

Impact Evaluation of the *Bashy Bus* HIVPrevention Mobile Clinic in Jamaica¹

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Abstract

The Bashy Bus is a mobile clinic that provides HIV/AIDS/STI¹ information, skill-based counseling and services to vulnerable adolescents in Jamaica. Since 2006, the bus has been operating in four communities in Jamaica; selected on the basis of high HIV/STI prevalence levels. Three other communities, characterized by a high proportion of adolescents showing signs of being sexually active, were also selected to constitute a control group. Both the experimental and the control communities were surveyed in 2006 and 2008, using the same survey instrument, to establish the impact of the program over a two year period. The overall results were that adolescents surveyed from experimental communities in 2008 showed an improvement in comparison with those surveyed in 2006, implying that the impact of the program, over the two year period, was positive.

Keywords: Bashy bus, HIV/AIDS, mobile clinic, adolescents, communities

1. Introduction and Background

Although youth represent about 25% of the world population, about 40% of people newly infected with HIV/AIDS everyday world-wide are youth, aged 15-24 years (UNAIDS, 2007). Within Latin America and the Caribbean, about 50% of all new HIV/AIDS infections are youth, aged 15-24 years (Schutt-Aine and Maddaleno, 2003). In Jamaica, it is estimated that on average, 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 (Tara Thomas, 2006: 1-2). The above statistics, notwithstanding, risky sexual behavior among adolescents world-wide has continued unabated, calling for a special attention on HIV/AIDS prevention programs among the youth. To that end, at the International Conference on Population and Development (ICPD) in 1994, it was agreed that adolescent sexual and reproductive health becomes a top priority. This, in turn, led to the development of an integrated approach to reproductive health program of action, calling for universal access to family planning and for prevention and treatment of Sexual Transmitted Infections (STIs), including HIV (UN Population Fund, 1998).

In June 2001, at the first UN General Assembly Special Session (UNGASS) on HIV/AIDS, 189 countries signed the Declaration of Commitment as a pledge to halt and to reverse the spread of AIDS. The declaration stated that by the year 2005 at least 90% of youth (15-24 years) would have access to information about HIV transmission and prevention; and that by 2010 access to such information would increase to 95% (UNGASS, 2001). Unfortunately, however, as of 2007 only 40% male and 36% female youth world-wide were accurately informed about HIV transmission and prevention (UNGASS, 2008); calling further for more serious effort on implementing an integrated approach to promoting sexual health among youth.

The integrated approaches to promoting sexual health among youth fall into two main categories: (i) explicit, putting equal emphasis on both family planning and prevention of HIV and other STIs, and (ii) implicit, putting emphasis only on family planning (Allison Tombros, 2005: 2). The former will be our concern in this study. The explicit integrated approach is intended to help adolescents make healthy choices in order to attain healthy outcomes in adulthood. This requires at least four inter-related steps: setting up a program that addresses adolescents' sexual health holistically; making sure that the program is culturally specific and age-appropriate for the targeted adolescents; involving youth in developing and implementing the program; and promoting peer education within the program in order to enhance the required behavioral change among youth (Alford S et al. 2005; Mason H, 2003).

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¹ See Appendix for all acronyms and abbreviations used in this paper

Allison Tombros (2005) has provided a summary of three examples of explicit integrated programs to promote sexual health among youth. The first is the *TOP Reseau* (Best Network) in Madagascar, originally made up of 13 youth-friendly clinics established by Population Services International in 2001. In these clinics, affordable, confidential and high quality services were provided to youth by medical professionals, who themselves received comprehensive STI training. Since 2001, *Top Reseau* has expanded into many more clinics throughout Madagascar, with a common goal of preventing STIs and youth pregnancies through the promotion of correct and consistent condom use and encouraging treatment of STIs using medical professionals. The activities of the clinics have been further enhanced by a complimentary media campaign (Population Services International, 2004).

The second explicit integrated program to promote sexual health among youth is *Junto Decidimos* (Together We Decide) in Nicaragua, established in 2001 by the Nicaraguan Interagency Commission for Reproductive Health and John Hopkins Bloomberg School of Public Health Centre for Communications Programs. The program advocates for safer sex behavior among youth, including: abstinence, skills in communicating with partners and in negotiating the use of condoms. Both traditional and non-traditional (in bars and discos) distributions of condoms were utilized by the program, supplemented by a comprehensive media campaign to disseminate pertinent messages (John Hopkins Centre for Communications Programs, 2001).

The third explicit integrated program to promote sexual health among youth is the *Entre Nous Jeunes* (Among Youth) Peer Education Program in Cameroon, established in 2001 by the institute for Behavioral Research and Studies, in collaboration with the Population Council's Frontier in Reproductive Health program. The program sought to assess the extent to which peer education increased the level of youth's reliability on condoms to prevent STIs and pregnancy. Trained peer educators not only led discussions in youth service clubs and associations, but also worked with their peers to distribute holistic sexual health educational materials relating to: dating, friendships, sexuality, pregnancy prevention, abortion, HIV and other STIs (Speizer et al. 2001).

Within the Caribbean region, the integrated program to promote sexual health among youth has been the Caribbean Social Marketing (CARISMA) Project, Co-funded by the Germany Development Bank and the Canadian International Development Agency (CIDA) for prevention of HIV/AIDS and other STIs within the region. It is a multi-facet program to promote safer sex practices among high risk groups by supporting local social marketing organizations to increase access to affordable condoms. In addition, both mass media and interpersonal communications are utilized to increase preventive information and behavioral change with regard to HIV/STIs. By 2006 the activities of the program were spread in the following 13 Caribbean countries and territories: Belize, the Dominican Republic, Jamaica, Haiti, Antigua & Barbuda, Barbados, Dominica, Grenada, St. Kitts & Nevis, St. Maarten, St. Lucia, St. Vincent & Grenadines, and Trinidad & Tobago (CARICOM, 2006).

The case of the *Bashy Bus* HIV Prevention Mobile Clinic in Jamaica

Children First Agency (a non-governmental organization) in collaboration with the National HIV/AIDS Program (of the Jamaica Ministry of Health) and UNICEF Jamaica initiated, in 2006, the *Bashy Bus* project. This project is a mobile reproductive health clinic, with emphasis on HIV prevention among vulnerable adolescents in high HIV/STI prevalent communities located across three Jamaican parishes of St. Catherine, St. Ann and St. James. Within these three parishes, the bus travels to rural and inner-city communities, making stops at popular "hang out" spots frequented by hard-to-reach adolescents. The title of the project, "*Bashy Bus*", was conceived as a positive response to the negative phenomenon "sex on the bus" believed to have prevailed in Jamaica between some youth and transport operators. The *Bashy Bus* is a colorfully decorated bus, packed with youth facilitators and educators. The *Bashy Bus* Project has been ably described as follows (Bashy Bus Baseline Study Report, 2006: 2):

A safe space where young people can learn about sex and sexuality in a wholesome environment, free of abuse and exploitation, and where they access essential sexual and reproductive health services at low or no cost. Instead of creating a service and expecting youth to utilize it, the aim of the initiative is to meet young people where they are.

Among the vulnerable groups targeted by the *Bashy Bus* project are in-and out-of school adolescents that are prone to sex risky behavior, including unprotected and transactional sex, influenced by bad example prevalent within their communities. Using music to attract attention, the *Bashy Bus* peer educator (fondly known as the *Bashy Bus* Kru) engage their clients in friendly discussions about their sexual reproductive health and in imparting skills on sexual decision making, including condom use and delaying sexual initiation.

There is also a facility on the bus for confidential HIV testing and counseling, administered by a trained health professional. In 2006, UNICEF commissioned a study to establish baseline data and a monitoring framework for the design and delivery of the *Bashy Bus* project. The findings of that baseline study included the following: about half the respondents (48%, n= 452) were sexually active, most having had sex before they were 15 years old; among the sexually experienced, 37% of the girls and 29% of the boys did not use a condom during the most previous sexual encounter; 28% indicated involvement with multiple sex partners and 10% reported having experienced forced sex; overall, 73% of the respondents showed gaps in their understanding of safe sex and/or held popular sexual myths.

2. Objectives of this study

2.1: Major objective: To assess the extent to which the *Bashy Bus* HIV Prevention Clinic had been effective in impacting on the knowledge, attitude and behaviors of adolescents and young people within the targeted communities.

2.2: Specific objectives: According to the performance framework of the *Bashy Bus* project, within two years of its establishment the following objectives should be attained (Bashy Bus Baseline Study Report, 2006: 2):

- Increase in proportion of adolescents who correctly identify two (2) methods of HIV prevention and who reject three (3) sexual myths
- Increase in proportion of adolescents who demonstrate good risk assessment, sexual decision making skills and sexual health practices
- Increase in proportion of adolescents who are aware of and utilize other sexual reproductive health (SRH) services available.

3. Methodology

Methodologically, there are two main models for evaluating the impact of social interventions. The first, the before and after model, is based on a comparison of the same group before and after a specified period of the intervention. The second, the quasi-experimental model, is based on a comparison between the control and the experimental groups after the latter has received the intervention for a specified period of time (Peter Rossi and Freeman, 1989: 225-270). This study has utilized both models, as indicated below.

3.1: The Before and After Model: Under this model, comparisons are made between information about the behavior and/or condition being examined and similar information from an earlier time period (Rossi and Freeman, 1989: 229). For this study, a cohort longitudinal study was conducted whereby respondents of the 2008 survey were selected from the same sub-populations (cohorts) that had been utilized in the baseline *Bashy Bus* survey of 2006. As well, the same survey instrument was utilized in both surveys. The results from both surveys were then compared on the same indicators (identified in section 2.2 above), in order to establish whether or not there had been any changes within the studied sub-populations over the two year period. The sub-populations targeted by the 2008 survey were adolescents and young people from the following communities that had been surveyed in 2006 for the *Bashy Bus* baseline data: March Pen (St Catherine), Exchange and Bohemia (St. Ann) and Flankers (St. James). Adolescents from each of these four communities were interviewed by trained Interviewers from the reserve list of Statistical Institute of Jamaica (STATIN), on the basis of which data collected were compared with data collected in 2006.

3.2: The Experimental Model: In this model, the comparison is made between the subjects that have experienced the interventions (experimental group) and an equivalent group of those subjects that have not experienced the intervention (control group). In this study, the experimental groups were adolescents and young people from the four communities mentioned in 3.1 above, which were “predetermined based on the routes planned for visits by the *Bashy Bus* along major transport routes and high HIV/STI prevalence locations” (*Bashy Bus* Baseline Study Report, 2006: 4). The control group was made up of adolescents and young people from communities that were also studied in 2006 during the collection of data for the *Bashy Bus* baseline survey. These communities included: York Town (Clarendon), Lawrence Tavern (St Andrew) and Springfield (St. Thomas). As mentioned in the *Bashy Bus* Baseline Report (2006: 4) the selection of the above three communities was based on three criteria: a high proportion of young people in the community; a community in which residents had to leave in order to access basic services; and a community where young people showed signs of being sexually active. The major difference between the two groups is that the four experimental communities were all located on planned routes for visits of the *Bashy Bus*, while the three control communities were not on the *Bashy Bus* route.

A comparative analysis has been made between data collected from the two groups in order to establish whether or not there were differences that may be partly explained by the *Bashy Bus* impact.

4. Analysis of Findings

The basis for survey data analysis was to establish whether the *Bashy Bus* HIV Prevention Clinic had been effective in impacting on the knowledge, attitude and behaviors of adolescents and young people within the targeted experimental communities between 2006 and 2008. Apart from the comparison of survey data for 2006 and 2008, using cross-tabulation results, the analysis also sought to establish whether there were significant differences between these two sets of data. A chi-square (χ^2) test for two related sample was used to assess the level of significance.

4.1 Demographic Profile of Respondents in the Two Surveys

4.1.1 Location of respondents

Table 1: Location and Number of Respondents in the two Surveys

Location of respondents	2006 survey	2008 survey
March Pen (Spanish Town)	71	86
Exchange (Ocho Rios)	70	84
Bohemia (St. Ann rural)	70	86
Flankers (Montego Bay)	70	85
York Town (Clarendon)	70	85
Lawrence Tavern (St Andrew)	50	87
Springfield (St. Thomas)	51	87
Total	452	600

As indicated in Table 1, an attempt was made to increase the number of respondents from an average of 66 per studied community in 2006 to an average of 86 in the 2008 survey.

4.1.2 Gender: Females constituted the majority of respondents in both surveys, 53 % in 2006 (n=451) and 55% in 2008 (n=600).

4.1.3 Age Distribution: Although majority of the respondents in the 2006 survey were under 15 years of age (53%, n=451), in the 2008 survey this age group accounted for only 23% (n=600); leaving the age group 15 to 19 years with 77% of the respondents.

The main explanation for the lower number of younger adolescents (as provided by field interviewers of the 2008 survey) was the constant fear of kidnapping among younger adolescents. At the time of the survey, there were several reports of kidnappings and murders of young adolescents across Jamaica. Because of that fear, both parents and their respective young adolescents avoided any involvement with people they did not know, including interviewers in the 2008 survey. Thus, the age range of adolescents who were interviewed was 10 to 19 years old for the 2006 survey and 11 (only one) to 19 years old for the 2008 survey.

4.1.4 Occupation: Most respondents in both surveys were students: 77% (n=451) in 2006, and 71% (n=596) in 2008. Those who were employed constituted only 07% (n=451) in 2006 and 18% (n=596) in 2008. The rest were unemployed: 16% in 2006 and 11% in 2008.

4.1.5: Dependency status: Most respondents were dependent on others, including parents, relatives and friends for financial support (90% and 97% of the 2006 and 2008 surveys, respectively).

4.1.6 Social activities of respondents by age

Table 2: Social activities of respondents, by age group for both surveys

Activity	2006 Survey		2008 Survey	
	<15 years	15-19 years	<15 years	15-19 years
School *	157 (68%)	117 (40%)	84 (60%)	173 (38%)
Church	121 (50%)	064 (30%)	47 (34%)	090 (20%)
Youth club	096 (40%)	072 (34%)	28 (20%)	066 (14%)
Sports	110 (46%)	067 (32%)	64 (46%)	155 (34%)
Gang	009 (04%)	011 (05%)	08 (06%)	048 (10%)

*Significant (p<.001)

With the exception of gang activity, the younger adolescents (<15 years) were proportionally more involved than the 15-19 years age group in all social activities for both 2006 and 2008 surveys. The most popular activities for all age groups in both surveys were school-based (56% for 2006 survey and 43% for the 2008 survey), which was statistically significant ($p < .001$). The least popular activity was hanging out with a gang (04% for the 2006 survey and 09% for the 2008).

4.1.7 People respondents were living with at the time of the survey

Table 3: Living status of respondents, by age group

Who they lived with	2006 Survey		2008 Survey	
	<15 years	15-19 years	<15 years	15-19 years
Mother	115 (75%)	100 (67%)	103 (75%)	303 (68%)
Father & mother *	070 (81%)	050 (82%)	066 (47%)	163 (35%)
Father	016 (19%)	011 (18%)	087 (64%)	206 (46%)
Step parent	035 (15%)	024 (11%)	023 (32%)	042 (15%)
Friend	004 (02%)	004 (02%)	002 (01%)	029 (07%)
Alone	0	008 (04%)	0	29 7%)

*Significant ($p < .000$)

As would be expected, the level of respondents living with both parents was higher among the younger adolescents (<15 years) than among the older adolescents (15-19 years). Those living with mother among the younger adolescents were 75% for both the 2006 and the 2008 surveys. For the older adolescents, those living with mothers were 67% for the 2006 survey and 68% for the 2008 survey.

4.1.8 Source of financial support to respondents

Table 4: Source of financial support to respondents, by age group

Sources of support	2006 Survey		2008 Survey	
	9-17 years	18 + years	11-17 years	18 + years
Employed *	5 (01%)	26 (35%)	20 (05%)	86 (47%)
Hustling	8 (02%)	08 (11%)	23 (06%)	18 (10%)
Dependent	363 (97%)	41 (54%)	364 (89%)	78 (43%)
Total	376 (100%)	75 (100%)	407 (100%)	182 (100%)

*Significant ($p < .000$)

In Jamaica, most adolescents exit the secondary school system after becoming 17 years old. As indicated in Table 4, the level of financial dependence decreases after the adolescent leaves school. Whereas the level of dependence among adolescents of 17 years and below was 97% and 89% in the 2006 and 2008 surveys, respectively, it decreased to 55% and 43%, respectively, in both surveys among the adolescents of 18 years and over. Moreover, as expected, adolescents who were either working or hustling were mostly from the age group 18 years and over.

4.2 Respondents' Knowledge of SRH and Use of Services

4.2.1 Knowledge about where to get advice, counseling or treatment

A list of situations was read to the respondents who were subsequently asked if they knew where in Jamaica they could go or call to get advice, counseling or treatment. Table 5 below shows the results for the two surveys.

Table 5: Would you know where to get help in the following situations?

Possible needs	Yes for 2006 Survey	Yes for 2008 Survey
Relationship with parent	43% (n=451)	44% (n=600)
Personal relationships	42%	38%
STI/AIDS infection	64%	51%
Forced sex encounter	55%	53%
Sexual molestation	65%	51%

Adolescents who participated in both surveys were least aware of where they could seek help for personal relationships and their relationships with their parents. Overall, respondents in the 2006 survey demonstrated a higher level of awareness of where to seek help in case of need than respondents in the 2008 survey.

4.2.2 Perceived Needs for SRH Services

A list of situations was read to the respondents, who were then asked if they felt, within the previous 12 months leading to the time of the interview, the need to get help and from where or who. Table 6 shows the results for both surveys.

Table 6: Perceived needs, by help sources and by age groups

Needs	Help source	2006 Survey		2008 Survey	
		<15 years	15-19 years	<15 years	15-19 years
Relationship with parents	Did not get help	15 (37%)	13 (30%)	06 (18%)	12 (15%)
	Family	16 (39%)	8 (19%)	08 (24%)	11 (14%)
	Friends	02 (05%)	05 (12%)	06 (18%)	21 (26%)
	Counselors	05 (12%)	10 (23%)	12 (35%)	29 (36%)
	Police	03 (07%)	02 (05%)	0	0
	Church	0	05 (12%)	02 (05%)	8 (09%)
Total		41 (100%)	43 (100%)	34 (100%)	81 (100%)
Personal relationships	Did not get help	01 (08%)	07 (28%)	05 (23%)	16 (18%)
	Family	07 (58%)	10 (40%)	06 (27%)	30 (34%)
	Friends	01 (08%)	06 (24%)	06 (27%)	29 (32%)
	Counselors	01 (08%)	01 (04%)	05 (23%)	14 (16%)
	Police	01 (08%)	0	0	0
	Didn't specify	01 (08%)	01 (04%)	0	0
Total		12 (100%)	25 (100%)	22 (100%)	89 (100%)
STI/HIV treatment	Did not get help	07 (50%)	08 (29%)	01 (20%)	08 (19%)
	Family	02 (14%)	02 (07%)	0	08 (19%)
	Friend	0	0	01 (20%)	05 (11%)
	Counselors	0	0	0	04 (09%)
	Health professionals	05 (36%)	18 (64%)	03 (60%)	18 (42%)
Total		14 (100%)	28 (100%)	05 (100%)	43 (100%)
Family planning	Did not get help	12 (41%)	08 (24%)	01 (20%)	05 (09%)
	Family	04 (14%)	03 (09%)	01 (20%)	03 (05%)
	Friends	02 (07%)	04 (12%)	02 (40%)	02 (03%)
	Counselors	02 (07%)	0	0	04 (07%)
	Health Professionals	09 (31%)	18 (55%)	01 (20%)	44 (76%)
Total		29 (100%)	33 (100%)	05 (100%)	58 (100%)
Sex for money pressure	Did not get help	03 (43%)	04 (57%)	01 (17%)	05 (28%)
	Family	01 (14%)	01 (14)	0	03 (16%)
	Friends	02 (29%)	02 (29%)	02 (33%)	04 (22%)
	Police	0	0	03 (50%)	01 (06%)
	Counselors	0	0	0	04 (22%)
	Health professionals	01 (14%)	0	0	01 (06)
Total		07 (100%)	07 (100%)	06 (100%)	18 (100%)
Domestic violence/abuse	Did not get help	02 (18%)	0	03 (33%)	01 (05%)
	Family	03 (27%)	03 (60%)	0	06 (30%)
	Friends	0	01 (20%)	01 (11%)	06 (30%)
	Counselors	02 (18%)	0	04 (45%)	03 (15%)
	Police	04 (36%)	0	01 (11%)	03 (15%)
	Church	0	01 (20%)	0	01 (05%)
Total		11 (100%)	05 (100%)	09 (100%)	18 (100%)

Adolescents in the 2008 survey generally demonstrated a higher ability than those in the 2006 survey on seeking help from relevant professionals. For problems relating to parents, 35% of younger adolescents (<15 years) and 36% of the 15-19 year olds sought help from counselors in the 2008 survey, compared to 12% and 23%, respectively for the same age groups in the 2006 survey.

Although most respondents from both surveys sought help from family members when dealing with problems relating to personal relationships, still 23% of the young adolescents and 16% of older adolescents in the 2008 survey sought help from counselors compared to 8% and 4%, respectively, in the 2006 survey.

For problems relating to STI/HIV and to family planning, most adolescents of all ages from both surveys sought help relevantly from health professionals. This choice was more pronounced in the 2008 survey than in the 2006 survey.

Results in Table 6 illustrate the attainment of the third objective of the Bashy Bus project, which was that within two years of its establishment, there should be an increase in proportion of adolescents who are aware of and utilize local sexual reproductive health (SRH) services available (Bashy Bus Baseline Study Report, 2006: 2).

4.3 Gaps in SRH Knowledge

4.3.1 Safer sex ideas

In assessing the knowledge and perceptions of adolescents on safer sex, respondents in both surveys of 2006 and 2008 were asked whether taking the following actions would help prevent sexual transmitted infections (STIs):

1. having sex with one person (one sex partner)
2. having sex with a faithful partner (only has sex with me)
3. using condom every time (consistent condom use)

In the 2006 survey, 67% of adolescents studied (n=451) incorrectly assessed at least one of these three ideas. In the 2008 survey, this incorrect assessment was reduced to 52% (n=600), a reduction of 15 percentage points. Moreover, adolescents who incorrectly assessed all three safer sex ideas (high risk) in the 2006 survey were 32%. In the 2008 survey the corresponding figure was a mere 1%, a reduction of 31 percentage points.

4.3.2 Sexual health myths

Respondents' perceptions towards three common sexual health myths were also tested in both surveys. The myths relating to steps to prevent STI/HIV transmission were:

1. make sure sexual partner looks healthy
2. avoid holding hands with someone who has HIV
3. avoid having sex with adults (over 19 years old)

While 32% of adolescents studied in the 2006 survey (n=451) rejected all the three myths, this level of rejection increased to 49% (n=600) in the 2008 survey; an increase of 17 percentage points. As well, while 8% of adolescents in the 2006 survey accepted two or more of the three myths, this level was reduced to 4% in the 2008 survey. Results in sections 4.3.1 and 4.3.2 above illustrate the attainment of the first objective of the Bashy Bus project, which was that within two years of its establishment, there should be an increase in proportion of adolescents who correctly identify two methods of HIV prevention and who reject three sexual myths (Bashy Bus Baseline Study Report, 2006: 2).

4.4 Risk in Sexual Attitude and Behaviour

4.4.1 Willingness to engage in sex

To measure sexual readiness, respondents were asked to indicate whether they agreed, disagreed or were not sure with respect to the following statement: "I think it is okay for me to have sex".

Table 7: Respondents' readiness to have sex, by gender for 2008 survey

I think it is okay for me to have sex	Male	Female
I Agree	152 (60% , n=253)	126 (39% , n=319)
Not sure	43 (17%, n=253)	79 (25%, n=319)
I disagree	58 (23%, n=253)	114 (36% , n=319)

Results in Table 7 indicate that male respondents were more willing than females to have sex, which is consistent with results for the 2006 survey. In relation to age, among respondents of less than 15 years, 56% (n=135) disagreed with the statement. On the other hand, only 23% of the 15-19 year olds (n=452) disagreed with the statement. These results are also consistent with those of the 2006 survey, which found that "older teenagers (15-19) were more ready than their younger peers" to engage in sexual activity (Bashy Bus Baseline Study Report, 2006: 21).

4.4.2 Sexual experience

The adolescents studied in both surveys were asked if they had engaged in sex and, if so, when. Tables 8 and 9 show the results, stratified by gender and age, respectively.

Table 8: Sexual experience of adolescent, by gender

Sexual experience	2006 Survey		2008 Survey	
	Male	Female	Male	Female
Had sex in last 12 months	100 (48%)	73 (31%)	138 (53%)	152 (47%)
Had sex before last 12 months	28 (14%)	12 (05%)	029 (11%)	53 (16%)
Never had sex before	78 (38%)	150 (64%)	92 (36%)	120 (37%)
All adolescents	206 (100%)	235 (100%)	259 (100%)	325 (100%)

In both surveys, male adolescents were more sexually active than females. In the 2008 survey, 53% of the males (n=259) and 47% of the females (n=325) had had sex within the previous 12 months. In the 2006 survey, 48% of the males and 31% of females had done the same; implying that sexual activity has increase over the last two years, especially among female adolescents.

Table 9: Sexual experience of adolescent, by age for the two surveys

Sexual experience	2006 Survey		2008 Survey	
	< 15 yrs.	15-19 yrs.	<15 yrs.	15-19 yrs.
Had sex in last 12 months*	38 (16%)	137 (65%)	26 (19%)	271 (59%)
Had sex before last 12 months	10 (04%)	31 (15%)	07 (05%)	77(17%)
Never had sex before	192 (80%)	43 (20%)	107 (76%)	111 (24)
All adolescents	240 (100%)	211 (100%)	140 (100%)	459 (100%)

*Significant (p<.000)

As expected, younger adolescents (<15 years) were less sexually active than the older ones (15-19 years) in both surveys. Among the 15-19 year olds, there was a decrease in level of sexual activity from 65% in 2006 to 59% in 2008.

4.4.3 Sexual experience and use of condom

Table 10: Comparing Findings of Baseline Study and the 2008 Survey

Indicator	2006 Survey	2008 Survey
Sexual experience by age 19		
Females	36%	68%
Males	62%	81%
Mean age of sexual initiation		
Females	14.9 years	17.1 years
Males	11.8 years	13.9 years
Condom use at first sex by gender		
Females	80%	48%
Males	33.6%	44%
Condom use at first sex by age		
< 15 years	40%	31%
15-19 years	57%	47%
Condom use at last sex with partner by gender		
Females	61.6	67%
Males	80.4	69%
Condom use at last sex with partner by age		
< 15 years	52%	61%
15-19 years	72%	69%
Condom use at last sex with non-main partner		
Females	54.1	74%
Males	77.3	88%
Fertility outcomes for females 15-19 years		
Ever pregnant before	10%	31%
Unplanned pregnancy by mothers 15-19	94%	84%

Although figures for the 2008 survey tended to be higher than those for the 2006 survey on most indicators, the findings of the two surveys were generally consistent. The only exception is condom use at first sex by female, which declined from 80% in 2006 to 48% in 2008. A possible explanation for this drastic decline is the small number of younger adolescent (less than 15 years) in the 2008 survey (only 23%, n=600) compared to 53% (n=451) in the 2006 survey. Since younger adolescents are less likely to use condom at first sex than their elder peers (Bashy Bus Baseline Report, 2006: 22), their reduced number in the 2008 survey may be responsible for the above noted decline.

4.4.4 Vulnerability and sexual decision making

Vulnerability to some risky sexual behaviour such as transactional sex was associated with age differences between sexual partners and dependence on the partner for money. Manifestation of vulnerability was measured using the following indicators: females' attitude to condom negotiation, incidence of forced sex and susceptibility to sex for money pressures. Tables 11 through 13 show results.

Table 11: Dependence on sexual partner for money, by condom negotiation

Condom negotiation attitude by females	Dependence on sexual partner for money 2006			Dependence on sexual partner for money 2008		
	Most times	Not often	No, I don't	Most times	Not often	No, I don't
Submit to partner most times*	30%	13%	04%	28%	17%	04%
Submit to partner sometimes	30%	07%	06%	30%	39%	26%
No condom, NO SEX	40%	80%	90%	42%	44%	70%
N	20	15	51	43	48	89

*Significant (p<.001)

The results from the two surveys are consistent with each other. In both surveys, female adolescents who did not depend on their respective sexual partners for money were the least to submit to their partners for sex; a percentage correlation between "I don't depend on partner for money" and "I submit to partner most times" was a mere 4% in both surveys. On the other hand, those adolescents that were dependent on their partners for money most of the time were the most likely to submit to their partners for sex: 30% in the 2006 survey and 28% in the 2008 survey. The computed figures for male adolescents on this and other subsequent relationships were too small to make any meaningful analysis.

Table 12: Money dependence on sexual partner, by forced sex encounter

Forced sex encounter for female adolescents	Dependence on sexual partner for money 2006			Dependence on sexual partner for money 2008		
	Most times	Not often	No, I don't	Most times	Not often	No, I don't
Had forced sex	60%	20%	22%	38%	27%	32%
Never had forced sex	40%	80%	78%	62%	73%	68%
N	20	15	50	48	93	186

For those adolescents who were dependent on their sexual partners for money most of the time, the level of forced sex declined, over the two year period, from 60% in the 2006 survey to 38% in the 2008 survey.

Table 13: Mixed Age among respondents, by female condom negotiation

Condom negotiation	2006 Survey		2008 Survey	
	younger partner	Older partner	Younger partner	Older partner
Submit to partner most times	07%	22%	12%	17%
Submit to partner sometimes	11%	15%	37%	40%
No condom, NO SEX	82%	63%	51%	43%
N	54	27	74	48

In both surveys, the greater the age differences between sexual partners the weaker the negotiation by female adolescents to use condoms when their partners did not want to. However, there was a reduction over the two year period. In the 2006 survey, 22% of females with older partners submitted to partner most times, compared to 17% in the 2008 survey.

Table 14: Mixed Age among respondents, by female forced sex encounters

Forced sex encounter among female adolescents	2006 Survey		2008 Survey	
	younger partner	Older partner	younger partner	Older partner
Had forced sex*	28%	41%	19%	36%
Never had forced sex	72%	59%	81%	64%
N	54	27	74	50

*Significant ($p < .05$)

In the 2006 survey 41% of female adolescent with older partners had forced sex encounters compared to 28% of female adolescents with younger partners. In the 2008 survey, the corresponding figures were 36% and 19%, respectively. Overall, results in Table 14 indicate that levels of forced sex encounters had declined over the two year period ($p < .05$).

Results in Tables 11 through 14 illustrate the attainment of the second objective of the *Bashy Bus* project, which was that within two years of its establishment, there should be an increase in proportion of adolescents who demonstrate good risk assessment, sexual decision making skills and sexual health practices.

5. Overall recommendations arising from the study

Given the success of the *Bashy Bus* project within its first two years of establishment, the first recommendation is that the initiative should be expanded to cover more communities across Jamaica, in order to help adolescents to help themselves in the fight against HIV/AIDS and other sexual transmitted infections, as well as unplanned pregnancies. Moreover, it could be the case that if this intervention was attempted in other developing countries, under similar circumstances, the effort to prevent the spread of the HIV virus may prove helpful.

Second, as the services of the *Bashy Bus* are expanded across Jamaica, all service providers should develop easy to understand and short customer service survey instruments for collecting feedbacks, on a regular basis, from adolescents about services being provided. This would provide to clients both a voice and a realization that their opinions are vital in decision making relating to services they receive. Failure to consult with clients on a regular basis may have disastrous consequences, including an apathetic clientele that often leads to complacency on the part of service providers.

Third, for purposes of future impact assessment of the *Bashy Bus* project, the survey instrument to measure levels of change over time should remain the same, in order to enhance both reliability and validity of the assessment. In some instances, questions measuring same indicators in the surveys of 2006 and 2008 were put differently, thus, making the comparison of results difficult.

Fourth, the level of awareness among adolescents about the *Bashy Bus* project during the 2008 survey was quite low (23%, $n=600$) even within communities that are on its route. It is, thus, recommended that awareness campaign about the *Bashy Bus* project be launched within communities on its route through newspapers, talk-back radio programs and seminars in order to reach as wide an audience as possible, thereby making the project more effective.

Finally, the impact assessment of the *Bashy Bus* Project should be conducted at regular intervals of every two years, as a means of monitoring the progress of the Program.

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Appendix: Acronyms and Abbreviations

AIDS	Acquired Immune Deficiency Syndrome
ARH	Adolescent Reproductive Health
ASRH	Adolescent Sexual and Reproductive Health
HIV	Human Immune-deficiency Virus
CARICOM	Caribbean Community
CARISMA	Caribbean Social Marketing
CIDA	Canadian International Development Agency
ICPD	International Conference on Population and Development
ISES	Institute of Social and Economic Studies
MOH	Ministry of Health
PAHO	Pan American Health Organization
PANCAP	Pan-Caribbean Partnership Against AIDS
SRH	Sexual and Reproductive Health
STATIN	Statistical Institute of Jamaica
STD	Sexual Transmitted Disease
STI	Sexual Transmitted Infection
UN	United Nations
UNAIDS	United Nations Program on HIV-AIDS
UNGASS	United Nations General Assembly Special Session
UNICEF	United Nations Children's Fund