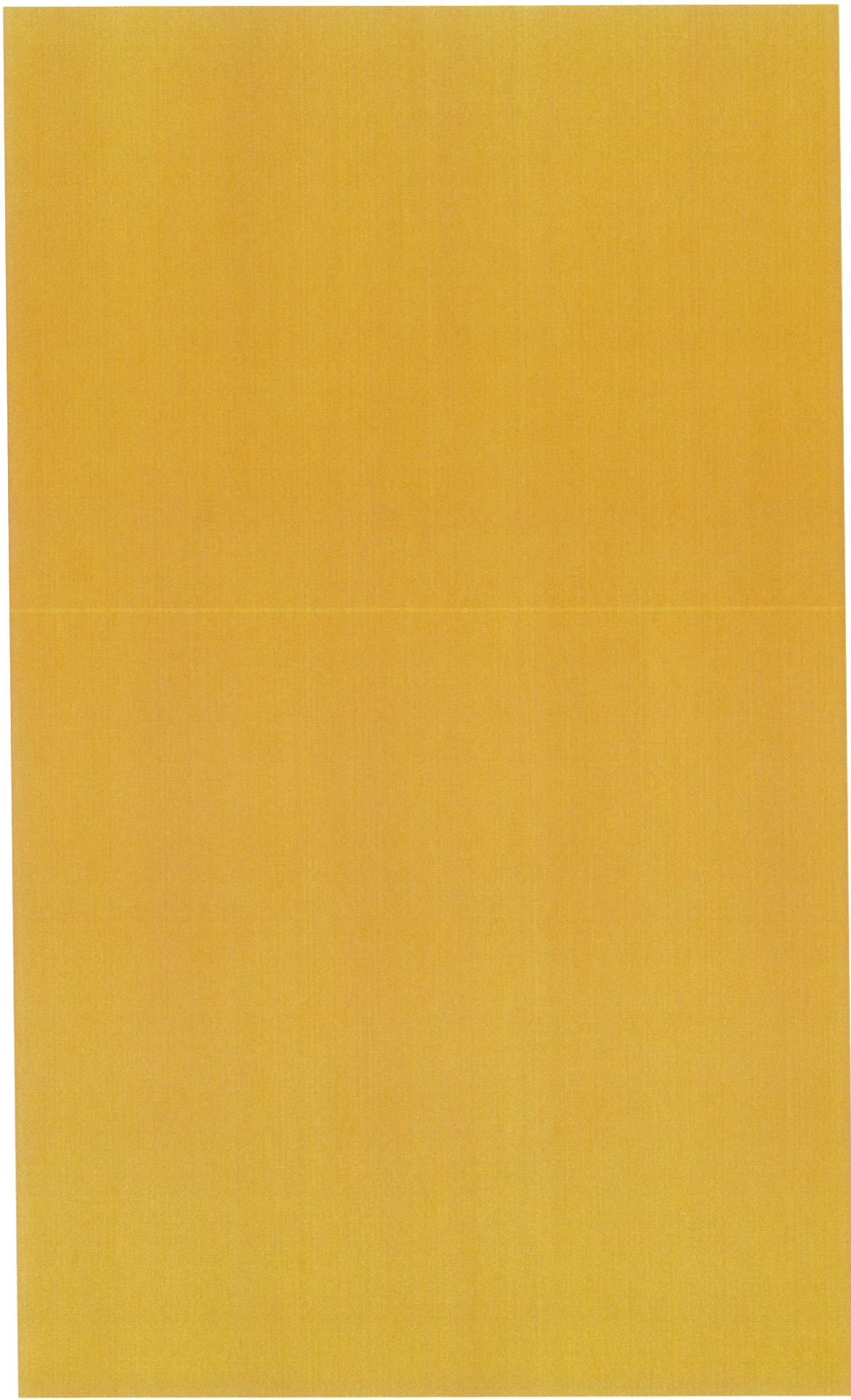


KaziHealth

The **DASH** Symposium

11 October 2017

KaziBantu Launch : Healthy Schools for Healthy Communities



KaziKidz: Three content pillars

- *KaziKidz* is a holistic educational and instructional tool for primary school teachers.
- Based on the South African school curriculum CAPS (Curriculum Assessment and Policy Statement)





Overview of the KaziKidz toolkit: Grade 1 - 7

SCHOOL LEVELS				
GRADES		PHYSICAL EDUCATION	MOVING TO MUSIC	HEALTH AND HYGIENE AND NUTRITION
		100% LEARNER	100% LEARNER	100% LEARNER
Foundation Phase				
Grade 1	Lessons: 32 Assessments: 1	Lessons: 32 Assessment: 1	Lessons: 32 Assessment: 1	Health and hygiene lessons: 3 Nutrition lessons: 3 Assessments incl. solutions: 2
Grade 2	Lessons: 32 Assessments: 1	Lessons: 32 Assessment: 1	Lessons: 32 Assessment: 1	Health and hygiene lessons: 3 Nutrition lessons: 3 Assessments incl. solutions: 2
Grade 3	Lessons: 32 Assessments: 1	Lessons: 32 Assessment: 1	Lessons: 32 Assessment: 1	Health and hygiene lessons: 3 Nutrition lessons: 3 Assessments incl. solutions: 2
Intermediate Phase				
Grade 4	Lessons: 32 Assessments: 4	Lessons: 32 Assessments: 4	Lessons: 32 Assessment: 1	Health and hygiene lessons: 3 Nutrition lessons: 3 Assessments incl. solutions: 2
Grade 5	Lessons: 32 Assessments: 4	Lessons: 32 Assessments: 4	Lessons: 32 Assessment: 1	Health and hygiene lessons: 3 Nutrition lessons: 3 Assessments incl. solutions: 2
Grade 6	Lessons: 32 Assessments: 4	Lessons: 32 Assessments: 4	Lessons: 32 Assessment: 1	Health and hygiene lessons: 3 Nutrition lessons: 3 Assessments incl. solutions: 2
Senior Phase				
Grade 7	Lessons: 32 Assessments: 4	Lessons: 32 Assessments: 1	Lessons: 32 Assessment: 1	Health and hygiene lessons: 3 Nutrition lessons: 3 Assessments incl. solutions: 2



Pilot Schedule at Enkwenkwezini Primary

Deputy Principal: Mrs Ni

Enkwenkwezini Primary (7 Life Skills teachers)

		Week 1: Teacher Workshops					Week 2: Implementation and evaluation					Week 3: Implementation and evaluation				
Time		Monday	Tuesday	Wednesday	Thursday	Friday	Monday	Tuesday	Wednesday	Thursday	Friday	Monday	Tuesday	Wednesday	Thursday	Friday
		20.8.18	21.8.18	22.8.18	23.8.18	24.8.18	27.8.18	28.8.18	29.8.18	30.8.18	31.8.18	3.9.18	4.9.18	5.9.18	6.9.18	7.9.18
		Day 1	Day 2	Day 3	Day 4	Day 5	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 10
		HMS Seminar Room					Grade 1	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7		
08:00		Swiss Students fly in / Teresa Odipo presentation (10:30-11:30)														
09:00		Kazi coach workshop: Day 1: Theory lessons & Assessments														
10:00		Kazi coach workshop: Day 2: Practical lessons & Assessments														
11:00		Kazi coach workshop: Day 1: Theory lessons & Assessments														
12:00		Kazi coach workshop: Day 2: Practical lessons & Assessments														
13:00		Travel to schools														
14:00		Day 1: Theory Teacher Workshop at Helenvale School														
15:00		Day 2: Practical Teacher Workshop at Helenvale School														
16:00		Day 1: Theory Teacher Workshop at Enkwenkwezini														
17:00		Day 2: Practical Teacher Workshop at Enkwenkwezini														
Introductory workshop for the KaziBantu team		KaziBantu Team Debrief Session (Seminar Room)					Interactive Sessions: KaziKidz Coaches and Swiss Master students information sharing (Seminar Room)									
							Interactive Sessions: KaziKidz Coaches and Swiss Master students information sharing (Seminar Room)									
							Electronic capturing of evaluation questionnaires									
							Electronic capturing of evaluation questionnaires									

KaziKidz testing – Some impressions



21 September 2018

KaziKidz testing – Some impressions

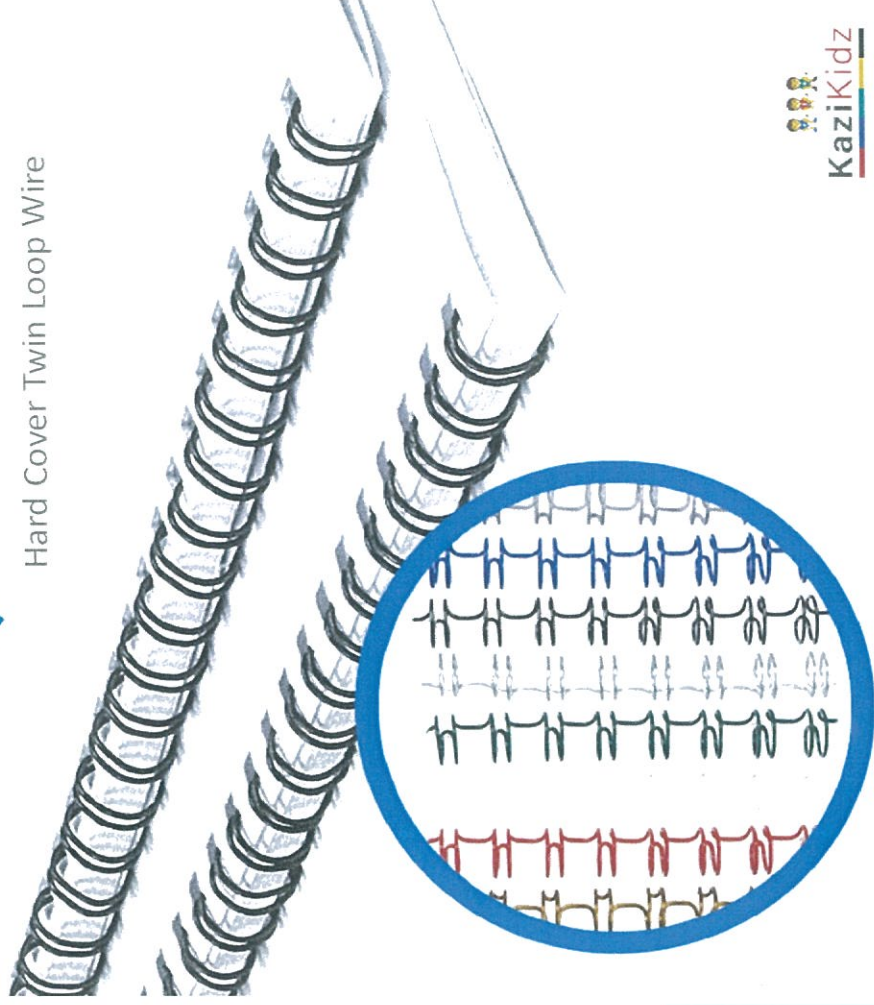


21 September 2018

KaziKidz prototype development



Hard Cover Twin Loop Wire



KaziHealth



KaziHealth

Teacher's Health Promotion Programme



The Novartis
Foundation

NELSON MANDELA
UNIVERSITY



KaziHealth is a teacher's health promotion programme aimed at lessening cardiovascular disease risk and improving **physical activity, nutrition and stress management**.

The programme includes:

1. a health risk assessment,
2. lifestyle coaching and the
3. *KaziHealth* app

Teacher's Health Promotion Programme

The team developing this programme work closely with biokineticists, dietitians, psychologists and ICT developers from the Nelson Mandela University.



KaziHealth – Electronic Assessment Form

KAZIBANTU
Healthy Schools for Healthy Communities

John Doe | Log out

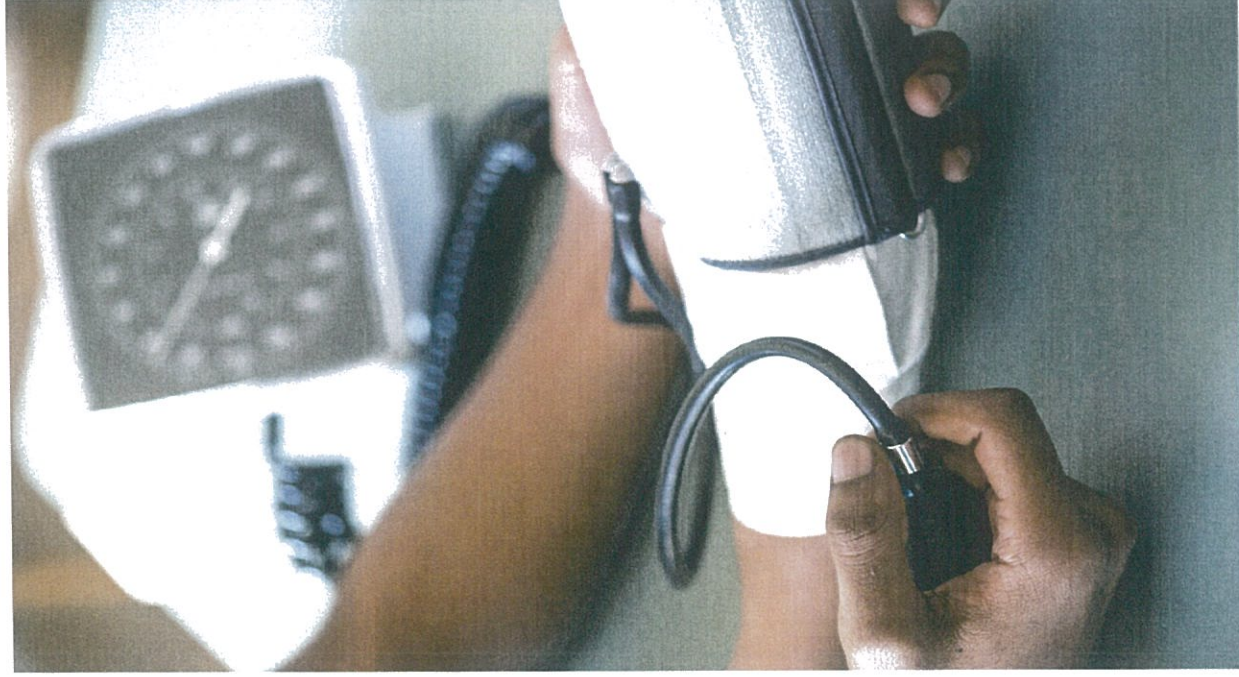
Healthcare Facilities**System Users****Schools****Assessments****Create**

Healthcare Facility

Name	Urban Facility
Country	South Africa
Telephone Number	0412222222
Postal Address	PO Box 77, Tesville, 6001
Physical Address	1 Test Street, Tesville, 6001
Latitude	33.6539° S
Longitude	19.4616° E
Elevation (m)	220

Create[Back to List](#)**KaziHealth**

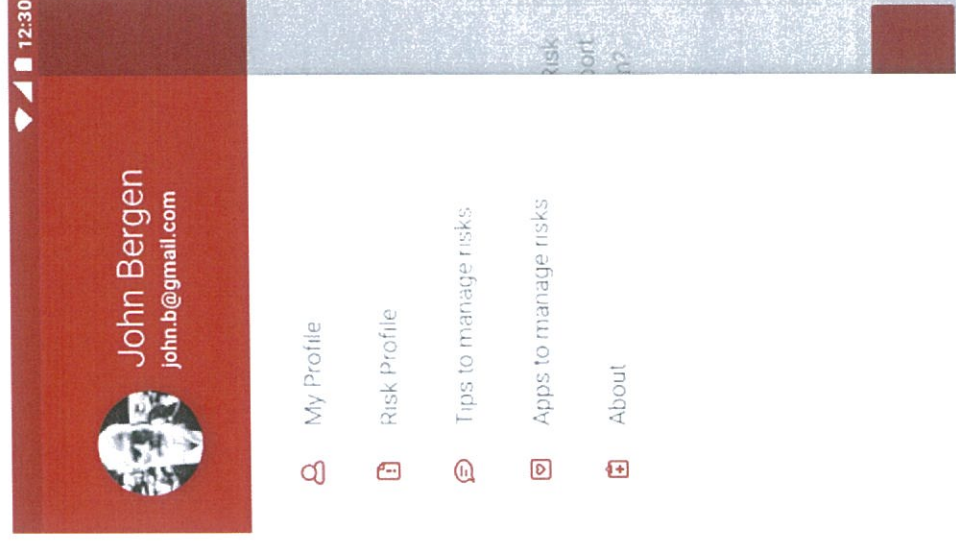
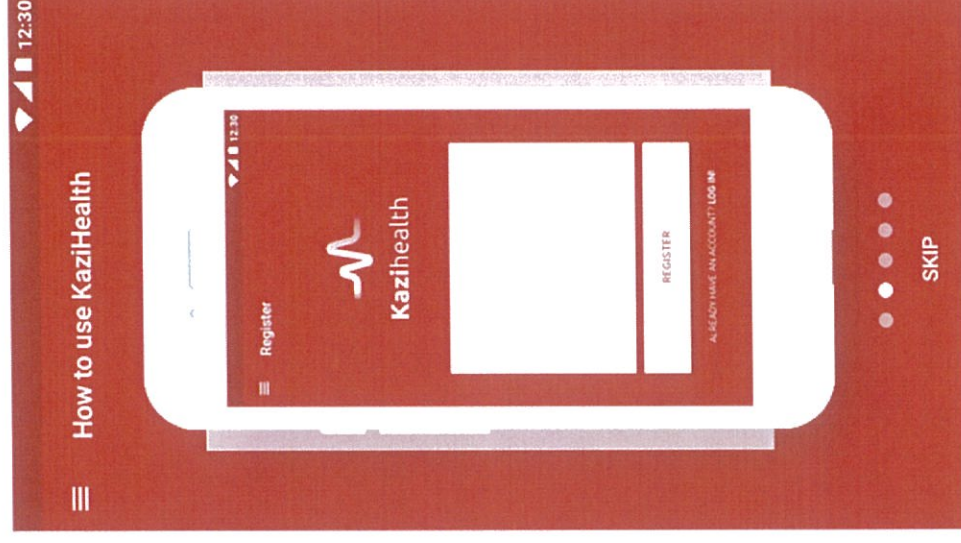
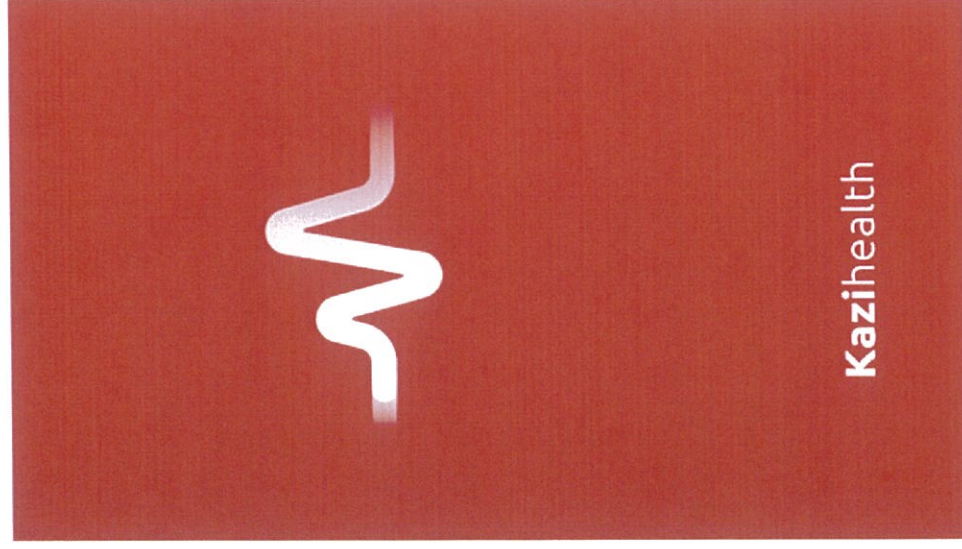
21 September 2018



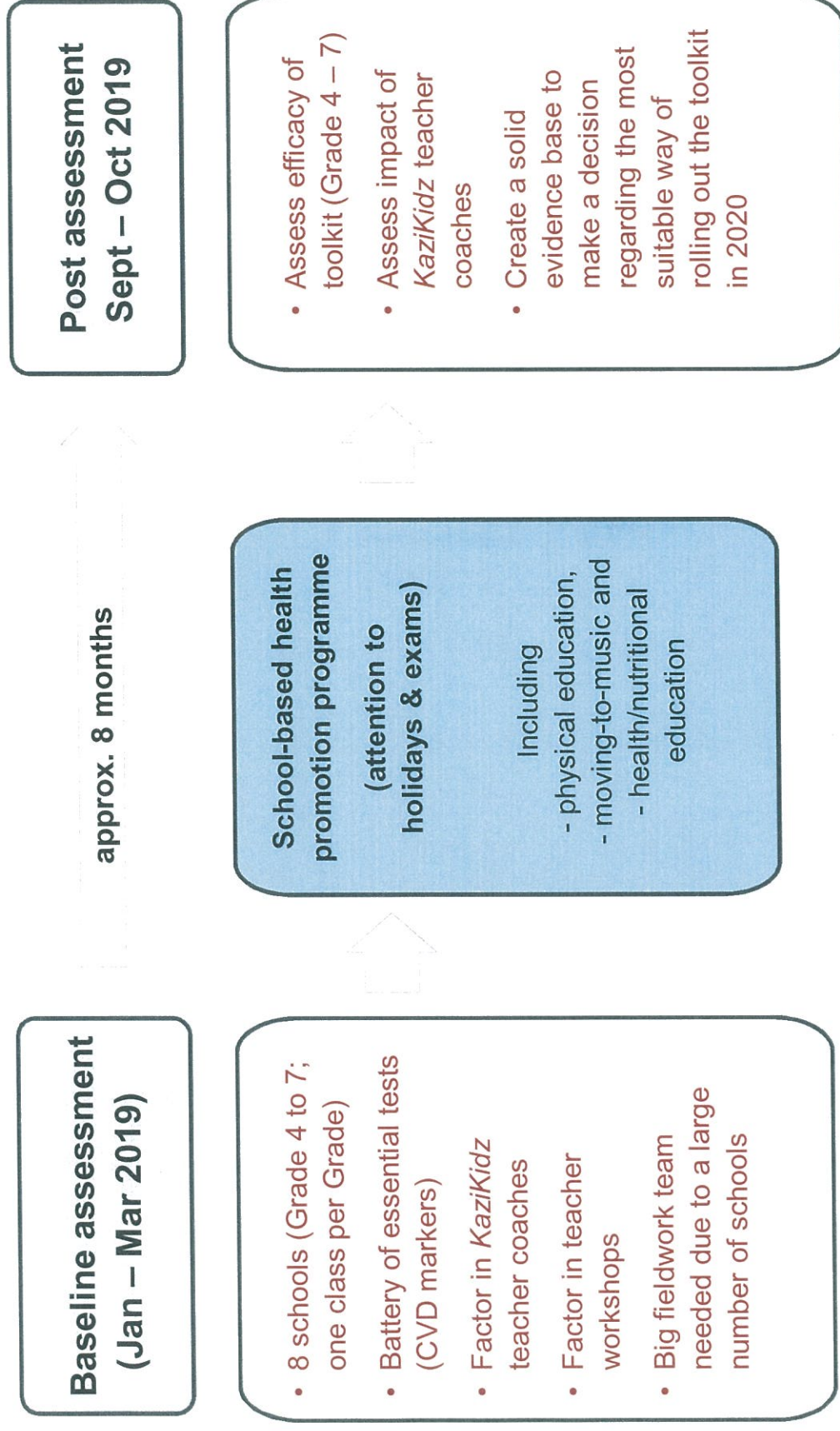
The following key areas are assessed:

1. Body composition (BMI)
2. Blood pressure
3. Cholesterol screening
4. Diabetes screening
5. Questionnaires for stress and burnout

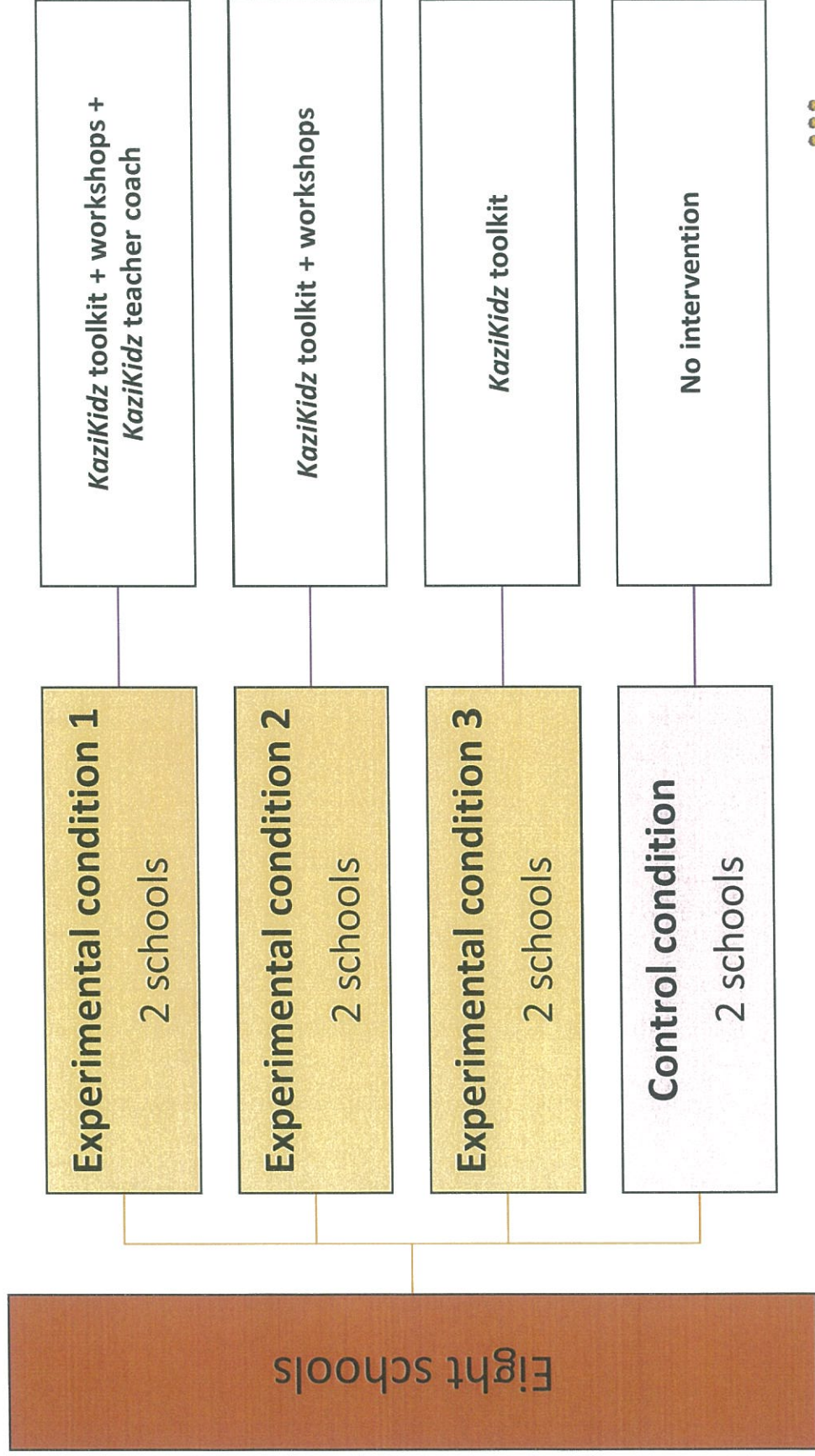
KaziHealth mobile App



KaziBantu study design 2019



KaziBantu study design



Assessment battery of CVD markers

Test battery

CVD markers

- Height, weight, body impedance (body fat percentage, waist-to-hip ratio)
- Blood pressure
- Glucose
- Cholesterol
- 20 m shuttle run (estimated VO2max)
- Accelerometry

Eight Schools
(n=1200)

Learners per school
(n=150)

Component	Test	Outcome
Anthropometry	Height	BMI & z-scores: height-for-age, weight-for-age + BMI-for-age
	Weight	
	Waist + Hip Circumference	Waist-to-hip-ratio
	Body Impedance	Boy fat percentage
Cardiovascular	Blood Pressure	Prevalence of hypertension
	Blood Glucose (HbA1c)	Prevalence of diabetes
	Blood Lipid	Prevalence of hypercholesterolemia
Physical Fitness	20 m Shuttle Run	Estimated VO2max
Physical Activity	Accelerometry	Prevalence of sedentariness

Future plans - Strategy

- Stepwise dissemination through the Department of Education:

→ **103 quintile 3 primary schools of the Nelson Mandela Bay Municipality.**



nelson mandela bay

Strategic planning for rolling-out the *KaziKidz* toolkit on a large scale level together with NF and the Department of Education, South Africa



KaziKidz

Teaching Mathematics for Schoolchildren



KaziBantu

Healthy Schools for Healthy Communities



KaziHealth

Organigram

Lead

Principal investigators

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Cheryl Walker, Prof. South Africa (SA)

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Marinus Gerber, Prof. (CH) ¹
Rosa du Randt, Prof. (SA) ²

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Christian Herrmann, PD Dr. (CH) ¹

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Danielle Smith (SA) ²

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Jenni Haysom (SA) ²

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Nandi Joubert (SA) ²
Jan Drogen (CH) ¹
[Sophie de Nienhuis] (SA) ²

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Sesethu Nanywa (SA) ²
Likhaya Nkomo (SA) ²
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Dietetics Department (SA) ²
Bruce Damons, Dr. (SA) ²
Dorelle Isaacs (SA)
TwoOne Music (SA)

Local institutions/partners

Biokinetics and Sport Science Unit (SA) ²
Primary Schools (SA)
Principals (SA)
Teachers (SA)
School staff (SA)

Local field team

Nurses (approx. 6)
Students (approx. 10)
Volunteers (approx. 20)

¹ Novartis Foundation (NFI), Basel, Switzerland

² Nelson Mandela University, Port Elizabeth, South Africa

³ Swiss Tropical and Public Health Institute (Swiss TPH), Basel, Switzerland

⁴ University of Basel, Basel, Switzerland

⁵ Department of Sport, Exercise and Health (DSBG), University of Basel, Basel, Switzerland

⁶ Eastern Cape Department of Education, South Africa

⁷ Eastern Cape Department of Health, South Africa



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**THANKS
FOR
LISTENING**

