

**EVALUATION OF EDUCATORS CONCERNS WITH THE
IMPLEMENTATION OF THE NUTRITION COMPONENT OF THE
HEALTH AND FAMILY LIFE EDUCATION (HFLE) PROGRAMME AT
PRIMARY SCHOOLS IN TRINIDAD**

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ABSTRACT

The aim of this study was to identify the concerns, perceptions and attitudes among primary school teachers regarding the implementation of the eating and fitness component of the Health and Family Life Education (HFLE) curriculum in the St. George Educational District, Trinidad. A three-stage cluster sampling design was utilized and a sample of 21 primary school teachers was randomly selected from each level of the three schools. A mixed method approach utilizing both qualitative and quantitative data collection was applied. A structured questionnaire and semi-structured interview based on the Stages of Concern Model were used to collect the data. The study revealed that the two main concerns among primary school teachers were task and impact concerns. The Stages of Concern ranged from awareness to refocusing. The emergent themes to respondents concerns were training, time, resources, administrative support, collaboration and parental involvement.

Keywords: *school, education, nutrition, health, family life education, educators, perception.*

INTRODUCTION

Health and Family Life Education (HFLE) is a continuous process aimed at ensuring that individuals, through guided learning experiences, acquire attitudes, knowledge, skills and values which would empower them to develop healthy lifestyles and make decisions that would impact positively on themselves, their homes and their communities (Ministry of Education, 2001). The genesis of this programme was the first international conference on health promotion, the Ottawa Charter on Health Promotion which took place in 1986. This conference was one of the first initiatives by Caribbean Ministers of Health, as a joint framework for health action (Caribbean Charter for Health Promotion, 1993).

A comprehensive approach by the Caribbean Community (CARICOM) and The University of the West Indies gave rise to the genesis of the CARICOM multi-agency Health and Family Life Education (HFLE) project. By 1996 both Ministers of Education and Health endorsed and reaffirmed their commitment to HFLE as a priority for achieving national development goals, and to implement measures to ensure its sustainability. To this end, the way was paved for a new initiative. HFLE was included as a part of the core curriculum of general education at all levels of the primary schools in 2006. The programme targets issues related to four thematic areas as mandated by UNICEF in conjunction with the CARICOM Secretariat, namely Self and Interpersonal Relationships, Sexuality and Sexual Health, Eating and Fitness and Managing the Environment, and thus can be seen as one of CARICOM's initiatives or responses to arrest the advancing obesity epidemic.

Research conducted by the National Health and Nutrition Examination Survey in the USA during the period 2007-2008 indicated an estimate of 16.9% of children and adolescents aged 2-19 years were obese. Obesity in preschool aged children (2-5 years) increased from 5% -10.4 % in a four year period (1976-1980). Between the periods (1976-1980) and (2007-2008), obesity among children ages 6-11 increased from 6.5% to 19.6% and adolescents (12-19) from 5% to 18.1 % during the same period. American society is now being viewed as 'obesogenic' (CDC, 2011).

In Canada, the Childhood Obesity Foundation (2010) reported a dramatic increase in unhealthy weights in children. In 1978, 15% of children were classified as overweight or obese. Twenty-nine years later, Canadian statistics found obesity rates of children with approximately 29% having unhealthy weights. The European Childhood Obesity Group (ECOG,2010) reported approximately 20% of all European children was overweight and approximately one- third of them were obese. Similar findings have been reported for Trinidad and Tobago. According to the daily newspaper article dated 2011, the Minister of Education reported that 20% of the school children in Trinidad and Tobago are obese (Newsday, 2011).

LITERATURE REVIEW

Research conducted by Hord (2011) on teachers' perceptions of nutrition education in primary schools revealed that failure to monitor and evaluate how well teachers and administrators were using a new programme or the process in the school or classroom to provide them with

additional information, coaching and follow-up to help them improve what they are doing impacts the successful implementation of the curriculum.

Probart et al (1997) listed other factors concerned with the successful implementation of the curriculum which included lack of administrative support, particularly pertaining to scheduling of common planning times for teachers, school-wide promotional activities and stability in personnel. They further explained the need for stability in personnel by stating there are times when the teacher who was involved in the process (grant application process or the teacher training workshop) was transferred or changed teaching assignments before the curriculum was implemented, leaving the remaining teachers without guidance and making implementation more difficult.

Stang et al (1998) developed a nutrition education needs based assessment survey for both elementary and secondary public school teachers in the United States. It stressed on issues such as how often nutrition education was provided by teachers, methods used when providing nutrition education, perceived barriers to nutrition education, collaboration among teachers, parents, foodservice staff at schools and reasons for providing nutrition education. They also found that there were at least three common barriers that prevented teachers from providing the type of and amount of nutrition education that they should. These were lack of classroom time, lack of training and lack of educational materials and equipment. They also cited the lack of time to meet with foodservice staff, lack of time and training of foodservice personnel, and inexperience in collaboration with foodservice personnel as barriers to providing collaborative nutrition education

Auld et al (1999), interviewed teachers covering issues such as thoughts on teaching nutrition in elementary schools, perspectives on the alternating-week instruction model and the lessons they taught, current interest and confidence in providing nutrition education and finally their perceptions on the effectiveness of the programme. Results showed that teachers supported the inclusion of nutrition lessons in elementary schools. Teachers described nutrition as an implementation health-related content and a potential early influence on children's food habits. The teachers also believed that special resource teachers were more effective because of their greater knowledge and skill-set. Teachers who took part in the study also acknowledged that they were unlikely to teach nutrition as frequently and elaborately as the special resources teachers due to lack of preparation time, resources and assistance to conduct hands on activities. Other barriers identified by the teachers included lack of administrative support, lack of confidence and previous nutrition training.

Lambert et al (2010) reported that 57.7% of the teachers believed they did not have adequate classroom time to include nutrition competencies however, the majority reported having the skills to incorporate nutrition competencies. The scholars put forward the view that schools have been more successful in implementing school health policies when an outside facilitator is employed to help school staff progress through changes. They stressed that the successful implementation of new policies cannot and should not be the sole responsibility of school administration and staff but must also have the support of other influential constituents such as the

school board, parent-teacher association, community groups and businesses just to name a few. “Successful changes are more likely to occur when school administration understands how important it is to address teachers’ perception, understanding, and participation in the changes” Lambert et al (2010).

Since the implementation of the HFLE curriculum in 2006, no known study has been conducted to determine the impact of the programme on the school population, thus little is known about educators’ perceptions, concerns and attitudes regarding the implementation of the Eating and Fitness component of the HFLE curriculum at primary schools in Trinidad and Tobago or in other Caribbean countries. This study seeks to identify concerns, perceptions and attitudes among educators to implement the nutrition (eating and fitness) component of the Health and Family Life Education (HFLE) curriculum at primary schools in the St. George East District, Trinidad and Tobago, (using the Stages of Concern facet of the Concerns Based Adoption Model).

The study will therefore highlight the concerns, perceptions and attitudes of teachers with regard to teaching the nutrition component of the HFLE curriculum in primary schools; determine the effectiveness of the training provided to teachers, and teachers’ perception of the facilitators or barriers to satisfactory classroom implementation of nutrition education. It will also generate information to inform policy makers and administrators in the Ministry of Education of the need to conduct an indepth assessment of the HFLE curriculum in light of the advancing obesity epidemic.

METHODOLOGY

The study was conducted in the St. George East Educational District (St. George EED) one of eight educational districts in Trinidad and Tobago. The St. George EED is divided into four fraternities namely A, B, C and D which represent approximately 90 primary schools. Respondents were 21 primary school teachers between the ages of 23 to 58 years, from the Infants to Upper Juniors level classes from three primary schools. The St. George EED was selected due to its close proximity to The University of the West Indies, St. Augustine Campus. The sample size was determined on the basis of the type of schools and cost.

A three-stage cluster sampling design was used to select a sample of 21 primary school teachers from three primary schools in the St. George EED. Firstly, to select the fraternity a list of random numbers was first assigned to the four fraternities in the St. George EED, and fraternity C was randomly selected. Fraternity C is comprised of 21 primary schools. Secondly, to select the Primary schools in fraternity C, a list of all the primary school was generated, and a random selection of the primary schools was conducted. Only three primary schools were selected to participate in the study due to time constraints. To maintain anonymity pseudonyms were attached to the participating schools. The schools selected were labelled School X, School Y and School Z, with X representing a private school, Y representing a government school and Z representing a denominational school. School X and Y comprised a co-ed population while school Z is a single sex population. Schools X and Y are categorized as small schools with a student population that

ranges between 100 – 299. While school Z is categorized as a medium school with a population between 300 – 400 students.

Thirdly, to select the study participants a random selection of teachers from each level: 1st year to Standard 5 at each school was conducted. Primary schools are divided into three categories: Infants (1st and 2nd years), Juniors (Standards 1 to 3) and Upper Juniors (Standards 4 and 5). From each school, two teachers representing the Infant category (one from 1st and 2nd year classes); three teachers representing the Juniors category (one from Standards 1, 2 and 3), and two teachers representing the Upper Juniors category (one from Standards 4 and 5) were selected. Seven participants were selected from each school representing each of the levels. The study was carried out during the months of February and March, 2011. Permission to conduct the study was obtained from the Ministry of Education, the school principals and staff of the participating schools.

A mixed method approach utilising both qualitative and quantitative data collection was applied. Firstly, a 25-item structured questionnaire was used to capture general information such as demographics, level of training and the teaching practices of the eating and fitness component of the HFLE curriculum. Secondly, face-and to-face interviews were conducted with each respondent. Eleven structured questions based on one facet of the Concerns Based Adoption Model by Hall and Hord (2001), the Stages of Concern formed the basis of the interviews. The interviews were audio-taped. The administration time period for both the interview and questionnaire was 15-20 minutes per respondent. The Stages of Concern model comprises three main categories namely Self Concerns, Task Concerns and Impact Concerns as shown in Table 1. The three categories of Concern comprise seven stages ranked from 0 to 6. Stage zero represents awareness. This stage relates to persons who are aware that an innovation is being introduced but are not really interested or concerned. Self Concern has two stages: stage 1 represents informational and stage 2 represents personal. The informational stage speaks to those individuals who are interested in some information about the change whereas the personal stage seeks to attract individuals who are interested in the personal impact of the change. Task Concern has one stage: stage 3- management. Individuals at this stage are concerned about how the change will be managed in practice and the time frame within which the change will occur. Impact Concern includes three stages that represent stage 4 - consequence, stage 5 - collaboration and stage 6 – refocusing. Individuals at stage 4 are interested in the impact of the change on the students or the school. Those at stage 5 are interested in working with colleagues to make the changes effective. Finally, individuals at stage 6 begin refining the innovation to improve student learning results.

All data obtained from the questionnaire was analysed using the Statistical Package for the Social Sciences version 16. Frequencies were used to represent the demographic characteristics. For respondents who requested that their responses not be taped, the researcher respected this, and penned the responses on a note pad. The responses from the interviews were transcribed from the audio data and common themes associated with the three Stages of Concerns were formulated. The data were peer examined to ensure that the data were not altered. The notes were categorized by themes which were then organized according to the Stages of Concerns facet of

the Concerns Based Adoption Model. The responses were recorded according to the three categories: Self Concerns, Task concerns and Impact concerns for analysis.

RESULTS and DISCUSSION

The sample comprised 21 respondents between the ages of 23- 58 years. The demographic characteristics of the sample revealed that 38.1% of the respondents were between the ages of 36-46 years (See Table 2). Five of the 21 respondents were male and 16 were female. Almost half of the sample comprised respondents with greater than 22 years' service while 52.4 % of the respondents had between 0-20 years' of service. The teachers at School Y presented the greatest number of teachers at this level (>20 years service) followed by School X and Z respectively (See Table 3). 91% were at the Teacher I level while the remaining respondents' 9% were classified as Senior Teachers. For the highest level of education attained among the sample 33.3% of respondents had a Teachers' Diploma while 33.3% possessed both a Teachers' Diploma and a Bachelors Degree (See Table 4).

95.5% of the sample reported that the HFLE curriculum was timetabled and they were required to teach the eating and fitness component of the HFLE curriculum. 47.6% reported that they were trained to deliver the HFLE curriculum while (52.4%) reported that they were not trained to do so. Among the trained respondents, only two attended the training sessions held by the Ministry of Education. The other respondents were either trained at Teachers' Training College (if the nutrition elective was chosen) or not at all. In response to the question that asked how important they thought nutrition was, all respondents felt that nutrition was important. 66% of the respondents believed that the Ministry of Education should outsource nutrition specialists to teach nutrition at the primary school.

1. Self Concerns

In response to self concerns about the implementation of the HFLE curriculum most respondents from both the public and private schools felt that the HFLE curriculum was good, however, they felt more knowledge of the eating and fitness (nutrition education) component was needed, in addition to in-service training. They reported that *"Based on what you are exposed to at teacher's college or other institutions the training in the area is not sufficient"* A concern highlighted among most respondents was adequate training. Respondents who received training to deliver the curriculum also felt that they did not have sufficient knowledge in nutrition. This finding is in keeping with Fullan (2001) who reported that teacher training does not fully equip teachers for the realities of the classroom. In addition, many perceived that more instruction was needed and it was necessary for special resource personnel to deliver the material. One respondent stated that *"Other than the training we received at training college, somebody needs to come in and do a one day workshop"*. *"There is need for more available persons who are qualified to come and share the necessary information with us or come in and teach it"*, said another respondent.

Among the respondents, only two indicated that they received training from the Ministry of Education. One of these two respondents reported attending the workshop held by the Ministry

but was soon transferred to another school. This ongoing concern is observed at all echelons of the education system which results in a lack of continuity due to loss of information transfer that could lead to instability at the schools. According to Probart et al (2007) stability in personnel is an important key to successful implementation of the curriculum. When a person leaves his or her school (whether before or during the implementation) with the necessary information needed to direct the school in achieving successful implementation of the curriculum, it creates a void in the system. This may be one reason why teachers reported that their training was inadequate.

According to Hall and Hord's (2001) seven Stages of Concern one should acknowledge that a lack of awareness is expected, meaning that the respondent can be placed at stage 0 of the Stage of Concern model due to his/her uncertainty about what the innovation entails. One respondent reported that "The HFLE programme is disjointed. Teachers are not sure what they were supposed to teach." Two other respondents were also seen at this level, highlighting their uncertainty. Some of their responses are as follows: "I am not aware of such an offering by the Ministry", "Actually, we don't really have set programme yet. What we do have, to me involves Social Studies as well"

2. Task Concerns

Task concerns were observed at the junior and upper junior level classes. The concerns and attitudes reflected by respondents were related to the execution of the actual task. The major task concerns reported were: not enough time was spent on the eating and fitness component during the week, the curriculum was too compact and complicated for the children to understand and felt that a textbook for the subject was needed. Two respondents at the Upper Junior level, one at the public school (Y) and one at the denominational school (Z) disagreed with the other respondents highlighting the benefits of the program to the children. The respondent at school (Z) further reported that the HFLE curriculum is a holistic approach to education. The respondent elaborated stating, "It promotes the emotional, social and mental health of the children. It is an important component which gives a holistic approach to education. It looks at the whole child. I am addressing problems, social issues which have to be dealt with. If it has to be dealt with in the classroom I must have a structured medium through which I can do so and HFLE provides that." The two respondents from School Y and School Z reported having greater than 20 years of experience in the teaching service and as such may have had more experience with curriculum implementation and thus were able to better integrate the curriculum into their existing programme. One such respondent stated, "Nutrition education in my class is also integrated into other subject areas, during the lunch period and whenever an incident arises."

Respondents showed concerns regarding the time and energy commitments required to prepare and teach the eating and fitness theme of the HFLE curriculum. The attitude of most respondents was reflected by this response: "We have a lot of other subjects to be taught hence less time is spent on it". Similar to the teachers in Lambert et al (2010), most respondents reported that they were concerned about the time allocated to teach the unit and stressed that not enough emphasis was placed on nutrition education. The most common response among all respondents when asked about the management of the course content was the lack of time. The

respondents attitude toward the teaching of the curriculum was further expressed when they reported that the reason less time was spent on HFLE curriculum was because it was not a subject examined by the Ministry of Education at the National Test and Secondary Entrance Assessment examinations (SEA). *“HFLE is not tested at SEA. There is such congruence with social studies which puts HFLE at a disadvantage. As the saying goes, what is not tested is not taught”*, said one respondent. Others perceived the programme to be too intense and the content could not be covered in such a short space of time. *“Nutrition is something you have to go in depth with and it needs more time to complete that part of the syllabus.”* Some of the respondents reported that the curriculum was overcrowded. Currently, ten subjects are taught at the primary school level. It appears that teachers have a huge task to complete these subjects within three terms, ensuring that the students are capable to move forward to the next level. One respondent said, *“At the standard five level, I don’t pay much attention to it. SEA is the main focus.”* Another respondent stated, *“There is undue stress placed on the schools for certification (examination success) however it is critical for teachers to disseminate the eating and fitness component.”*

One respondent at the infant level at School X stated that she had no concerns about the time and energy requirements of the eating and fitness unit. She reported that nutrition was important and further explained that without good nutrition and health the children cannot focus on their work. A level five respondent at School X also shared a similar view; he had no concerns with the time and energy commitments of the nutrition component. He reported, *“One’s lifestyle based on nutrition is important to extend the longevity of a person’s well-being. It is important for the benefit of all.”*

When respondents were asked if they believed there could be a conflict between their interest and their responsibility. Most respondents indicated that no conflict should exist but it does exist in some cases. One respondent from School Y asked, *“How can an obese teacher tell a child about good eating habits?”* The respondent was alluding to the fact that one should be a role model to the students. However, regardless of a teacher’s situation they are expected to do what they have been placed in the school to do. Another respondent stated, *“It is not about one’s interest, the responsibility is there.”*

When respondents were asked about the availability of resources at the schools to teach nutrition education, the majority of the respondents stated that there were not enough. A number of persons were displeased with the lack of resources to teach nutrition. This task concern was unanimous among all respondents across the sample. One respondent at the junior level at School X expressed her concerns *“The government sends resources for subjects like mathematics and science. We have a healthy lifestyle which we need to practice. What has the government provided for that?”* Another respondent reported, *“We do not have a laboratory and the classroom can be a limiting factor to what can be done. Probart et al (1997), Stang et al (1998) and Auld et al (1999) have all indicated that there is a need for resources to teach nutrition. Lambert et al (2010) explained:*

Inadequate resources to incorporate nutrition may have been due to a lack of exposure to the available teaching materials and resources available at no cost or very low cost, provided

by federal and state government agencies, university extension services, and non-profit organisations. (p,274)

The attitude displayed by the respondents suggests that the Ministry of Education ought to provide the resources to execute the lessons. The Ministry of Education however, usually provides the resources needed to execute the basic needs of the curriculum but they have not restricted teachers to those. It may be up to the teacher to use creative means outside of what is provided by the Ministry of Education to effectively perform his/her task as it relates to nutrition education. Since School X, is not managed by the government; their administration is responsible for the provision of necessary tools to teach their students regardless of the subject area.

3. Impact Concerns

3.1 Collaboration

When respondents were asked if they coordinated their efforts to maximize the effect of nutrition education, most respondents indicated that they didn't. It was noted however that School X did coordinate their effort via team teaching. Here a positive attitude toward the execution of the curriculum was seen. One respondent at the upper junior level attached to School Z reported that issues needed to be raised in staff meetings. It was further explained that the meetings would allow for teachers and the administration of the school to establish a position on nutrition education thus transforming the way it is done. Most respondents reported that they did not use a collaborative approach when planning lessons for various reasons. Respondents at School X reported that they collaborated when planning lessons. Three respondents (two from School X and one from School Y) reported that they did not collaborate with anyone since they were the only classes at their level. It was noted that collaboration did not exist at School Y. Respondents at school Y reported "No, I work alone." One respondent at School Z reported that she was recently transferred to the school and was not accustomed to what was taking place at the school. It was felt that the collaborative approach when planning lessons was an issue that calls for the attention of the school's administration. According to Roettger (2006) one of the greatest support mechanisms for teachers experiencing change is working with peers.

Respondents indicated the need for the school's administration to enhance the teacher/learner experience as it relates to nutrition education. All respondents agreed that there was a need for support from their administration. They all echoed the view that there was a need for administration to assist in obtaining resources and arranging training workshops. One respondent from School X reported that administration needs to ensure that nutrition is high up on the list of priorities while another respondent from School Y stated, "*If you don't have the support of the administration, teachers do nothing*". This was not in keeping with findings from Stanek et al (1991) who found that administrative support was not seen as an important factor. Roettger (2006) put forward the view that the goal of schooling was not to produce teacher and principal experiences but to provide meaningful education for all students.

In response to a supportive food environment at their schools, all respondents agreed that there should be a supportive food environment. Respondents from School X stated that the cafeteria

was supportive. They said *“Our cafeteria carries lots of nuts and biscuits without cream. It encourages the students to eat healthy.”* Respondents from School Y and School Z reported that the cafeteria was not supportive but instead a money-making venture. *“The cafeteria is money-making venture and because of that they sell things that the children like as opposed to the things that they need. However I am not sure how changing what is sold would affect the feasibility aspect of it.”*

At the School Y one teacher complained *“Our school cafeteria does not help us to implement things. It sells a lot of sweets and snacks that are not healthy. This issue was raised at staff meetings and a list of what students should eat was prepared and circulated. However we are still seeing the extra sweets coming in. There is supposed to be togetherness among academic and non-academic staff.”* The vendor at School Z told the teachers she was just selling what is on the market. The vendor also stated *“The provision of healthier options may mean charging the children more money.”* This is a major concern since the nutritional needs of the children are not being considered first. According to the Standards and Operations of Trinidad and Tobago Primary Schools (2005), all school cafeterias and approved vendors must serve nutritious snacks, balanced meals, beverages as approved by the National Schools Dietary Services. Stang et al (1998) in their findings highlighted the “lack of time to meet with foodservice staff, lack of time and training of foodservice personnel, and inexperience in collaboration with foodservice personnel as barriers to providing collaborative nutrition education” (p.401) . This may be the case of the proprietors who have businesses established in the schools.

A respondent from School Z perceived the School Breakfast programme as a culprit as well. *“The breakfast programme seems ill-prepared to provide a healthy breakfast. The carbonated orange juice and the sweet rolls are not very nutritious. The Standards and Operations of Trinidad and Tobago Primary Schools,(2005) states that schools must make provisions for healthy eating. There seems to be some departure from that.”* Stang et al (1998) recommended that joint training sessions involving teachers and foodservice staff should be offered to improve communication between the two disciplines, to encourage collaborative efforts, and to dispel existing stereotypes (p.403).

Respondents at the infant level at School X reported concerns regarding collaboration and the need for parental involvement. One respondent commented, *“The issue I have with the programme is that they are leaving out the parents. Parents need to be educated along the lines of the nutrition part of the curriculum. Everything is left up to the teacher, so get the parent involved. Some of these same parents have conflicting opinions from us”*. Another said, *“My main concern has to do with parents ability to provide what was necessary. It is when the children go home some of the parents cannot afford to provide what is needed for their children. Even though you are teaching the children about good health and nutrition and so on some parents are just not able to get the type of meals that their children may need”*. *“Even though you send letters to parents requesting that they send healthier snacks, you always need to be monitoring to see if it occurs”*, said a respondent from the same school. Findings reported by Stang et al (1998) also indicated that respondents had a desire for parents to become much more involved in nutrition than they were. According to Stang et al (1998) parental involvement in nutrition is crucial to the successful efforts

by both teachers and parents, leading to changes in eating behaviour of youth both at home and at school.

The majority of respondents at the three schools reported that the Ministry of Education should outsource specialist to teach the nutrition component. One respondent from the infant level at School X reported that the curriculum allowed for the use of resource personnel. Two respondents, one at the junior and one at the upper junior level also at School X stressed the need for special resource personnel. Stanek et al (1991) in their study reported that the utilization of guest speakers for certain topics may have increased the time devoted to nutrition.

3.1.1 Consequence

When respondents were asked to what extent they thought nutrition education (training) would affect a teacher's approach to teaching. The majority of the respondents reported that it had no effect on the teacher while the others felt that the teacher had a role to play in nutrition education. A few respondents reported that the teacher has to model what he or she teaches. One respondent said, *"Teaching nutrition education would make teachers more aware. The more you teach it the more you actually do what you teach In other words you become conscious of your decisions."* Another shared her view stating, *"The teacher has to model what he or she teaches. That is critical since children look at what you eat. Teachers would also have to be acquainted with the importance of nutrition and how it affects children at the different levels of development."* This response is supported by the study conducted by Prelep et al (2006). Their study stated that teachers perceive their role in nutrition education primarily as that of classroom instructors who teach nutrition concepts. It also indicated that their role involved modelling healthy eating habits, advocating for the students, and motivating and facilitating the good nutrition habits of their students. A respondent at School Z reported that nutrition education could have effect on teachers requiring them to use differential instruction and assessment strategies, which accounts for the various learning styles of students.

General consensus on students' behavioural changes was reported by respondents. Respondents at School X reported that they celebrated health week which made them more aware about fruits and vegetables for snack among other nutrition concepts. One respondent from School X further explained that the children started to pay attention to the things they consumed while others reported becoming vegetarians. Others indicated that the behaviour change was short-lived. At the public school one teacher shared this view *"It is difficult to say if there have been any behavioural changes. Again, if teachers had the cooperation of parents then you would see a difference in snacking patterns"*. One respondent at School Z expressed his view saying *"Initially, the children try to make an attempt to eat healthy foods. They will encourage their parents to provide healthy foods, but because they are children and they have to eat what mom and dad gives them. It is difficult for them to practice a healthy lifestyle if it isn't embedded in the home. A parent may try to implement healthy options but children can be influenced by their peers who have chips and pizza.. Children tend to want to experience these things"*. According to Auld et al (1999) interventions must use behavioural change strategies and be implemented with sufficient longevity and intensity for behaviour change to occur in the classroom.

Respondents were also asked to comment on the extent to which nutrition education could affect student learning. A number of respondents indicated that nutrition education would have a positive effect on student learning. One respondent at School Z said, “*Learning is a change in behaviour. You would like to think that the things students learn at school will be carried home. Nutrition must therefore be instilled in them continuously.*” At the School X one respondent said “*Nutrition education would help the children to eat right. It will in turn affect what they learn and how they learn.*” Prelip et al’s (2006) findings support the belief that nutrition education does have an effect on students, improving their knowledge of nutrition and helping them to make healthier food choices. Their results revealed that “Most teachers think that students eat either a little or a lot better as a result of nutrition education.” (p.124)

While the study highlighted some concerns, perceptions and attitudes of teachers to the implementation of the eating and fitness component of HFLE curriculum some limitations were encountered:

- The small sample size was not representative of all primary schools in the St. George East Educational District thus it will be difficult to generalize the findings.
- Due to time and financial constraints the collection of additional data from more schools was not possible.
- The study was based on teachers’ concerns which would have drawn on their personal experiences. It therefore may have been difficult to generalize the concerns of all teachers.

CONCLUSION

Curriculum change cannot be successful if its most essential users, (implementers) are not involved, especially since they are the ones expected to effect change. As such, the concerns and perspectives of teachers ought to be of utmost importance where curriculum change is concerned. Successful implementation of the HFLE curriculum or any other programme is not solely dependent on its implementers but rather includes the environment in which implementers exist. The culture of the environment determines how persons involved view the current task and their plan of execution. It may be useful to re-culture the organisation allowing implementers to empower themselves to successfully transform existing methods used to achieve the task at hand. Issues such as training, time, resources, administrative support, collaboration and parental involvement need to be addressed if successful implementation must take place. It seems like teachers felt they were not sufficiently trained nor was the environment conducive to full implementation. In times of change it is quite common for teachers to revert to what is described as their comfort zone however, implementers need to remember that everything happens over time and it may require a major commitment from teachers. Respondents in the study were of the opinion that they did not have the full support they needed from their administration. Teachers will perform better once they are in an environment that fosters collaboration efforts. Shared leadership and vision with staff that are committed to task, creates a wealth of quality education for students. It was the shared view that the more attention needed to be paid to the cafeterias to ensure that joint efforts were made by both

academic and non-academic staff. The teachers also perceived parents as playing a greater role in nutrition education than they were currently playing. Parents need to get more involved in their children's school life. Parent/teacher relations allow for comprehensive implementation, bridging the gap between home and school.

Appendix

Table 1: Showing Hall and Hord (2001) Stages of Concern Model.

Category	Stages of Concern	Expressions of Concern
Impact	Stage 6: Refocusing	I have some ideas about something that would work even better.
	Stage 5: Collaboration	I am concerned about relating what I am doing with what my co-workers are doing.
	Stage 4: Consequence	How is my use affecting clients?
Task	Stage 3: Management	I seem to be spending all of my time getting materials ready.
Self	Stage 2: Personal	How will using it affect me?
	Stage 1: Informational	I would like to know more about it.
	Stage 0: Awareness	I am not concerned about it.

Sourced: *Implementing Change: Patterns, Principles, Potholes*

TABLE 2: Cross-Tabulation Showing the Type of School and Age Distribution of Sample

		Type of School			Total	Percentage
		Public	Private	Denominational		
Age	< 25	0	2	0	2	9.5
	25-35	1	2	2	5	23.8
	36-46	3	0	5	8	38.1
	> 46	3	3	0	6	28.6
Total		7	7	7	21	100

TABLE 3: Showing Number of Years Teaching Experience by School

		Type of School			Total	Percentage
		Public	Private	Denominational		
Length of Time Teaching	0-9 yrs	0	3	0	3	14.3
	10-20 yrs	2	1	5	8	38.1
	> 20 yrs	5	3	2	10	47.6
Total		7	7	7	21	100

TABLE 4: Showing the Highest Level of Education Attained by Teachers by School

		Type of School			Total	Percentage
		Public	Private	Denominational		
Level of Education	Teachers' Diploma Only	5	0	2	7	33.3
	Bachelors Degree Only	0	1	1	2	9.5
	Teachers' Diploma and Diploma	1	0	0	1	4.8
	Teachers' Diploma & Bachelors Degree	0	5	2	7	33.3
	Teachers' Diploma, Bachelors Degree, PostGraduate Diploma	0	0	1	1	4.8
	Teachers' Diploma, Bachelors Degree, Postgraduate Diploma, Masters Degree	1	0	1	2	9.5
	Ministry of Education Pupil Teacher System/Servol's ECCE Training Program	0	1	0	1	4.8
	Total	7	7	7	21	100

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