High Risk Health Behaviours among Adult Jamaicans

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ABSTRACT

The purpose of this study was to assess the prevalence of high risk health behaviours among adult Jamaicans aged 15–49 years in 2000, and to compare the results with the 1993 survey. A nationally representative sample of 2013 persons aged 15–74 years was surveyed in 2000 using cluster sampling in the Jamaica Healthy Lifestyle Survey (Wilks et al, unpublished). Interviewer administered questionnaires and anthropometrical measurements were done. Data for a sub-sample of adults aged 15–49 years were analyzed. The sub-sample included 1401 persons (473 men and 928 women). Significantly more men (18.6%) than women (4.3%) reported never having had a blood pressure check (p = 0.0001). Approximately one-third of the women reported that they had never had a Pap smear (36.0%) or a breast examination (31.2%). Current cigarette smoking was reported in 28.6% of men and 7.7% of women (OR 3.73 CI 2.71, 5.15), while 49.0% of men and 15.0% of women ever smoked marijuana (OR 3.28 CI 2.56, 4.20). Significantly more men (28.0%) than women (11.7%) reported ever having a sexually transmitted disease (OR 2.93 CI 2.16, 3.97); having more than one sexual partner in the past year (49.1% vs 11.4%, OR 4.31 CI 3.22, 5.76) and usually using a condom during sexual intercourse (55.3% vs 40.5%, OR 1.3 CI 1.11, 1.68). Between 1993 and 2000, significant trends include: more persons reported having a blood pressure check, a reduction in multiple sexual partners, increased condom use at last sex (women), reduced crack/cocaine use (males) and increased marijuana smoking. Although there were some significant positive lifestyle trends between 1993 and 2000, high risk behaviours remain common among Jamaican adults. Comprehensive health promotion programmes are needed to address these risk behaviours.

Conductas de Alto Riesgo para la Salud entre los Adultos Jamaicanos

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RESUMEN

El propósito de este estudio fue evaluar la prevalencia de conductas de alto riesgo para la salud entre adultos jamaicanos comprendidos en las edades de 15 a 49 en el año 2000, y comparar los resultados con la investigación realizada en 1993. Una muestra nacional representativa de 2013 personas comprendidas en las edades de 15 a 74 años, fue sometida a investigación en el 2000, usando el muestreo por cluster del Jamaica Healthy Lifestyle Survey (Wilks et al, inédito). Se realizaron entrevistas en forma de cuestionarios, así como mediciones antropométricas. Se analizaron los datos de una sub-muestra de adultos entre edades de 15 a 49 años. La sub-muestra incluyó 1401 personas (473 hombres y 928 mujeres). Un número de hombres significativamente mayor (18.6%) que el de las mujeres (4.3%) reportaron no haber tenido nunca un chequeo de la presión (p = 0.0001). Aproximadamente un tercio de las mujeres reportó no haberse hecho nunca la prueba citológica (36.0%) o el examen de mamas (31.2%). El hábito actual de fumar cigarrillos fue reportado en el 28.6% de los hombres y el 7.7% de las mujeres (OR 3.73 CI 2.71, 5.15), mientras que el 49.0% de los hombres y el 15% de las mujeres nunca fumó marihuana (OR 3.28 CI 2.56, 4.20). Significativamente más hombres (28.0%) que mujeres (11.7%) reportaron no haber tenido nunca enfermedades de transmisión sexual (OR 2.93 CI 2.16, 3.97); haber tenido más de una pareja sexual en el año anterior (49.1% vs 11.4%, OR 4.31 CI 3.22, 5.76), y usar comúnmente condón durante el acto sexual (55.3% vs 40.5%, OR 1.3 CI 1.11, 1.68). Entre 1993 y 2000, las tendencias significativas incluyen lo siguiente: más personas reportaron el chequeo de la presión sanguínea, una reducción en las parejas sexuales múltiples, el aumento del uso de condones en el último acto sexual (mujeres), la reducción en el uso de crack/cocaína (hombres), y aumento en el consumo de marihuana para fumar. Aunque hubo algunas tendencias positivas significativas en cuanto al estilo de vida entre 1993 y el 2000, los comportamientos de alto riesgo siguieron siendo comunes entre los adultos jamaicanos. Se necesitan programas generales de la promoción de la salud para abordar estas conductas de alto riesgo.

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INTRODUCTION

The health of Jamaicans has improved considerably over the past century (1). The main burden of disease is now due to chronic diseases and HIV/AIDS (2-4). While health gains must be maintained, a new vision of health is needed to guide our approach to addressing the challenges of the 21st century (1, 5). A previous study recommended that "These strategies need to address changes in the way people live and behave. Individual persons and populations as a whole have to be motivated to change well established habits and customs, to reduce risk taking and adopt healthy lifestyles and appropriate health-seeking behaviour" (6).

In 1993, a behaviour risk factor survey was conducted in Jamaica to provide a baseline for tracking health-related behaviours in the adult population (6). The survey included self-reported data on health-seeking behaviour, chronic diseases, substance abuse, injuries and violence and reproductive health. The survey found a high prevalence of self-reported hypertension (with 62% not on treatment), of heavy alcohol use by men, of possible obesity among women and of sexually transmitted disease (STD). Injuries and violence were common and many persons carried a weapon. Many men reported multiple sexual partners while condom use was highest among young adults (6).

During the 1990s, the Ministry of Health took steps to put greater emphasis on health promotion as well as prevention of risk factors associated with chronic diseases and injuries. A Division of Health Promotion and Protection has been established in the Ministry of Health and a strategic plan for health promotion developed for which funding is being sought. Comprehensive measures to reduce cigarette smoking have been prepared but not yet implemented as they are being reviewed by a select joint committee of Parliament. A system of injury surveillance has been introduced and an advisory committee of experts set up to guide the development of preventive measures. There have been a number of initiatives to promote healthy lifestyles; however, significant resources and behaviour change campaigns have dealt primarily with respect to the promotion of safe sex and control of HIV/AIDS and other sexually transmitted infections.

During 2000, another population based survey "The Jamaica Healthy Lifestyle Survey" was conducted by Wilks *et al* (7). This report details the findings related to health-seeking behaviour, substance abuse and reproductive health, and compares the results to the 1993 survey.

SUBJECTS AND METHODS

A nationally representative sample of 2013 persons aged 15–74 years was surveyed in 2000 using cluster sampling and in consultation with the Statistical Institute of Jamaica (STATIN). The systematic random sampling method was used to draw 56 Enumeration Districts (ED's) based on STATIN's labour force sample of 478 ED's. The sample was weighted by parish size. Within each ED, 36 persons were selected using a map and proceeding house to house in a clockwise direction from a designated starting point. Only one person *per* household was selected using the Kish Random Selection Method (8). If the randomly selected household member declined to participate, this would be counted as a non-response and the next household would be visited to recruit a participant. If respondents were unavailable, a minimum of three callbacks was made before moving to another household. Field supervisors and staff were recruited from among health staff in the Government service.

Table 1: Age distribution of participants by gender (2000 Survey)

Age (yr)	Males		Females		Total	
	No	%	No	%	No	%
15 – 19	74	15.7	94	10.1	168	12.0
20 – 24	70	14.8	152	16.4	222	15.8
25 – 29	71	15.0	168	18.1	239	17.1
30 – 39	135	28.5	324	34.9	459	32.8
40 – 49	123	26.0	190	20.5	313	22.3
Total	**473**	**100**	**928**	**100**	**1401**	**100**

The protocol and supporting documents were reviewed and approved by the Ethical Committees of The University Hospital of the West Indies (UHWI)/The University of the West Indies (UWI) Faculty of Medical Sciences and the Ministry of Health. Written informed consent was obtained from each participant. At recruitment, a questionnaire and, in some cases, anthropometrics and blood pressure were done. The questionnaire was pre-tested. Test – retest reliabilities were good (85%–100%) except for questions eliciting disease episodes among relatives of subjects (33%–50%). All questionnaires were checked and coded by field supervisors prior to submission. Data were double-entered and validated.

For this report, the data set was limited to persons aged 15–49 years. Frequencies and cross tabulations were prepared and the chi squared test for significance or test for trend performed using Epi Info Version 6 (9). Logistic regression was done using Stata (10). The study was adequately powered. For instance, the estimated power to show a 3% change in the proportion of women ever smoking in 2000 compared with 1993 (10%), given a sample size of 928 (two sided alpha = 0.05) was between 83% and 90%. Among men, the estimated power for showing an 8% difference in ever smoking in 2000 compared with 1993 (37.8%), given a sample size of 473 (two sided alpha = 0.05) was between 94% and 96%.

RESULTS

Characteristics of the sample

The survey included 473 males and 928 females, a total of 1401 persons. Table 1 gives the age distribution by gender of

Table 2: Age-specific prevalence rates of current cigarette smoking in 1993 and 2000, by gender

	1993 Survey			2000 Survey		
Age (yr)	**No of smokers**	**Total**	**%**	**No of smokers**	**Total**	**%**
MALES						
15 – 19	6	59	10.2	8	74	10.8
20 – 24	25	100	25.0	13	69	18.8
25 – 29	31	74	41.9	23	69	33.3
30 – 39	44	115	38.3	41	133	30.8
40 – 49	37	93	39.8	48	120	40.0
Total	**143**	**441**	**32.4**	**133**	**465**	**28.6***
FEMALES						
15 – 19	0	68	0.0	1	94	1.1
20 – 24	4	96	4.2	13	152	8.5
25 – 29	8	100	8.0	11	168	6.5
30 – 39	15	147	10.2	28	324	8.6
40 – 49	18	89	20.2	18	189	9.5
Total	**45**	**500**	**9.0**	**71**	**927**	**7.7+**

* p = 0.21 2000 survey compared with 1993
+ p = 0.38

Table 3: Age-specific prevalence rates of ever smoking marijuana in 1993 and 2000, by gender

	1993 Survey			2000 Survey		
Age (yr)	**No of smokers**	**Total**	**%**	**No of smokers**	**Total**	**%**
MALES						
15 – 19	12	58	20.7	23	73	31.5
20 – 24	41	102	40.2	40	69	58.0
25 – 29	31	74	41.9	32	69	46.4
30 – 39	50	118	42.4	70	132	53.0
40 – 49	35	95	36.8	62	119	52.1
Total	**169**	**447**	**37.8**	**227**	**462**	**49.0***
FEMALES						
15 – 19	6	67	9.0	7	94	7.4
20 – 24	9	97	9.3	29	150	19.3
25 – 29	15	101	14.9	30	167	18.0
30 – 39	11	146	7.5	45	318	14.1
40 – 49	9	88	10.2	26	187	13.9
Total	**50**	**499**	**10.0**	**137**	**916**	**15.0+**

* p = 0.0003 2000 survey compared with 1993
+ p = 0.0044

the persons surveyed. Of the sample, 32.9% were aged 20–29 years, 32.8% were 30–39 years, 22.3% were 40–49 years and 12.0% were under 20 years of age. The majority of participants (51.4% of males, 59.9% of females) had achieved secondary education; 40.0% of males and 31.2% of females had primary education and a minority (8.6% of males, 8.9% of females) had tertiary education. Significantly more women than men (50.7% *vs* 39.4%, $p < 0.001$) actively practised religion. Using a 10 point scale based on the interviewer's assessment of the respondent's socio-economic status, 34.3% of the samples were found to be poor, 43.1% of lower middle class, 20.4% upper middle class and 2.2% upper class.

Health-seeking behaviour

Significantly more men (86/463 or 18.6%) than women (40/927 or 4.3%); ($p < 0.0001$) reported that they had never had their blood pressure taken by a health professional. Among those reporting having had their blood pressure checked, significantly more women (153/883 or 17.3%) than men (35/371 or 9.4%) said they were told that they suffered from high blood pressure ($p = 0.0002$). Of the persons who reported being diagnosed with high blood pressure, 51/148 (34.5%) of women and 10/33 (30.3%) of men said they were currently taking prescribed blood pressure medication ($p = 0.32$). Between 1993 and 2000, the proportion of persons reporting never having had their blood pressure checked declined significantly among both men (26.2% to 18.6%, $p = 0.0029$) and women (9.1% to 4.3%, $p = 0.0001$).

More women (43/921 or 4.7%) than men (13/459 or 2.8%); ($p = 0.052$) reported that they had been told by a health professional that they had diabetes mellitus. Of these persons, 24/43 or 55.8% of the women and 9/13 or 69.2% of the men ($p = 0.19$) said they were currently taking prescribed medication for diabetes mellitus. There were no significant differences in the findings between 1993 and 2000.

Approximately one-third of the women in 2000 reported that they had never had a Pap smear (36.0%) or a breast examination (31.2%) by a health professional compared with 40.3% ($p = 0.12$) and 29.0% ($p = 0.39$) respectively in 1993. As many as 76.8% of men reported that they never had a rectal examination in 2000 compared with 78% in 1993.

Cigarette smoking

Significantly more men (28.6%) than women (7.7%) were current cigarette smokers (OR 3.73 CI 2.71, 5.15) in 2000 (Table 2). Among men, there was a significant association between current cigarette smoking and age. Male smokers were significantly more likely to be poor, less educated and to not actively practice a religion. Among women, current cigarette smokers were significantly less likely to actively practice religion than were non-smokers (OR 2.86 CI 1.77, 4.64). There were small, non-significant declines in the prevalence of cigarette smoking among both males and females between 1993 and 2000.

Marijuana smoking

Significantly more men (49.0%) than women (15.0%) reported ever smoking marijuana (OR 3.28 CI 2.56, 4.20) in

Table 4: Age-specific prevalence rates of ever having had an STD, by gender (2000 survey)

Age (yr)	Males			Females		
	No	Total	%	No	Total	%
15 – 19	2	56	3.6	4	62	6.5
20 – 24	7	63	11.1	21	148	14.2
25 – 29	21	69	30.4	25	160	15.6
30 – 39	47	131	35.9	35	314	11.1
40 – 49	45	117	38.5	17	185	9.1
Total	**122**	**436**	**28.0**	**102**	**870**	**11.7**

Table 5: Age-specific prevalence rates of having multiple sex partners in the past year among sexually active persons (2000 Survey), by gender

Age (yr)	Males			Females		
	No	Total	%	No	Total	%
15 – 19	20	42	47.6	10	49	20.4
20 – 24	32	51	62.7	14	139	10.1
25 – 29	38	66	57.6	23	149	15.4
30 – 39	56	118	47.5	30	282	10.6
40 – 49	44	110	40.0	10	144	6.9
Total	**190**	**387**	**49.1**	**87**	**763**	**11.4**

2000 (Table 3). Both males and females aged 15–19 years were significantly less likely to have ever smoked marijuana than were older persons. Among both men and women ever smoking marijuana was significantly associated with low socio-economic status and low educational level (data not shown). Ever smoking marijuana was significantly associated with not actively practising religion in women (OR 2.53 CI 1.75, 3.66) and of borderline significance in men (OR 1.31 CI 0.95, 1.79). Overall, a significantly higher proportion of both males ($p = 0.0003$) and females ($p = 0.0044$) reported ever smoking marijuana in 2000 compared with 1993. In the 2000 survey, of those persons who reported that they had smoked marijuana at some point 114/226 (50.4%) of males and 33/136 (24.3%) of females said they were current smokers. Thus 24.7% of men and 3.6% of women were current marijuana smokers in 2000.

Crack/Cocaine use

There was no significant difference in crack/cocaine use between men (2/463 or 0.4%) and women (2/927 or 0.2%) ($p = 0.6$) in 2000. The proportion of men reporting crack/cocaine use in 1993 (10/452 or 2.2%) was significantly higher than in 2000 ($p = 0.009$). There was no change in prevalence of crack/cocaine use in women between 1993 (1/496 or 0.2%) and 2000.

Table 6: Number of sex partners (proportions within gender) in 1993 and 2000, by gender

Number of partners within past year	1993 Survey		2000 Survey	
	No	%	No	%
MALES				
None	32	7.7	35	8.3
1	158	37.8	197	46.7
2	57	13.6	72	17.1
3 – 5	121	29.0	83	19.7
6 – 10	33	7.9	22	5.2
> 10	17	4.1	13	3.1
Total	**418**	**100.0**	**422**	**100.0***
FEMALES				
None	46	9.6	107	12.4
1	352	73.5	668	77.7
2	50	10.5	73	8.5
3 – 5	24	5.0	11	1.3
6 – 10	6	1.3	1	0.1
> 10	1	0.2	–	–
Total	**479**	**100.0**	**860**	**100.0+**

* $p = 0.007$ 2000 survey compared with 1993
+$p < 0.001$

Table 7: Age-specific prevalence rates of usually using a condom (2000 Survey)

Age (yr)	Males			Females		
	No	Total	%	No	Total	%
15 – 19	38	51	74.5	41	57	71.9
20 – 24	42	60	70.0	63	143	44.1
25 – 29	35	69	50.7	73	156	46.8
30 – 39	66	130	50.8	117	311	37.6
40 – 49	54	115	47.0	48	178	27.0
Total	**235**	**425**	**55.3**	**342**	**845**	**40.5**

Alcohol use

Significantly more men (296/371 or 79.8%) than women (242/466 or 51.9%) reported alcohol use during the past month in 2000 ($p < 0.0001$). This compares with 78.5% of men and 40.6% of women in 1993.

Table 8: Age-specific prevalence rates of using a condom at last sex for persons with two or more sex partners during the past year

	1993 Survey [1]			2000 Survey [2]		
Age (yr)	**No Using Condom**	**Total**	**%**	**No Using Condom**	**Total**	**%**
MALES						
15 – 19	18	24	75.0	14	20	70.0
20 – 24	40	66	60.6	19	32	59.4
25 – 29	21	46	45.7	22	38	57.9
30 – 39	26	55	47.3	34	56	60.7
40 – 49	14	35	40.0	21	44	47.7
Total	**119**	**226**	**52.7**	**110**	**190**	**57.9***
FEMALES						
15 – 19	5	13	38.5	5	9	55.6
20 – 24	9	25	36.0	6	14	42.9
25 – 29	2	16	12.5	10	22	45.5
30 – 39	6	13	46.1	18	30	60.0
40 – 49	5	12	41.7	6	10	60.0
Total	**27**	**79**	**34.2**	**45**	**85**	**52.9^{+}**

*p = 0.28 2000 compared with 1993

$^{+}$p = 0.0078

Reproductive health

In the 2000 survey significantly more men (28.0%) than women (11.7%) reported ever having a sexually transmitted disease (STD) (OR 2.93 CI 2.16, 3.97) (Table 4). Among males, but not females, there was a significant direct association between ever having had an STD and age (test for trend $p < 0.0001$). On logistic regression, ever having an STD was significantly associated with lower socio-economic status and educational level among women but not men. There was no significant difference in reporting ever having had an STD among persons who actively practised religion or did not (males $p = 0.74$, females $p = 0.16$).

Among persons who were sexually active, significantly more men (49.1%) than women (11.4%) reported having more than one sex partner in the past year (OR 4.31 CI 3.22, 5.76) (Table 5). Among men, the age group 20–24 years reported the highest proportion of multiple partners (62.7%) while among women it was the age group 15–19 years (20.4%). Between 1993 and 2000, the proportion of sexually active persons having only one sexual partner within the previous year increased significantly for both men (40.9% to 50.9%, $p = 0.0027$), and women (81.3% to 88.6%, $p = 0.0002$). During the same period the proportions of persons either not being sexually active or having only one sexual partner within the previous year increased significantly from 45.5% to 55.0% among males ($p = 0.007$) and from 83.1% to 90.1% among females ($p = 0.001$).

In 2000, as many as 28.0% of men reported three or more sexual partners in the past year compared with 1.4% of women (Table 6). Between 1993 and 2000, the proportion of persons reporting multiple sexual partners within the past year declined significantly for both men ($p = 0.007$) and women ($p < 0.001$).

Significantly more men (55.3%) than women (40.5%) reported usually using a condom during sexual intercourse (OR 1.3 CI 1.11, 1.68) (Table 7). There was a significant inverse association between condom use (usually using a condom) and age among both men (test for trend $p = 0.04$) and women ($p = 0.0002$). Between 1993 and 2000, there was a significant increase in the proportion of women with two or more sexual partners in the past year reporting condom use at last sex (34.2% to 52.9%, $p = 0.0078$) (Table 8). For men with two or more sexual partners in the past year, reported condom use at last sex also increased but not significantly (52.7% to 57.9%, $p = 0.28$).

DISCUSSION

The characteristics of the study sample in this survey were similar to those of the 1993 survey with respect to age, socio-economic status, educational level and religious practice (6). A lower proportion of persons aged 20 – 24 years were included in 2000 (15.8%) compared with 1993 (21%) and more men (60.6%) reported not actively practising a religion in 2000 than in 1993 (50%). The high proportion of men (20% in 2000, 25% in 1993) and women (9%) refusing to answer the question on religious practice suggests that this is a sensitive subject.

Both studies in 2000 and 1993 used population based probability samples so the results can be extrapolated to the general population. While the 1993 sample included 450 males and 504 females, the 2000 sample included nearly twice as many women (928) as men (473). Based on the 2001 census, the expected ratio of females to males was 1:1.06 (11). It was clearly much more difficult to recruit men than women in 2000. This was mainly due to the difficulty in finding the men to interview because the rate of refusal was not high (8.3%). Unfortunately, the gender and age of persons refusing interview was not recorded systematically so refusal rates by gender are not available. However, the refusal rate cannot explain the significantly higher proportion of women in the sample. Since the Kish selection method was used, all males and females in the household were listed by age and the person to be interviewed was chosen randomly. Fewer men than women would be available for selection because deaths among males 15–74 years are higher and more men are in prisons.

It is not clear whether the difficulty in recruiting men in the study may have biased the results, and if so, in which way the results may be biased. In this respect, it is noteworthy that the results of the 2000 survey are consistent with those found in 1993. However, it is possible that the 2000 survey under-estimated behaviour risk factors for men because those men who were available for interview were likely to have less risky lifestyles than those who were not recruited into the study.

Health-seeking behaviour and/or access to healthcare appears to have improved between 1993 and 2000 since significantly fewer persons in 2000 than in 1993 reported never having had their blood pressure checked and fewer women said they had never had a Pap smear. This may be due to a growing health consciousness in sectors of the society.

Although the prevalence of cigarette smoking among both men and women declined between 1993 and 2000, this was not statistically significant. On the other hand, there was a significant increase in the prevalence rates of ever smoking marijuana between 1993 and 2000 for both men ($p = 0.0003$) and women ($p = 0.0044$). Smoking marijuana is clearly a widespread and deep-rooted cultural practice in Jamaica despite it being illegal. A National Commission on Ganja recommended that the personal use of marijuana be decriminalized (12). The current programmes to reduce cigarette and marijuana smoking are limited and ineffective. There is an abundance of experience indicating what measures will reduce cigarette smoking: smoke free public areas, banning all advertisements and promotion of tobacco products, increased taxation and measures to control smuggling (13,14). There is little experience concerning effective measures to reduce use of marijuana. However, a necessary first step is to decriminalize personal use as recommended by the National Commission on Ganja.

While there was little change in alcohol use between 1993 and 2000, it was not possible to compare heavy alcohol use because the questions were asked differently in the two surveys. In 1993, 30% of men and 9% of women reported drinking five or more drinks on one or more occasions in the previous month. A national household survey of 2383 persons aged 15–55 years in 2001 found that 8.8% of men and 2.2% of women drank five or more drinks on five or more occasions in the previous month (15).

There was no significant difference in the prevalence rates of adults reporting an STD between 1993 and 2000. This is despite the significant decline in rates of infectious syphilis over the same period from 34 cases per 100 000 population to nine cases per 100 000 population (1,16). Self-reported rates of STD may not have changed significantly over the period because of relatively high rates of genital discharges and genital ulcers (16).

Although the proportion of persons reporting multiple sexual partners within the past year declined significantly between 1993 and 2000 for both men and women, having multiple sexual partners remains common among men. The large difference in the proportion of men reporting multiple sex partners compared with women remains an enigma. While men probably do have more sex partners than women the large difference reported appears unlikely. Commercial sex work accounts for some of the difference in that a large number of men have sex with a small number of female commercial sex workers. However, women are likely to under-report the number of sexual partners, as this is not socially acceptable behaviour for women.

It is encouraging to note that condom use at last sex among women with multiple partners increased significantly between 1993 and 2000. There was also a small increase in condom use at last sex among men. These changes are likely to be due to the widespread awareness of HIV/AIDS and the programmes to promote safe sexual behaviour. However, reported rates of condom use remain inadequate to prevent transmission of HIV and other sexually transmitted infections. Data from national KAP surveys show that approximately 25% of men and 34% of women did not use a condom at last sex with a non-regular sexual partner (17). In fact, behaviour change appears to have reached a plateau for the past 10 years for men and the past six years for women. New strategies will be required to achieve higher rates of consistent condom use and a reduction in the number of multiple sexual partners.

Lower socio-economic status and/or lower level of educational attainment were generally associated with more risky behaviour in both 1993 and 2000 though this was not consistently the case. For instance, among males reporting a STD in the 2000 survey only age remained significant on logistic regression with lower level of education no longer being significant as it was on univariate analysis. Lower socio-economic status is well recognized as generally being associated with high risk health behaviour, risk factors for chronic disease, poor health-seeking behaviour and poor health-outcomes (6, 18-20). Actively practising a religion was generally protective though not so for a history of ever having had an STD.

The Jamaica Healthy Lifestyle survey 2000 provides important data on behavioural risk factors that are essential for planning as well as for monitoring trends. However, these surveys become pointless if comprehensive health promotion programmes are not developed to systematically address and change the risk behaviours being surveyed. While various programmes are in place and others are being developed, it is clear that much more remains to be done.

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