

Impact Assessment of the Health and Family Life Education in Jamaica

Jimmy Kazaara Tindigarukayo Ph.D.
Senior Lecturer, Sir Arthur Lewis
Institute of Social and Economic Studies
University of the West Indies
Jamaica

ABSTRACT

The main objective of this study was to evaluate the Health and Family Life Education (HFLE) program in Jamaican primary schools, paying attention to the impact of life skill teaching on the knowledge, attitudes, behaviors and practices of grade six students, 11-13 year olds, exposed to the HFLE program.

A survey was conducted during the month of March 2010 in nine schools fully implementing the HFLE program, which were matched with nine Non-HFLE schools across Jamaica. Participants in the survey were distributed as follows: 273 HFLE and 228 Non-HFLE, for a total of 501. The aptitude of surveyed students was tested using indicators relating to four HFLE thematic areas: self and interpersonal relationships, sexuality and sexual health, eating and fitness and managing the environment.

The findings of the study were mainly two-fold: (i) overall, grade six students from HFLE schools reported more positive attitudes, greater knowledge and fewer risk behaviors than students from Non-HFLE schools; and (ii) the HFLE program had benefited female more than male students.

In conclusion, this research suggests that the HFLE program has been largely successful in Jamaican primary schools, although some HFLE schools were not implementing the program effectively on some HFLE themes.

Key Words: HFLE, program, life skill teaching, schools, students

1. Introduction

The teaching of Health and Family Life Education (HFLE) is supported by both the World Health Organization (WHO) concept of the health promoting school (WHO, 1988), and the *International Technical Guidance on Sexuality Education*, published by the United Nations Educational, Scientific and Cultural Organization (UNESCO, 2009).

According to WHO, a health promoting school should enhance improved physical and emotional health for all those who live and work within it through the teaching and learning style it adopts which, in turn, should empower young people to take action and to generate change that influence their health status and their health behaviors (WHO, 2003).

UNESCO, together with its partners, published two volumes of the *International Technical Guidance on Sexuality Education* in 2009. Volume I provided the rationale for a comprehensive sexual education, based on a rigorous review of 87 studies drawn from across the globe. It also provided technical advice on criteria necessary for effective sexual education programs and mechanisms for building support among sexual education stakeholders, including students, parents, teachers and community leaders.

Volume II focuses on topics and learning objectives that should be covered in sexual education of young people, ranging from 5 to 18 years of age, based on a review of curricula from 12 countries. The learning objectives on sexual education provided in this volume are age-specific, starting from 5-8 year age-group and ending with the 15-18 year age-group (UNESCO, 2009).

The overall goal of both volumes was to provide students with accurate information on sexuality education to enable them to make informed and responsible decisions (UNESCO, 2009 and 2010).

Although sexuality education is a priority and a key component of HFLE, the scope of the latter is much broader. Besides sexuality, HFLE addresses other main issues affecting adolescents, including: violence, drug abuse, obesity and environmental degradation.

2. Implementation of Health and Family Life Education in Jamaica

The Ministry of Education (MOE) in Jamaica is committed to strengthening the delivery of HFLE throughout Jamaican schools. In this effort, the MOE receives the support from partners, including: United Nations Children Fund (UNICEF), UNESCO and the Global Fund. In 2007, the MOE adapted the *Health and Family Life Education Regional Curriculum Framework for ages 9-14*, prepared by the Caribbean Community (CARICOM), UNICEF and Education Development Centre (CARICOM, UNICEF and EDC, 2007). The MOE, subsequently, used the adapted *Regional Curriculum Framework* to revise Jamaica's HFLE curricula for grades 1-6 and for grades 7-9 (MOE, 2007). This revision led to the incorporation of a life-skill based approach to teaching, as well as the use of interactive teaching methods in the overall delivery of the HFLE Program (MOE, 2009). Both curricula cover four thematic areas, also adapted from the *Regional Curriculum Framework*, as summarized below (Hill, 2009):

- (i) **Sexuality and Sexual Health:** This explores sexual feelings, attitudes and roles; as well as negative expression of sexuality, including early sexual activities, unplanned pregnancy and attracting sexual transmitted infections.
- (ii) **Self and Interpersonal Relationships:** This focuses on skills needed by youth to enable them to manage their relations with others, both physically and socially.
- (iii) **Managing the environment:** The emphasis here is on protecting the environment by ensuring good air quality, proper waste disposal, preparing for natural disasters and preservation of natural resources such as water, soil, vegetation, and the like.
- (iv) **Appropriate Eating and Fitness:** This focuses in maintaining appropriate and balanced nutrition and adopting a fitness schedule.

By the time of the study in 2010, the MOE was in the process of implementing the revised HFLE Program in all schools in Jamaica, on a phased basis, until the year 2012. The initial revised HFLE curricula commenced in September 2007, with 223 schools. In September 2008, the Program was scaled up to include an additional 234 schools across the country. The intention of the MOE is to eventually cover all schools in Jamaica from early childhood through to secondary (MOE, 2010).

3. Purpose of the Study

This study was intended to evaluate the progress and the impact of HFLE curriculum in primary schools in Jamaica, paying special attention to: (i) the impact of life skill teaching on the knowledge, attitudes, behaviors and practices of adolescents exposed to the HFLE program; and (ii) the effectiveness of the delivery of the life skills methodology for the four HFLE themes mentioned above.

4. Methodology

4.1 A survey of students

To measure the impact of the HFLE program on students, a quasi-experimental design was utilized. This was based on a comparison of data collected from schools that were implementing all four themes of the program (intervention schools), and data collected from schools that were not implementing any theme of the program (comparison schools). A survey instrument for grade six students enlisted data on attitudes, knowledge and practices of adolescents from both the intervention and comparison schools.

Interviewers on the reserve list of Statistical Institute of Jamaica (STATIN), who are located in every parish in the island, were hired to administer the survey instrument in schools. Upon arrival at schools, interviewers were required to go straight to the Principal's office for a formal introduction. The Principal would then take interviewers to classes to be surveyed, which were previously selected at random by the author; using class lists of each school previously provided by the MOE.

4.2 Sampling

Purposeful sampling was undertaken to match intervention schools with comparison schools, whereby the latter were similar to the former in terms of size, location and gender composition, but had not implemented the HFLE Program at the time of the study. The sampling had to be purposeful because the number of Non-HFLE schools, in comparison with HFLE schools, was so small to render random probability sampling inappropriate.

A sample of 303 students from HFLE schools and 266 from Non-HFLE schools, for a total of 569 potential respondents, was sampled. However, those who brought back signed parental consent forms allowing them to participate in the study were 501: 273 HFLE and 228 Non-HFLE; constituting a response rate of 88%.

5. Data Processing and Analysis

5.1 Background to the survey

The survey was conducted during the week of March 15–19, 2010 in nine schools fully implementing the HFLE program, which were matched with nine Non-HFLE schools across Jamaica.

There were more male than female respondents in both HFLE (52%, n=273) and Non-HFLE (56%, n=228) schools. The age range of grade six students was 11-13 years, with the modal age in both HFLE (48%) and Non-HFLE (54%) being 12 years.

Survey data were processed using the Statistical Package for Social Sciences (SPSS) software. The basis for survey data analysis was to evaluate whether students enrolled in schools implementing a full HFLE program reported greater knowledge, more positive attitudes and/or opinions relating to: self and interpersonal relationships, sexuality and sexual health, eating and fitness and environmental management, as well as greater life skills and less risky behavior than students enrolled in Non-HFLE schools.

Apart from paired school comparison of students by condition, using cross-tabulation results, the analysis also sought to establish whether there were significant differences across pairs of schools assigned to HFLE and Non-HFLE and comparison conditions. A chi-square (χ^2) test for two related samples was used to assess the level of significance.

5.2 Use of drugs by Grade Six Students in Jamaica

A recent study on the use of drugs among Caribbean adolescent students has identified alcohol as the most commonly utilized drug in the region (Inter-American Drug Abuse Control Commission, 2010). Within the context of Jamaica, a school-based study in 2000 also found alcohol to have been the most commonly utilized drug among Jamaican adolescents aged 10-18 years, whereby 47.8% of respondents had used alcohol in the past year (Pan American Health Organization, 2000). In another school-based study in 2005 (Fox and Gordon-Strachan, 2005), 30% of respondents aged 10-15 years had drunk alcohol during the past year. In agreement with the above mentioned past studies, Table 1 below indicates that the use of alcohol has remained the most dominant drug, even among grade six Jamaican adolescents aged 11-13 years.

Table 1: Grade Six Students' Report on Drug use, by School Type and by Gender

Answering "yes" to the following drug use	MALES		FEMALES	
	HFLE schools	Non-HFLE	HFLE schools	Non-HFLE
Did you drink alcohol in the past year?	32%	40%	33%	23%
Did you drink alcohol in the past month	17%	20%	12%	02%
Did you smoke marijuana in the past year?	09%	13%	02%	04%
Did you smoke marijuana in the past month?	05%	06%	01%	03%
Did you smoke cigarettes in the past year?	08%	11%	05%	05%
Did you smoke cigarettes in the past month?	06%	06%	01%	07%

Although levels of drug use reported by grade six students were generally low, Non-HFLE students were 83% more likely than HFLE students to use drugs. Of the three types of drugs on which students reported, alcohol was the most utilized by both school types, with Non-HFLE students reporting slightly higher level of its use (33%, n=228) than HFLE students (32%, n=273).

In both HFLE and Non-HFLE schools, male respondents were 86% more likely than females to use drugs overall. With respect to alcohol consumption in the past year, male respondents in Non-HFLE schools reported higher levels of use (40%) than female respondents (23%). Within HFLE schools, levels of alcohol use were almost equal among male respondents (32%) and female respondents (33%).

5.3 Knowledge about HIV/AIDS

In Jamaica, it is estimated that three new cases of HIV/AIDS are diagnosed each day, and one in every ten reported cases of HIV/AIDS reflects young adults under the age of 19 years (Thomas, 2006; Jamaica Ministry of Health, 2008 and 2010). It was, thus, imperative that not only was the delivery of knowledge about HIV/AIDS to students included in the HFLE program, but also that the Ministry of Education developed a five year HIV/AIDS strategic plan (2007-2012), specifically for the education sector (MOE, 2007).

In the grade six students' survey, respondents were provided with statements about HIV/AIDS and were required to indicate whether each statement was true, false or unable to tell (don't know). Table 3 provides comparative results between HFLE and Non-HFLE Grade six students on their knowledge about HIV/AIDS.

Table 2: Students' Knowledge about HIV/AIDS by School Type and by Gender

Percentage of students who answered correctly on the following items	MALES		FEMALES	
	HFLE schools	Non-HFLE	HFLE schools	Non-HFLE
You can get HIV from sweat or urine (false)**	75%	63%	85%	68%
A baby can be infected with HIV through breast feeding (true)***	81%	58%	83%	66%
Only people having sex with gays get HIV (false)*	58%	46%	63%	54%
You can protect yourself from HIV by using condom every time you have sex (true)	89%	87%	95%	90%
You can get HIV by hugging someone with AIDS (false)**	87%	76%	96%	85%
A person can get HIV from mosquito bites (false)***	66%	52%	72%	49%
You can get HIV by sharing food with someone living with AIDS (false)**	71%	64%	82%	62%
You can protect yourself from HIV by making sure that your sex partner looks healthy (false)	56%	51%	50%	37%
You can get HIV by sharing a toilet with a person who has AIDS (false)**	79%	68%	81%	64%
A person with HIV will always look sick (false)	59%	55%	71%	61%
You can reduce your risk of getting HIV by not having sex (true)*	68%	64%	76%	56%
Adolescents (people of age 10-19 years) can get HIV (true)*	86%	78%	89%	83%
HIV can be found in blood of an infected person (true)	79%	79%	84%	84%
A healthy looking person can have HIV (true)	84%	84%	94%	87%
You can get HIV by having sex just once without a condom (true)	84%	77%	82%	81%
You can be a friend to someone living with HIV (true)	85%	82%	95%	89%

*Significant (p<.05); **Significant (p<.001); ***Significant (p<.000)

Respondents from HFLE Schools had by far superior knowledge about HIV/AIDS than respondents from Non-HFLE Schools. Out of 16 items measuring knowledge about HIV/AIDS, respondents from HFLE schools scored 15 times (or 94%) higher than respondents from Non-HFLE schools. All this implies that the HFLE program has had a remarkable impact on its Grade Six recipients in relation to knowledge about HIV/AIDS.

Female respondents were more knowledgeable than males about HIV/AIDS and associated attitudes. Among the HFLE students, females were more knowledgeable than males on 14 items out of 16 (or 88%), and among Non-HFLE students, the proportion was 11 out of 16 (or 69%) in favor of females.

5.4 Opinions/Attitudes on Physical Fights (involving hitting, kicking, or pushing)

Although Jamaica is a small island of 2.6 million people, it has one of the highest youth-perpetrated violence in the world (World Bank, 2007; Smith and Green, 2007; and UNDP, 2012). Hence, part of HFLE delivery in schools dealt with inter-personal relationship, of which physical fights plays a prominent role.

Table 3: Students’ Attitude on Violence, by School Type and by gender

Condition	MALES		FEMALES	
	HFLE schools	Non-HFLE	HFLE schools	Non-HFLE
Agreement with pro-violence attitudes				
It is okay to fight if you get really angry	35%	26%	18%	23%
No fighting doesn’t show strength*	30%	42%	32%	35%
Coward if you back down from fight	85%	73%	75%	76%
Girls who don’t fight when pushed around lose respect	43%	49%	37%	46%
Boys who don’t fight when pushed around lose respect	49%	49%	41%	47%
Okay to hit a girl if she hits first	49%	41%	55%	47%
Okay to hit a boy if he hits first*	39%	34%	34%	28%
Can’t settle an argument without getting into a physical fight	13%	13%	06%	10%

*Significant (p<.05)

Out of 8 items measuring opinions/attitudes on physical fights, respondents from both HFLE and Non-HFLE schools scored equally (4 or 50% each), implying that there was no difference between the two types of schools. These results are similar to those reported by a survey conducted in four East Caribbean countries on the same HFLE items in 2009, which reported no difference between the two types of schools (UNICEF, 2009).

Male respondents were more supportive of violence attitudes than females, implying that grade six male students were more likely than their female counterparts to engage in fighting. In both HFLE and Non-HFLE schools, males were more supportive than females on 6 out of 8 items measuring involvement in fighting (or 75%).

Table 4: Students’ Report on Fights and carrying weapons, by School Type and Gender

Condition	MALES		FEMALES	
	HFLE schools	Non-HFLE	HFLE schools	Non-HFLE
Answering “yes” to the following items				
Have you ever been in a physical fight?	94%	91%	81%	91%
Have you been involved in a physical fight in past 30 days?	62%	65%	49%	55%
Have you ever carried a weapon to school?	10%	07%	00%	02%
Have you ever carried a weapon to places other than school?	19%	24%	09%	10%
Have you ever used a weapon against anybody?	34%	35%	10%	14%

Results in Tables 4 indicate that students from Non-HFLE schools were slightly more likely to get involved in a physical fight and in carrying a weapon than students from HFLE schools.

Male students were more likely than females to get involved in a physical fight and to carry a weapon. Among the HFLE students, males were more likely than females to get involved on 5 items out of 5 (or 100%), and among Non-HFLE students the proportion in the same direction was 4 out of 5 (or 80%).

5.5 Perceptions on life style, eating and fitness and managing the environment

A life style choice generally entails a set of attitudes and habits that influence a person’s social and personal interactions with others (American Heritage Dictionary of English Language, 2009). A healthy life style choice, on the other hand, entails the choices a person makes about daily habits, relating to eating, exercising, and managing stress in order to prevent chronic non-communicable diseases. The latter are prevalent in the Caribbean, leading to concerted efforts to control them (PAHO and CARICOM, 2011; Jamaica Ministry of Health, 2004). Table 5 measures students’ perceptions on eating and fitness.

In the survey, students were provided with statements about opinions, attitudes and feelings on life style choices, eating and fitness and the management of environment and were requested to circle the response that best reflected their choices, the results of which are indicated below.

Table 5: Students’ Report on Life Style Choices, by School Type and by Gender

Condition	MALES		FEMALES	
	HFLE schools	Non-HFLE	HFLE schools	Non-HFLE
Answering “always” to the following items				
It is easy for me to make new friends	40%	34%	37%	34%
It is easy for me to get along with other people	24%	27%	25%	20%
I don’t let my friends talk me into doing things I don’t want to do	11%	09%	16%	06%
I have friends to go to if I need help with a problem	47%	57%	53%	54%

Using the categories “always” or ‘never”, as appropriate, results in Table 5 indicate that both HFLE and Non-HFLE students scored equally on 2 out of 4 items (or 50%), implying no difference between the two school types on life style choices.

However, there were gender differences. Among HFLE students, females scored 3 out of 4 items (or 75%) higher than males, implying that female students were better informed than males students on life style choices. On the other hand, among Non-HFLE students, the opposite was the case, with male students scoring 75% higher than female students on life style choices.

Table 6: Students’ Report on Eating and Fitness, by School Type and by Gender

Condition	MALES		FEMALES	
	HFLE schools	Non-HFLE	HFLE schools	Non-HFLE
Answering “always” to the following items				
I feel happy with the way my body looks	76%	77%	83%	83%
I eat fruits and vegetables in order to be healthy*	54%	69%	62%	62%
I exercise to help keep my body fit	49%	56%	49%	44%
I discourage my friends from eating too much fast foods, like KFC and Burger King	13%	13%	14%	18%
I eat a lot of fried food even though it is not good for my health	34%	24%	36%	31%

*Significant (p<01)

Results in Table 6 indicate that Non-HFLE students scored slightly higher than HFLE students on all items measuring respondents’ perceptions on eating and fitness, implying that the results were counter to expectation whereby students exposed to the HFLE program were expected to score higher.

For gender, females among HFLE students scored 80% higher than males, and among Non-HFLE students females scored 60% higher than males. These results seem to imply that female respondents were better informed than male respondents on appropriate eating and fitness habits.

Table 7: Students' Report on Managing the Environment, by School Type and by Gender

Condition	MALES		FEMALES	
	HFLE schools	Non-HFLE	HFLE schools	Non-HFLE
I keep my surroundings clean and tidy*	56%	74%	66%	71%
I don't play loud music when I know it will disturb someone else**	26%	20%	28%	18%
I tell my parents not to litter/throw garbage on the ground	38%	41%	44%	49%
I tell my parents to buy canned foods to prepare for a hurricane	46%	43%	50%	49%
I practice the 3Rs for garbage management	26%	30%	37%	40%
I waste water at home by leaving the pipe running for too long	07%	07%	06%	07%

*Significant (p<.02); ** Significant (P<.01)

Out of six items measuring students' perception on managing the environment, Non-HFLE students scored higher than HFLE students in four (or 67%), contrary to expectations.

Among HFLE students, females scored 100% higher than males, implying that female were by far more capable of managing the environment than males. Among Non-HFLE students, however, both male and females scored 50% each, implying that there were no gender differentials in environmental management among those respondents.

5.6 Students Perceptions on Life Skills

Life skills are defined by the World Health Organization "as abilities for adaptive and positive behaviour that enable individuals to deal effectively with demands and challenges of everyday life" (WHO, 1997: 5). The core of life skills include: decision making, problem solving, creative thinking, critical thinking, effective communication, interpersonal relationship, self-awareness, empathy, coping with emotions, and stress management (Hill, 2009; and WHO, 1997).

In the survey, grade six students were provided with statements about some of the above mentioned life skills and were requested to circle the response that best reflected their choices, the results of which are indicated in Table 8 below.

Table 8: Students' scores on Life skills, by School Type and by Gender

Condition	MALES		FEMALES	
	HFLE schools	Non-HFLE	HFLE schools	Non-HFLE
Answering "always" to the following items				
When I have I decision to make:				
(1) I think about the different choices I could make***	37%	41%	47%	59%
(2) I think about the likely dangers of each choice before I make a decision	38%	43%	45%	55%
(3) I do all of the above**	29%	45%	34%	49%
When I think critically:				
(1) I ask several questions to get information	32%	36%	46%	39%
(2) I usually have more than one source of information before making a decision	37%	42%	41%	30%
(3) I do all of the above	32%	36%	34%	39%
When I communicate with others:				
(1) I try to see things someone else's way (or taking the other person's point of view)	20%	21%	19%	21%
(2) I am respectful even when I don't agree with what the person is saying	24%	42%	39%	39%
(3) I make eye contact	31%	25%	29%	28%
(4) I pay attention to what the other person is saying	37%	51%	49%	46%
(5) I do all of the above*	30%	36%	28%	43%
When solving a problem:				
(1) I first figure out exactly what the problem is	39%	51%	53%	59%
(2) I think about how all the possible solutions (choices) will affect my life	42%	45%	48%	45%
(3) I list the negative and positive consequences of each solution (choice)	33%	34%	30%	26%
(4) I compare each possible solution with the others to find the best one	30%	37%	42%	41%
(5) I do all of the above	30%	29%	28%	36%
When I am refusing to do something:				
(1) I make eye contact	18%	23%	25%	31%
(2) I say no firmly and clearly	26%	36%	46%	44%
(3) I give reasons for refusing	23%	43%	47%	39%
(4) I do all of the above	27%	27%	27%	32%
When resolving a conflict:				
(1) I listen to what others are saying without getting angry	33%	34%	36%	44%
(2) I can respect someone else's opinion even if he/she disagrees with me	31%	36%	44%	40%
(3) I make sure that everyone involved in the conflict is satisfied with the outcome	28%	34%	36%	44%
(4) I do all of the above	31%	30%	28%	31%

*Significant (p<.01; ** Significant (p<.003); *** Significant (p<.001)

Out of 22 items measuring skills for everyday living, Non-HFLE students scored higher than HFLE students in 18 (or 82%), contrary to expectations.

Among both HFLE and Non-HFLE students, females scored 17 out of 22 items (or 77%) higher than males students, implying that female respondents demonstrated superior life skills to those of male respondents.

6. Limitation of the study

The main limitation arose from the impact of external factors on students' knowledge and their responses to the survey questions. Some external factors, which were beyond the control of the study (including: social environment in which students lived, music and the media messages) had an impact on students' knowledge, thereby influencing their responses to some survey questions. This, in turn, made it difficult to assess the exact impact of the HFLE program in imparting knowledge to its recipients, in comparison with the Non-HFLE students on some indicators that could have been influenced by the above mentioned and other related external factors; especially eating and fitness and the management of the environment.

7. Conclusions

The first conclusion is that, overall, the HFLE program for grade six students in Jamaica has been successful. There is evidence to demonstrate that students from HFLE schools reported more positive attitudes and norms, greater knowledge and less risky behavior than students from their matched Non-HFLE schools. Out of 9 indicators utilized to measure the success of the HFLE program among grade six students, HFLE schools did better than Non-HFLE schools in 6 (or 67%).

The second conclusion is that the HFLE program has benefited female more than male students. In comparison with male students, females were more knowledgeable about HIV/AIDS, were less involved in physical fights and drug abuse, exhibited less risky sexual behaviour, were more likely to practice life style choices, were better informed about appropriate eating and fitness habits, were more likely to protect the environment, and had superior life skills. Part of the explanation for this may be the dominance of female teachers within the Jamaican school system, resulting into female students interacting more freely with female teachers when discussing some HFLE sensitive topics.

8. Recommendations

The first recommendation relates to the monitoring of the HFLE program. The under-performance of some HFLE schools on HFLE indicators raises issues relating to the implementation of the HFLE program in Jamaican schools. The HFLE schools that under-performed were either non-compliant or lacked necessary resources to implement the program. In either case, this calls for serious efforts in monitoring the implementation of the program by the MOE to ensure effective delivery of the program. The MOE needs to implement sanctions against non-compliant schools.

The second recommendation relates to the training of teachers for the HFLE program. It is recommended that this should be done at the Teachers' Training Colleges. This policy would enhance the aspiration of the MOE to implement the HFLE program to all schools in Jamaica. Moreover, training HFLE teachers at Teachers' Training College would promote a level of sensitivity about gender imbalance in schools and its impact on male students.

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