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UNIVERSITY OF CAPE TOWN

# Evaluating Exposure to and Perceptions of the Woolworths Healthy Tuck Shop Guide in Cape Town, South Africa

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Mini-Dissertation

Toni Marraccini

MRRTON002

August 2011

## Abstract

**Background:** Both under-nutrition and over-nutrition pose a public health concern, especially for children in South Africa. Several initiatives exist in South Africa in order to promote healthy eating and nutrition at schools. One of them is the Woolworths Making the Difference (MTD) Programme aimed at eliminating barriers to promoting healthy lifestyles that exist at schools, such as the availability of low cost, unhealthy foods either from tuck shops or street vendors. The Healthy Tuck Shop Guide is a recent addition to the MTD programme. The aim of this evaluation is to assess schools' perceptions of the Woolworths Healthy Tuck Shop Guide as it is being utilized in Woolworths Making the Difference schools.

**Methods:** A qualitative study consisting of focus groups, interviews and tuck shop observation was used to gather information on thirteen schools and their exposure, comprehension, and use of the guide. A mix of schools was examined in terms of economic status and level of control over their tuck shop. Thematic analysis was used to extract findings.

**Results:** Findings show that despite overall positive attitudes about the guide, several barriers to its implementation exist including children's preferences for unhealthy foods, the higher cost of healthy foods, and other issues related to a lack of facilities, time and manpower. Results are divided according to question type; that is, findings on questions related to the tuck shop and questions related to the guide are discussed separately. Other key themes also emerged and are examined prior to making recommendations and revealing the studies' limitations.

**Conclusion:** Overall, findings from this study are useful in raising awareness about the key obstacles to implementing healthy food initiatives, which need to be kept in mind during any attempts to promote consumption of healthier foods at school. If barriers to implementation are addressed, the Woolworths Healthy Tuck Shop Guide, if executed within a larger support network, has the potential to assist in the creation of a healthier food environment at schools. Due to multiple challenges to implementation, individual attention needs to be given to schools that are in favour of implementing the guide.

## **Acknowledgements**

I would like to thank Catherine Draper, Shelly Meltzer and Lesley Bourne for their part in supervising this research. I would also like to acknowledge Shelly Meltzer and Catherine Draper for their role in conceptualizing the present evaluation of the Healthy Tuck Shop Guide. Lastly, I want to thank Sadia Ansary for assisting with the selection of the schools for this study, and the tuck shop operators and schools for their participation in this research.

University of Cape Town

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Part A: Protocol

# Evaluating Exposure to and Perceptions of the Woolworths Healthy Tuck Shop Guide in Cape Town, South Africa

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## **Abstract**

Both under-nutrition and over-nutrition pose public health concern, especially for children. Several initiatives exist in South Africa in order to promote healthy eating and nutrition at schools. One of those programmes is the Woolworths Making the Difference (MTD) Programme that was created to combat barriers to promoting healthy lifestyles that exist at schools, for example, the availability of low cost, unhealthy foods either from tuck shops or street vendors. The Woolworths Making the Difference team realizes that South African learners face a variety of nutritional problems, and that schools provide an ideal location for promoting health, especially where families struggle to provide nutritious food for their children. The Healthy Tuck Shop Guide is a recent addition to the MTD programme and was developed over a number of years by experts in nutrition. This evaluation is to assess schools' perceptions of the Woolworths Healthy Tuck Shop Guide as it is being utilized in Woolworths Making the Difference schools. A qualitative study consisting of focus groups, interviews and tuck shop observation will be used to gather information on the school's exposure, comprehension, and usefulness for planning of the guide.

## Background

In 1992 at the FAO/WHO International Conference on Nutrition in Rome, the World Declaration and Plan of Action for Nutrition was adopted with one of its aims being to eliminate or substantially reduce malnutrition, micronutrient malnutrition and diet-related communicable and non-communicable disease<sup>1</sup>. Malnutrition in South Africa is a serious issue with multiple contributing factors; yet one of the primary and immediate causes is inadequate dietary intake<sup>2</sup>. Both under-nutrition and over-nutrition pose public health concern, especially for children. The National Food Consumption Survey (NFCS) was conducted in 1999 with one of its main objectives being to determine the degree of malnutrition among South African children. The survey revealed that among children aged 1-9, the prevalence of stunting was 19.3%, while the combined prevalence of obesity and overweight was 17.2%<sup>3</sup>. For the first time at a national level, South Africa recognized the presence of both over- and under-nutrition within the population. The matter of foods sold at schools clearly may contribute to this situation.

Under-nutrition includes stunting, wasting and deficiencies of essential vitamins and minerals that are collectively known as micronutrients. Vitamin A and zinc deficiencies have by far the largest remaining disease burden among the micronutrients considered, while iodine and iron deficiencies have small disease burdens, partly because of intervention programmes, but sustained effort is needed to further reduce their burden<sup>4</sup>. In South Africa, both moderate and severe stunting (18.0%), wasting (4.5%) and underweight (9.3%) are prevalent in children aged 1 to 9. In addition, over 63.0% of children between 1 and 9 years old experience vitamin A deficiencies<sup>5</sup>. The graphs and tables in Appendix A show the prevalence of components of under-nutrition in children under five years old, as well as children aged 1-9. Several risk factors for under-nutrition exist. Low birth weight is a significant predictor of stunting, and other factors including presence of a toilet, maternal literacy and education, and breastfeeding practice all have been shown to impact on under-nutrition<sup>6</sup>.

With regard to over-nutrition, obesity has become a growing problem. Among adolescents 17.0% are overweight and 4.2% are obese. It has also been shown that overweight and obesity increase with age, suggesting that those who are overweight and obese in their youth are likely to

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<sup>1</sup> FAO/WHO. *International Conference on Nutrition. Food, Nutrition and Agriculture 1992; 5/6*. Rome: FAO.

<sup>2</sup> United Nations Children's Fund (UNICEF). *Conceptual Framework for Improved Nutrition of Children and Women in Developing Countries*. New York: UNICEF, 1990.

<sup>3</sup> Labadarios, D. (editor) 2000. *The National Food Consumption Survey (NFCS): children aged 1-9 years, South Africa, 1999*. Pretoria: Department of Health.

<sup>4</sup> Black, RE, Allen, LH, Bhutta, ZA, Caulfield, LE, de Onis, M, Ezzati, M, Mathers, C, & Rivera, J. 2008. Maternal and child undernutrition: global and regional exposures and health consequences. *Lancet*,

<sup>5</sup> UNICEF. South Africa Development Indicators. 2010. Online Available: <http://www.devinfo.info/southafrica/> 2 December 2010.

<sup>6</sup> Chopra, M. 2003. Risk factors for undernutrition of young children in a rural area of South Africa. *Public Health Nutrition: 6*(7), 645–652.

remain as such into adulthood<sup>7</sup>. Global trends in the onset of overweight and obesity as an epidemic have pointed to a nutritional transition as a cause. In developing countries, like South Africa, this nutritional transition is represented by a shift in diet from traditional to Westernized. In developing countries, as economies continue to grow and develop the pattern of obesity prevalence changes such that lower income groups have higher levels of obesity and overweight. Eventually this leads to developed countries where children in low SES groups or specific racial groups are at the greatest risk for overweight. This is being seen in South Africa<sup>8</sup>.

Globalization and urbanization have contributed to this nutritional transition. Overall, there has been an increased intake in fat, caloric sweeteners, and animal products consumed. This has been combined with a decrease in physical activity and an increase in sedentary leisure time<sup>9</sup>. With urbanization, occupational changes in activity have occurred such that more people have sedentary jobs. The nature of transportation has also become more passive.

The consequences of malnutrition are detrimental to learners. Under-nutrition is estimated to be the underlying cause of up to a third of infant deaths in South Africa. Growth, intellectual development and resistance to illness are also influenced by under-nutrition, which can impact on attendance and ability to learn. If deficiencies in iron, iodine and vitamin A were eliminated, it has been estimated that a population-wide increase in intelligence quotient (IQ) by 10-15 points would occur. In addition, there is increasing evidence that both under and over-nutrition are very important in the development of chronic diseases such as diabetes and heart disease, and that dietary habits developed in youth determine adult disease. For these reasons, malnutrition is also known as ‘the silent emergency’<sup>10</sup>.

Poverty also plays a role in determining malnutrition. For example, obesity has been described as an “economic phenomenon” by Adam Drewnowski, linked to low income<sup>11</sup>. That is, those who are poor are at a disadvantage in adapting healthier ways of eating because they suffer from inequitable access to healthy foods. Food choice, therefore, is limited, and foods that are affordable tend to be higher in calories, fat and sugar. Healthier foods, such as fresh fruit and vegetables, simply cost more. Further, issues with storage are also a concern due to the perishable nature of these foods. Refrigeration costs money and many low income homes lack space for storage. This low cost dietary intake may be a predictor of obesity. The low availability

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<sup>7</sup> Goedecke, J.H., Jennings, C.L., & Lambert, E.V. “Obesity in South Africa” *Chronic Diseases of Lifestyle in South Africa: 1995-2005*; Chapter 7. South African Medical Research Council, Chronic Diseases of Lifestyle Research Unit. MRC Technical Report, May 2006. Online Available: <http://www.mrc.ac.za/chronic/cdlchapter7.pdf> 28 August 2010

<sup>8</sup> Wang, Youfa and Lobstein, Tim. 2006. “Worldwide trends in childhood overweight and obesity” *International Journal of Pediatric Obesity*, 1: 11/25.

<sup>9</sup> Popkin, BM and Gordon-Larsen, P. 2004. “The nutrition transition: worldwide obesity dynamics and their determinants” *International Journal of Obesity*: 28, S2–S9.

<sup>10</sup> Chopra, M. 1999. Under-nutrition in South Africa. *Health Systems Trust UPDATE* Issue No. 47

<sup>11</sup> Drewnowski, Adam. 2009. “Obesity, diets, and social inequalities” *Nutrition Reviews* Vol. 67(Suppl. 1):S36–S39.

of healthy foods in rural and township areas in South Africa impacts on the prevalence of obesity. This also explains, in part, the existence of underweight and overweight in the same household.

There is a great need to ensure that school tuck shops are providing learners with options for eating healthy food. A study done in Cape Town found that the majority of food eaten by adolescents is unhealthy. Almost 70.0% of learners purchased food at school, mainly from tuck shops. Among these learners, 70.0% purchased no healthy items and 73.2% purchased two or more unhealthy items. Learners were also asked to complete a questionnaire identifying foods as healthy or unhealthy. Despite a majority of students knowing which foods were healthy and unhealthy, they were not more likely to purchase healthy foods. The most commonly purchased unhealthy items were potato chips, sweets, soft drinks and French fries<sup>12</sup>. This demonstrates the need to work with tuck shops to offer fewer unhealthy options.

The Woolworths Making the Difference (MTD) programme is a national, public-private sector initiative that has multiple components that are both theoretical and experimental. Its primary aim is to promote healthy lifestyles through nutrition and physical activity using school-based interventions. Several barriers to promoting healthy lifestyles at school exist, for example, the availability of low cost, unhealthy foods either from tuck shops or street vendors. As a result, the MTD programme was designed to reduce these obstacles. Currently, a total of about 3,000 schools are registered in the programme, with about 230 of those schools located in the Western Cape. Registered schools are classified as either economically advantaged or disadvantaged. It was launched in 2004, and from 2005 to 2008, an evaluation of the programme was conducted. The programme has shown growth since its inception. Figures in Appendix B show the increasing number of MTD registered schools by region annually (Figure 1) and the breakdown of advantaged and disadvantaged schools by region annually (Figure 2). Uptake of some of the components of the programme has been relatively low; however, advantaged schools have shown greater uptake suggesting the importance of funding and infrastructure<sup>13</sup>.

Several other initiatives are already underway in South Africa to help promote nutrition in schools. The National School Nutrition Programme (NSNP), the Healthkick Programme, and the Heart and Stroke Foundation's Tuck Shop Programme are all examples of such efforts. The NSNP was developed in 1994 with the intention of improving the health and nutritional status of primary school children in South Africa. By doing so, they also hoped to improve the attendance and learning capacity of these children. A review of this programme in 2008 found that while the programme was perceived to have a positive impact on the learners and the local community through active community involvement, problems still existed. Compliance with the guidelines

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<sup>12</sup> Temple, NJ, Steyn NP, Myburgh, NG, & Nel JH. 2006. Food items consumed by students attending schools in different socioeconomic areas in Cape Town, South Africa. *Nutrition*, 22(3):252-258.

<sup>13</sup> Draper, CE, Mc Quaide-Little, KA, Twine, P, Luthi, P, Meltzer, S, & Lambert, EV. 2010. Process evaluation of the *Woolworths Making the Difference* programme: promoting nutrition and physical activity in South African primary schools.

of the NSNP varied, mostly due to issues with inadequate infrastructure and capacity to implement. In other instances, key players involved with implementation were unsure of their roles and responsibilities leading to difficulties<sup>14</sup>. Healthkick is a programme that aims to promote healthy eating habits and physical activity in schools, as well as creating an environment that makes it possible to adopt a healthy lifestyle<sup>15</sup>. This programme recognizes tuck shops and street vendors near schools as a barrier to encouraging a healthy lifestyle. An example of a strategy to tackle this challenge is to seek help from the South African Heart and Stroke Foundation (HSFSA), who have created a tuck shop programme to help schools promote healthier foods. The HSFSA developed a Healthy Tuck Shop Programme with similar goals in mind: to encourage healthier eating habits. To do this tuck shops would be a source of intervention by providing more healthy choices and using more healthy ingredients<sup>16</sup>. Through this programme, a school can have their tuck shop accredited as healthy by the HSFSA. The Woolworths MTD programme is compatible with all of these initiatives to promote health in schools.

The Woolworths Making the Difference team realizes that South African learners face a variety of nutritional problems, and that schools provide an ideal location for promoting health, especially where families struggle to provide nutritious food for their children. The Healthy Tuck Shop Guide is a recent addition to the MTD programme and was developed over a number of years by experts in nutrition. By conducting research at schools in South Africa, researching the international experience and applying their own dietary expertise the guidelines were created. The purpose of this guide is to “assist [schools] in providing children with important opportunities to make healthier eating choices every day”<sup>17</sup>. The term ‘tuck shop’ is used to explain the various school methods of food provision. This can include cooked lunches, traditional tuck shop foods, snacks or other foods supplied by outside vendors. Healthy Tuck Shops aim to provide children with foods that promote health and performance<sup>18</sup>.

The guide includes ten (10) chapters on how to create healthy school tuck shops. The chapters are as follows:

1. Why is a Healthy Tuck Shop Important?
2. Getting Started
3. A Healthy Tuck Shop School Policy
4. A Healthy Tuck Shop Communication Strategy

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<sup>14</sup> The Public Service Commission (PSC). 2008. Report on the Evaluation of the National School Nutrition Programme (NSNP). Online Available: <http://www.info.gov.za/view/DownloadFileAction?id=88572> 25 January 2011.

<sup>15</sup> Draper, CE, de Villiers, A, Lambert, EV, Fourie, J, Hill, J, Dalais, L, Abrahams, Z & Steyn, NP. 2010. Healthkick: a nutrition and physical activity intervention for primary schools in low-income settings. *BMC Public Health*, 10:398.

<sup>16</sup> Heart and Stoke Foundation South Africa. 2007. Healthy Tuck Shop Programme. Online Available: <http://www.heartfoundation.co.za/docs/tuckshop/TuckShopProgrammeDocument.pdf> 25 January 2011.

<sup>17</sup> Woolworths Healthy Tuck Shop Guide (Introduction)

<sup>18</sup> Woolworths Healthy Tuck Shop Guide (Chapter 5)

5. The Dietician's Nutrition Information for Healthier Tuck Shops
6. Ideas for Delicious, Healthy Tuck Shop Lunches
7. Ideas for tasty, Nutritious Tuck Shop Snacks
8. Ideas for Delicious and Nourishing Drinks
9. Food Safety and Hygiene Guidelines
10. Healthy Schools – The Bigger Picture

Research is needed to determine the factors that either promote or hinder uptake of this aspect of the MTD programme. Since this programme was not a part of the original MTD evaluation, a separate and more detailed analysis will be carried out. The results of this research will be used to make amendments and improvements to the Woolworths Healthy Tuck Shop Guide and could be used to design a larger scale evaluation of the Guide. Changes in consumption, for example, could be measured in a larger, quantitative study. Furthermore, the findings of this study will be useful for others interested in promoting health in schools as well as those implementing school-based nutrition interventions.

### **Research Questions**

The aim of this evaluation is to assess schools' perceptions of the Woolworths Healthy Tuck Shop Guide as it is being utilized in Woolworths Making the Difference schools. To reach this aim, specific objectives have been identified:

- To Assess Exposure
  - How they accessed the guide
  - The extent to which they have consulted the guide
  - What they have communicated to others about the guide
- To Assess Comprehension
  - What they think of the language and tone of the guide (i.e. is it user-friendly?)
  - The extent to which they understand the guide from a healthy nutrition perspective
  - What they feel may be missing, e.g. more specific shopping lists
- To Assess Usefulness for Planning
  - Whether the guide is suitable for their school in practical terms
  - What they feel is most helpful
  - What will help them bring about positive changes in their tuck shop
  - What they need to help them implement the suggestions in the guide

In addition to the questions mentioned above, the tuck shop environment of each of these schools will be observed, and some questions asked around tuck shop policies, profitability, items sold at the tuck shop etc. This information would help to contextualise responses to the questions addressed in interviews and/or focus groups.

## **Study Methodology**

This will be a qualitative study, and individual interviews and/or focus groups (semi-structured) will be carried out at selected Woolworths Making the Difference schools. Basic data will also be collected on tuck shops, e.g. items sold and management.

### ***Population & Sampling***

The sample population includes all Making the Difference schools registered with Woolworths in the Western Cape. There are currently around 230 schools in the Western Cape registered with the Making the Difference programme. Registered schools are classified as either economically advantaged or economically disadvantaged. A cross section of schools that are advantaged/disadvantaged will be selected with variable levels of control over their tuck shops; that is, (1) schools with existing tuck shops run by schools, (2) schools that outsource to a tuck shop, and (3) schools that have no tuck shop, but may have vendors selling outside the school property (often through the school fence). In the third scenario, the Principal will be contacted to discuss how outside vendors may be able to use aspects of the material contained in the guide. Ten (10) schools will be selected for participation in this study. Depending on each school, a focus group or individual interviews will be conducted. Each focus group will have approximately eight people per group, so the final sample size may be up to 80 individuals.

The schools will be contacted through the MTD Relationship Managers, and Woolworths will be asked to notify us of which schools have accessed the guide. Sampling for this study will be purposive in order to allow for the selection of schools reflecting the three categories above. Key individuals who are involved with school tuck shops will be chosen to take part in the study. Individuals participating in the interviews/ focus groups could be administrators and teachers, as well as parents / community members that are involved with the tuck shop. Schools that are amenable to this research will be selected, not solely those schools who are most active or most successful in the programme.

Relationship Managers involved in the MTD programme will assist in the selection and recruitment of schools for this study. Schools that have accessed the guide and are included in one of the three levels of control over their tuck shop will be eligible to participate. Schools that have not accessed the guide will be excluded from recruitment.

### ***Data Collection***

Interviews/ focus group discussions with key informants will be recorded for later transcription by the investigator. The school setting will serve as a convenient area for participants to partake in the study, and refreshments will be provided for focus group participants as an incentive for their participation. Guide questions for the focus groups and interviews will be structured around

the study objectives. These guide questions will be piloted at one MTD school that will not be included in the sample.

Data will also be collected regarding the actual tuck shops (Appendix D). For example, information on who manages the tuck shop, who benefits from the profit, and what is sold will be gathered at each school.

### *Data Management*

In all of the interviews and focus groups responses will be recorded on tape with respondents consent and managed by the investigator to ensure that all data (field notes, tape recordings, transcripts and other additional materials) are carefully stored after each focus group and/or interview.

### *Data Analysis*

After the interviews/focus groups are conducted and transcribed, data will be analyzed using content analysis to uncover themes relating to each study objective.

All of the data will require analysis of:

1. Semi-structured interviews
2. Focus group discussions
3. Data collected on the tuck shops
4. Any additional forms of data that have emerged through the implementation of the study

The data collected on the tuck shops will be analyzed for frequency and distributions. The interviews/focus groups conducted at all ten schools will be compared to determine how experiences with the guide were different or similar and based on what circumstances. That is, schools will be compared on the basis of their economic status (advantaged versus disadvantaged), as well as on the basis of their level of control over the tuck shop (school owned and operated, outsourced tuck shop, outside vendor). The transcripts from the interviews/focus groups will be analyzed for common themes.

### *Limitations*

The pilot focus group will help to inform the validity and reliability of this study given the small sample size. While these results cannot be generalized, qualitative research helps to provide insight and in-depth information that is not possible to obtain using quantitative methods.

### **Ethical Considerations**

An existing relationship exists between the Woolworths Making the Difference programme and Western Cape Education Department (WCED); however, appropriate representatives from the WCED will be informed about the study.

Informed consent (Appendix C) will be obtained from participants with the use of thorough consent forms and a verbal presentation of the research project. Participants will be fully informed about the study design, the purpose of the study and the benefits of participating before the research activities. In addition, participants will be encouraged to ask any remaining questions relating to the study before starting the interview or focus group discussion, and will be reminded that their participation will be entirely voluntary. Since Afrikaans and Xhosa are commonly spoken in the Western Cape schools, consent forms will also be available in these languages. No incentives will be given to participate in the focus groups; however, refreshments will be served during the sessions.

Along with informed consent comes the crucial role of anonymity. All transcripts and notes from interviews and focus groups will be identified in case there is a need to re-contact a respondent. Woolworths will know the identity of the schools because they helped to identify the schools that will participate. However, the identity of respondents will be completely removed in the report, as will the names of the schools and any other identifying information for those who choose to participate. Each school will be assigned an identifying number for reporting purposes. Focus group participants will be advised that the confidentiality of their discussions cannot be guaranteed.

In all the interviews and focus groups, notes shall be taken and responses recorded on tape with respondents consent and managed by the researchers to ensure that all data (field notes, tape recordings, transcripts and other additional materials) are carefully stored. If respondents do not want the conversations recorded on tape, I will take detailed notes and ask them to repeat their responses when necessary. Discussions from both interviews and focus groups will be transcribed and will not be shared with respondents. Any personal information obtained through the research will only be used for the study and all data will be entered anonymously by the researcher in order to protect participants' identity. Video material will not be used, but photographs of the school tuck shops will be taken after obtaining consent from the school principals; however, no learners will be included in the photographs. Verbal consent will be obtained from adults before including them in photos; however, no learners will be included. If any sensitive materials are to be shared, researchers will ensure that their source cannot be traced.

As with other studies, there are always risks and benefits of participation. There is little risk involved with this particular study, yet it is possible that conducting this research may raise the expectations of the schools that they are going to receive further assistance from Woolworths with their tuck shop programmes. The consent form will be used to clarify that this is not the case. Benefits of participation, on the other hand, include gaining knowledge about healthy food provision, and the possibility to use this information to improve the guide for use within the community.

## Write-up & Dissemination

This research will inform the Woolworths Making the Difference programme on the usefulness of the Healthy Tuck Shop Guide as a tool for schools. It will also serve to stimulate further discussion and developments around promoting healthy eating at schools and the role of interventions. The outcomes of this research will be relevant to a number of different stakeholders including academics, school administrators and teachers, tuck shop owners and managers, learners, parents and the larger community. Information on the relative perceptions of the guide will provide a useful basis for the coordinators of the MTD programme, as well as those using the guide to assess the next steps in communicating about healthy eating at school.

The presentation and dissemination of results from this research would be adapted to suit the various target audiences. Though the entire result will be codified into a single research report, other forms of audience specific presentations can be made available such as policy briefs, feedback sessions, school/ community presentations, etc. Dissemination will be done through academic channels, as well as through Woolworths.

## Logistics

### *Timetable*

February	Submit Proposal for ethics approval
March	Woolworths will begin communication with schools about research
April-May	Data collection
June-July	Analysis, write-up, etc.
August	Submit

### *Budget*

Costs associated with this research will be minimal as it is being done for a degree. Transcription will be done by the primary researcher. Refreshments at the interviews/focus groups will be sponsored by Woolworths, as will some travel costs.

## Appendices

### Appendix A

#### Prevalence of stunting (moderate and severe) - South Africa

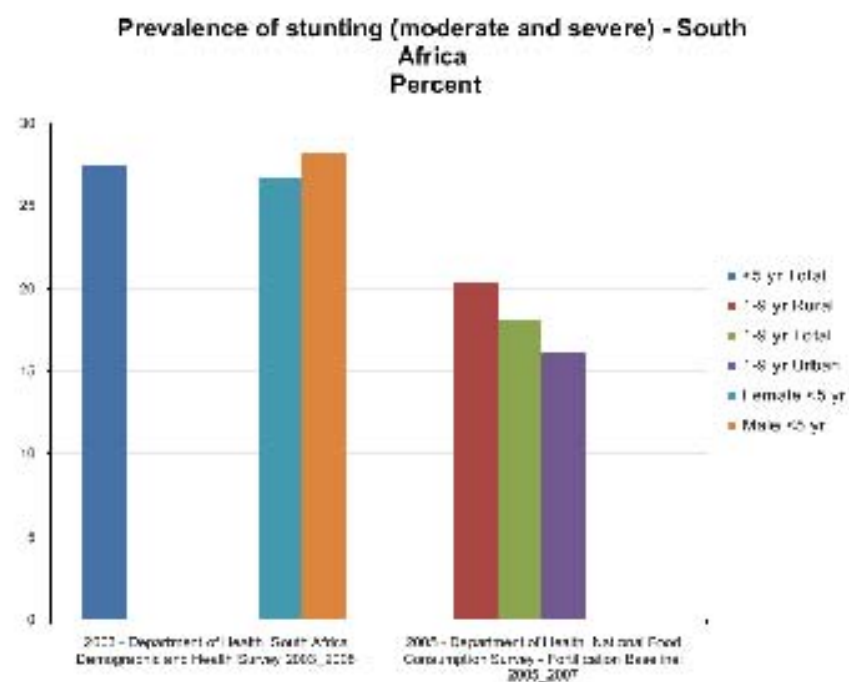
Percent

Time Period	Source	<5 yr Total	1-5 yr Rural	1-5 yr Total	1-5 yr Urban	Female <5 yr	Male <5 yr
2003	Department of Health_South Africa Demographic and Health Survey 2003_2008	27.40				26.60	28.20
2005	Department of Health_National Food Consumption Survey - Fortification Baseline: 2005_2007		20.30	18.00	16.20		

#### Source

Department of Health\_South Africa Demographic and Health Survey 2003\_2008

Department of Health\_National Food Consumption Survey - Fortification Baseline: 2005\_2007



**Prevalence of underweight (moderate and severe) - South Africa**

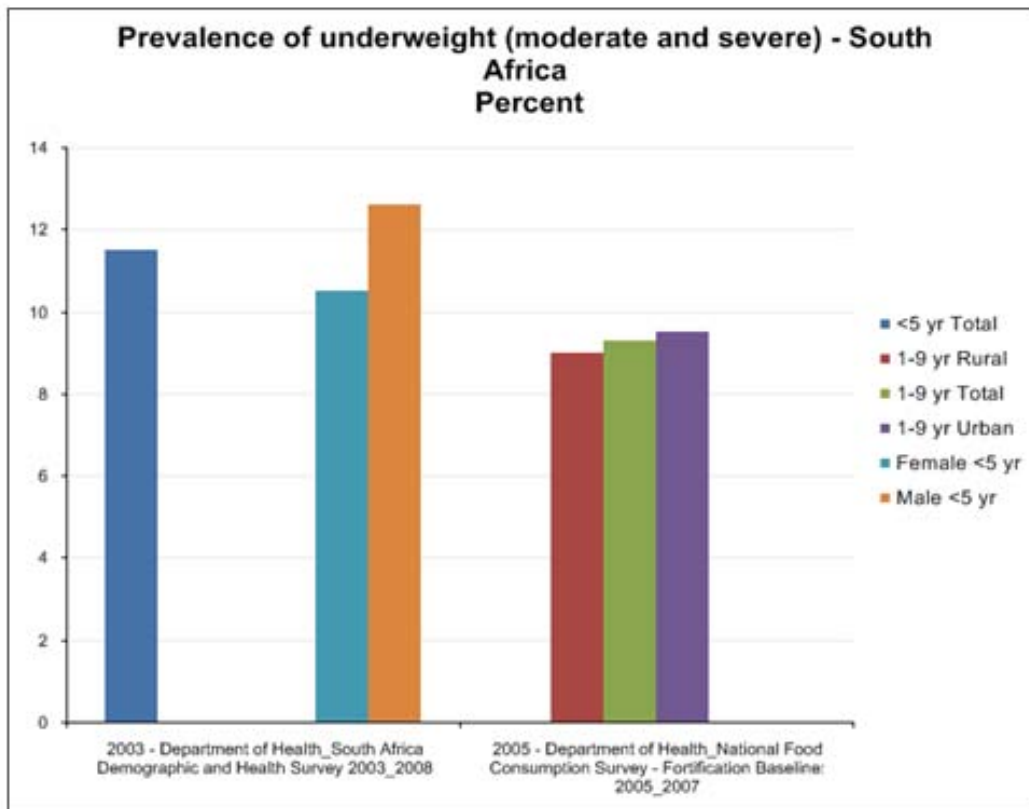
Percent

Time Period	Source	<5 yr Total	1-9 yr Rural	1-9 yr Total	1-9 yr Urban	Female <5 yr	Male <5 yr
2003	Department of Health_South Africa Demographic and Health Survey 2003_2008	11.50				10.50	12.60
2005	Department of Health_National Food Consumption Survey - Fortification Baseline: 2005_2007		9.00	9.30	9.50		

Source

Department of Health\_South Africa Demographic and Health Survey 2003\_2008

Department of Health\_National Food Consumption Survey - Fortification Baseline: 2005\_2007



**Prevalence of wasting (moderate and severe) - South Africa**

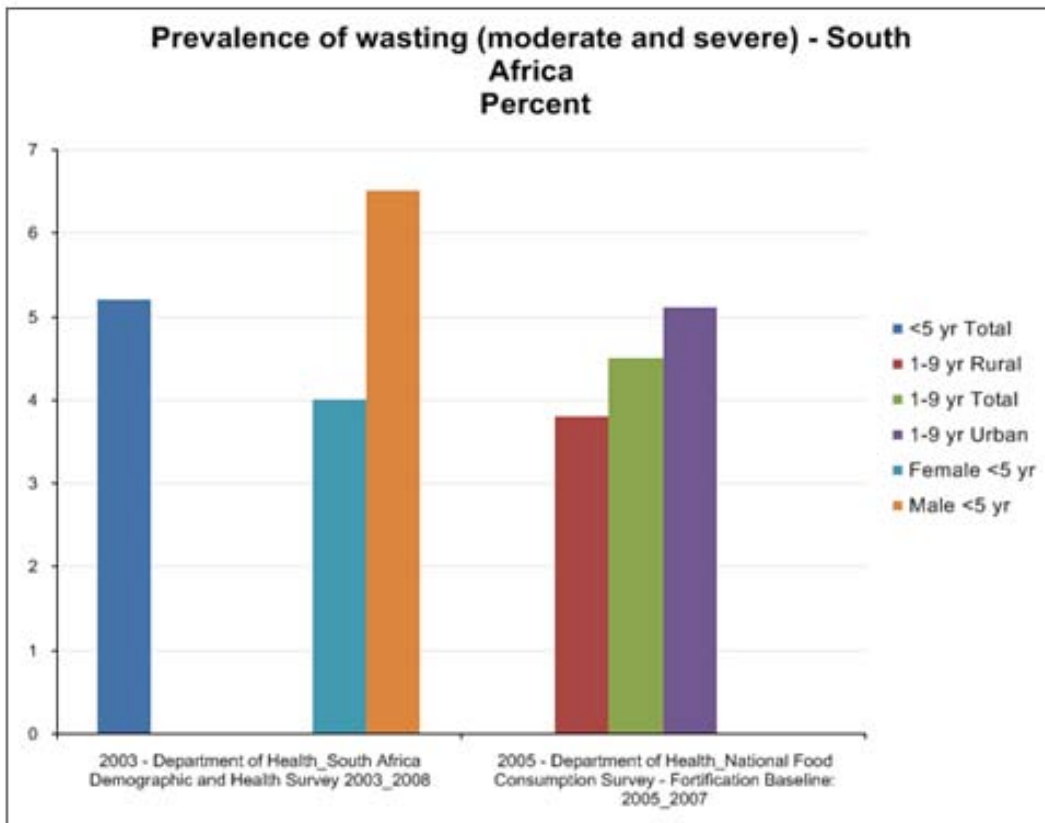
Percent

Time Period	Source	<5 yr Total	1-9 yr Rural	1-9 yr Total	1-9 yr Urban	Female <5 yr	Male <5 yr
2003	Department of Health_South Africa Demographic and Health Survey 2003_2008	5.20				4.00	6.50
2005	Department of Health_National Food Consumption Survey - Fortification Baseline: 2005_2007		3.80	4.50	5.10		

Source

Department of Health\_South Africa Demographic and Health Survey 2003\_2008

Department of Health\_National Food Consumption Survey - Fortification Baseline: 2005\_2007



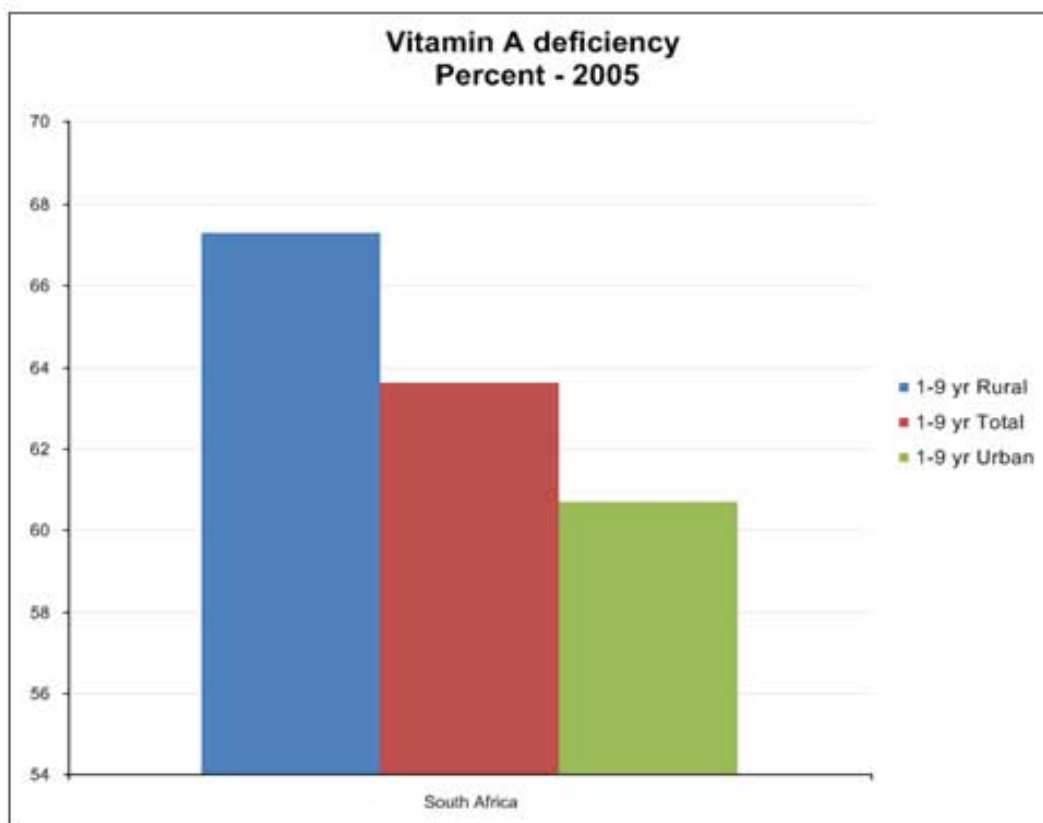
## Vitamin A deficiency

Percent - 2005

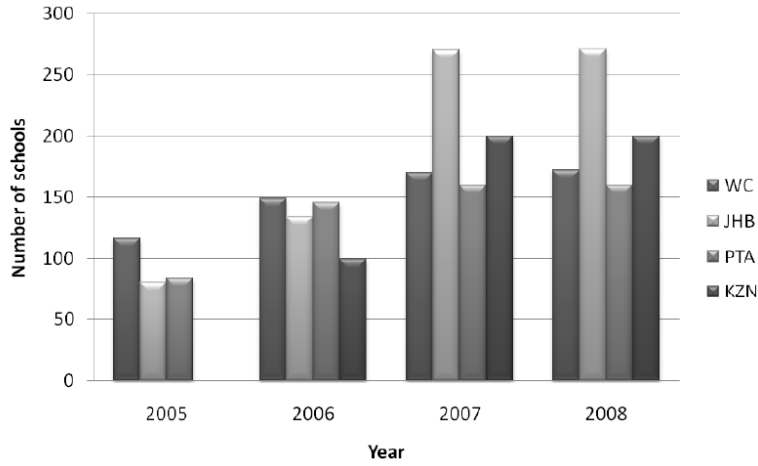
Area Name	1-9 yr Rural	1-9 yr Total	1-9 yr Urban
South Africa	67.30	63.60	60.70

Source

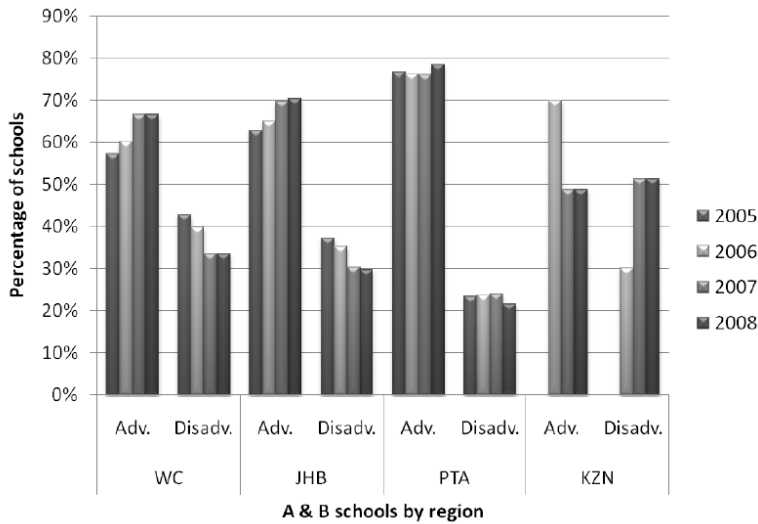
Department of Health\_National Food Consumption Survey - Fortification Baseline: 2005\_2007



## Appendix B



**Figure 1: Registered MTD schools by region: 2005 – 2008**



**Figure 2: Advantaged and disadvantaged schools by region: 2005 – 2008**

## Appendix C

### Evaluating Exposure to and Perceptions of the Woolworths Healthy Tuck Shop Guide in Cape Town, South Africa Participant Consent Form

The aim of this study is to evaluate the exposure to and perceptions of the Woolworths Healthy Tuck Shop Guide. We hope to find out how the guide has been accessed, understood and used for planning. The purpose of this interview/focus group is to evaluate school perceptions of the guide, as well as tuck shop policy.

There are no right or wrong answers to the questions you will be asked in this focus group. It is important for you to answer these questions as honestly as possible so that your views can be most accurately represented. Although you were contacted through \_\_ and your identity is known to the focus group facilitator, your anonymity will be protected. Your name will not be used in the research report, and no connection will be made between your name and your responses in this focus group. With your permission, this focus group discussion will be recorded via audio. Only the research team will have access to this audio recording.

Your participation in this study is voluntary, and is greatly appreciated. Your involvement in this study will ultimately benefit future participants of the Woolworths MySchool Programme and users of the Healthy Tuck Shop Guide by providing this organization with insight into the success of their programmes. If you agree to participate in this interview / focus group, please sign in the space given below.

If you have any queries, please contact Toni Marraccini at [tmarraccini@gmail.com](mailto:tmarraccini@gmail.com)

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

## Appendix D

### Tuck Shop Questions:

1. Is there a tuck shop in the school? If not, are there vendors?
2. Who manages the tuck shop? (teachers, learners, parents, school governing body, community members, other)
3. Who benefits from the profit? (school, private company, someone outside the school etc)

### Tuck Shop Observation:

Observe what is sold by the tuck shop and/or vendors

- Chocolates
- Sweets
- Chips (crisps)
- Fizzy cool drinks or other cool drinks
- Sports drinks (i.e. Energade™)
- 100% Fruit juice
- Fruits or salads
- Cooked meals
- Chicken braai
- White bread sandwiches
- Brown bread sandwiches
- Hamburgers/ hot dogs
- Vetkoek
- Koeksisters / doughnuts
- Slap chips / tjiptjip roll
- Sausage rolls / pies
- Ice suckers - bunny licks/JCs / ice cream

## Part B: Structured Literature Review

### Objectives

The objectives of this literature review are:

- to briefly describe the current nutrition situation, both globally and specific to South Africa, which has necessitated a movement toward improving nutrition,
- to describe current patterns of food consumption by children and adolescents at school,
- to justify the link between schools and health promotion, and
- to provide examples of research done on school tuck shops or school food provision initiatives.

### Strategy and Criteria for the Selection of the Literature

Literature was gathered using several search methods. First, online databases were searched using phrases such as, 'school tuck shop', 'school nutrition guideline', 'nutrition guideline evaluation', 'school food environment', 'school nutrition South Africa', and 'school health South Africa'. Databases searched included: PubMed, JSTOR, Science Direct, Cochrane Library, BioMed Central, EBSCO Host and Google Scholar. Next, relevant journals were searched for additional articles. Examples of these journals include the Journal of School Health, Journal of Behavioral Nutrition, Health and Place, Qualitative Health Research, Health Education, and Nutrition and Food Science, to name a few. The references in the articles yielded from this search were also examined and a few more relevant articles were obtained. Lastly, authors who had several articles returned in the search were investigated further and additional articles were gathered that are pertinent to the present research.

Articles were included based on their ability to fulfil the objectives of the literature review. Once studies were selected, a standard data extraction form was used and information was extracted from each of the included studies. The data extraction form included: study details (author surname, year of publication, period of data collection, study aim); context (country, setting, participant characteristics); methods (theoretical framework, sampling strategy, sample size, participant selection, data collection methods, data analysis procedures, methods to ensure trustworthiness); and key findings. Some studies were eliminated after this process based on irrelevance to the present research.

In order to assess the quality of the included studies, quality assessments were done using a modified version of the Critical Appraisal Skills Programme (CASP) questions for assessing quality in research [1]. For example, factors such as clear reporting of research questions, data collection and analysis, and methodology, as well as a discussion of limitations or reflexivity help increase quality in reporting. Organizational reports, fact sheets and charters consulted for the purposes of review were not evaluated for quality. No journal articles were excluded due to poor quality research.

### Interpretation of the Literature

*The current nutrition situation: globally and in South Africa*

In 1992 at the FAO/WHO International Conference on Nutrition in Rome, the World Declaration and Plan of Action for Nutrition was adopted with one of its aims being to eliminate or substantially reduce malnutrition, micronutrient malnutrition and diet-related communicable and non-communicable disease [2]. Globally, childhood nutrition has improved in the past twenty years with 16% of children being underweight in 2010 and 27% of children under five experiencing stunting, compared to 25 and 40% respectively in 1990 [3]. On the other hand, global rates of obesity have continued to increase, and in the past twenty years, these rates have more than doubled. In 2010, almost 43 million children were overweight of which 80% lived in developing countries. Thus, obesity and overweight are no longer issues for the developed world alone [4]. These trends are evident in South Africa, and in this respect, South Africa is said to face a double burden of nutrition-related disease, with both under-nutrition and over-nutrition posing a serious public health concern, especially for children [5].

The National Food Consumption Survey (NFCS) was conducted in 1999 with one of its main objectives being to determine the degree of malnutrition among South African children. The survey revealed that among children aged 1-9, the prevalence of stunting was 19.3%, and the combined prevalence of obesity and overweight was 17.2% [6]. In South Africa, both moderate and severe stunting (18%), wasting (4.5%) and underweight (9.3%) are prevalent in children aged 1 to 9 [7]. For the first time at a national level, South Africa recognized the presence of both over- and under-nutrition within the child population.

One of the primary and immediate causes of under-nutrition is inadequate dietary intake [8]. Under-nutrition includes deficiencies of essential vitamins and minerals that are collectively known as micronutrients. Vitamin A and zinc deficiencies have by far the largest remaining disease burden among the micronutrients considered, while iodine and iron deficiencies have small disease burdens, partly because of intervention programmes, but sustained effort is needed to further reduce their burden [9]. In addition, over 63% of children between 1 and 9 years old experience vitamin A deficiencies [7]. Several risk factors for under-nutrition exist including low birth weight, which is a significant predictor of stunting, further, presence of a toilet, maternal literacy and education, and breastfeeding practice all have been shown to impact on under-nutrition [10].

Poverty also plays a role in determining malnutrition. For example, obesity has been described as an “economic phenomenon” by Adam Drewnowski, linked to low income [11]. That is, those who are poor are at a disadvantage in adapting healthier ways of eating because they suffer from inequitable access to healthy foods. Food choice, therefore, is limited, and foods that are affordable tend to be higher in calories, fat and sugar. Healthier foods, such as fresh fruit and vegetables, simply cost more. Further, issues with storage are also a concern due to the perishable nature of these foods. Refrigeration costs money and many low income homes lack space for storage. Thus, low cost dietary intake may be a predictor of obesity, and may also explain, in part, the existence of underweight and overweight in the same household.

The consequences of malnutrition are detrimental to learners. Under-nutrition is estimated to be the underlying cause of up to a third of infant deaths in South Africa. Growth, intellectual development and resistance to illness are also influenced by under-nutrition, which can impact on attendance and ability to learn. If deficiencies in iron, iodine and vitamin A were eliminated,

it has been estimated that a population-wide increase in IQ by 10-15 points would occur. In addition, there is increasing evidence that both under and over-nutrition are very important in the development of chronic diseases such as diabetes and heart disease, and that dietary habits developed in youth determine adult disease. For these reasons, malnutrition is also known as ‘the silent emergency’ [12].

With regard to over-nutrition, obesity has become a growing problem. An increased consumption of foods with high caloric values that are usually high in fat and sugar, but low in vitamins and minerals is a known cause of obesity [4]. Among South African adolescents 17% are overweight and 4.2% are obese. It has also been shown that overweight and obesity increase with age, suggesting that those who are overweight and obese in their youth are likely to remain as such into adulthood [13].

Global trends in the onset of overweight and obesity as an epidemic have pointed to a nutritional transition as a cause. In developing countries, like South Africa, this nutritional transition is represented by a shift in diet from traditional to Westernized. In developing countries, as economies continue to grow and develop the pattern of obesity prevalence changes such that lower income groups have higher levels of obesity and overweight. Eventually this leads to developed countries where children in low socio-economic status (SES) groups or specific racial groups are at the greatest risk for overweight. This is being seen in South Africa [14].

Globalization and urbanization have contributed to this nutritional transition. Overall, there has been an increased intake in fat, caloric sweeteners, and animal products consumed. This has been combined with a decrease in physical activity and an increase in sedentary leisure time [15].

With urbanization, occupational changes in activity have occurred such that more people have sedentary jobs. The nature of transportation has also become more passive.

Review articles on obesity interventions have been somewhat inconclusive, revealing that many diet and exercise interventions are not successful at treating childhood obesity, but may work at encouraging a healthy lifestyle [16], and not enough quality data on effective obesity interventions exists [17].

The burden of disease from obesity and overweight is great as the conditions are associated with increased risk for type 2 diabetes, hypertension, cardiovascular disease and some cancers [18]. There is also evidence of an increase in morbidity in South African children as a result of overweight and obesity. New cases of type 2 diabetes in children have been on the rise in the past decade. In addition, being obese as a child often leads to weight based discrimination, which can impact economic factors, such as income, and socio-cultural factors, such as self-esteem and marital status, later in life [13]. Some interventions to lower the burden of non-communicable disease have focused on promoting the consumption of fruits and vegetables, which have been demonstrated to have protective effects against heart disease and some cancers. Additionally, low fruit and vegetable consumption was linked with almost 5% of deaths worldwide in 2000 [19]. As a result, the WHO created a Fruit and Vegetable Promotion Initiative to encourage increased consumption of fruits and vegetables and ultimately reduce risk for non-communicable diseases [20]. Dietary improvements such as these have the potential to significantly alter the health outlook for children and adults in South Africa.

*Current patterns of food consumption by children and youth*

Patterns of food consumption are obviously linked to nutritional status. In the Feeding Infants and Toddlers Study (2002), it was demonstrated that intake patterns of adults and older children were evident in infants as young as seven months. That is, many infants and toddlers were already consuming desserts, sweets and sweetened beverages [21]. These patterns carry on during childhood and even into adulthood and are not unique to South Africa. Studies done in the United States have shown that fruit, juice and vegetable consumption at schools is low [22] and that competitive foods lacking nutrients are commonly available and consumed [23, 24] often to such an extent where the diet quality of students is negatively impacted [25].

Despite increases in fruit and vegetable access and intake over the years, consumption still remains low in South Africa [19]. Several factors have been shown to influence intake of fruits and vegetables including age, sex, socio-economic status and market price, individual preferences, parental consumption/modelling and encouragement, and other family regulations and home accessibility [26, 27]. A study that examined fruit and vegetable intake among adolescents in selected African countries (not including South Africa) found that a majority of participants were consuming less than the recommended number of servings of fruits/vegetables per day [26]. Another study on sub-Saharan countries (not including South Africa) also examined fruit and vegetable consumption, but among households. These findings revealed that vegetable consumption was quite high across countries; however, fruit intake was significantly lower and more inconsistent [27].

Food choice is also known to be influenced by the media [28, 29], taste/flavour and shape/size [30] especially among children when it comes to snack foods. Research conducted by Steyn *et al.* in 2003, analyzed dietary surveys to determine the most common foods consumed by South Africans across different age groups. Cereals, sugars and stimulants were found to be the three most consumed foods for children aged 1 through 9 followed by milk, meat and offal [31]. One study done among 17 year olds in South Africa revealed that fast food consumption was also high, and on average, males and females ate eight and seven fast food items per week respectively [32].

A study done in Cape Town on food consumption patterns of students found that the majority of food eaten by adolescents is unhealthy. Almost 70% of learners purchased food at school, mainly from tuck shops. Among those learners, 70.0% purchased no healthy items and 73.2% purchased two or more unhealthy items. In addition, despite a majority of students knowing which foods were healthy and unhealthy, this knowledge did not impact their purchasing behaviour. The most commonly purchased unhealthy items were potato chips, sweets, soft drinks and French fries [33]. Another study done in the Western Cape, South Africa examined disadvantage grade four learners' tuck shop and lunchbox behaviours. Common foods found in lunch boxes included white and brown bread sandwiches with meat, cheese, or some form of spread. Less than 10% of lunchboxes contained fruit. The most common item purchased from tuck shops was chips (crisps). Findings show that learners who bring lunchboxes to school were more likely to be from urban areas and of a higher standard of living and less likely to consume food purchased at school. In addition, they had greater dietary diversity and consumed more meals per day. While most learners brought lunch to school, children who purchased food from a tuck shop had higher BMIs and a lower standard of living [34]. Soft drinks are also regularly consumed by learners in

Cape Town and in significantly higher quantities compared to students in the US; however, results may not be comparable due to different methods of data collection. Intake of soft drinks was based largely on preference, but parental consumption was also cited as an influential factor [28].

### *The link between schools and health*

The Ottawa Charter for Health Promotion developed in 1986 at the first International Conference on Health Promotion deemed the school environment an appropriate place for health promotion and the development of personal skills [35]. By 1995, the WHO launched a global school health initiative with the goal of improving the health of students and larger school communities through increased health education and health promotion at schools. Health Promoting Schools were envisioned by which ‘a school [is] constantly strengthening its capacity as a healthy setting for living, learning and working’ [36].

One component of the school nutrition environment is the school tuck shop. A tuck shop is a small, food vendor, and in South Africa the term ‘tuck shop’ is used to explain the various school methods of food provision. This can include cooked lunches, traditional tuck shop foods, snacks or other foods supplied by outside vendors [37]. Tuck shops were introduced into schools in Britain as early as the 1890s and served to supplement regular meals provided by the school. Learners would visit the tuck shop mid-day to obtain snacks between meals where cakes and biscuits were served. The tuck shop was also known to provide snacks during tea time for learners [38]. Recently, there has been a move toward improving health at school tuck shops in South Africa and other countries given the previously mentioned benefits of consuming healthier foods and the belief that schools play an important role in food provision for youth. This effort has been approached differently in different countries and has led to mixed results. For example, a study done in the UK on the impact of school fruit tuck shops showed that there was no overall effect of the tuck shop on children’s intake of fruit or other snack items including chocolates, sweets and chips. While in general more children claimed to eat fruit as a snack at school, the fruit tuck shop had more of an impact when it was implemented along with a ‘fruit only’ policy at school versus schools with no restrictions on consumption [39, 40, 41].

School tuck shops, as well as other food vendors near schools, play a vital role in influencing choices made about foods consumed on a regular basis. Recently, a study done in South Africa revealed that adolescents who scored well on nutrition evaluations found nutrition information learned in school to be practical and influential on consumption; in this case, dietary knowledge had a positive effect on eating behaviour [29]. In other words, ‘dietary knowledge has an impact on behaviour and this knowledge can be imparted at school’ [29]. On the other hand, research done in other settings has confirmed a continued gap among knowledge and practice when it comes to healthy food choices [42]. According to Burke, students receive conflicting messages in the school setting because the food made available at school does not provide students with the opportunity to choose healthy items. Despite students having overall good knowledge of what healthy eating means, unhealthy foods are preferred. This results in fewer healthy options being offered as ‘demand controls supply’ in school food shops that are run as a business [32, 43].

There is a great need to ensure that school tuck shops are providing learners with options for eating healthy food, since being overweight or obese has been linked to inferior levels of achievement in school [44]. A review by Taras (2005) examining the relationship between academic performance and nutrition concluded that lack of food has a severe impact on children's ability to learn, and supplementation with multivitamins and minerals has not been effective in improving performance. Only for students with iron deficiencies that hinder learning is iron therapy effective in bettering academic outcomes [45]. Further, caffeine consumed in soft drinks has been demonstrated to have an adverse effect on learners' ability to perform at school [28]. Research done on diet quality and its effects on academic performance found that students with a better quality diet were less likely to fail literacy tests. Specifically, having adequate consumption and consuming a variety of foods were found to be key aspects of dietary quality that improved performance, along with increasing fruit and vegetable intake and decreasing fat intake [46]. Therefore, school-based initiatives that encourage healthy eating behaviours have the potential to improve academic performance.

Recently, research conducted in rural areas of the Western Cape, South Africa discovered that while healthy items are available, the selection is usually limited. In terms of cost, healthy foods were found to be between 10 and 60 % more expensive than less healthy versions of the same item. Although there is great variability, generally higher prices effectively eliminate the option of consuming a healthy diet for most individuals [47]. Because it is unaffordable for many families to eat healthy foods, schools may play an even more critical role in providing affordable, healthy options to children.

Several initiatives are already underway in South Africa to help promote healthier nutrition in schools. The National School Nutrition Programme (NSNP), the Healthkick Programme, and the Heart and Stroke Foundation's Tuck Shop Programme are all examples of such efforts. The NSNP was developed in 1994 with the intention of improving the health and nutritional status of primary school children in South Africa. By doing so, they also hoped to improve the attendance and learning capacity of these children. A review of this programme in 2008 found that while the programme was perceived to have a positive impact on the learners and the local community through active community involvement, problems still existed. Compliance with the guidelines of the NSNP varied, mostly due to issues with inadequate infrastructure and capacity to implement. In other instances, key players involved with implementation were unsure of their roles and responsibilities leading to difficulties [48]. Healthkick is a programme that aims to promote healthy eating habits and physical activity in schools, as well as creating an environment that makes it possible to adopting a healthy lifestyle [49]. This programme recognizes tuck shops and street vendors near schools as a barrier to encouraging a healthy lifestyle. An example of a strategy to tackle this challenge is to seek help from the South African Heart and Stroke Foundation (HSFSA), who have created a tuck shop programme to help schools promote healthier foods. The HSFSA developed a Healthy Tuck Shop Programme with similar goals in mind: to encourage healthier eating habits. To do this tuck shops would be a source of intervention by providing more healthy choices and using more healthy ingredients [50]. Through this programme, a school can have their tuck shop accredited as healthy by the HSFSA.

The Woolworths Making the Difference (MTD) programme is a national, public-private sector initiative that has multiple components that are both theoretical and experimental. Its primary aim is to promote healthy lifestyles through nutrition and physical activity using school-based interventions. Components of the programme include additional curriculum for the learners related to healthy eating and physical activity, parent talks, school greening/gardening and educational tours of Woolworths stores. As a result, the MTD programme was designed to reduce such obstacles. Schools registered with the programme are classified as either economically advantaged or disadvantaged. The programme has shown growth since its inception in 2004. However, uptake of some of the components of the programme has been relatively low, with advantaged schools showing greater uptake, suggesting the importance of funding and infrastructure [51].

The Woolworths Making the Difference team realizes that South African learners face a variety of nutritional problems, and that schools provide an ideal location for promoting health, especially where families struggle to provide nutritious food for their children. Recognizing that one of the barriers to promoting healthy lifestyles at school is the availability of low cost, unhealthy foods either from tuck shops or outside vendors, a guide was created for schools. The Healthy Tuck Shop Guide is a recent addition to the MTD programme and was developed over a number of years by experts in nutrition. By conducting research at schools in South Africa, researching the international experience and applying their own dietary expertise the guidelines were created. The purpose of this guide is to “assist [schools] in providing children with important opportunities to make healthier eating choices every day” [37]. Healthy Tuck Shops aim to provide children with foods that promote health and performance [37].

School health interventions outside of South Africa often focus on preventing obesity; however, a review of school obesity prevention programmes in the US has not shown long term positive outcomes in terms of obesity reduction in children [52]. Other studies with a nutritional focus may be more effective. The Nutrition Detectives Program is a US based initiative that focuses on teaching students and their parents about healthy food choices and resulted in significant increases in nutrition label literacy among participants [53]. Additionally, in a review by Steyn et al. (2009), school-based nutrition interventions were examined for best practice and several of the programmes reviewed had positive outcomes on the nutritional behaviour of children. For example, the Know Your Body programme in Greece, as well as CATCH and Eat Well and Keep Moving in the US demonstrated that by incorporating health programmes into the existing school curriculum, nutrition and health knowledge improved. Teacher and parent involvement were critical in the success and sustainability of these programmes [54].

Look Good Kai is a programme that aims to promote the provision of healthy food items in school tuck shops in New Zealand secondary schools. The programme requires participating tuck shops to categorize food items according to a traffic light system: red for occasional foods, amber for sometimes foods and green for every day food items. Learners are given loyalty cards and receive stickers for healthier items purchased; when their card is full, they receive a free bottle of water and are entered into a draw to win a prize. A 60 page guide for tuck shop operators was developed as part of the programme and contained five chapters: Introduction, General Nutritional Information, Food for School, General Tuck Shop Information, and Recipes

[55]. Although a draft version of this guide was created in 2007, no information on an evaluation of the guide is available.

### **Need for Further Research**

It is known that making changes to the nutrition environment is a key component of making healthy food choices [56]. In addition, policy changes can be effective in changing consumption at school [22, 41, 57] and in some cases, meals provided at school can increase fruit and vegetable consumption [58], especially when healthy foods become more accessible and efforts are made to change children's preferences [59].

On the other hand, little is known about the effects of guides developed for school food providers. More qualitative research is needed to evaluate such health promotion materials, as the outcomes of this research are of greater use to programme planners in making adjustments compared to quantitative data [60]. Research on school tuck shops is limited, and studies mostly focus on food consumption by learners, rather than the functioning of the tuck shop and potential barriers to implementing health promotion initiatives. Little information exists on school food provision in developing countries. More research needs to be done in the primary school setting in South Africa, rather than focusing on adolescents, on whom there seems to be more information. There is also a need to communicate with tuck shop operators and school food providers, along with school administrators, as most of the research currently involves learners as participants.

Specifically, research is needed to determine the factors that either promote or hinder uptake of this aspect of the MTD programme. Since this programme was not a part of the original MTD evaluation, a separate and more detailed analysis will be carried out. The results of this research will be used to make amendments and improvements to the Woolworths Healthy Tuck Shop Guide and could be used to design a larger scale evaluation of the Guide. Furthermore, the findings of this study will be useful for others interested in promoting health in schools as well as those implementing school-based nutrition interventions.

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# Evaluating Exposure to and Perceptions of the Woolworths Healthy Tuck Shop Guide in Cape Town, South Africa

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Mini-Dissertation

Toni Marraccini

August 2011

## Abstract

**Background:** Both under-nutrition and over-nutrition pose a public health concern, especially for children in South Africa. Several initiatives exist in South Africa in order to promote healthy eating and nutrition at schools. One of them is the Woolworths Making the Difference (MTD) Programme aimed at eliminating barriers to promoting healthy lifestyles that exist at schools, such as the availability of low cost, unhealthy foods either from tuck shops or street vendors. The Healthy Tuck Shop Guide is a recent addition to the MTD programme. The aim of this evaluation is to assess schools' perceptions of the Woolworths Healthy Tuck Shop Guide as it is being utilized in Woolworths Making the Difference schools. **Methods:** A qualitative study consisting of focus groups, interviews and tuck shop observation was used to gather information on thirteen schools and their exposure, comprehension, and use of the guide. A mix of schools was examined in terms of economic status and level of control over their tuck shop. Thematic analysis was used to extract findings. **Results:** Findings show that despite overall positive attitudes about the guide, several barriers to its implementation exist including children's preferences for unhealthy foods, the higher cost of healthy foods, and other issues related to a lack of facilities, time and manpower. **Conclusion:** If barriers to implementation are addressed, the Woolworths Healthy Tuck Shop Guide, if executed within a larger support network, has the potential to assist in the creation of a healthier food environment at schools.

**Keywords:** tuck shop, nutrition, schools

## Background

Malnutrition, both globally and in South Africa, is a serious issue with multiple contributing factors; yet one of the primary and immediate causes is inadequate dietary intake [1]. Both under-nutrition and over-nutrition pose public health concern, especially for children. The National Food Consumption Survey (NFCS) was conducted in 1999 with one of its main objectives being to determine the degree of malnutrition among South African children. The survey revealed that among children aged 1-9, the prevalence of stunting was 19.3%, while the combined prevalence of obesity and overweight was 17.2% [2]. For the first time at a national level, South Africa recognized the presence of both over- and under-nutrition within the population. As a result, in 2002, the National School Nutrition Programme (NSNP), or the school feeding scheme, was developed as a part of the Integrated Food Security Strategy for South Africa, aiming to relieve short-term hunger for learners<sup>19</sup> [3]. The goal of this programme is to serve the youngest and most disadvantaged children in public schools. Consequences of malnutrition are detrimental to learners. First, being overweight or obese has been linked to inferior levels of achievement in school [4]. In a review by Taras (2005) examining the relationship between academic performance and nutrition concluded that lack of food has a severe impact on children's ability to learn, and that supplementation with multivitamins and minerals has not been effective in improving performance. Only for students with iron deficiencies that hinder learning is iron therapy effective in bettering academic outcomes [5]. Caffeine consumed in soft drinks has also been shown to have an adverse effect on learners' ability to perform at school [6]. Further, research done on diet quality and its effects on academic performance found that students with a better quality diet were less likely to fail literacy tests. Specifically, having adequate consumption and consuming a variety of foods were

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<sup>19</sup> The term 'learner' refers to a school pupil and is used by the South African Department of Education.

found to be key aspects of dietary quality that improved performance, along with increasing fruit and vegetable intake and decreasing fat intake [7]. Therefore, school-based initiatives that encourage healthy eating behaviours have the potential to improve academic performance. The World Health Organization's global school health initiative has been in existence for over 15 years. The WHO has identified healthy nutrition as a critical component of a health promoting school [8]. Based on the Ottawa Charter for Health Promotion, it is effective to encourage healthy habits outside of the immediate health sector [9]. Healthy school initiatives are part of overall health promotion, an integral component of public health, by which health is linked to other sectors and social issues. Creating a healthy environment rather than depending solely on individual behaviour change is an important part of this approach [10]. While the health promoting schools initiative does exist at the provincial level, its presence in schools is not that obvious, and there has been limited uptake of this intervention. Therefore, this research could be useful in informing activities within the Department of Health or the Department of Education in South Africa and encouraging future public-private partnerships.

Several other organisations and initiatives to improve the quality of food at schools have come into existence recently. The School Food Trust in the UK, the School Lunch Initiative in the US, and the Heart and Stroke Foundation (HSFSA) Tuck Shop Programme in South Africa are examples; however, few programmes like these exist in other developing countries. The HSFSA Tuck Shop Programme aims to reduce unhealthy eating among children at school. By signing onto the programme, school tuck shops get support from the HSFSA as to how to make their tuck shops healthier and ultimately can get their tuck shop accredited by the organization. Some of the resources used include a short list of guidelines, as well as a 'Poor, Better, Best' list of foods [11]. Unfortunately, there has been a lack of evaluative research done on the resources developed and used by programmes such as these.

School tuck shops, as well as other food vendors near schools, play a vital role in influencing choices made about foods consumed on a regular basis. There is a great need to ensure that school tuck shops are providing learners with options for eating healthy food. Students sometimes receive conflicting messages in the school setting because the food made available at school does not provide students with the opportunity to choose healthy items that they learn about during health education. Despite students having overall good knowledge of what healthy eating means, unhealthy foods are preferred. This results in fewer healthy options being offered as 'demand controls supply' in school food shops that are run as a business [12].

A study done in Cape Town, South Africa found that the majority of food eaten by adolescents is unhealthy. Almost 70% of learners purchased food at school, mainly from tuck shops. Among those learners, 70.0% purchased no healthy items and 73.2% purchased two or more unhealthy items. Learners were also asked to complete a questionnaire identifying foods as healthy or unhealthy. Despite a majority of students knowing which foods were healthy and unhealthy, they were not more likely to purchase healthy foods. The most commonly purchased unhealthy items were potato chips, sweets, soft drinks and French fries [13]. This demonstrates the need to work with tuck shops to offer fewer unhealthy options, and possibly, the need to educate children on the consequences of consuming unhealthy foods.

Recently, research conducted in rural areas of the Western Cape, South Africa discovered that while healthy items are available, the selection is usually limited. In terms of cost, healthy foods

were found to be between 10 and 60 percent more expensive than less healthy versions of the same item. Although there is great variability, generally higher prices effectively eliminate the option of consuming a healthy diet for most individuals [14]. Because it is unaffordable for many families to eat healthy foods, schools may play an even more critical role in providing affordable, healthy options to children.

Woolworths is a major South African retailer aimed at middle and upper socioeconomic groups. The Woolworths Making the Difference (MTD) programme is a national, public-private sector initiative that has multiple components that are both theoretical and experimental. As a result of this partnership between the public and private sectors, Woolworths works closely with the National Department of Education to ensure that its materials and resources are relevant to the school curriculum. The primary aim of the MTD programme is to promote healthy lifestyles through nutrition and physical activity using school-based interventions. Components of the programme have included additional curriculum for the learners related to healthy eating and physical activity, parent talks, school greening/gardening and educational tours of Woolworths stores; talks for learners on nutrition have recently become an additional component. This programme has been implemented mostly in urban areas and has yet to be expanded to rural parts of South Africa. Several barriers to promoting healthy lifestyles at school exist, for example, the availability of low cost, unhealthy foods either from tuck shops or street vendors. As a result, the MTD programme was designed to reduce these obstacles. Currently, a total of about 3,000 schools are registered in the programme, with about 230 of those schools located in the Western Cape. Although the programme has shown growth since its inception, the uptake of some of its components has been relatively low. Advantaged schools have shown greater uptake suggesting the importance of funding and infrastructure [15].

The Woolworths Making the Difference team realizes that South African learners face a variety of nutritional problems and that schools provide an ideal location for promoting health. The Healthy Tuck Shop Guide is a recent addition to the MTD programme and was developed over a number of years by experts in nutrition. By conducting research at schools in South Africa, researching the international experience and applying their own dietary expertise, the guidelines were created. The purpose of this guide is to “assist [schools] in providing children with important opportunities to make healthier eating choices every day” [16]. The term ‘tuck shop’ is used to explain the various school methods of food provision. This can include cooked lunches, traditional tuck shop foods, snacks or other foods supplied by outside vendors. Healthy Tuck Shops aim to provide children with foods that promote health and performance. The guide includes ten chapters on how to create healthy school tuck shops, ranging from how to develop a school tuck shop policy to tips on serving healthy meals, snacks and drinks [16].

The aim of this evaluation was to assess schools’ perceptions of the Woolworths Healthy Tuck Shop Guide as it is being utilized in Woolworths Making the Difference schools. Specifically, the research aimed to assess exposure, comprehension and usefulness for planning in relation to the guide. The findings of this research will help inform the Woolworths Making the Difference Programme as to the effectiveness of the guide as a tool for improving school tuck shops. It could be useful for others interested in promoting health in schools as well as those implementing school-based nutrition interventions and may potentially serve to inform a larger, more comprehensive study on the guide.

## **Methods**

Qualitative research methods were used to collect data for this study including semi-structured interviews and focus group discussions. Participant observation was also used to collect basic data on the school tuck shops, that is, items sold and management.

### *Population and sampling*

The population for this study included all Making the Difference schools registered with Woolworths in the Western Cape (230 schools). Registered schools are classified as either economically advantaged (approximately 65% of schools) or economically disadvantaged (approximately 35% of schools) [15]. Schools were purposively selected from this group by a Woolworths relationship manager, and a list of seventeen schools was compiled. These schools were selected based on their status as either advantaged or disadvantaged, as well as level of control over their tuck shops; that is, (1) schools with existing tuck shops run by schools, (2) schools that outsource to a tuck shop, and (3) schools that have no tuck shop, but may have vendors selling outside the school property (often through the school fence). A total of thirteen schools participated in the study, and the remaining four were not able to schedule appointments during the data collection period. Among the participating schools, nine are considered to be disadvantaged, while the remaining four are advantaged schools. Schools chosen had already demonstrated a good working relationship with Woolworths and it was thought that these schools would be amenable to participating in the study. The goal was to obtain a mix of schools on which to carry out the research in order to represent the range of the MTD schools.

Prior to the data collection period, each of the participating schools was first visited by the relationship manager, and upon visitation, a copy of the guide was delivered, and schools were notified that they would be contacted about the guide. A total of twenty individuals participated in the study. Participants included mothers, school administrators, teachers and individuals outsourced by the school. These roles sometimes overlapped; for example, teachers were also parents of children still in school.

### *Data collection*

Data collection took place from April to June 2011. Calls were made by the primary investigator and appointments were scheduled with thirteen schools for a response rate of 76.5%. Semi-structured interviews and one focus group discussion took place to gather information about the school's tuck shop, as well as perceptions of the guide. Conversations were audio recorded and transcribed by the primary investigator. All but one of the participants consented to having the conversation recorded. In this case extensive notes were taken and written up immediately after the interview. All transcriptions were done within 48 hours of the actual interview/focus group. All interviews/focus groups took place at the schools, except in one case where it was more convenient for the interview to take place in the participant's home. In addition, observations were made at all but one of the tuck shops, and digital pictures were taken of the tuck shops at all but two of the schools. Notes were made regarding items sold at the tuck shop, the actual tuck shop facility and sanitation/hygiene and food handling. An attempt was also made to assess the overall interest or buy-in of the school in the guide.

Twelve individual interviews, one paired interview, and one focus group discussion were conducted. At one school, two separate individual interviews were carried out. The interview or focus group arrangement was determined by school administrators. Interviews ranged from two minutes to just over twenty minutes in length with the majority of discussions lasting longer than ten minutes.

### *Data analysis*

After conducting and transcribing the interviews/focus groups, content analysis was used to uncover themes relating to the objectives of the study [17]. The semi-structured interviews and focus group discussion transcriptions were analyzed for common themes and compared to determine how experiences with the guide were different or similar and based on what circumstances. Comparisons were drawn on the basis of their economic status (advantaged versus disadvantaged), as well as on the basis of their level of control over the tuck shop (school owned and operated versus outsourced tuck shop or outside vendor). In addition, information collected on the tuck shops, in terms of control over the shop and other relevant aspects of operation, was analyzed for frequency and distribution.

Ethical approval for this study was obtained from the University of Cape Town's Human Research Ethics Committee within the Faculty of Health Sciences (REC REF: 046/2011). Written consent was obtained from all respondents prior to commencement of the discussions, and refreshments were provided for their participation.

## **Results**

### *The tuck shop*

In terms of the level of control over the tuck shops, five schools had existing tuck shops that were run by the school, seven schools outsourced their tuck shop and one school did not have a tuck shop, but did have outside vendors coming to sell to the learners. All but three of the schools in the study had a permanent tuck shop facility. Individuals operating tuck shops were mostly female (all but one), and were either parents, teachers, or employed by the school. This categorization was unrelated to the school's level of control over the tuck shop and sometimes overlapped; for example, a teacher who operated the tuck shop was also a parent and was able to offer a dual perspective. Additionally, no clear relationship between who managed the tuck shop and how the tuck shop was managed emerged. For example, a tuck shop operator outsourced by the school either made their own decisions about what was sold, or was asked to first consult the school administration or school governing body prior to making changes in the tuck shop. The level of consultation with others when making decisions around changes to the tuck shop seemed to depend on the school and its administrators, rather than who operated the tuck shop. This could be important knowledge to obtain prior to starting a more structured implementation of the guide. Also, there were no clear distinctions that emerged when comparing advantaged versus disadvantaged schools on how tuck shops were operated. It seemed that all schools, including the school without a tuck shop, were doing what they believed works best.

All tuck shops were observed selling items classified as sweets and chips (crisps), and all but one of the tuck shop facilities sold chocolates. These items also happened to be the most popular items sold; generally, cheaper items were cited as being more popular. Other popular items reported included popcorn, pretzels, and cooked/hot meals at the schools where they are

available. Beverages including waters, flavoured waters and cool drinks were also cited as being purchased by learners often. Ice suckers were sold by most schools during warmer weather. All schools that offered a cooked meal or fresh food item cited these as popular among learners. Few of the schools offered healthy options in terms of snack items for the learners on a regular basis; fruit was not available at any of the schools on a regular basis, except for those with feeding schemes, where a majority of it reportedly went to waste. Items sold by schools that subscribed to the HSFSa Tuck Shop programme seemed to sell healthy hot meals, but still offered a majority of the same snack items, such as chips (crisps) and chocolates. Donuts, pies, hamburgers and hot dogs were also sold by a majority of schools; however, regulations were sometimes placed on these items. Limitations on purchasing were cited by a few of the schools; for example, pies were only available on certain days of the week, young children were only allowed to come to the tuck shop at particular times, fizzy cool drinks weren't sold during the day, and price ceilings were placed on the purchasing of sweets. These rules served to regulate the consumption of unhealthy items by learners.

Four of the schools visited reported having specific days or times during the week or term devoted to healthy eating. For example, one school devoted Mondays and Wednesdays to healthy days at the tuck shop and on these days did not sell any unhealthy foods. Children were slowly learning to accept this and eat well on these days, although the tuck shop did not earn as much on health days. One respondent said,

*“Then it’s not about the profit, it’s about the healthy living at the end of the day, so we don’t look at it as a profitable two days”.*

Other schools mentioned having one week during the term devoted to raising awareness about healthy eating or to promote fruit consumption. Lastly, “brain food time” was a daily occurrence at one school. Children were asked to bring a healthy snack from home and had a short morning break during which they ate their healthy food. This did require some level of reliance on parents.

Overall, there did not seem to be a clear connection between the economic status of the school and number of healthy items sold. The variety of items sold had more to do with the presence or availability of a permanent tuck shop facility; those with a temporary tuck shop facility offered the fewest items to learners and only sold non-perishable foods. Larger tuck shops appeared to offer more variety, but this did not strictly link to the school’s status as advantaged or disadvantaged, rather it depended on the purpose of the tuck shop at the school.

The different beliefs about the purpose of a tuck shop often influenced what was sold, as well as respondents’ opinions on the guide. School tuck shops that were outsourced were often profit driven. These tuck shops, which were run as businesses and served as a source of income for their operators, often sold only luxury items. Many schools that ran their own tuck shops were also profit driven and stated that purpose of the tuck shop was to raise funds for the school. Others saw the tuck shop as a treat for the learners. All of these beliefs resulted in mostly unhealthy foods being sold, and further, created a barrier to the implementation of the guide.

Ten out of the thirteen schools visited reported that their school tuck shops were ‘very well’ or ‘well’ supported by the learners. In one case, the school feeding scheme interfered with learners supporting the tuck shop. Only three of the schools included in the study had a feeding scheme in operation; those that did were all disadvantaged schools. In two of the schools operating a feeding scheme the tuck shop was a totally separate entity, and both were reportedly well supported. In the school where the feeding scheme and tuck shop were run from the same facility and by the same person, the tuck shop was not well supported. Half of the tuck shops at schools without feeding schemes primarily served snack foods for the learners (one of which was an advantaged school); the other half served snack items, but also offered meals either via a pre-order system or had a daily meal option that was the same every week (three of which were advantaged schools).

Six schools benefitted from the profits made from sales at the tuck shop, six schools were paid a rental fee by the tuck shop operator and one school did not feel comfortable disclosing that information. This was often directly related to who managed the tuck shop; that is, those who outsourced their school’s tuck shop were more likely to charge a rental fee rather than benefit from the profits earned. Profits were generally used for replenishing stock in the tuck shop, as well as purchasing other school materials (i.e. maintenance and basic supplies).

Only two schools reported having a formal tuck shop policy, one advantaged school and one disadvantaged school. In one case, the policy set out to describe the roles and responsibilities of the people in charge of operating the tuck shop. The policy was enforced by the principal and was described as effective and helpful “with the smooth running of the tuck shop”. Another school’s tuck shop policy outlined standards for the purchasing and preparing of food items and was enforced by the tuck shop operator. At both schools, non-compliance with the policy was not an issue. A few other schools mentioned the school administration wanting to go healthy or having to sell all Halaal foods, but no formal policy existed.

### *The guide*

Two of the tuck shop operators had not seen the guide, despite having a Woolworths relationship manager drop off copies at schools that were to participate in the study. At one of these schools, the guide was most likely misplaced, while at the other school, the decision not to pass the guide on to the tuck shop operator was intentional and the deputy principal took responsibility for consulting the guide. The remaining participants first accessed the guide when it was dropped off at the school; none of the participants knew the guide was available to be downloaded online. Four of the thirteen schools had not read the guide at the time of the interview/focus group. Reasons for not reading the guide varied, but included not having the guide, lack of time, no school tuck shop and not planning on starting one (had vendors instead), and already being involved with the HSFSa tuck shop programme (two schools, one advantaged and one disadvantaged, consult the HSFSa before making changes in their tuck shop). At least one representative of the remaining schools had read the guide or paged through it. Almost all of the respondents who had read the guide stated that they mentioned it to someone else, such as a school administrator, other teachers or other individuals who helped in the tuck shop.

Only eight schools read the guide adequately enough to answer questions on its content. Most respondents did not find the guide suitable for their school for several reasons, such as it is

unaffordable to implement the suggestions made, children prefer unhealthy foods, or they were already operating under a healthy tuck shop policy (i.e. from the HSFSA). A tuck shop operator outsourced by a disadvantaged school explained:

*“I find those healthy things expensive, and also I think it’s a cultural thing in a way. They don’t eat those things at home, a lot of them, I don’t think. I’ve had bowls of fruit in the tuck shop, and they don’t buy it. I’ve had healthy rolls and muffins. They just don’t sell. They don’t buy them, not even the teachers”.*

All participants who consulted the guide found it easy to read and understand; further, many commented on its nice layout. In terms of what participants found to be most useful about the guide, the specific suggestions (e.g. yoghurt and milkshake drinks, menu ideas) and the factual information contained in the guide were cited as helpful. Others could not pinpoint helpful parts of the guide, but believed it was insightful and made them “more aware of making the children more aware of healthy eating habits”.

Participants were also asked what would help them to implement positive changes in their tuck shop, or what would help them implement the suggestions made in the guide, depending on the extent to which they had consulted the guide. As a result, the responses to this question varied, and a distinction between advantaged and disadvantaged schools was clear. Many of the advantaged schools expressed that they had the ability to make changes and didn’t really need structural help. They also provided examples of what they might change, such as switching away from chocolates or pre-packaged foods. Disadvantaged schools, on the other hand, were more likely to suggest having someone to talk to the children or someone to work with the tuck shop operator. Mostly they took this time to express that they had tried selling healthy things and were unsuccessful, that “nothing really would help”. One tuck shop operator stated with dismay:

*“Yes, somebody can come to speak to [the children]. Maybe they will listen. Somebody needs to come and talk to them about healthy food and stuff...I don’t know what to do anymore with the tuck shop”.*

When asked about key challenges, children’s preference for unhealthy foods was mentioned by almost all of the respondents. Many expressed that they have tried to sell healthy food in the tuck shop, but have done so without success. One parent volunteer expressed her concern:

*“[We] had a whole health section. The children are not into it. We’ve tried. We lost out, actually... It’s pointless having a tuck shop and having all this healthy food and throwing it away at the end of every single day because that’s exactly what happens”.*

Other challenges cited were lack of time and manpower, issues with the tuck shop facility (e.g. space is too small or lack of a kitchen facility), or the presence of other shops/food vendors in the area. Only two respondents said there were no major challenges; both were from advantaged schools. One school administrator reflected on possible challenges for their outsourced tuck shop:

*“I think it’s the manpower...I suppose she just wants to keep her costs minimal, so [she’s] the manpower we have”.*

At another school, a tuck shop operator explained the relationship between time and manpower:

*“We can’t have a lot of foody things because we don’t have the time. So as much as you want to ...you’ve got limited time, you see, especially when it comes to the small ones. They take too long maybe to say what they want so the result is that it’s time consuming....You see it’s, well it really just boils to if you’ve got more manpower”.*

Of the schools that read the guide, most thought that nothing was missing and that it was quite comprehensive. Two advantaged schools mentioned that specific shopping lists might be helpful, and one suggested having a “we sell” section with pictures of suggested snack items that could be purchased from Woolworths. A few participants commented on the length of the guide, stating that it was quite long and “contained a bit too much information”. Others felt that the information provided in the guide was “nothing new”, “not something that I didn’t know” or seemed like “common sense”. Interestingly, this translated into a mismatch between knowledge of what was healthy and what was actually sold in the tuck shop. The main reason for this discrepancy was that healthy foods don’t sell. On the other hand, those who stated that the guide contained information they already knew still found it to be insightful.

*“It gave me insight, and...like I said, you know, it’s not something that I didn’t know”.*

In terms of the best way to disseminate the guide, dropping it off at schools or directly with the tuck shop operator was suggested by all of the participants, except one who did not know. Two schools suggested having a meeting with the tuck shop conveners to distribute the guide. Participants were also asked about how to encourage actual use of the guide. Responses varied and no clear patterns based on the school’s status or tuck shop management emerged. A few respondents mentioned that it depended on the school, the administration, and the person running the tuck shop, saying that every school was different. Others suggested holding some kind of competition or workshops around the implementation of the guide and having talks or assemblies for parents and children to encourage healthy eating. One participant stressed the importance of the school having a buy-in to the programme in order for it to succeed.

#### *Other key themes*

Barriers to implementing the guide were discussed by eleven of the thirteen schools in this study. The two schools who did not discuss barriers were both advantaged schools. The most common barrier to implementation was children’s preference for unhealthy foods. Many tuck shop operators stated that they had tried going the healthy route, and health foods don’t sell. This is related to the higher cost of healthy foods, which was also mentioned as an obstacle. Because healthy foods are expensive, they are not profitable, since most children cannot afford them after the prices have been marked up for sale in the tuck shop.

Lack of proper facilities, lack of time and lack of manpower were also mentioned as barriers. Some schools did not have a permanent tuck shop facility and other facilities were small and lacked fully functioning kitchens. Tuck shops that were operated by the school and employed parents or teachers, expressed difficulties with the short interval periods and providing fresh, healthy foods. One respondent perceived a lack of support from Woolworths and felt that a more concrete programme needs to be developed around the implementation of the guide. Cultural barriers were mentioned by a couple of the participants. Children were used to eating certain types of foods such as pies and samoosas (a fried, triangular pastry with a savoury filling) at home and often looked for these items at the tuck shop.

Barriers to healthy eating were discussed in relation to challenges in implementing the guide. Similar obstacles such as costs and children's preferences were raised; in addition, the role of parents in children's eating habits became apparent. Parents were cited as being lazy when it came to packing healthy lunches for their children. Lack of time and the convenience of take-away food were other reasons that children don't consume healthy foods. Lastly, some participants maintained that parents cannot afford to provide healthy foods for their children.

Given the crucial role of parents in providing food for their children, tuck shop operators often shifted blame away from the school and the tuck shop and onto the parents, stressing that a "healthy plan must be inculcated at home" and that "the tuck shop lady and the school cannot make a difference". Another respondent stated,

*"It's the mothers that have to do it from home. It's their responsibility, not my responsibility".*

Participants felt that parents need to exercise more control over the foods their children purchase because if they don't buy unhealthy things from the tuck shop, children will get it somewhere else. One said,

*"I strongly believe that starts in the home, not at the tuck shop because the moment you give your child money, that child is going to run to a shop".*

As a result, it was suggested by several participants that a parent version of the guide may be more useful. Using school newsletters and parent meetings to inform parents about how to provide healthy meals and snacks for their children was proposed. Schools and parents need to become partners in providing healthy environments for children to learn. While this may not be feasible for parents at all schools, participant suggestions highlight the need to target interventions for different schools. Others suggested organizing meetings or workshops for tuck shop operators, expressing interest in learning about what other tuck shop operators in the area were doing given similar challenges or constraints.

## **Discussion**

Overall, these discussions have illuminated some of the key challenges to wide-spread implementation of the Woolworths Healthy Tuck Shop Guide, as well as informed planners of users' general perceptions of the guide. While most of the participants had a positive perception

of the guide, children's preferences for unhealthy snacks and the cost of healthy food were two major barriers to healthy eating and the implementation of the guide. Given these challenges, many participants did not find the guide to be a useful tool for their school, irrespective of the school's economic status. Therefore, it is important to note that implementation of new resources is not guaranteed regardless of appeal or informational value. This is also necessary to keep in mind when creating policy.

A variety of tuck shop setups were examined and the reliance on most tuck shop operators for profits hindered the sale of healthy foods. Many participants felt that parents were solely responsible for encouraging their children to consume healthy foods, and that the tuck shop would not be able to influence learners' eating behaviours. Some respondents believed that parents need to have greater control over what their children eat and set an appropriate example for children at home.

Several challenges for the future exist in changing the mindsets of children, parents and schools in their respective roles for healthy food consumption; however, these challenges are not unique to South Africa. An evaluation of Action Schools! BC, a school-based healthy eating and physical activity initiative in Canada, revealed that engagement with the parents of learners is key in reinforcing healthy messages delivered at school. A *Family Healthy Hamper* was created consisting of recipes, nutrition information and activities for parents and their children to use at home. Parents found the hamper to be useful, and teachers believed it to be effective in connecting families to the programme [18]. In the past, Woolworths incorporated parent talks given by dieticians as one of the components of the MTD programme in order to advise parents on nutritional issues and to provide suggestions for healthy meals; therefore, the timing and linking of these two interventions is important.

Lastly, schools need to recognize their crucial role in creating a healthy environment for children, which includes systems of food provision [19, 20]. It was encouraging to learn that cooked meals are popular because it is usually easy to serve a healthier version of such items compared to popular snack foods. It is also encouraging that popcorn is well liked among learners, as it is a far healthier alternative to chips that schools may be able to sell at a similar price. Planet Health, a programme in the US with a focus on promoting child health at schools, found that financial constraints made developing a low-cost intervention strategy essential for success of the programme [21]. Therefore, finding affordable and healthy foods that are enjoyed by learners is essential in making school tuck shops healthier.

A separate challenge exists in getting school tuck shop operators to access and consult the guide given that more than one third of the schools had not looked at it knowing they were participating in research. It is also important to note that the most common suggestion for the distribution of the guide was to have it dropped off at schools, yet this is what happened and still a few tuck shop operators had not read or even seen the guide. A Woolworths relationship manager to work closely with schools that are interested in implementing changes to their tuck shop may be necessary.

### *Recommendations*

While it is necessary for schools to be informed that they can make a difference in changing the dietary intake of learners, this knowledge is not sufficient to bring about action. School administrators must buy in to the Healthy Tuck Shop Guide in order for it to be effectively implemented, and dieticians need to work with tuck shop operators at these schools in order to find healthy alternatives to what is already sold. New items must be comparable to children's favourites in terms of taste and cost. Because the guide was effective in raising awareness about healthy eating, dieticians may also be useful in changing children's preferences toward healthier foods through workshops and assemblies, which is seen as the main barrier to implementing healthier foods.

Additionally, because it is unaffordable for many families to purchase healthy foods, schools may play an even more critical role in providing affordable, healthy options to children. Research done in the UK has shown that fruit tuck shops implemented in conjunction with 'fruit only' policies have had a positive impact on fruit consumption for learners [22]. Other research shows that increasing availability and access to healthy foods can also impact consumption when efforts are made to change children's preferences [23]. School tuck shop operators and school administrators must serve as champions of change, and wellness policies around foods consumed at school need to be written as suggested in the guide. Parents also need to be involved and support this change.

Future research on the guide may involve a more longitudinal study comparing consumption patterns and health and performance outcomes in learners at schools who implement the suggestions made in the guide. Another study could be done with schools that have more actively engaged with the guide and implemented it in a more rigorous way, for example, with assistance from a dietician and Woolworths relationship manager. Although changes are being made to the national curriculum on Life Skills to ensure the inclusion of modules on healthy eating, the relationship between the school curriculum and tuck shop interventions was beyond the scope of this research. However, this does warrant another area for further study and a potential area for intervention. Woolworths is currently working on ensuring that curriculum materials are in line with Department of Education modules.

There is also a need to continue promoting partnerships between the public and the private sectors, as this cooperation has been demonstrated to be successful in improving global health equity [24] and in pooling resources to address challenging health issues [25]. The public sector in South Africa lacks the capacity to support national scale initiatives that require the provision of individual attention, especially within the school setting. As a result, the private sector has been recognized as playing an important role. The Woolworths MTD programme, and more specifically the Healthy Tuck Shop Guide, does not exist for private benefit. Clearly, the public sector can learn from the evaluation of this type of initiative.

### *Limitations*

Although the sample size in this study was acceptable for a qualitative study, the interviews were short since some of the participants had not consulted the guide at the time of the interview/focus group. Conducting longer interviews or more interviews is one challenge in carrying out community based research, especially in a primary school setting because of a lack of time on

the part of respondents, as well as a lack of communication between the person scheduling the interview and the participant. Generally, questions were designed to gain an overall understanding of the perceptions of the guide, rather than obtaining in-depth information from all of the participating schools. Making initial contact with the schools was also a challenge, and there were instances where appointments had been made via receptionists and not passed on to tuck shop operators or administrators who would be participants.

Another limitation was that there were nine disadvantaged schools and only four advantaged schools that participated in the study, which does not align with the proportion of schools registered with the MTD program. This is because the original sample of 17 schools also contained a greater proportion of disadvantaged schools. These schools were generally easier to make appointments with, and given the time frame, were more likely to be included in the research.

### **Conclusion**

This study illuminates several challenges that schools face in encouraging healthy eating and creating a healthy school environment. These findings are relevant to school health initiatives in a variety of settings; for example, both disadvantaged and more affluent communities. The need for school health promotion is not unique to South Africa, and school food services in other countries are known to face similar challenges and barriers to healthy eating.

Further, findings from this study are useful in raising awareness about the key obstacles to implementing healthy food initiatives, which need to be kept in mind during any attempts to promote consumption of healthier foods at school. Lessons learned during this research also highlight the difficulties of working with school administrators and food service providers who are currently operating under a system that works best for them. A programme with a solid support network and both material and human resources is needed in order for seasoned food providers and school administrators to buy-in to the idea of serving healthy food at school. Individual attention needs to be given to each school in order to adapt the guide to different settings in terms of time, manpower and facilities.

In light of this, learners need to be given the opportunity to exercise knowledge about eating well while at school. The Woolworths Healthy Tuck Shop Guide, if implemented within a larger support network, has the potential to create a healthier food environment at schools.

### **List of Abbreviations**

NSNP	National School Nutrition Programme
NFCS	National Food Consumption Survey
HSFSA	Heart and Stoke Foundation South Africa
MTD	Making the Difference
WHO	World Health Organization

### **Competing Interests**

The author declares that she has no competing interests.

## Author's Contributions

This article was written as part of a Master's mini-dissertation under the supervision of Catherine Draper, Shelly Meltzer and Lesley Bourne.

## Author's Information

TM is a candidate for her Master's in Public Health at the University of Cape Town.

## Acknowledgements

I would like to thank Catherine Draper, Shelly Meltzer and Lesley Bourne for their part in supervising this research. I would also like to acknowledge Shelly Meltzer and Catherine Draper for their role conceptualizing the present evaluation of the Healthy Tuck Shop Guide. Lastly, I want to thank Sadia Ansary for assisting with the selection of the schools for this study, and the tuck shop operators and schools for their participation in this research.

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Part D: Appendices

**Appendix A: Interview/ Focus Group Discussion Questions**

The purpose of the following questions is to gain a general understanding of how tuck shops function at this school, how you see the Woolworth's Healthy Tuck Shop Guide fitting in, and to identify areas where there is an opportunity to intervene.

Questions related to the tuck shop:

1. Who currently manages the school's tuck shop? (teachers, learners, parents, members of the school governing body, community members, outsourced)
2. How is the tuck shop managed? (i.e. if you want to change things who are the people you go to/have to get on your side to make changes)
3. How well is the tuck shop supported?
4. What are the most popular items sold at the tuck shop?
5. Does the school benefit from the profits made from sales at the tuck shop?
  - a. If yes, how are these funds used?
6. Does the school have a tuck shop policy?
  - a. If yes, what is it? How was it developed?
  - b. What does this policy mean to the school?
  - c. Is the policy effective?
  - d. Who enforces the policy/how is it enforced? What are consequences of non-compliance?
7. Does the school have a feeding scheme?
  - a. If yes, how does the tuck shop fit in?
  - b. If no, how does the tuck shop fit in?

Questions related to the guide:

1. How did you first access the guide?
2. To what extent have you consulted the guide?
3. What, if anything, have you communicated to others about the guide?
4. Do you find this guide suitable for your school?
5. What do you think of the language and the tone of the guide?
6. What do you feel is most helpful about the guide?

7. What will help you bring about positive changes in your tuck shop? What do you need to help you implement the suggestions made in the guide?
8. What are some challenges to implementing the changes suggested in the guide?
9. What, if anything, do you feel is missing from the guide? e.g. more specific shopping lists
10. What's the best way to disseminate the guide? How can we ensure that all schools have access to it?
11. How can we encourage schools to use the guide? What else do you need to put the guide into practice? (i.e. help from a WW relationship manager)

\*Other things to note/observe:

- Type of foods sold at the tuck shop
- Sanitation/hygiene, food handling, safety
- Infrastructure/ facilities
- Interest/buy-in of the school administration in the guide

Tuck Shop Observation:

Observe what is sold by the tuck shop and/or vendors

- Chocolates
- Sweets
- Chips (crisps)
- Fizzy cool drinks or other cool drinks
- Sports drinks (i.e. Energade™)
- 100% Fruit juice
- Fruits or salads
- Cooked meals
- Chicken braai
- White bread sandwiches
- Brown bread sandwiches
- Hamburgers/ hot dogs
- Vetkoek
- Koeksisters / doughnuts
- Slap chips / tjip roll
- Sausage rolls / pies
- Ice suckers - bunny licks/JCs / ice cream

**Appendix B: Participant consent form.**

**Evaluating Exposure to and Perceptions of the Woolworths Healthy Tuck Shop Guide in Cape Town, South Africa**

Participant Consent Form

The aim of this study is to evaluate the exposure to and perceptions of the Woolworths Healthy Tuck Shop Guide. We hope to find out how the guide has been accessed, understood and used for planning. The purpose of this interview/focus group is to evaluate school perceptions of the guide, as well as tuck shop policy.

There are no right or wrong answers to the questions you will be asked in this interview/focus group. It is important for you to answer these questions as honestly as possible so that your views can be most accurately represented. Although you were contacted through the Woolworths Making the Difference Programme, and your identity is known to the interviewer/focus group facilitator, your anonymity will be protected. Your name will not be used in the research report, and no connection will be made between your name and your responses in this interview/focus group. With your permission, this interview/focus group discussion will be recorded via audio. Only the research team will have access to this audio recording.

Your participation in this study is voluntary, and is greatly appreciated. Your involvement in this study will ultimately benefit future participants of the Woolworths MySchool Programme and users of the Healthy Tuck Shop Guide by providing this organization with insight into the success of their programmes. If you agree to participate in this interview / focus group, please sign in the space given below.

If you have any queries, please contact Toni Marraccini at [tmarraccini@gmail.com](mailto:tmarraccini@gmail.com)

---

Signature

---

Date

Appendix C: Letter of approval from Research Ethics Committee.



Faculty of Health Sciences  
Human Research Ethics Committee  
Room U52-24 Groote Schuur Hospital Old Main Building  
Observatory 7925  
Telephone [021] 406 6526 • Facsimile [021] 406 6411  
e-mail: shurecm.thomas@uct.ac.za

02 March 2011

HREC REF: 046/2011

Dr C Deaper  
Human Biology  
Sport Science Institute

Dear Dr Deaper

**PROJECT TITLE: EVALUATING EXPOSURE TO AND PERCEPTIONS OF THE WOOLWORTHS HEALTHY TUCK SHOP GUIDE IN CAPE TOWN, SOUTH AFRICA.**

Thank you for responding to the issues raised by the Faculty of Health Sciences Human Research Ethics Committee

It is a pleasure to inform you that the Ethics Committee has formally approved the above-mentioned study.

Approval is granted for one year till the 15 March 2012.

Please submit an annual progress report (FHS016) if the research continues beyond the expiry date. Please submit a brief summary of findings if you complete the study within the approval period so that we can close our file.

Please note that the ongoing ethical conduct of the study remains the responsibility of the principal investigator.

**Please quote the HREC REF in all your correspondence**

Yours sincerely

**PROFESSOR M BLOCKMAN**  
**CHAIRPERSON, FHS HUMAN ETHICS**  
Federal Wide Assurance Number: FWA00001637.  
Institutional Review Board (IRB) number: IRB00001938

S Thomas

This serves to confirm that the University of Cape Town Research Ethics Committee complies to the Ethics Standards for Clinical Research with a new drug in patients, based on the Medical Research Council (MRC-SA), Food and Drug Administration (FDA-USA), International Convention on Harmonisation of Good Clinical Practice (ICH-GCP) and Declaration of Helsinki guidelines.

The Research Ethics Committee granting this approval is in compliance with the ICH Harmonised Tripartite Guidelines for Note for Guidance on Good Clinical Practice (CFMP/ICH/135/95) and FDA Code of Federal Regulation Part 312.56 and 312.62.

### **Preparing main manuscript text**

General guidelines of the journal's style and language are given below.

### **Overview of manuscript sections for Research**

Manuscripts for Research articles submitted to *IJBNPA* should be divided into the following sections (in this order):

#### **Title page**

The title page should:

- provide the title of the article
- list the full names, institutional addresses and email addresses for all authors
- indicate the corresponding author

Please note:

- the title should include the study design, for example "A versus B in the treatment of C: a randomized controlled trial X is a risk factor for Y: a case control study"
- abbreviations within the title should be avoided

#### **Abstract**

The Abstract of the manuscript should not exceed 350 words and must be structured into separate sections: **Background**, the context and purpose of the study; **Methods**, how the study was performed and statistical tests used; **Results**, the main findings; **Conclusions**, brief summary and potential implications. Please minimize the use of abbreviations and do not cite references in the abstract. **Trial registration**, if your Research articles reports the results of a controlled health care intervention, please list your trial registry, along with the unique identifying number (e.g. **Trial registration**: Current Controlled Trials ISRCTN73824458). Please note that there should be no space between the letters and numbers of your trial registration number. We recommend manuscripts that report randomized controlled trials follow the CONSORT extension for abstracts.

#### **Keywords**

Three to ten keywords representing the main content of the article should be given.

#### **Background**

The Background section should be written in a way that is accessible to researchers without specialist knowledge in that area and must clearly state - and, if helpful, illustrate - the background to the research and its aims. Reports of clinical research should, where appropriate, include a summary of a search of the literature to indicate why this study was necessary and what it aimed to contribute to the field. The section should end with a brief statement of what is being reported in the article.

#### **Methods**

The methods section should include the design of the study, the setting, the type of participants or materials involved, a clear description of all interventions and comparisons, and the type of analysis used, including a power calculation if appropriate. Generic drug names should generally be used. When proprietary brands are used in research, include the brand names in parentheses in the Methods section.

For studies involving human participants a statement detailing ethical approval and consent should be included in the methods section. For further details of the journal's editorial policies and ethical guidelines see 'About this journal'.

For further details of the journal's data-release policy, see the policy section in 'About this journal'.

### **Results and discussion**

The Results and discussion may be combined into a single section or presented separately. Results of statistical analysis should include, where appropriate, relative and absolute risks or risk reductions, and confidence intervals. The Results and discussion sections may also be broken into subsections with short, informative headings.

### **Conclusions**

This should state clearly the main conclusions of the research and give a clear explanation of their importance and relevance. Summary illustrations may be included.

### **List of abbreviations**

If abbreviations are used in the text they should be defined in the text at first use, and a list of abbreviations can be provided, which should precede the competing interests and authors' contributions.

### **Competing interests**

A competing interest exists when your interpretation of data or presentation of information may be influenced by your personal or financial relationship with other people or organizations. Authors must disclose any financial competing interests; they should also reveal any non-financial competing interests that may cause them embarrassment were they to become public after the publication of the manuscript.

Authors are required to complete a declaration of competing interests. All competing interests that are declared will be listed at the end of published articles. Where an author gives no competing interests, the listing will read 'The author(s) declare that they have no competing interests'.

When completing your declaration, please consider the following questions:

#### *Financial competing interests*

- In the past five years have you received reimbursements, fees, funding, or salary from an organization that may in any way gain or lose financially from the publication of this manuscript, either now or in the future? Is such an organization financing this manuscript (including the article-processing charge)? If so, please specify.
- Do you hold any stocks or shares in an organization that may in any way gain or lose financially from the publication of this manuscript, either now or in the future? If so, please specify.
- Do you hold or are you currently applying for any patents relating to the content of the manuscript? Have you received reimbursements, fees, funding, or salary from an organization that holds or has applied for patents relating to the content of the manuscript? If so, please specify.
- Do you have any other financial competing interests? If so, please specify.

#### *Non-financial competing interests*

Are there any non-financial competing interests (political, personal, religious, ideological, academic, intellectual, commercial or any other) to declare in relation to this manuscript? If so, please specify.

If you are unsure as to whether you, or one your co-authors, has a competing interest please discuss it with the editorial office.

### **Authors' contributions**

In order to give appropriate credit to each author of a paper, the individual contributions of authors to the manuscript should be specified in this section.

An 'author' is generally considered to be someone who has made substantive intellectual contributions to a published study. To qualify as an author one should 1) have made substantial contributions to conception and design, or acquisition of data, or analysis and interpretation of data; 2) have been involved in drafting the manuscript or revising it critically for important intellectual content; and 3) have given final approval of the version to be published. Each author should have participated sufficiently in the work to take public responsibility for appropriate portions of the content. Acquisition of funding, collection of data, or general supervision of the research group, alone, does not justify authorship.

We suggest the following kind of format (please use initials to refer to each author's contribution): AB carried out the molecular genetic studies, participated in the sequence alignment and drafted the manuscript. JY carried out the immunoassays. MT participated in the sequence alignment. ES participated in the design of the study and performed the statistical analysis. FG conceived of the study, and participated in its design and coordination and helped to draft the manuscript. All authors read and approved the final manuscript.

All contributors who do not meet the criteria for authorship should be listed in an acknowledgements section. Examples of those who might be acknowledged include a person who provided purely technical help, writing assistance, or a department chair who provided only general support.

### **Authors' information**

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### **Acknowledgements**

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- Animations
  - SWF (Shockwave Flash)
- Movies
  - MOV (QuickTime)
  - MPG (MPEG)
- Tabular data
  - XLS (Excel Spreadsheet)
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3. Ensure that all links are relative (ie "images/picture.jpg" rather than "/images/picture.jpg" or "http://yourdomain.net/images/picture.jpg" or "C:\Documents and Settings\username\My Documents\mini-website\images\picture.jpg") and no link is longer than 255 characters.
4. Access the index.html file and browse around the mini-website, to ensure that the most commonly used browsers (Internet Explorer and Firefox) are able to view all parts of the mini-website without problems, it is ideal to check this on a different machine.
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Appendix E: Woolworths Healthy Tuck Shop Guide

**WOOLWORTHS**

**EDUCATION PROGRAMME**

HEALTHY  
TUCK  
SHOP  
GUIDE



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# INTRO

**DEAR PRINCIPAL, EDUCATORS, PARENTS,  
SCHOOL TUCK SHOP STAFF AND OTHER  
STAKEHOLDERS IN THE SCHOOL COMMUNITY,**

In presenting this Healthy Tuck Shop Guide, the Woolworths Making The Difference team is delighted to take our participation in South African schools' nutrition and promotion of healthy lifestyles to a new level.

We hope that this user-friendly guide will assist your school in providing children with important opportunities to make healthier eating choices every day. The school environment provides a vital context not only for children to learn about healthy eating and healthy lifestyles, but also for them to put knowledge into practice.

South African school children face nutritional challenges that range from malnutrition to obesity. Schools can help to make the difference by ensuring that food provided on the school grounds meets the standards of good nutrition for children. This is especially important in communities where parents struggle to provide good food for their children.

The need to ensure that school tuck shops and vendors provide nutritious food for children is a world-wide concern. In more and more countries, states and communities, what food can or can't be sold to children is even becoming part of legislation.

Many South African schools are well-aware of the need for healthier eating at school and we can all expect the demand for healthy tuck shops to keep growing.

We use the term 'tuck shop' here to describe the different school systems of food provision. Whether your school provides cooked lunches, traditional tuck shop foods, just snacks or is reliant on vendors, this guide is designed to help you to ensure your school is a healthy food provider.

As with any transformation, it may help to phase in changes over time. What is crucial is that you communicate effectively with your school community so there is clear understanding and widespread support.

The Woolworths Making The Difference Healthy Tuck Shop Guide is brought to you by Woolworths and the Sports Science Institute of South Africa (SSISA) in association with dietitians Shelly Meltzer & Associates. It is based on the latest expertise on healthy eating. This guide complements the nine educator modules we have produced for schools on healthy eating, physical exercise and sustainability. As part of its good business journey, Woolworths is committed to sharing its expertise with South African schools in order to enhance the educational experience of our children.

Best Regards

Penny Luthi

Manager: Woolworths Making The Difference  
Education Programme



# THANKS

The development of this guide has taken place over a number of years involving teams of nutrition experts who have conducted research at South African schools, explored the international scenario and applied their dietary expertise.

## **THIS GUIDE INCLUDES THE WORK OF:**

Shelly Meltzer, JennyAnn Smuts and Lauren Tanchel of Shelly Meltzer & Associates

Mariza Van Zyl – Woolworths Consultant Dietician

Karin Carstensen – Woolworths Technical Manager: Policies & Legal



WHY IS  
A HEALTHY  
TUCK SHOP  
IMPOR-  
TANT  
?

# ONE

## WHY IS A HEALTHY TUCK SHOP IMPORTANT?

Often the introduction of change, even if it is change for the greater good, creates resistance in some people. It is important to motivate the transformation to a healthy tuck shop well amongst all your stakeholders. The school community needs to understand why the change needs to happen, have any concerns addressed and be inspired by a vision of something better.

### HERE ARE 7 KEY ARGUMENTS TO MOTIVATE WHY A HEALTHY TUCK SHOP IS IMPORTANT:

#### 1 GETTING IN LINE WITH THE CURRICULUM

Children learn in school about good nutrition and how to make healthy eating choices. The school environment needs to properly support this education by ensuring that food provided on the school grounds is in line with the accepted guidelines for children's nutrition. It doesn't make sense to teach children in the classroom that they must eat whole-wheat bread, and then serve them hamburgers on white buns at break time.

## **2 SO, LET'S WALK OUR TALK**

We must make it possible for children to eat healthier foods every day by making these choices most available. Research shows that having lots of opportunities as a child to make healthy food choices has a big impact on whether healthy eating becomes a life-long habit.

## **3 EVERY SCHOOL CAN BE A HEALTHY SCHOOL**

No matter what its resources, any school can have a committed focus on health promotion that makes the difference. The key is to be well-informed and to make healthier choices. For example, many delicious, healthy fruits can be cheaper than sweets – especially if you are growing the fruits yourselves! People often worry that healthy means more expensive – however, there are many ways to provide affordable nutritious food.

## **4 POOR NUTRITION COSTS A FORTUNE**

It is well known that poor nutrition, whether that is under-nutrition, poor food choices, or over-eating, has a major impact on modern societies. So-called 'lifestyle diseases' that result from poor nutrition and inactivity, cost governments, communities, families and individuals a fortune in health care, never mind the terrible emotional costs of the pain and stress of ill-health. The hidden costs of unhealthy foods can be found in the soaring expenses of ill-health.

## **5 MEETING GLOBAL STANDARDS**

The impact of poor nutrition on children's health all over the world has reached such proportions that decreasing their exposure to unhealthy foods and drinks is fast becoming an issue of child protection. For instance, there are many schools where the sales of certain food products are simply banned outright, and many others have transformed their food provision because of pressure from within the school community.

There is no doubt that the ongoing facilitation of good nutrition and healthy lifestyles enhances a school's reputation for delivering an excellent service to its community.

## **6 GOOD FOOD IS GOOD HEALTH**

Eating good food is an essential part of maintaining health and avoiding disease. Children are most vulnerable to poor nutrition, both because they cannot control their sources of food and because their bodies are still growing. Good food is a basic requirement for the growing of healthy bodies, and it is essential if children are going to learn well. As the seminal places of learning in our societies, schools play a critical role in ensuring that children have healthy bodies and minds.

## **7 THE SCHOOL TUCK SHOP – A COMMUNITY HEALTH HUB**

The transformation of the tuck shop into a healthy-eating hub provides wonderful opportunities for schools to promote improved health and well-being in their communities. Many important healthy lifestyle messages can be spread from the healthy tuck shop, helping families to take better responsibility for their health and increasing their enjoyment of life. In addition, other projects such as a schools food garden and a physical activity programme can be linked to the healthy tuck shop.

You can use these 7 key arguments in a powerpoint presentation or as a leaflet to communicate to parents, educators, learners, the School Governing Body, food suppliers including vendors, the provincial education department, etc.

GET  
TING  
STARTED

# TWO

## GETTING STARTED

All food premises must be registered with the local authorities, and your school will require a certificate of acceptability in terms of the Food Premises Regulation prior to trading.

Copies of the food premises regulation (R.918) can be obtained from the Directorate Food Control, Department of Health's website at [http://www.doh.gov.za/departement/dir\\_foodcontr-f.html](http://www.doh.gov.za/departement/dir_foodcontr-f.html).

(Under the legislation tab - go to section 6 Hygiene and related matters - General hygiene requirements for food premises and the transport of food R918/1999.)

Here are some broad guidelines to assist you whether your goal is to transform your existing food provision infrastructure (tuck shop, lunches, snacks or vendors) or if you are planning to introduce food provision through a brand new healthy tuck shop strategy.

### **1 MAP YOUR RESOURCES**

It is a useful exercise to make an inventory of available resources and identify new resources you may need. An awareness of the 'big picture' will help you to plan and manage the details of the process more effectively.

**People** – As with any project, people are your most important resource. You will need people to lead and those who have the skills to take on a variety of work roles such as - overseeing infrastructure/processes/systems/ staff; budgeting/buying/pricing/simple book-keeping/reporting; menu planning/cooking/ food preparation; merchandising/serving/ selling/stock-taking; cleaning/maintenance. Of course, people are multi-skilled, and one person may be able to take on a number of roles. Ask people about their skills and preferences so that you can make sure that they are well-matched to the roles that they take on.

**Infrastructure** – Includes the physical space (tuck shop, kitchen, vendor stalls) and its attributes such as access to water and electricity. It also includes other resources such as fridges, stoves, microwaves, urns, catering furniture, storage facilities, kitchen utensils, crockery etc.

**Systems and Processes** – Establishing clear processes and systems helps to organise work roles and work flows. Whether you make use of volunteers or paid staff or a combination, people need to be clear about their roles and responsibilities as well as how they are expected to perform their work.

**Budget** – Assess the financial resources currently available to you, set financial goals and explore fundraising opportunities to address shortfalls.

## **2 MATCH YOUR RESOURCES TO YOUR PLAN**

It might be exciting to plan a “Rolls Royce” of a tuck shop, but if you only have the budget for a Toyota, the project may be a disappointment or a failure. (Remember that a “Toyota” can work very well!) Once you have a good idea of your resources, formulate a realistic plan that does not strain and stress your available resources. Look instead for ways to start simply - you can always phase in improvements and expansions as the tuck shop becomes more and more successful. Working within the limits of your existing resources allows for a smoother, more trouble-free implementation and enables the people involved to enjoy measures of success as the process unfolds. This helps to keep them motivated over the longer term.

## **3 FORMULATE A HEALTHY TUCK SHOP POLICY**

Formulating an official school policy is a great way of clarifying goals, setting the standards and informing stakeholders about the Healthy Tuck Shop. Importantly, it serves to entrench the school’s food provision within the context of the school’s rules and regulations. The next chapter gives you more detail on how to do this.

A HEALTHY  
THICK  
SHOP  
SCHOOL  
POLICY

# THREE

## A HEALTHY TUCK SHOP SCHOOL POLICY

### WHY?

It is a good idea to introduce a healthy tuck shop by formulating a school policy to set the standard and provide the means for monitoring, evaluation and reporting. The aim of the healthy tuck shop school policy is to clearly inform those involved about how things are to be done at your tuck shop.

### WHO?

The formulation of a policy should be a participative process. You need to involve the key players to ensure that the policy is relevant, understood and supported. Key players may include educators, parents, tuck shop staff, the School Governing Body, student representatives, dieticians, health care providers, food suppliers, food sponsors, formal or informal vendors. Consultation may take some time, but it will be well worth the effort because discussion and debate will result in stakeholders taking ownership of the best possible policy for your school.

### HOW?

When it comes to writing policy, the best rule is to keep it simple. Write clearly and be specific. Like all policies, you will need to review it from time to time to ensure that it is relevant and up to date.

Keep it simple.

## **WHAT?**

Different schools approach food provision in different ways. Therefore, healthy eating policies will differ from school to school. However, there are some basic nutritional guidelines that are relevant to all and you might want to include them in your policy. For more in depth nutritional information, please refer to Chapter 5 - The Dietician's Nutrition Information for healthier tuck shops.

## **SOME IDEAS**

- The school tuck shop is a Healthy Tuck Shop that promotes a healthy, balanced diet by providing a variety of foods that will help meet children's nutritional requirements.
- All stakeholders involved in the provision of food to school children are educated about the dietary guidelines for children.
- Stakeholders involved in the buying of foods for the tuck shop are also educated about reading food labels.
- As far as possible, processed foods and drinks that do not have nutritional information on the labels are not sold.
- Foods high in saturated fats and trans fats are avoided as much as possible.
- Foods high in salt (sodium) are avoided as much as possible.
- The healthy tuck shop promotes the regular consumption of fruit and vegetables, and makes these foods available as snacks or as part of meals as much as possible.
- The healthy tuck shop promotes the consumption of plain, clean water and makes it readily available.
- On an ongoing basis, the healthy tuck shop seeks healthier alternatives to popular

foods that are of poorer nutritional quality such as pies, sausage rolls and white bread rolls filled with chips.

- Sponsored food and promotions meet the requirements of the school's Healthy Tuck Shop policy.
- Rewards and performance incentives are non-food based.
- Healthier choices are offered at lower prices.
- Recycling is promoted and incentivised.

University of Cape Town

HEALTHY  
TUCK  
SHOP  
COMMUNIC  
NICATION  
STRATEGY

# FOUR

## A HEALTHY TUCK SHOP COMMUNICATION STRATEGY

Once you have consulted key players and formulated a Healthy Tuck shop policy, you need to communicate your plans to the broader school community. This is an important key to ensuring that people understand and support change or a new initiative. Here are some broad guidelines:

Fit kids  
are cool  
kids.

### **TARGET AUDIENCES**

More often than not different audiences need to be exposed to different key messages in different ways. Always consider the concerns of the particular audience you are addressing. For example - children are more easily reached by messages that emphasise fun and acceptance by their peers, while their parents may be more concerned about health, costs and convenience; educators may be inspired by the opportunities for children to practice what they are teaching in the classroom, while food vendors may have little knowledge about healthy eating and feel threatened about losing business.

## **KEY MESSAGES**

**Learners** – Fit Kids are Cool Kids! Healthy eating and physical activity help you to feel good, to have lots of energy and to build a strong body and mind. Our school's Healthy Tuck Shop means that you can make delicious, good food choices.

**Parents** – The school's Healthy Tuck Shop will make affordable, nutritious food available so that your children can learn to make healthy food choices a good habit that can last a lifetime.

**Educators** – The school's Healthy Tuck Shop will help learners to make the healthy food choices we teach them about in the classroom. The project also has the potential to play a role in promoting healthy eating and healthy lifestyles in our school community.

**Tuck Shop staff** – You are playing a vital role in promoting healthy eating amongst learners and our school community. Providing children with good food options helps them to make healthier choices a lifelong habit.

**Vendors** – The school will help you to transform your product offering so that children can buy nutritious food from the vendors.

## **DELIVERING THE MESSAGES**

- Most of these messages can reach the target audiences through the school's usual channels
  - meetings, assemblies, parent notices, notice boards, newsletters etc.
- You can use the Dietician's information in the guide to provide more in depth information to parents, educators, tuck shop staff and vendors.
- It may be necessary to arrange a special training intervention for tuck shop staff, buyers and vendors so that they understand what needs to change, why and how.
- You may consider involving learners in the communication campaign by getting them to design posters or create projects to promote healthy eating and healthy lifestyle themes.

## **FEEDBACK**

Make sure the communication channel is open for feedback from your target audiences. This enables you to gauge reactions, be aware of misunderstandings and to identify areas of concern that must be addressed.

DIETICIAN'S  
NUTRITION  
INFORMATION  
FOR HEALTHIER  
TUCK  
SHOPS

# FIVE

## THE DIETICIAN'S NUTRITION INFORMATION FOR HEALTHY TUCK SHOPS

### **FOOD FOR HEALTH AND PERFORMANCE**

Healthy Tuck Shops aim to provide children with foods that promote health and performance. Foods that promote performance are those that help sustain energy levels, increase concentration and positively impact on behaviour.

The key to healthy food provision is a balance of different types of food. Growing bodies need sensible ratios of carbohydrates, proteins and fats; plenty fruit and vegetables, a high intake of fibre; and controlled amounts of added salt.

It is important to relate good nutritional value to the energy provided by a specific food option. Two different foods for example, can provide similar energy in the form of kilojoules – but one option may include nutrients such as protein, vitamins, minerals and fibre; while the other contains lots of added sugar and fat.

**TO UNDERSTAND NUTRITIONAL VALUE,  
CONSIDER THESE TWO LUNCH OPTIONS:**

- A** Deep-fried potato chips with salt – as a meal, this option provides high carbohydrate, high fat and salt. It is not nutritionally complete as a meal as it is lacking in protein as well as important vitamins and minerals. The high carbohydrate and fat content can contribute excessive energy without nutrients. If this option is eaten regularly as a meal, it will compromise the child's overall diet and may contribute to weight gain.
- B** A whole-wheat roll with fresh avocado, skinless chicken breast, lettuce, tomato and an apple or orange – as a meal, this option provides a good balance of carbohydrates, protein and fat as well as a reasonable serving of raw fruit and vegetables. The whole-wheat roll, lettuce, tomato and fresh fruit contribute fibre. If a variety of meals like this, containing a range of nutrients, are eaten regularly, they will positively contribute to the child's overall diet, promoting health and performance.

As this example illustrates using a variety of different foods helps to achieve nutritional balance. Some school tuck shops offer a wide menu, and not all the options provide variety and balance. In this case, you may consider offering less options but ensuring that each menu item is nutritionally balanced.

A little  
(fat)  
goes  
a long  
way

## REDUCE AND AVOID

**Added Sugar** – As a carbohydrate, sugar does provide energy but it is of little nutritional value as it contains no other nutrients. Many convenience food and drinks have a high added sugar content. Consuming too many foods and drinks high in added sugar can crowd out other nutrients, decrease appetite at meal times and promote dental caries (especially sweet sticky foods and beverages with acids). In addition, over consumption of sugar may trigger behavioural problems in susceptible children, and result in weight gain in children who are less active. Words on the ingredient list that indicate added sugar: - “lose” words such as sucrose, fructose, dextrose, maltose; “syrups” – corn syrup, maple syrup; “Concentrated fruit juice”; “honey, molasses” .

**Added Salt** – Salt, sometimes listed as ingredient as sodium, is often added to food products as a preservative and flavourant. Like sugar, we easily develop a taste for added salt, which can become a life-long habit. Consuming too much salt in childhood can lead to ill-health conditions in adulthood such as high blood pressure.

It is advisable to reduce or avoid products with added salt so as to help school children adjust their palate while they are still young.

Check labels for total sodium or salt from these sources: salt, sea salt, sodium, sodium chloride, soy sauce, baking soda, baking powder, MSG.

## UNDERSTANDING FATS

Fats have many important functions in building and maintaining healthy bodies. So they should not be cut out of children's eating regimes. However, it is important to regulate the total amount of fats – because when it comes to fat, as the saying goes 'a little goes a long way'. It is particularly important for schools that have a high or increasing rate of obesity amongst children to promote a fat controlled diet alongside physical activity. Making a long term habit of controlling the amount of fat one eats helps to prevent weight gain and avoid lifestyle diseases such as heart disease later in life.

It is also important to understand that there are different kinds of fats found in different foods. Partially hydrogenated fat, also known as trans fats should be avoided. Saturated fats should only be consumed in small quantities. Poly-unsaturated and, particularly mono-unsaturated fats are beneficial in moderation and can be substituted for all other sources of unhealthy fats in low amounts.

**Reduce and avoid foods high in fat** – many processed foods, sweets and snacks are high in fat and undermine a fat controlled diet. Deep-fried and fried foods such as samoosas, doughnuts and vetkoek should be avoided. Foods that require butter in the preparation or cooking process, such as toasted sandwiches, may be high in fat if the amounts of butter used are not kept to a minimum. Many baked goods such as pies, sausage rolls, cakes and biscuits should be limited. Full cream dairy products such as full cream cheeses, ready-made milkshakes and full cream yoghurt and yoghurt drinks are high in fat and should be substituted with lower fat options where possible or only consumed in small portions.

**Reduce and avoid saturated fats** – These are found in brick margarine, butter, fatty meat, chicken skin, cheese, processed meats such as polony and other sandwich meats, coconut and palm kernel oils which are often used in biscuits and energy bars.

**Reduce trans fats** – Although these are naturally found in meat and dairy products, and therefore cannot be completely avoided, you can reduce trans fats by avoiding other products that include ‘partially hydrogenated fat’ as an ingredient or enquire from the manufacturer if partially hydrogenated fat is an ingredient if the food label is not clear.

**Include poly-unsaturated fats in controlled amounts** – These are found in fatty fish, fish oils, plant oils such as sunflower and corn oil, some soft tub margarines and seeds.

**Include mono-unsaturated fats in controlled amounts** – mono-unsaturated fats are more preferable than the poly-unsaturated fats. They are found olive and canola oils, nuts and seeds, olives and avocado pears.

## **UNDERSTANDING FIBRE**

**Food fibre plays a number of important roles in the body, which include:**

- Prevention and treatment of constipation
- Prevention of ‘lifestyle diseases’ such as certain cancers, diabetes and heart disease
- Increased feeling of fullness

For children to meet their daily fibre requirements they need to consume fibre-rich meals and snacks. The examples listed below represent different types of fibre and it is important to combine these foods to meet children’s fibre needs.

**Some foods high in dietary fibre** – Fresh and dried legumes such as beans, peas, chickpeas and lentils; whole-wheat and other whole-grain breads such as rye; whole-wheat pasta and noodles; cereals such as bran and muesli; brown rice; fresh fruits such as berries, plums, apples and pears that are eaten with their skins; dried fruits such as figs, apricots, dates, raisins and prunes; vegetables such as broccoli, carrots, brussel sprouts, corn, brinjals, sweet potatoes and potatoes; leafy vegetables such as spinach and cabbage; nuts; oats, buckwheat and bran.

### **UNDERSTANDING FOOD LABELS**

It is very important to read and understand food labels. The school needs to ensure that tuck shop buyers or vendors are educated about the importance of food labels. You may consider holding a workshop on this issue. Collect a range of packaging from foods such as yoghurts, flavoured milks, sweets, cold-drinks, crisps, energy bars, cakes, dried fruit etc. Get the participants to read labels and practically demonstrate how to identify products that meet the requirements of your Healthy Tuck Shop policy.

### **ALWAYS CHECK THE INGREDIENTS**

Ingredients are listed in descending order of mass on food labels. Thus, the ingredient contributing to the product the most is listed first. Some times ingredients you may want to reduce or avoid are included in what seems like a beneficial product.

### **For example:**

- Bran muffins may have high added sugar content and you'll be aware of this if sugar is listed in the first few ingredients on the label.
- Canned beans in tomato sauce may have added salt
- Yoghurt drinks may contain added sugar and preservatives, and in some cases, be high in fat
- Energy bars or oat cookies may include trans fats and this may be worded on the label as 'partially hydrogenated fats'.

### **UNDERSTAND THE NUTRITIONAL INFORMATION PER SERVING**

You also need to assess the nutritional information per 100g and per actual serving – sometimes you can be misled when the quoted nutritional value of the product per 100g is not aligned to the serving you will provide.

### **ASSESS THE MARKETING MESSAGES**

Don't be misled by the promotion of added vitamins and minerals – such products may still be high in fat or sugar that you want to reduce and avoid.

- Always note and adhere to the 'sell by' and 'use by' dates
- Avoid food products that are not properly labelled

Use this information to educate your school community. The expertise contained in this chapter helps everyone to understand more about healthy eating. Tuck shop staff, buyers and vendors need to know this information, but it may also be of interest to teachers and parents. You can use it to create a powerpoint presentation, or include it in school newsletters and notices.

IDEAS  
FOR DELICIOUS  
HEALTHY  
TUCK  
SHOP  
LUNCHESES

# SIX

## **IDEAS FOR DELICIOUS, HEALTHY TUCK SHOP LUNCHES**

Depending on the school's infrastructure tuck shop lunches may range from a menu of choices every day to a one-pot offering on some days. In order to make it easy to ensure that each lunch offering is a nutritionally-balanced meal, it may be a good idea to offer fewer choices per day, and rather vary the choices from day to day.

## **HERE IS AN EXAMPLE OF A WEEKLY PLAN OF NUTRITIOUS BALANCED TUCK SHOP LUNCHES:**

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### **MONDAY HEALTHIER HOTDOGS**

For healthier hot dogs, choose sausages carefully. Look for those that are lower in fat, salt and additives. Fresh chicken sausage is a great alternative to beef, boerewors or viennas. Boil, bake or dry fry the sausages. Serve on whole-wheat bread rolls with salads such as lettuce, tomato and cucumber.

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### **TUESDAY MACARONI CHEESE**

For a lower fat macaroni cheese use low fat or fat free milk, and a small amount of a stronger tasting cheese such as mature cheddar. Add cooked vegetables such as diced carrots, grated marrows or peas.

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### **WEDNESDAY FISH BURGERS**

Make fish patties using canned fish such as salmon, pilchards and sardines because of their high omega-3 fatty acid content. Add boiled lentils or chickpeas to stretch the protein content. Use flavours such as chopped dhania and ground cumin. Use whole-wheat bread for crumbs. Oven bake the patties. Serve on whole-wheat rolls with lots of lettuce and tomatoes. Use low fat mayonnaise or hummus, tzatziki, tomato sauce.

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### **THURSDAY HEALTHIER PIZZA SLICES**

Use a base such as whole-wheat pitta breads. Use small amounts of strong tasting cheese such as mature cheddar. Add lots of seasonal vegetables to the toppings. It is not necessary to include meat, but if you do, use lean meat such as skinless chicken. This can be steamed instead of fried, and shredded after cooking to make it go further.

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### **FRIDAY THE MIGHTY VEGGIE CURRY**

Make a tasty curry using butternut and kidney beans or chickpeas and lentils. Add flavours such as mild curry powder, chopped parsley and dhania, ground cumin or cinnamon, finely chopped garlic and onions. Serve on rice or samp or stampkoring. Top with lots of fresh veg and fruit sambals such as chopped tomatoes and cucumbers, shredded baby spinach or beetroot leaves, or sliced bananas.

## **10 PRACTICAL TIPS FOR HEALTHY TUCK SHOP LUNCHES**

- 1** Devise a weekly plan that includes at least 1 vegetarian meal, 1 fish meal, and no more than 2 red meat meals.
- 2** Use lean meat trimmed of fat and skinless chicken. Avoid polonies and other processed sandwich meat options.
- 3** Always use brown, whole-wheat and seed breads or rolls rather than white.
- 4** Include lots of fresh vegetables, salads and fruits in every meal. Even if your school's lunches always comprise of smp and beans, serve this with fresh, seasonal vegetables whenever possible.
- 5** Use as little oil as possible when cooking meat, chicken, fish or vegetables.
- 6** Add legumes such as lentils, dried beans and chickpeas to soups and meat dishes to enhance protein and increase fibre content.
- 7** Where ever possible oven-bake rather than fry, and steam rather than boil.
- 8** Include just one fat-based spread per meal or sandwich - and choose spreads with higher unsaturated fat content such as peanut butter, avocado pear, hummus, olive spread or low fat salad dressing. A peanut butter sandwich does

not require margarine or butter.

**9** If you buy products such as ready-made burger patties or chicken nuggets, choose those that are low in saturated fat, low in salt and contain little to no additives. Avoid brands that contain partially hydrogenated vegetable fat. Bake rather than fry.

**10** Limit the use of ready-made sauces, marinades and condiments. It is best to make your own. Ready-made products should be chosen with care to select lower salt options and products without preservatives. Avoid seasoned rice, noodle mixes and creamy pasta, soup and sauce products.

University of Cape Town

IDEAS  
FOR TASTY  
NUTRITIOUS  
THICK  
SHOPS  
SNACKS

# SEVEN

## IDEAS FOR TASTY, NUTRITIOUS TUCK SHOP SNACKS

Snacks play an important role in sustaining active, growing bodies through the busy school day. Unfortunately, many of the convenience foods that children commonly consume as snacks, such as sweets, chocolates, crisps and doughnuts are of poor nutritional quality. Such foods should be regarded as occasional treats only, and should not be part of a child's every day eating regime. Healthy Tuck Shops can play a vital role in supplying tasty, nutritious snacks that are low fat, low salt and high in fibre.

One of the best ways to ensure that the tuck shop's snack offering is healthy is for staff to prepare snacks from fresh ingredients rather than sell ready-made options. If you include products such as pretzels, cereal and snack bars, be sure to read the labels and buy only those that are low in salt and saturated fat.

Remember snacks are not supposed to replace meals. It is important to keep snack serving sizes small, especially in schools where there are rising levels of obesity.

## **10 PRACTICAL TIPS FOR HEALTHY TUCK SHOP SNACKS**

- 1** Make seasonal fresh fruits available every day. You can sell whole fruits such as bananas, oranges, apples, pears, plums, peaches etc. or fruit wedges such as pineapple, mangoes, watermelon, sweet melons. You can also make colourful fruit kebabs or sell servings of fruit salad.
- 2** Blend ripened, leftover fruits with 100% fruit juice and freeze as ice lollies.
- 3** Make bulk air or machine popped popcorn and package into small bags.
- 4** Make bulk trail mix – a blend of unsalted nuts, seeds and dried fruits, and package into small bags.
- 5** Make your own dried fruit mix – where possible purchase dried fruit that is free of preservatives such as raisins, prunes and sulphur-dioxide free mango.
- 6** Cheese and biscuit snack – use whole-grain crackers and reduced fat cheese, serve with a few cherry tomatoes or carrot and cucumber sticks.
- 7** Toasted pita triangles and dip – use whole-wheat pita breads cut into wedges and oven-baked. Serve with dips such as hummus, mashed avocado pear or low fat cottage cheese.
- 8** Corn on the cob.
- 9** Bran and fruit/vegetable muffins – use recipes that are low in oil and substitute whole-wheat flour for cake flour. Apples, bananas, carrots and butternut make great ingredients in muffins. Make muffins about the size of a door-knob.

- 10** Homemade Roasted Chickpeas – Chickpeas provide carbohydrate, protein, fibre, vitamins and minerals. Soak dried chickpeas overnight, drain and pat dry. Spread on a baking tray and roast for about 45 minute until crisp. A low salt flavouring such as low salt soya sauce or a rub that contains no added preservatives or artificial flavourings can be sprinkled over the chickpeas before baking. Package into small bags.

University of Cape Town

IDEAS  
FOR DELICIOUS AND  
NOURISHING  
DRINKS

# EIGHT

## **IDEAS FOR DELICIOUS AND NOURISHING DRINKS**

Plain, clean water tops the charts as the natural, healthy-giving thirst-quencher that children should be encouraged to drink throughout the day. The healthy tuck shop can help to promote this by offering servings of plain water which can be chilled in the Summer months. Children can bring their own reusable sports or water bottles. You can also use cups and set up a bring-back system that engages children in the important activity of reducing waste. Be aware that proper sanitising of cups that are re-used is essential. Avoid bottled waters as this greatly increases unnecessary waste.

Many cold drinks, juice blends, cordials, mixes and powders, and sports drinks are not recommended as quality nutrition for children because of added sugar, non-nutritive sweeteners and other additives. However, it is easy to offer better, nutritious options that children will enjoy.

## **6 PRACTICAL TIPS FOR HEALTHY TUCK SHOP DRINKS**

- 1** Provide 100% pure, pressed or blended fruit and vegetable juices that contain no added sugar, or other sweeteners, preservatives, herbs, caffeine, guarana, artificial colourants. Make sure the servings are around 125ml, and ideally diluted with water to a volume of around 250ml.
- 2** Plain milk – ideally low fat, fat free or skim options, preferably free of rBST-hormone.
- 3** Low fat soy milk – choose brands that are calcium-enriched.
- 4** Make your own homemade iced tea using Rooibos tea and 100% fruit juice .
- 5** Make your own smoothies using ripened leftover fruit, low fat, rBST-free milk and plain low fat yoghurt.
- 6** Low fat yoghurt drinks, milkshakes or lassis – choose brands that are low in sugar.

FOOD  
SAFETY AND  
HYGIENE  
GUIDE  
LINES

# NINE

## **FOOD SAFETY AND HYGIENE GUIDELINES**

All food premises must be registered with the local authorities, and your school will require a certificate of acceptability in terms of the Food Premises Regulation prior to trading.

Copies of the food premises regulation (R.918) can be obtained from the Directorate Food Control, Department of Health's website at [http://www.doh.gov.za/departement/dir\\_foodcontr-f.html](http://www.doh.gov.za/departement/dir_foodcontr-f.html)

(Under the legislation tab - go to section 6 Hygiene and related matters - General hygiene requirements for food premises and the transport of food R918/1999)

- 1** Wash your hands with soap and water before and after handling food. You also need to repeat the process during food preparation, especially after going to the toilet and after working with raw meat.
- 2** Wear an apron.
- 3** Tie back or cover hair.
- 4** Do not wear jewellery.
- 5** Keep the kitchen, all equipment and work stations clean.
- 6** Keep the kitchen, all equipment and work stations free of insects and other animals.
- 7** Keep raw and cooked food separate; use different work surfaces, containers and utensils.
- 8** Keep meat, especially raw meat, separate from other food; use different work surfaces, containers and utensils.
- 9** Do not work with food when you are sick.
- 10** Ensure that equipment, utensils and food are not exposed to potentially harmful chemicals in the form of pesticides or cleaning agents that contain toxins.
- 11** Store foods correctly to protect product integrity and avoid contamination.
- 12** Adhere to the "sell-by" and "use-by" dates on food labels.

HEALTHY  
SCHOOLS

DIET  
PLAN

PICTURE

# TEN

## HEALTHY SCHOOLS – THE BIGGER PICTURE

The Healthy Tuck Shop can serve as a dynamic hub of health promotion in your school community. However, it is one of a number of important “lifestyle” aspects that can contribute positively to the well-being of your school community. It is important to set your tuck shop in the context where children, educators and parents are encouraged and supported to care well for themselves and for the school environment in a holistic way.

### **HERE ARE SOME IDEAS FOR COMPLEMENTARY PROJECTS THAT WILL GREATLY ENHANCE THE IMPACT OF YOUR HEALTHY TUCK SHOP:**

#### **CREATE A HEALTH TRACK**

Even a school that lacks sports fields and equipment can easily establish a health track for learners and educators to get physically active. Eating well is one important aspect of being healthy; being physically active every day is another..

Resource: The Woolworths Making the Difference Programme Module 5 – Getting Kids Physically Active. Download for free from [www.makingthedifference\primary\teachers](http://www.makingthedifference\primary\teachers)

### **START A PERMACULTURE FOOD GARDEN**

Growing your own good food in harmony with Nature reaps more than just the benefit of an abundance of healthy food. You will enhance your school's assets by creating a living, learning outdoor laboratory and learn how to reduce, re-use and recycle waste.

Resource: The Woolworths Making the Difference Programme Module 8 – Permaculture. Download for free from [www.makingthedifference\primary\teachers](http://www.makingthedifference\primary\teachers)

### **BECOME A SUSTAINABLE SCHOOL**

Learn more about how to create a sustainable school environment and implement sustainability principles. Reducing your ecological footprint not only helps to save life on Earth but it reduces your actual running costs.

Resource: The Woolworths Making the Difference Programme Module 10 – Creating a Sustainable South Africa.

Download for free from [www.makingthedifference\primary\teachers](http://www.makingthedifference\primary\teachers)