

APPLICATION FORM: NMMU ENGAGEMENT EXCELLENCE AWARDS

(CONSULT THE NMMU ENGAGEMENT EXCELLENCE AWARDS POLICY AND READ THE APPLICATION FORM BEFORE COMPLETING THE TEMPLATE IN ORDER TO AVOID A DUPLICATION OF INFORMATION.)
COMPLETE THIS FORM IN TYPESCRIPT. PROVIDE ONLY THE INFORMATION REQUESTED.

SECTION A: Application category			
<ul style="list-style-type: none"> Indicate with an X in the appropriate box the award you are applying for. Your application will only be considered for the award you have applied for. 	<p><input type="checkbox"/> Engagement Excellence Award – Science, Technology and Engineering</p> <p><input type="checkbox"/> Engagement Excellence Award – Social Sciences and Humanities</p> <p><input type="checkbox"/> Engagement Excellence Team Award</p> <p><input type="checkbox"/> Engagement Excellence Project Award – Science, Technology and Engineering</p> <p><input checked="" type="checkbox"/> Engagement Excellence Project Award – Social Sciences and Humanities</p> <p><input type="checkbox"/> Emerging Engagement Excellence Awards <i>(note that Professors and Associate Professors are not eligible for this category)</i></p>		
Surname of Applicant/Team Leader	Walter		
First Name	Cheryl		
Initials	C.M.		
Title	Prof		
Telephone numbers	041-5042628 / 084 582 1608		
E-mail address	Cheryl.walter@nmmu.ac.za		
Employment position held at NMMU	Associate Professor		
Faculty	Health Sciences		
Department	Human Movement Science		
Division			
Immediate line-manager	Prof Louise Stroud		
Eligibility: Are you permanently employed and/or on a long term (3 years or more) fixed contract? <i>(Indicate with an X)</i>	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; text-align: center; border: none;">Permanent X</td> <td style="width: 50%; text-align: center; border: none;">Fixed term contract</td> </tr> </table>	Permanent X	Fixed term contract
Permanent X	Fixed term contract		
If this is an application for one of the <u>Engagement Excellence Project Awards</u>, provide a brief title and description of the project (250 words maximum)	<p>Title: The DASH Project</p> <p>Description: The DASH project (an acronym for Disease, Activity and Schoolchildren’s Health) is a joint research project between NMMU and the University of Basel in Switzerland, funded through Swiss SA Joint research Programme (SSAJRP) - a 3-year project (2014 – 2016). The project is however continuing with new funding in</p>		

	<p>place. The project emerged from the premise that as traditional lifestyle and diets change with social and economic development, disadvantaged communities in low- and middle-income countries (like South Africa) increasingly face a double burden of communicable and non-communicable diseases. The goal of this project was to survey the distribution of selected intestinal parasite infections and risk factors for non-communicable conditions, and assess their impact on schoolchildren's health over time before, during and after the introduction of setting-specific interventions which entailed physical activity, health education, nutrition, and deworming interventions. Eight schools, including 1009 Grade 4 learners from disadvantaged township and northern areas participated in the study. The DASH Project, provided an interdisciplinary platform to conduct socially engaged research, experiential learning opportunities for students across disciplines and professions, and stimulated various community engagement initiatives.</p> <p>Addendum 1: DASH Study Objectives, and Overview of tests</p>
<p>If this is an application for either the Excellence Awards or the Emerging Award, provide a brief description of your engagement activities and initiatives (250 words maximum)</p>	<p>Description:</p>
<p>If this is an application for the Engagement Excellence Team Award, provide</p> <ul style="list-style-type: none"> • the names of all staff members and students participating • the nature of their involvement • a brief description of the team's engagement initiatives and activities (250 words maximum) 	<p>Staff:</p> <p>1.NMMU Staff</p> <ul style="list-style-type: none"> • Prof Cheryl Walter: SA project coordinator and PI, and postgrad supervisor • Prof Rosa du Randt: PI and postgrad supervisor • Prof Annelie Gresse: Dietician • Dr Liana Steenkamp: Dietician • Mrs Leyli Zondi and Mrs Lindsey Byleveldt (Biomedical Laboratory Sciences) • Mr Bruce Damons: Project adviser community affairs <p>2.University of Basel</p> <ul style="list-style-type: none"> • Prof Uwe Puhse: Swiss project coordinator and PI • Prof Jurg Utzinger :Director: Swiss Tropical and Public Health Institute • Prof Markus Gerber: Sport, Exercise and Health • Prof Harald Seelig: Sport, Exercise and Health • Prof Peter Steinmann: Swiss Tropical and Public Health Institute • Dr Peyling Yap: Swiss Tropical and Public Health Institute

	<p>Students: 1.SA Masters students: Siphesihle Nqweniso, Danielle Smith, Larissa Adams, Nandi Joubert</p> <p>2. Swiss PhD: Ivan Muller Swiss Master students: Stephanie Gall, Dominique Bänninger, Thomas Hager, Silvano Zwick, Susanne Tschudi, Benjamin Wegenstein</p> <p>Description:</p>
<p>Are your Engagement activities/projects/initiatives registered on the Engagement Management Information System (E-MIS) on SharePoint? If <u>not</u>, please ensure that they are before you submit this application. Applications that are not registered and updated on the E-MIS will not be considered for Awards. The most recent date on E-MIS for each project update (achieved when 'submit' is clicked) must be in 2015. Provide the exact titles (as featured on the E-MIS) for all of the Engagement activities/ projects/ initiatives with which you are involved. Visit http://caec.nmmu.ac.za/Engagement-Information-and-Development/Engagement-Management-Information-System</p>	<p>Titles:</p> <p>1. Swiss /SA Joint Research Programme: DASH (Disease Activity and Schoolchildren's Health)</p>
<p>SECTION B: Engagement categories</p>	
<ul style="list-style-type: none"> • You are required to describe and report in detail on a minimum of <u>two engagement categories (these are 1, 2, 3 and 4 below) in order to be considered for an award.</u> • If you or your team are involved in three or four of the engagement categories, report in detail on all of these categories. • Applications that describe and can provide evidence of <u>engagement activities across all four categories are encouraged.</u> • <u>Refer to section 5 of the attached Engagement Excellence Awards policy which provides a guideline on the specific activities you should report on under each of the categories you have chosen.</u> 	
<p>Report on your:</p> <p>1. Engagement through Community Interaction, Service and Outreach: The DASH project engaged disadvantaged project schools and their communities in many ways, and the following outcomes were achieved:</p> <ul style="list-style-type: none"> • Health screening by professional nurses of 1009 children. • 67 children were referred to local clinics based on the clinical examination and laboratory results. Reasons – <i>Cryptosporidium spp.</i> or <i>Giardia intestinalis</i> positive infection in combination with functional symptoms such as diarrhea, abdominal pain or blood in the stool, tachycardia, hypertension, ringworm, special lung sounds/wheezing. • Treatment for soil-transmitted helminth infections in accordance with WHO guidelines: mass treatment at 3 schools and case by case at 5 schools. • Community members were enlisted to assist with translation, administrative tasks and in the facilitation of the data collection, and compensated. • The development of an intervention toolkit for teachers for Physical Activity, Health Education and Nutrition Education • Workshops and mentoring support for teachers in relation to the toolkit • Takkie collection drive where more than 500 pairs of takkies were collected for project schools • Renovation of school toilets at one school – through obtaining sponsorship from a local business. • The PasSPORT to Health Project, a third year experiential learning project for HMS students at NMMU, partnered the DASH Project in 2016, in working with DASH schools: Hillcrest Primary, Elundini Primary, Walmer Primary and de Vos Malan Primary. Despite the Fees Must Fall disruptions, students showed 	

commitment to their project schools and completed their interventions as planned. The following outcomes were achieved through community interaction, service and outreach in 2016: Students raised in excess of R60 000 for the PasSPORT to Health project schools; the creation of physical activity-friendly environments were achieved which entailed playground structures, soccer 5-a-side posts, activity circuits, painted games, the marking of netball courts; 90 learners from 3 schools participated in leadership camps (a first for these schools), where they were exposed to a variety of team building activities reinforcing good values and citizenship; 100 trees (sponsored by Trees and Food for Africa) were planted at 3 of the schools. Each class with their class teachers are taking responsibility for the tree they planted. A litter campaign was implemented at the 4 schools.

Addendum 2: Overview of the DASH intervention toolkit

Report on your:

2. Engagement through Teaching and Learning:

The DASH Project: This interdisciplinary project included students from a range of disciplines who gained valuable experiential learning opportunities through the project:

- HMS students (including Biokinetics interns, Honours students and undergrads) were involved with physical fitness testing, anthropometrical measurements; cognitive and psychosocial health assessments.
- Students from Medical Laboratory Sciences were trained to assist in the analyses of stool and urine samples, using the Kato-Katz method and various urine filtration methods - the B.Tech students also used the results in their research treatise module;
- Nursing Science students assisted with various medical assessments (blood pressure, temperature, anaemia);
- Psychology, Social Work and Education students assisted with the cognitive and psychosocial health assessments.
- HMS students were also involved in the physical activity intervention. Students served as mentors, assisting teachers with the teaching of physical education in project schools.
- I involved the PasSPORT to Health project, which is an experiential learning project for HMS third year students. Students put theory into practice, as they created physical activity-friendly environments at project schools, as part of the physical activity intervention in the DASH project.

Addendum 3: Examples of engaging through teaching and learning

Report on your:

3. Engagement through Profession/Discipline-Based Service Provision:

We engaged in this area in the following ways:

- The DASH project provided a unique clinical platform to engage Biokinetics students in a community health setting. The Biokinetics profession is currently working in the private health care sector, and has not yet been incorporated into the public health sector. The Biokinetics Association of South Africa is currently taking up the matter with the Department of Health.
- Physical Education which is currently part of the learning area, Lifeskills, in the school curriculum, has been neglected in many disadvantaged schools for a number of reasons, including teachers not adequately training, the lack of resources and infrastructure. The DASH project facilitated the teaching of Physical Education through the development of teaching material, the training and mentoring of teachers, and the provision of resources. Plans and funding are in place to broaden this to more school grades and schools in the area.

- The Department of School Health, under the auspices of the Department of Health were engaged in health screening and deworming of affected children at project schools. The Department of Nursing at NMMU facilitated the treatment of children at community clinics in the NM Metro.
- The Project embraced an inter-disciplinary approach in accomplishing its aims and objectives, exposing students from various health professions to holistic health from a bio-physical-psych-social approach.

Report on your:

4. Engagement through Research and Scholarship:

The DASH project supported the following postgrad qualifications:

- 4 NMMU Masters degrees
- 11 NMMU B.Tech (Biomedical Technology) research treatises
- 1 University of Basel PhD
- 6 University of Basel Masters degrees
- 1 PhD and 1 Masters through the Swiss Tropical and Public Health Institute

The project also facilitated the following:

- The opportunity to attend research related workshops (proposal writing, academic writing, stats workshops)
- NMMU students were introduced to the double-entry and validation programme EpiData version 3.1
- The Department of Biomedical Laboratory Sciences (staff and students) were introduced to and trained in analyses of stool and urine samples, using the Kato-Katz method and various urine filtration methods that were unfamiliar to them
- Young researchers in the team participated in the round-robinning of research articles as they were being prepared for submission to journals
- Students were exposed to experienced researchers and visiting scholars who both inspired and encouraged their research journeys

SECTION C: Descriptions

1. Describe the impact your Engagement activities have made on stakeholders/beneficiaries/communities and provide details on how these activities are acknowledged/recognized by:

1.1. External communities /stakeholders/ beneficiaries:
(not staff and students of NMMU)

DASH Project
More than 1000 Grade 4 learners and more than 40 teachers from eight schools have benefitted from the project through:

- An intervention toolkit comprising: physical activity, nutrition and health interventions.
- All the teaching materials were developed; equipment provided; workshops were held for teachers;
- food preparers in the school nutrition programme were trained;
- children identified with medical problems were referred to local clinics for treatment;
- deworming of affected children was undertaken;
- Toilets at one of the schools were renovated.
- The DASH project was partnered with the PasSPORT to Health Project: HMS students raised in excess of R60 000 for the 4 DASH. Physical activity-friendly environments were created at 4 schools. These entailed playground structures, soccer 5-a-side posts, activity circuits, painted games, the marking of netball courts. 90 learners

	<p>from 3 schools participated in leadership camps (a first for these schools), where they were exposed to a variety of team building activities reinforcing good values and citizenship. 100 trees (sponsored by Trees and Food for Africa) were planted at 3 of the schools. A litter campaign was implemented at the 4 schools. Letters of appreciation have been received from schools.</p> <ul style="list-style-type: none"> • The DASH project is currently in the process on being upscaled, to benefit more grades and more schools in relation to material development and resources for the teaching of Lifeskills in schools • Prof Walter has received a token of appreciation from the Eastern Cape Department of Education for her participation in relation to positive learner behaviours. • Prof Walter was awarded a Certificate of Appreciation by Hillcrest Primary School “for teaching us to value our health”.
<p>1.2. Internal communities /stakeholders/ beneficiaries: (staff and students of NMMU)</p>	<p>Students were afforded the opportunity to engage with communities from a volunteering perspective as well as from an experiential learning platform. Staff members from Human Movement Science, Dietetics and Medical Laboratory Sciences benefited through teaching and learning applications (putting theory into practice), research collaboration and publications emanating from the DASH project. Swiss students were provided with exposure to unique community work in an African setting and integrated well with our South African students, enriching both groups</p>
<p>2. Describe how your Engagement activities contribute towards faculty/department/entity engagement goals and objectives. (Refer to your Department/Faculty/Entity's strategic plan here)</p>	
<p>The vision of the HMS Department is to develop exceptional fit-for-purpose biokineticists, sport and exercise science practitioners for South Africa through transformative and innovative education, underpinned by relevant world-class research. The DASH project's contribution in this regard is as follows:</p> <ul style="list-style-type: none"> • Students were introduced to the child health challenges linked to poverty, such as communicable diseases (worm infections) and the consequences of stunting and under-nutrition. • A unique teaching and learning platform in a community setting • The inter-disciplinary team of Swiss / NMMU researchers has provided a platform for relevant and important research. <p>The FHS and the HMS Department promotes quality education in health and sport to ensure relevant, capable and compassionate professionals and the project has afforded students many opportunities to develop these core competencies as they engaged with schools and communities involved.</p> <ul style="list-style-type: none"> • Community work affords learning opportunities which cannot be achieved in a classroom. Students had to adapt to many day-to-day challenges, improvise and problem-solve as they worked in the project • They engaged with community members, and their lived experiences – which enhanced their understanding of health interventions • Through the experiences afforded by the project, students can be inspired to become visionary leaders in their workplaces, communities and professions. 	

3. Describe how your Engagement activities contribute towards the achievement of the NMMU Vision 2020 Engagement Strategic Goals and Objectives. *(Refer to the attached NMMU Engagement Strategic Goals and Objectives)*

The DASH Project (which incorporated the PasSPORT to Health initiative in 2016) is fully aligned with NMMU's Vision 2020 of being an "engaged institution". The project is mindful of the "poverty, unemployment and social inequalities" (p14, Vision 2020 Strategic Plan) affecting our region and how, through innovative teaching and learning, research and engagement we can foster holistic student development and contribute to innovative research solutions.

The research is socially engaged, relevant, and has a positive effect on children's health. Affected children were treated, and health department authorities are being approached to implement specific strategies. The intervention toolkits can improve the health of children. The project addressed some of the serious needs in relation to children's health, it partnered various stakeholders in government and in civil society, all of which supports NMMU's vision 2020.

The interventions also embraced the University values of diversity, excellence, Ubuntu, integrity, responsibility and respect for the natural environment.

4. Describe how your Engagement activities contribute towards: *(Refer to any relevant media coverage, representation on boards or committees, scholarly publications, conference presentations etc.)*

4.1. Addressing the needs of society and various external communities served by NMMU:

- Contributed to a better understanding of the communicable and non-communicable diseases affecting children from disadvantaged schools in Port Elizabeth
- Capacitated life orientation teachers
- The intervention toolkit covering health education, nutrition and physical activity serves as a resource for Life Skills teachers
- Assisted in creating physical activity-friendly environments at schools
- Installation of a health and hygiene programme at schools
- BJ Mnyanda SGB member (Prof Walter)
- Prof Walter serves on the FHS's Transforming Health Sciences Education for Equity in Health (Objective 1.3)
- Study results have highlighted serious health concerns – requiring attention from relevant authorities

Appendix 4: DASH Study results highlights serious health concerns

4.2. Profiling and promoting the NMMU as an engaged university:

- The DASH documentary (movie; August 12th, 2015) (<https://drive.google.com/file/d/0BziXA-wcDKIeC1qUzNSOE0xMFU/view?pref=2&pli=1>)
- "NMMU in big takkie drive for schools" (newspaper article in HERALD; August 14th, 2015) (<http://www.dash-sa.com/resources/Takkie-Collection-Drive.pdf>)
- "Little appetite for study on an empty stomach" (magazine article in UNI NOVA; October, 2015) (http://www.dash-sa.com/resources/UNINOVA_126_EN.pdf)
- "Leerders se gezondheid bekyk" (newspaper article in BURGER (Oos Kaap); February 16th, 2016) (<http://www.dash-sa.com/resources/Article-in-Die-Burgher.pdf>)
- DASH project website, since March 2016 (<http://www.dash-sa.com>)
- "Metro pupils hit by worm infestations" <http://news.nmmu.ac.za/NMMU-in-the-NEWS/Metro-pupils-hit-by-worm-infestations>

- <http://www.timeslive.co.za/sundaytimes/lifestyle/2017/05/10/Worms-partly-responsible-for-lower-academic-results-among-SAs-children>
- <http://www.sowetanlive.co.za/news/2017/05/10/worms-partly-responsible-for-lower-academic-results-among-children>
- <https://www.facebook.com/dispatchdd/posts/10154770399742779>
- Presentations at various academic and other conferences (reported elsewhere)
- Presentation at the Poverty Alleviation Forum in the Nelson Mandela Metro
- Prof Walter has been invited to be a member of the Poverty Alleviation Forum of the NM Metro

Addendum 5: Media and publicity

5. Describe how you have successfully integrated engagement into the Teaching and Learning and Research functions of the university. (Refer to sections 5.1, 5.2 and 5.3 of the Engagement Excellence Awards Policy as a guideline)

The DASH project, an interdisciplinary research project, has served as a platform for experiential learning of students from a number of disciplines (HMS, nursing, education, medical laboratory sciences, psychology). It allowed for the integration of meaningful community engagement and service with education, and putting theory into practice.

Through the various the data collection processes, and implementation of the interventions, related to physical activity, health education and nutrition, communities were engaged in workshops and information dissemination. Situations lent themselves to critical reflective processes, and problem solving in relation to community needs.

6. Provide details of scholarly outputs/contributions made to a body of knowledge as a result of your engagement activities. (Refer to publications, new teaching programmes, technical reports, conference proceedings, etc.)

Journal Publications (1 article in 2015, 2 articles in 2016, and 3 submitted to journals early in 2017, with many more to follow).

- Müller, I., Yap, P., Steinmann, P., Damons, B., Schindler, C., Seelig, H., Nan S. N. Htun, Probst-Hensch, N., Gerber, M. du Rand, R., Pühse, U., Walter, C., and Utzinger, J. (2016). Intestinal parasites, growth and physical fitness of schoolchildren in poor neighbourhoods of Port Elizabeth, South Africa: a cross-sectional survey. *BMC Parasites & Vectors*, 9:488-500.
- Müller, I., Beyleveld, L., Gerber, M. du Randt, R., Pühse, U., Utzinger, J., Zondie, L. Walter, C., and Steinmann, P. (2016). Low efficacy of albendazole against *Trichuris trichiura* infection in schoolchildren from Port Elizabeth, South Africa. *Transactions of the Royal Society of Tropical Medicine & Hygiene*, 110 (11): 676-678.
- Yap, P., Müller, I., Walter, C.M., Seelig, H., Gerber, M., Steinmann, Damons, B.P., Smith, D., Gall, S., Bänninger, D., Hager, T., Nan S. N. Htun, Steenkamp, L., Gresse, A., Probst-Hensch, N., Utzinger, J., Du Randt, R. and Pühse, U. (2015). *BMC Public Health* 15:1285. Disease, activity and schoolchildren's health (DASH) in Port Elizabeth, South Africa: a study protocol. DOI 10.1186/s12889-015-2636-y

Awards won:

- aha!award 2016, Allergy Center of Switzerland, Berne, Switzerland (<http://www.aha.ch/allergiezentrum-schweiz/ueber-uns/aha-award/2016-praemierung/?oid=3253&lang=de>)

Local and National Scientific Conferences:

- Impact of disease burden on schoolchildren's physical fitness and psychosocial health in Port Elizabeth, South Africa, 4th International Conference of Physical Education and Sports Science (ICPESS 2015-Indonesia), 20-22 May, 2015
- Presentation at the SAAHE (South African Association of Health Educationalists) conference in Port Elizabeth, South Africa (<http://www.saaheconf.co.za/2016-presentations.html>) (22 - 24 June 2016)
- Presentation at the Department of Health, Port Elizabeth, South Africa (30 June 2016)
- Presentation at the Anti-Poverty Alleviation Forum of the Nelson Mandela Bay Municipality for Helenvale and Hillcrest in Port Elizabeth, South Africa (7 July 2016)

International Scientific Conferences:

- Physical Activity and Physical Education in the townships of Port Elizabeth, South Africa - an intervention study, 7th Asia Pacific Conference on Exercise and Sports Science in Delhi, India, Oct 14-16, 2015
- Presentation at the Global Forum, 26-28 May 2016, in Ankara, Turkey (<https://www.youtube.com/watch?v=SZ9pik2nIFQ&feature=youtu.be>)
- 2nd International Conference on Physical Activity and Sports for Health and Development in Africa (PASHDA) at the Kenyatta University, Nairobi, Kenya (September 2016)
- Presentation at the Children's Physical Activity and Sport Conference (CIAPSE 2), Jyväskylä, Finland (January 2017)


7. Describe the important role performed by you or the team in:**7.1. The leadership and management of the engagement activities and initiatives:**

The DASH study has embraced a team approach in the management of the project. I am the South African coordinator, responsible for the logistics on the ground, liaising with all local stakeholders (researchers, students, schools, local and provincial authorities etc.), to ensure the smooth implementation and facilitation of the project. This has been ably supported by the secretarial assistance of Mrs Deirdre Bowers and post-grad students in the project. The research component from NMMU side has been jointly led by Prof du Randt and myself in the co-supervision of students. The Swiss team, led by Prof Uwe Puhse and Prof Jurg Utzinger, has been the cornerstone of the DASH project's research leadership. The Swiss PhD student Ivan Muller has been anchor in keeping things steadfast. Regular visits, skype meetings and emails between the Swiss and SA partners have made this all possible.

Addendum 6: The DASH Team

7.2. The level and extent of partnerships/collaborations/networks/linkages formed internally and externally:

- a. Internally** (*inter-departmental, inter-faculty and interdisciplinary*):
- The following NMMU departments/faculties/entities were involved in the project:
- Biokinetics and Sport Science Unit (DASH testing)
 - Department of Medical Laboratory Sciences (Lab testing of stool and urine samples)
 - Department of Dietetics (analyses of School Nutritional Programme)
 - HIV Aids Unit (research assistance)
 - Department of Nursing Sciences (liaison with clinics and the Department of Health)
 - Centre for the Community School
 - School of Languages (translations into Afrikaans and Xhosa)

b. Externally (at local, national and international level):	The following external organizations were involved: Local: The 8 project schools involved in the project – principals, teachers, SGBs and community members; Departments of Education and Health at district level; Poverty Alleviation Forum of the NMB Metro National: Departments of Education and Health; the National Research Foundation (NRF) International: University of Basel in Switzerland; the Swiss Tropical and Public Health Institute; the Swiss National Research Foundation The project is expanding and is currently partnering with the Novartis Foundation and UNESCO		
SECTION D: Signature			
Applicant Signature		Date	26 May 2017
SECTION E: FOR OFFICE USE <i>(Administered by the Centre for Academic Engagement and Collaboration and the NMMU Engagement Committee)</i>			
Resolution regarding application from Awards Committee:			
Feedback to applicant:			

SECTION F: Portfolio of Evidence

- Addendum 1: DASH Study Objectives, and Overview of tests (Section A)
- Addendum 2: Overview of the DASH intervention toolkit (Section B 1)
- Addendum 3: Examples of engaging through teaching and learning (Section B 2)
- Addendum 4: DASH Study results highlights serious health concerns (Section C 4.1)
- Addendum 5: Media and publicity (Section C 4.2)
- Addendum 6: The DASH Team (Section C 7.1)

NMMU ENGAGEMENT AWARDS APPLICATION 2016



The **DASH** study Disease, Activity and Schoolchildren's Health Port Elizabeth, South Africa

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



Prof Cheryl Walter
Department of Human Movement Science

Addendum 1: DASH Study Objectives, and Overview of tests (Section A)

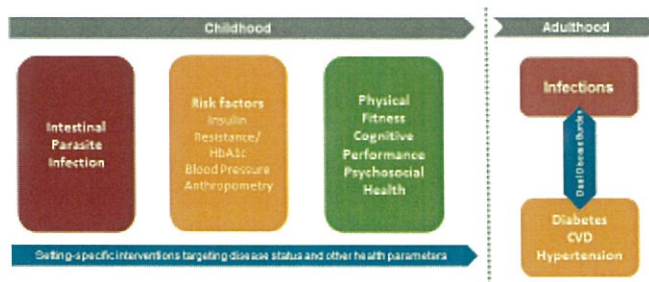


DASH Study goals

Objective 1: To investigate the following **health indicators** and their relationship, in children from selected disadvantaged primary schools in Port Elizabeth:

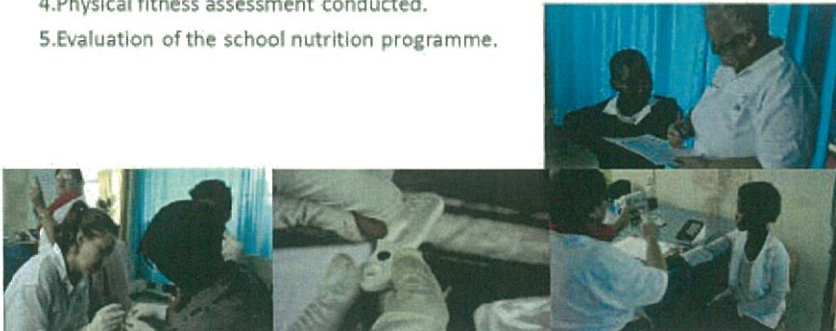
- Communicable diseases
- Non-communicable chronic conditions; and
- Fitness level

Objective 2: To measure the effect of **targeted interventions** on schoolchildren's health.



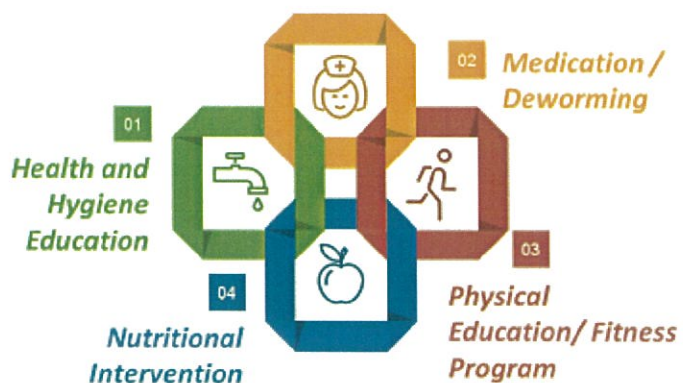
Overview of the baseline testing

1. Medical entrance examination done by a nurse (height, weight, medical history, testing for hypertension, anaemia and Type II diabetes).
2. Parallel, child will be asked to submit a single stool and urine sample to assess prevalence of parasitic diseases.
3. Cognitive performance and psychosocial health assessments conducted.
4. Physical fitness assessment conducted.
5. Evaluation of the school nutrition programme.



Addendum 2: Overview of the DASH intervention toolkit (Section B 1)

 **DASH Intervention toolkit: 4 Modules**

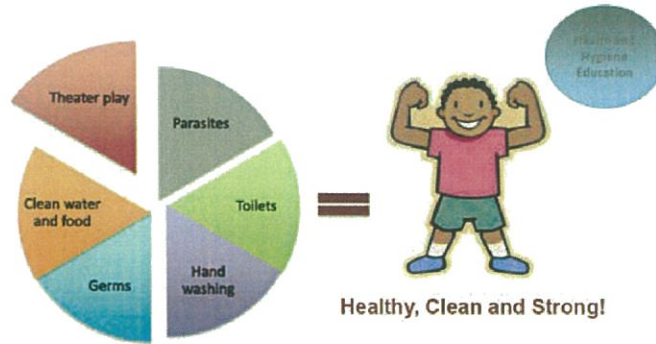


Workshops for teachers

Resources given to teachers: Workbook, lesson materials, work sheets for learners, laminated charts and posters.....



Health and hygiene education intervention.



Health and hygiene education intervention
Hand washing posters given to all schools

How to wash your hands

Wet your hands with water and use enough soap to cover the hands. Rub soap over hand as shown:

Let's wash our hands! Clean hands keep you healthy and strong!

When to wash your hands

After using the toilet

After sneezing or coughing

After playing with pets

After working or playing outside

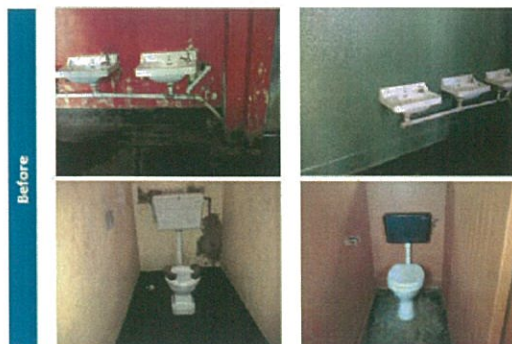
Before eating

Don't miss the red areas!

Red areas: Front of hand, Back of hand, Between fingers, Under nails

Blue areas: Back of hand, Between fingers, Under nails

Hillcrest primary school toilet renovation



Nutrition intervention

School Nutrition Programme



- What was done so far:
 - Collection of data on school feeding scheme, tuck shops and food vendors



Nutrition intervention

Nutrition Intervention



- Training of food preparation staff
- Healthy eating lessons for children
- Supplementation: UNICEF approved nutritional supplement
- Pamphlet for children and parents on healthy lunch box choices to create awareness
- Long term: Investigation at provincial and national level to determine possibility of changes to standard menu



- Why do we need to watch what we eat?
- Why is breakfast important?
- Are there any good and bad foods?
- How can I improve my health?

Physical Education intervention

PE Lessons (grade 4s)



- 2 X 45 minutes a week during the school day (grade 4 teacher)
 - 1 X 45 minute dance class after school (NMMU students)
 - All lesson material provided
 - Equipment provided
- PE Lesson Format
 - Warm-up (5 to 7 minutes)
 - Fitness component (10 – 15 minutes)
 - Modified Invasion Games (15 minutes)
 - Cool-down (3 to 5 minutes)



Physical Education intervention (E.g. of exercise charts for in-class activity breaks)

<p>Lying 8</p> <p>Level 1: Minimum 8 repetitions in a row. Participants wear head or toe tags.</p> <p>Level 2: Standing on one leg in order. The floor is marked with cones or tape.</p> <p>Level 3: One foot low, one foot high. One leg straight, one leg bent. Repeat 8 times.</p>	<p>High Knees Run</p> <p>Level 1: Perform high knees for 30 seconds.</p> <p>Level 2: Perform high knees for 30 seconds on the spot.</p> <p>Level 3: Perform high knees for 30 seconds on the spot.</p>
<p>Standing Boxing</p> <p>Level 1: Stand with feet shoulder-width apart.</p> <p>Level 2: Stand with feet shoulder-width apart. Arms extended forward.</p> <p>Level 3: Stand with feet shoulder-width apart. Arms extended forward. Head tilted back.</p>	<p>Call Raises</p> <p>Level 1: Stand with feet together. Arms raised.</p> <p>Level 2: Stand with feet together. Arms raised. Head tilted back.</p> <p>Level 3: Stand with feet together. Arms raised. Head tilted back. Head tilted forward.</p>

PasSPORT intervention at DASH schools

Creating physical activity – friendly environments at 4 DASH schools in 2016, despite Fees Must Fall

- Activity structures, painted games, tree planting, sport equipment, leadership camps..... R60 000 + raised by third year HMS students in the PasSPORT to Health Project



NMMU in big takkie drive for schools

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THREE biokinetics masters students from NMMU have collected more than 500 pairs of sports shoes to distribute to three disadvantaged schools as part of a research project.

Project supervisor and associate professor in the department, Cheryl Walter, said the initiative which formed part of the Disease Activity and Schoolchildren's Health (Dash) study, was aimed at promoting and teaching physical education in schools.

"We want to encourage the teaching of physical education in our disadvantaged schools," Walter said.

The study, which is a joint research project in conjunction with the University of Basel in



Switzerland, began in March.

Danielle Smith, who is one of the biokinetics masters students, said staff and students had approached the more advantaged schools in the Bay to collect the sports shoes and takkies.

The collection process, which began in May and ended in June,

saw five prominent schools in the Bay take on the challenge as part of their 67 minutes for Mandela initiative.

Schools benefiting from the Dash shoe drive are Hillcrest Primary in Hillcrest, Sapphire Road Primary in Booysen Park and Elandia Primary in Motherwell.

NOT SO TACKY: Biokinetics masters students at Nelson Mandela Metropolitan University, from left, Siphesihle Nqeniso, Larissa Adams and Danielle Smith with their supervisor Prof Cheryl Walter, in the background, facilitated the collection of more than 500 pairs of takkies

Addendum 3: Examples of engaging through teaching and learning (Section B 2)

Engagement through teaching and learning

- HMS students and Swiss students involved in clinical and fitness testing



Engagement through teaching and learning

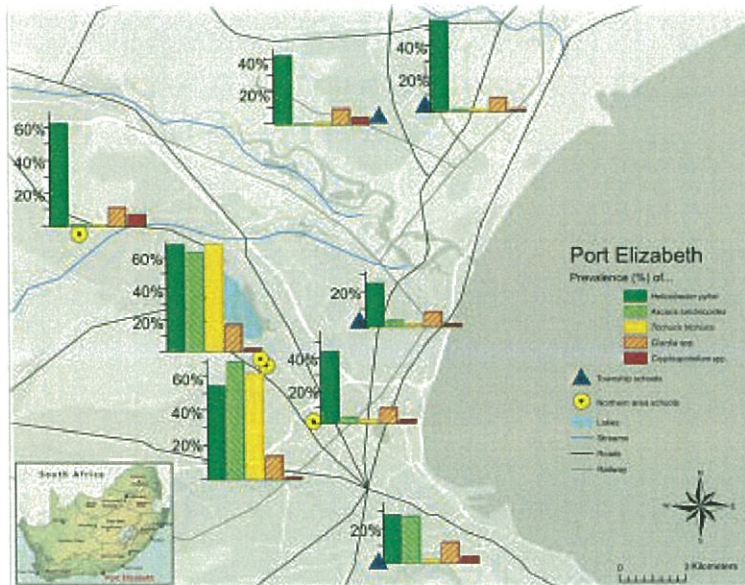
- Staff and students from Medical Laboratory Sciences were trained to assist in the analyses of stool and urine samples, using the Kato-Katz method and various urine filtration methods - the B.Tech students also used the results in their research treatise module



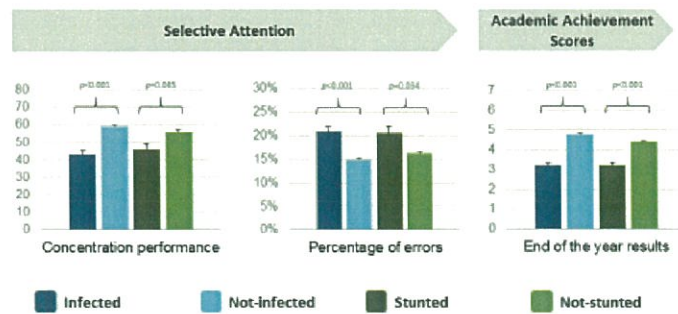
Addendum 4: DASH Study results highlights serious health concerns (Section C 4.1)



School disease profiles



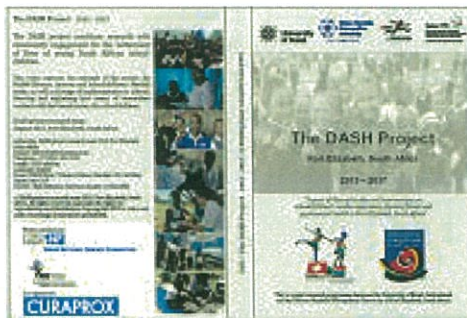
Baseline Results: Cognition



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

Addendum 5: Media and publicity (Section C 4.2)

Media and Publicity (Documentary, Website, media reports, videos of the intervention.....)



WELCOME TO THE DASH WEBSITE

Dear visitor,

As part of the DASH project, we have developed a website to provide information to the public about the DASH project. The website is designed to be user-friendly and easy to navigate. It contains information about the DASH project, the DASH intervention, and the DASH website. We hope you find this information helpful and informative.



Addendum 6: The DASH Team (Section C 7.1)

