Sexual networking in Freetown against the background of the AIDS epidemic
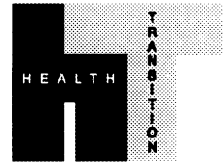
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West Africa, since the discovery of the HIV virus, has remained relatively unperturbed by the attendant AIDS epidemic sweeping through the other portions of the continent south of Sahara. The low level, of both the reported and the diagnosed cases of the epidemic at the onset, seem to explain the initial lukewarm and sometimes cynical attitude on the part of both the government and the populace. In recent times, however, emerging revelations from research on sexual behaviour in the region seem to be generating greater concerns about the possibility of continued containment of this scourge. So in many West African countries efforts are being made to generate baseline data to help in assessing the risk of this epidemic, given the background knowledge of the sexual behavioural correlates of AIDS gained elsewhere. However, not all the strategic points in this region have had such an inventory carried out or reported.

Not only does Freetown, the capital of Sierra Leone, fall into this category, it is also confronted with certain challenges at the regional level, as well as some internal peculiarities which underscore the need for the present inventory. One of these is its closeness to Abidjan, the Ivorian capital, which in recent times has been identified as a potential epicentre of AIDS infection in West Africa, given the unusually large number of HIV-positive individuals already diagnosed there *vis-à-vis* other cities of comparable status in the region.

The second peculiarity is connected with the increase in recent times in the rate of movement of nationals within the West African region across national boundaries. Such waves of movement which have been impelled by the economic depression ravaging, in varying degrees, some of the countries in this region, are likely to be aggravated by the increasing trends to political instability in some of these countries. The attendant movement may engender certain changes in the patterns of the morbidity variables within individual countries, especially those characterized by volatile epidemic tendencies such as HIV infection; this indicates the need for an assessment of high-risk sexual behaviour patterns among the strategic centres within the region. Locally, research reports on Freetown tend to indicate the prevalence of premarital maternity, a phenomenon that shows a high level of premarital and probably extramarital sexual activity coupled with a low degree of contraception.

An equally important reason for concern is the official disposition in Freetown to health-related matters which is perhaps partly explained by the poor financial capacity of many West African states. Records of the World Health Organization tend to associate some apathy and lukewarmness in the Leonian government towards a number of health-related programs of global concern. The IPPF publication of 1990 states that family planning only receives some support against the possibility of full government support, while the contraceptive prevalence

level is estimated at four per cent, placing it among those countries with the lowest contraceptive levels in the world.

At this point, two questions appear germane. First, to what extent has the worldwide commitment to AIDS containment received effective official acceptance, as reflected by the AIDS awareness level of the populace? Secondly, what relationship is there between the apparent level of awareness of the people and their disposition towards high-risk sexual behaviour? Against this background the phenomenon of sexual networking in Freetown is examined.

Freetown, the study area

Freetown, the capital of Sierra Leone, is one of the strategic cities along the West African coast. It is both an *entrepôt* and a political headquarters. It also serves as a commercial as well as a moderate industrial centre, at least for the larger population in the interior of the country. More of its strategic importance lies in its being perhaps the foremost primate[1] city in the region apart from Banjul in Senegal. It was founded in 1839 by American and British government interests as a resettlement centre for freed slaves after the abolition of the slave trade. Most of the initial freedmen originated from the West African region, others came from other parts of Africa, so an element of plurality has characterized the ethnographic composition of this city right from the start. Over the years, the original population has undergone considerable changes, both in size and in complexity.

Much growth in size has occurred rather significantly within the past 25 years, with a huge influx of diverse ethnic groups from the adjacent continental interior. Consequently, the initial population which primarily consisted of the Creoles has become diluted; the present population consists of the Temne, the Mende, the Limba, the Creoles and a host of others. The initial resettlers were largely Christians, but both immigration and intensive Islamic proselytization have worked simultaneously to impart almost comparable prominence to the Islamic religion. Other reports have highlighted some Freetown features which are common to many underdeveloped cities, and which may exert some influence on sexual behaviour: two of the prominent ones, which are related, are unemployment and dwindling income per capita.

Forde's (1991) study revealed much in these peculiarities. The extant socio-economic and demographic patterns documented in that study portend a strong likelihood for high-risk sexual behaviour similar to what has been documented of other cities with comparable socio-economic circumstances. According to Forde, between 1963 and 1974 the population of Greater Freetown rose from 127,917 to 276,247, a sharp increase of 115.9 per cent in eleven years, while in 1985, the population had increased to 469,776, gaining 70 per cent over the 1974 level.

Much of this increase has been adduced to speculative immigration which has the tendency to enlarge the size of the urban unemployed in the less developed world. Hence, Forde (1991) observed that since 1968 major indices of population welfare have continued to decline significantly for Freetown dwellers[2]. It was also discovered that the proportion of

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[1] The 1974 population figures for Sierra Leone show the population of Freetown as 364% the size of the second-order town and 701% the size of the third-order town.

[2] In 1968, one-person household units accounted for 15.1% of Freetown's total household units, while those with eight members were 3.9%. By 1985, the former had dropped to 2.2% while the latter rose to 10.7%. Furthermore, a considerable percentage, varying between 25 and 45% of households with large memberships (generally between five and ten individuals) now live in one-room apartments.

female-headed households amounted to 12 per cent, while 59 per cent of migrants into Freetown between the two terminal years were females as opposed to 41 per cent males. Furthermore, about 79 per cent of these migrants were between 1 and 39 years of age.

The circumstances described above, against the background of poor economic infrastructural support, may put pressure on individuals, especially unemployed females, to enter direct prostitution or adopt a para-commercial sexual way of life to survive the harsh urban environment. With sexual behaviour thus aligned, it is evident that the risk of contracting and spreading the HIV virus becomes greater.

Method

Data collection and coverage

The data for this study were collected between July and August 1990, and form part of the pioneering sexual networking research efforts in West Africa. A multi-stage sampling procedure was employed. The first stage involved an imposition of grids upon the metropolitan map of Freetown; the emergent grids were numbered using the table of random numbers, and predetermined numbers of cells were picked. At the second stage, streets within the metropolitan cells were listed and using the book of random numbers, streets were systematically chosen from each of these cells. The houses along each street were listed and varying percentages were chosen based on their relative residential and human densities generally within that urban region as well as for that particular street.

Numbers were written on separate sheets of paper representing each of the household units identified in a sampled residential building. By random selection, a member of that household aged 15 years or above was chosen. For a single-member household, or unmarried households, the choice was often easier than for couples with children and other adults. However, caution was exercised in guaranteeing confidentiality first by separating the day of respondent enlistment from the day of the interview. Prior appointments with respondents also helped in guaranteeing confidentiality, coupled with the fact that only one respondent was interviewed from a sampled house.

The interviewers, both males and females, were trained in what to expect in the field as well as the challenges that might come up and how to overcome them. At the completion of the interviews 300 respondents' questionnaires were considered admissible for analysis.

Fieldwork challenges

Despite all initial efforts, interviewers still met some challenges in the field. Many such problems arose from the novelty of the research theme as well as the questions posed, which sought information on aspects of individual life hitherto considered private.

Although many of those challenges were overcome in varying degrees, as interviewers were trained to emphasize the centrality of reproductive health to the fieldwork exercise, the study sample size would have been larger with greater co-operation. It is expected however that there will be more co-operation in subsequent fieldwork exercises as people become more familiar with this research theme and better persuaded of its social benefits.

The data

The numerous questions that were asked of respondents are in four groups. They include the socio-economic and demographic characteristics, family formation and fertility, sexual networking and knowledge of AIDS as well as experience of some well-known sexually

transmitted diseases. The last section elicits information on the respondents' spouses for those who are in marital union.

Analysis

The analysis has four major subsections; the first examines the socio-economic and some relevant demographic characteristics of the population categorized by sex. This is followed by the analysis of the knowledge of AIDS as well as perception of the AIDS epidemic. The third section focuses on the sexual behaviour of the never-married respondents by analysing some variables such as the total number of sexual partners, sexual partners within the last year and within the last month, and age at first sexual intercourse.

Sexual behaviour is thus analysed, classifying the population by selected socio-economic variables. A few variables were selected, with minimum categories, to avoid excessively low values per cell. Other variables were subsequently analysed for the never-married respondents; these include the focus in sexual interaction across levels of sexual partnership, as well as perceptions of sexual norms and values and the use of contraception in sexual intercourse.

The second section focuses on sexual behaviour of the ever-married respondents. Specifically, it examines the incidence of extramarital relationship as well as multi-partnership derived from responses to the question of sexual partnership within the last year and the last month. Further analysis examines variations in the incidence of extramarital relationships, using some marital and socio-economic variables to examine the possible explanatory factors for extramarital relationships.

The relative smallness of the study sample however restricted numerous classifications, of the respondents as well as of the variables analysed. Variables were therefore generally classified into two or three categories with the additional proviso that between four and five population groups emerge from such variables. The analysis of extramarital sexual relationship was made at three levels: whether a respondent has ever had an extramarital relationship, whether a respondent has had one within the last year and whether he or she has had one within the last week.

Other variables which focus on the awareness of AIDS as well as the different advantages introduced by variations in the temporal pattern of the acquisition of that knowledge, in conjunction with other variables which measure previous experience of STDs, were used to analyse the incidence of 'dropouts' in extramarital sexual behaviour so as to have a clearer insight into extramarital sex. Respondents who claimed to have ever had an extramarital relationship but who had not done so in the last year were separated. The same was also done for those who dropped out in the last month: these were called extramarital dropouts. They were then analysed with some variables on AIDS knowledge as well as previous experience of gonorrhoea.

Thus a temporal sequential perspective is adopted in the analysis of extramarital sexual relationship, to examine the degree of similarities and consistencies among the socio-economic correlates of extramarital sex over time as well as to explore the relationship between the variations in the trends of AIDS awareness and persistence in extramarital sexual behaviour. The focus element in extramarital relationship was also explored, as well as other aspects of sexual values and sexual behaviour analysis.

Analytical methods

For the most part, frequency distributions and percentages, and cross-tabulations are employed. In the analysis of extramarital relationships, however, logistic regression is

employed only to assess within-group variations in the propensity for extramarital sexual activity.

The study population

Selected socio-economic characteristics

Table 1 illustrates the general pattern of the selected socio-economic characteristics of the sampled population. Males constituted 50.7 per cent, females 49.3 per cent, showing a considerable degree of representation of both sexes. The near-symmetry observed in the gender composition almost characterized the age distribution of respondents by sex. The modal age group for both sexes is 30-39 years which accounted for 46 per cent of males and 44.6 per cent of females. The category which has the least representation is those respondents who have attained or exceeded 50 years of age. Among men they represent 8.6 per cent and among women, 6.1 per cent.

The analysis of marital status shows that a large percentage of the sampled population, 54.6 per cent (males) and 53.4 per cent (females) are currently married, while 12.5 per cent of males and 8.1 per cent of females are separated or divorced. Widows are 5.4 and widowers 2.6 per cent of the sampled population. The percentage composition of unmarried female respondents among the entire female population at 33.1 exceeds that of their male counterparts by almost 3 per cent. The above pattern shows that among men, a greater percentage (15.1) of once-married men are no longer with their spouses compared with 13.5 of the ever-married female respondents who are either widowed or divorced.

The majority of each sex have secondary education: 67.1 per cent of men and 58.8 per cent of women. Those without education are relatively numerous, especially among the female respondents of whom 14.2 per cent are without education; among male respondents the figure is 11.2 per cent. The proportion of respondents with post-secondary education is rather low, when compared with cities of comparable colonial history in West Africa. Of the men, 4.6 had university education compared with two per cent of the women.

The occupational distribution, however, shows the white-collar group as the largest among the five groups classified, for both sexes. The difference between the percentage of the post-secondary educational group and that of the white collar employees may perhaps reflect the classification scheme adopted as well as the phenomenon of vertical mobility associated with a public service career, which allows enhancement in career status over time probably without much change in education status. For example, the clerks have been grouped in this category with those far higher on the career ladder. Other notable occupational groups among men are the skilled production workers (17.8 %), the unskilled (14.5%), and the sales and business men (12.5%).

Among the female respondents, the business and sales group is very prominent, 27 per cent against 12.5 per cent of men. Numbers in the 'other' category are equally large for both sexes. The percentage of the unemployed seems larger among women, 9.5 per cent, as against 6.6 per cent unemployed males. This pattern of unemployment between the two sexes is similar to the Lagos pattern, except that the levels are fairly high in Freetown for both sexes[3].

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[3] Sexual behaviour was not analysed by occupation, because of the numerous groups that may be identified under the occupational data; for example, the group classified as 'others' consisted of four different occupational groups. This reduces the level of reliability of any sexual behaviour analysis by occupational groups.

The ethnographic distribution of respondents looks rather even and perhaps indicates that plurality is a major trait of Freetown's population. The major ethnic groups are the Mende, Temne, Creoles and Limba; there are many others. Only three groups have been separately categorized to prevent the occurrence of very low values and empty cells in the subsequent

Table 1

Selected socio-economic and demographic characteristics of respondents by sex

Major characteristics	Median* Mean**	Males (N=152)		Females (N+148)	
		N	%	N	%
Age 15 - 29 years	33.6**	51	33.6	56	37.8
30 - 39 years		70	46.0	66	44.6
40 - 49 years		18	11.8	17	11.5
50+ years		13	8.6	9	6.1
Marital status					
never married		46	30.3	49	33.1
married		83	54.6	79	53.4
widowed		4	2.6	8	5.4
divorced/separated		19	12.5	12	8.1
Education					
none		17	11.2	21	14.2
primary		14	9.2	22	14.9
secondary		102	67.1	87	58.8
pre-univer. vocational		12	7.9	15	10.1
university		7	4.6	3	2.0
Occupation					
none		10	6.6	14	9.5
white collar		48	31.6	56	37.8
skilled production		27	17.8	11	7.4
sales / business		19	12.5	40	27.0
unskilled		22	14.5	5	3.4
others		26	17.1	22	14.9
Ethnic					
Creole		26	17.1	34	23.0
Mende		33	21.7	37	25.0
Temne		28	18.4	25	16.9
Others		65	42.8	52	35.1

analysis. These three groups are the Creoles, the Temne, and the Mende, while the other numerous groups were classified together. Among the three, the Mendes have the largest representation, 25.0 per cent of the females and 21.7 per cent of the males; the Creoles follow with 23.1 per cent of females and 17.1 per cent of males; 18.4 per cent of male respondents were Temne, as were 17 per cent of female respondents.

Christianity and Islam are the dominant religions among respondents, but Christians outnumber Muslims. A combined analysis shows that Christians constitute 57 per cent as opposed to 41 per cent of Muslims. However, the gap between the two religions appears closer among males, with male Christians 11.1 per cent more numerous than Muslim males, while Christian females are about 21 per cent more numerous than Muslim females. The distribution of respondents by religion reflects in varying degrees the religious orientations of the dominant ethnic groups in this survey. On a general analysis, the Creoles are

predominantly Christians, while the Temne are predominantly Muslims. Though 57.1 per cent of Mende respondents said they were Christians, a gender breakdown shows that 51.5 per cent of Mende males are Muslims while 64.5 per cent of Mende females are Christians. Among the remaining ethnic groups, Christians constitute over 50 per cent of both the male and female respondents, which tends to account for the overall larger Christian population.

Table 1 Continued
Selected socio-economic and demographic characteristics of respondents by sex

Major characteristics	Median* Mean**	Males (N=152)		Females (N=148)	
		N	%	N	%
Religion					
Christian		82	53.9	89	60.1
Muslim		65	42.8	58	39.2
Others		5	3.3	1	0.7
Budget Status					
some budget status		36	23.7	82	55.4
min. saving budget		41	27.0	20	13.5
large saving budget		75	49.3	46	31.1
Co-resident dependants					
0		16	10.5	16	11.0
1-3		71	46.7	58	39.2
4+		65	42.8	68	45.9
no response		-	-	6	4.1
Childhood environment					
village		34	22.4	33	22.3
town		40	26.3	31	20.9
Freetown		78	51.3	84	56.8
Duration in Freetown	26*				
0-9 years		19	12.5	19	12.8
10-19 years		38	25.0	32	21.6
20-29 years		43	28.3	51	34.5
30 +		45	29.6	40	27.0
no response		7	4.6	6	4.1
Metropolitan residence					
Central II		31	20.4	29	19.6
East I		15	9.9	10	6.8
East III		31	20.4	32	21.6
West I		31	20.4	31	20.9
West II		32	21.1	32	21.6
West III		12	7.9	14	9.5

The budget status[4] analysis of respondents significantly differentiates the male from the female respondents: for example, 55.4 per cent of the female respondents have an expenditure

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[4] Three budget groups were classified, based only on the difference between monthly income and expenditure; the response level on supplementary income seemed too low to be included. The first group consists of respondents with deficit-budget status, the second consists of those without a deficit and those with a minimum surplus up to 15 per cent of the median

pattern which exceeds their regular income, while 23.7 per cent of men are so affected. Only 31.1 per cent of women had savings of over 750 Leone in comparison with 49.3 per cent of male respondents. The incidence of a large percentage with deficit budget status among the women may be connected with their higher level of unemployment, as well as the incidence of ex-nuptial parenthood which seems very common among never-married respondents, of whom 69 per cent of the males and 71.1 per cent of the females had experienced parenthood at least once. The economic burdens of rearing ex-nuptial children often fall more on the mother than her partner.

The pattern of dependants, including the respondents' own co-resident children, shows that 10.5 per cent of males and 11.2 per cent of females have no dependants with them. About 42.8 per cent of men and 45.9 per cent of women have more than four dependent children and wards. Those with one to three dependants constitute 46.7 per cent of male and 45.9 per cent of female respondents.

Quite a large percentage of the respondents said they were born in Freetown: more than half of both sexes. Those who had their early childhood in one of the few other towns were 26.3 per cent among males and 20.9 per cent among female respondents.

The duration analysis shows that on the average the respondents have stayed about 26 years in Freetown. The modal groups differ between the sexes: 34.5 per cent of female respondents representing those that have spent 20-29 years in Freetown constitute the largest group for females, the largest male group have spent 30 years or more. The metropolitan residential pattern shows that all respondents lived in six of the eight metropolitan electoral areas of Freetown, leaving out Central I and East II electoral areas.

The three electoral areas with the largest percentage of respondents, West II, East III and West I, experienced the largest scale of population change in recent times, especially since the 1970s. They are characterized by a relatively large percentage of recent immigrants and thus have greater chances of having demographic and economic characteristics that may engender high-risk sexual behaviour. The other three, West III, Central II and East I, complement the first groups as they had relatively low levels of intercensal population increase.

Knowledge of AIDS

As this was a baseline study, respondents were asked questions about the AIDS epidemic. Six of those questions and their responses are given in Table 2. Most respondents have heard of AIDS: only 4.6 per cent of males and 6.8 per cent of females had never heard of AIDS in 1990. This level is quite low compared with the level of ignorance in Lagos about the same time: 10.2 per cent of males and 12.3 per cent of females.

Most respondents attributed their first knowledge to the radio and television; however, more men than women chose this source. The second most important source for men is the newspaper, and for women, friends or relations. This seems to corroborate the observed pattern that information is likely to spread faster among women than among men. Other important channels for men are friends and relations, government posters, and health workers or hospitals. For the women, the corresponding information channels are the newspapers, government posters and other government publicity. A large percentage heard of AIDS rather later than expected, so one aspect of the analysis distinguishes between late and early knowers about AIDS. Up till 1987 only 7.9 per cent of men and 3.4 per cent of female respondents had heard of AIDS; two years later, 49.1 per cent of male respondents were yet

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population income; in the third group the monthly budget status is substantial and generally above 15 per cent of the population median income.

to know of AIDS. Among the women, the uninformed level at that time was comparably large, 47.3 per cent.

Table 2
Knowledge of AIDS by sex of respondents

Questions	Responses	Males		Females	
		N	%	N	%
Ever heard of AIDS?	Yes	144	94.7	138	93.2
	No	7	4.6	10	6.8
	No response/unsure	1	0.7	-	-
Sources of information	Radio/Television	69	45.4	47	31.8
	Newspaper	25	16.4	27	18.2
	Posters	13	8.6	19	12.8
	Other govt. publicity	9	5.9	8	5.4
	Friends/relations	19	12.5	29	19.6
	Health workers/hospital	10	6.6	5	3.4
	Don't know	7	4.6	12	8.1
When AIDS was first heard of	1980	3	2.0	-	0.0
	1984-87	9	5.9	5	3.4
	1988	20	13.2	24	16.2
	1989	47	30.9	49	33.1
	1990	65	42.8	58	39.2
	No response	8	5.3	12	8.1
What have you heard about its cure?	Incurable	104	68.4	103	69.6
	Medical treatment	24	15.8	10	6.8
	Traditional healers	2	1.3	4	2.7
	Spiritual	3	2.0	5	3.4
	Don't know	19	12.5	26	17.6
How is AIDS transmitted?	Sexual intercourse	118	77.6	111	75.0
	Kissing	6	3.9	1	0.7
	Blood transfusion	16	10.5	14	9.5
	Other ways	1	0.7	6	4.1
	No response	11	7.2	16	10.8
Who do you think can cure AIDS?	Nobody	89	58.6	95	64.2
	God/prayer/spiritual	10	6.6	11	7.4
	Doctor	37	24.3	18	12.2
	Traditional healer	2	1.3	3	2.0
	No response	14	9.2	20	13.5

On the question of what they had heard on AIDS curability, 68.4 per cent of males and 69.6 per cent of females said AIDS was incurable; however, the percentages of both sexes who claimed to have heard of a cure are rather large for a metropolis like Freetown: 15.8 per cent of males and 6.8 per cent of females claimed to have heard of an orthodox medical solution, while 3.3 per cent of males and 6.5 per cent of females claimed to be aware of traditional or spiritual healing options. This pattern of AIDS knowledge seems to have affected their own opinions on the curability of AIDS. In this respect, 64.2 per cent of female respondents maintained that AIDS is incurable. This is about 5.4 per cent below those who

when asked what they had heard of a cure for AIDS, said it was incurable. Among the males 58.6 per cent maintained that AIDS is incurable, which is about 10 per cent below those who answered 'incurable' to the previous question. The large number of those who believe there is some form of cure raises many questions on the real effectiveness of the various information, education and communication efforts ascribed to the government and other related agencies[5].

In spite of this pattern, quite a large percentage of the population was well aware of the infection sources of AIDS, most ascribing AIDS infection to sexual intercourse and blood transfusion.

It seems that men have better information and a clearer knowledge than women about AIDS. Given the pattern of respondents' knowledge and opinions on AIDS it is interesting to examine the sexual behaviour of the population.

General sexual behaviour patterns

Four sexual activity parameters are examined in varying degrees among the entire population. They are age at first sexual intercourse (AGESEX), total sexual partners (TSEXP), sexual partners within the last year (ASEXP), and sexual partners within the last month (MSEXP). For the entire population, the pattern of these variables is illustrated in Table 3. For the entire population, the mean age at first sexual intercourse was 17 years while the median point was the 16th year, showing a relatively mild pattern of fluctuation.

Table 3
General sexual activity variables by sex

	AGESEX			TSEXP			ASEXP			MSEXP		
	All	M	F	All	M	F	All	M	F	All	M	F
Mean	17	16.9	17.0	8	13.0	4.0	3	4.0	2.1	1	1.4	1.1
Median	16	17.0	16.0	4	5.0	3.0	2	2.0	2.0	1	1.0	1.0
Modal freq value	15			2			2			1		
% above (pop) mean		41.4	34.5		29.3	6.8		19.2	7.0		41.4	24.3
Effective number of respondents (N)		152	148		150	147		146	143		152	148
As % of total respondents		100	100		98.7	99.3		96.1	96.6		100	100

The minimum age recorded is nine years for one respondent. The modal age at first sexual intercourse is the 15th year, and by the 20th year, 89 per cent have had their first sexual intercourse, while about 1.7 per cent delayed their first sexual experience beyond the 25th year. The frequency of total sexual partnership varies between 1 and 97[6] partners. The

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[5] A similar pattern was observed in the Lagos study. However, it appears that the incidence of wrong opinions and notions of AIDS is more critical in Freetown than in Lagos.

[6] This was the uppermost limit allowed for respondents.

mean and the median values are eight and four partners respectively, an indication of the prevalence of extreme values. However, the modal sexual partnership category is those who have had only two sexual partners in their life time: altogether they account for 20.5 per cent of all valid responses. Most respondents, 82.8 per cent, have had between one and ten sexual partners, while 3.3 per cent claimed to have had 97 or more sexual partners.

Sexual partnership within the last year is also marked by some extreme values, however, the mean and the median values are not very far apart. The mean sexual partners within the last year was three against two for the median partnership point. The largest group of respondents, 40 per cent, have had only two sexual partners within the last year. Most respondents (96.2%) have also had between one and four sexual partners within the last year, and fewer than four per cent have had sexual intercourse with more than four sexual partners. Sexual partnership within the last month varied between zero and five, with one sexual partner being the mean, the median and the modal partnership value. About 12 per cent have had between three and five sexual partners over the same period. Gender analysis of the above pattern shows that the male respondents differ in some respects from the female respondents, although such differences are not uniform across sexuality parameters considered.

Thus the differences between the ages at first sexual intercourse (AGESEX) are not very large. It appears that on the average, the 17th year is the mean age of first sexual intercourse for both sexes. However, in spite of similar mean ages at first sexual experience, a greater percentage of the male respondents (41.4%) wait longer than the 17th year before their first sexual experience. This pattern seems to accord with expectation as the first sexual experience often takes place when a male partner is older than the female partner.

The total sexual partnership shows that 29.3 per cent of men have had more than the eight sexual partners which is the mean for the entire population, while only 6.8 per cent of female respondents exceeded this partnership level, so while the mean TSEXP value for men was 13 partners, that for female respondents was four.

The pattern of sexual partnership within the last year appears to be an extension of the previous pattern between the two sexes: for example the average of sexual partners for men over this period was almost twice that of the women, 4 to 2.1. Similarly the percentage of males with above-median annual sexual partners was almost triple that of females: seven per cent of the female respondents and 19.2 per cent of men had more than three sexual partners within the last year. A similar pattern may be observed with respect to sexual partnership within the past month: 41.4 per cent of male respondents have had more than one sexual partner compared to 24.3 per cent of female respondents.

The pattern observed which shows larger sexual activity parameters for men than women is in line with the findings elsewhere. Orubuloye (1994) identified this tendency as a likely source of distortion to an accurate assessment of the real pattern of sexuality estimates within a population. However, in this particular context, the response levels by both the male and female respondents have been comparably high. Furthermore, the differences between the estimates of their sexual activity parameters have not been large, so the usual tendency for females to underreport their sexual behaviour seems to have been minimal.

Premarital sexual activity

The patterns of the sexuality parameters estimated among the unmarried respondents vary in some degree from those of the larger population as illustrated in Table 4. It appears that the age at first sexual intercourse is the most uniform for both sexes among the variables examined. The mean for the unmarried males is 16.5 years and it is slightly lower than that

for the never-married females by 0.4 years, while the two groups have the same median age at first sexual intercourse.

Further comparison of the age at first sexual relationship estimates of the never-married groups with that of the entire population as illustrated in Table 3 shows that a greater proportion of never-married male respondents had their first sexual experience before the 17th year. Only 33.3 per cent from this group had a first sexual experience later than the mean age at 17, while the corresponding percentage for the entire male population is 41.4. The pattern is different among the female respondents: on the average, the never-married females had a first sexual experience over a year later than those who are married.

The total sexual partnership parameter of the never-married group deviated only a little from the observed pattern for the larger population. The greater proportion of the unmarried males characterized by above-median partnership size only emphasizes the general pattern identified with the larger population. Hence the mean TSEXP for unmarried males was 11.6 partners and the median was 4.5 partners compared with 4.5 and 4.0 partners for the unmarried female respondents.

Table 4
Sexual activity parameters for never-married group

	AGESEX		TSEXP		ASEXP		MSEXP	
Population mean (Approx)	17		8		3		1	
Population median value	16		4		2		1	
Modal frequency	15		2		2		1	
	M	**F**	**M**	**F**	**M**	**F**	**M**	**F**
Mean value	16.5	16.9	11.6	4.5	5.7	2.3	1.6	1.3
Median value	16.0	16.0	4.5	4.0	2.0	2.0	1.0	1.0
% above the mean	33.3	36.7	27.3	6.1	25.6	6.1	46.7	28.6
Effective Respondents (N)	45	49	44	49	43	49	45	49
N as % of unmarried males/females	100	100	97.8	100	95.6	100	100	100

The observed patterns of sexual partnership for the periods within the last year and the last month tend to fall in line with the variations observed with the Total Sexual Partnership parameter for the entire population by sex. Thus a greater male percentage, 25.6, had more than the average number of two sexual partners within the last year compared with 6.1 per cent females in this category. Similarly, the mean sexual partnership level of 5.7 within the last year for unmarried men was more than double the mean for the never-married females.

Variations in the pattern of sexual partnership within the last month further emphasized the tendency to larger above-median partnership for men: 46.7 per cent of them had more than one sexual partner within the last month while only 28.6 per cent of the never-married females did. Thus far it is evident from the temporal pattern of sexual partnership that a greater proportion of men than women are characterized by above-median sexual partnership traits.

Sexuality parameters by selected characteristics

Total sexual partnerships

Greater similarities can be observed in the pattern of the total sexual partnerships of the never-married male age cohorts than among the female groups as illustrated in Table 5. Fifty per cent of male respondents under 30 years of age have had more than five sexual partners in their lifetime; the pattern is the same for males aged 30-39 years.

Further comparison however reveals that a larger percentage (11.5 %) of the 30-39-year-old males have restricted themselves to only one sexual partner, compared to only 5.5 per cent of the younger cohort. This pattern contrasts with that of the females among whom wide variation is noticeable. The 30-39 years female age group has 4.8 per cent in the large TSEXP category compared with 23.8 per cent and 33.3 per cent for the other two age groups.

Ethnic differentiation in total sexual partnership is somewhat sharper than age group differences, this being more so with male respondents. Most Mende males (85.7%) for example are characterized by large sexual partnership compared to the Temne group with only 33.3 per cent. Creole males tend to have a balanced sexual partnership pattern among the three dominant groups, with 44 per cent in the large and the average sexual partnership categories. The observed patterns with the 'others' group which has 50 per cent and 12.5 per cent respondents respectively in average as well as in the minimum sexual partnership categories display a close similarity with the Creole males except that the above-median sexual activity of the Creole group is about five per cent lower.

The patterns with the female respondents tend to highlight the exceptionally large percentage of total sexual partnership of the Temne group. Sixty per cent of Temne females had had over five sexual partners in their lifetime; this is relatively large in comparison with the Creoles and the 'others' who had 38 per cent above-median total sexual partnership. The pattern of total sexual partnerships exhibited by the Mende females contrasts significantly with that of their male counterparts: the men had 85 per cent above-median total sexual partnership traits, the women 25 per cent.

Educational analysis of the variable TSEXP shows that those with educational advantages are characterized by large total sexual partnerships. However, it seems to demarcate total sexual partnerships primarily between the uneducated and the educated. For example, the gap between the pre-secondary and post-secondary male groups characterized by large numbers of sexual partners amounted to four per cent compared to 29.5 per cent between the no-education and the pre-secondary groups. The same pattern is observable among the female respondents: those with no education seem to be confined to the minimum and average partnership categories. The other two groups with relatively high education are differentiated by the tendency for large sexual partnership, having 40 per cent of respondents with five or more lifetime sexual partners.

The budget status of the respondents has a peculiar pattern common to both sexes. It shows, perhaps contrary to expectation, that those with surplus budget status are more likely to have a large number of sexual partners than those with negative budget status. Variations in the pattern of total sexual partners by religion have a similar pattern for both sexes. Among the males for example, 54.2 per cent of Christians have had more than five sexual partners in their lifetime compared to only 23.5 per cent of Muslims. Between the female groups, 41.7 per cent of Christians were characterized by above-median total sexual partnerships compared with 23.1 per cent of Muslims.

Table 5: Total number of sexual partners of never-married respondents by selected socio-economic characteristics in Freetown

	Males						Females					
	minimum (1)		average (2-4)		large (5+)		minimum (1)		average (2-4)		large (5+)	
	N	%	N	%	N	%	N	%	N	%	N	%
Age												
less than 30 yrs	1	5.5	8	44.9	9	50.0	5	23.8	11	52.4	5	23.8
30 - 39 yrs	3	11.5	10	38.5	13	50.0	4	16.0	9	36.0	12	48.0
40 + yrs									2	66.6	1	33.3
Ethnicity												
Creole	1	11.1	4	44.4	4	44.4	1	7.7	7	53.8	56	38.5
Mende			1	14.3	6	85.7			9	75.0	3	25.0
Temne	1	8.3	7	58.3	4	33.3	2	40.0			3	60.0
Others	3	12.5	6	37.5	8	50.0	5	27.8	6	33.3	7	38.9
Education												
none	1	25.0	2	50.0	1	25.0	1	25.0	3	75.0		
primary-secondary	3	9.1	13	39.4	18	54.5	6	17.1	15	42.8	14	40.0
post-secondary			3	50.0	3	50.0	2	20.0	4	40.0	4	40.0
Budget status												
low budget			8	75.0	4	25.0			18	66.7	9	33.3
surplus budget	4	12.5	10	31.2	18	56.2	9	40.9	4	18.2	9	40.0
Religion												
Christianity	2	8.3	9	37.5	13	54.2	3	8.3	18	50.0	15	41.7
Islam	2	11.7	11	64.7	4	23.5	6	46.1	4	30.7	3	23.1

Non-marital sexual partnership pattern in the past year

The pattern of sexual partnerships in the last year (Table 6) shows some deviation from what was observed for total lifetime sexual partnerships. Among the male age categories for example, the over-30 years group shows a reduction in the tendency for above-median sexual interaction. Only eight per cent from this group had five or more sexual partners.

The younger male group also has a reduction in the percentage of those with large sexual partnership, from 50 per cent for total sexual partnerships to only 16.7 per cent for sexual partnerships in the last year. The younger male age-group still retained the inclination for more sexual partnerships than the older male group.

Among the female respondents a more striking variation is observed. Virtually all female respondents by whatever classification have dropped out of large sexual partnership categories, so most of the variations observed in respect of sexual partnership occur between the moderate and the minimum sexual partnership groups. Variation by age group is minimal, except for the under-30 age group of which 4.8 per cent had five or more partners in the last year, a pattern which resembles that of males under 30. Generally, about one-third of each unmarried female group restricted themselves to one sexual partner within the last year. There is, however, a tendency for all the female age groups to concentrate in the median sexual partnership region.

Variations by ethnicity seem to reflect the pattern observed for total sexual partnerships. For example, the Temne unmarried males still showed the least tendency for above-median sexual activity. They had no respondents with many sexual partners in the past year, compared with 38.6 per cent of Mende males with five or more sexual partners, which is the most among the four ethnic groups. The Temne also had the modal percentage in the minimum partnership region, with 16.7 per cent males who had restricted themselves to only one sexual partner within the last year. The Creoles also show a moderate tendency which is exactly the same as the 'others' ethnic group. Both groups had 12.5, 75 and 12.5 per cent categories of respondents respectively within the minimum, the median and the above-median sexual activity groups. However, the pattern among the females is rather different, with 7.7 per cent of Creole respondents having had at least five sexual partners within the last year[7].

The Mende women had the largest percentage (75%) of respondents with two to four sexual partners in the past year. The variations introduced by education further show the greater tendency of the primary-secondary male group to large sexual partnership compared with the two other male groups, as observed in the total sexual partnership analysis, which shows that all male respondents with five or more sexual partnerships in the past year have either primary or secondary education.

Those with post-secondary education seem to have maintained a conservative attitude toward multiplicity of sexual partnerships relatively to other male education groups. They have the modal percentage of 40 per cent of male respondents with minimum sexual partners as well as the lowest percentage even in the median sexual partnership range.

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[7] The tendency to above-median sexual activity may in fact characterize the Mende female group rather than the Creole. The one case (7.7%) of above-median partnership may be due to sampling error, rather than the 75 per cent of Mende females with two to four sexual partners, which is the modal percentage among all the ethnic groups.

Table 6: Number of sexual partnerships in the last year: never-married respondents by selected socio-economic characteristics in Freetown

	Males						Females					
	minimum (1)		average (2-4)		large (5+)		minimum (1)		average (2-4)		large (5+)	
	N	%	N	%	N	%	N	%	N	%	N	%
Age												
less than 30 yrs	2	11.1	13	72.2	3	33.3	7	33.3	13	61.9	1	4.8
30 - 39 yrs	4	16.0	19	76.0	2	8.0	9	36.0	16	64.0		
40 + yrs							1	33.3	2	66.6		
Ethnicity												
Creole	1	12.5	6	75.0	1	12.5	4	30.8	8	61.5	1	7.7
Mende	1	14.3	4	57.1	2	28.6	3	25.0	9	75.0		
Temne	2	16.7	10	83.3			3	60.0	2	40.0		
Others	2	12.5	12	75.0	2	12.5	7	38.9	11	61.1		
Education												
none	1	25.0	3	75.0			3	75.0	1	25.0		
primary-secondary	3	8.8	26	76.5	5	14.7	11	31.4	23	65.7	1	2.9
post-secondary	2	40.0	3	60.0			3	30.0	7	70.0		
Budget status												
low budget	1	9.1	10	90.9			11	40.7	16	59.3		
surplus budget	5	15.6	22	68.7	5	15.6	6	27.3	15	68.2	1	4.5
Religion												
Christianity	3	13.4	16	69.6	4	17.4	11	31.4	24	68.6	1	2.9
Islam	2	11.8	14	82.3	1	5.9	6	46.1	7	53.8		

The same pattern was perhaps reflected by female respondents; for example, the primary-secondary group has the only case with large sexual partnership. It also has 65.7 per cent of respondents whose sexual partners range between two and four as against 25.6 per cent of the no-education group, and 70 per cent of the post-secondary group. Higher education status among the never-married females seems to be associated with large sexual partnership.

On the other hand, this pattern is absent among males and when sexual partnership among men is analysed, their educational status did not differentiate significantly among their partnership indications as may be observed in the female educational groups. The sexual partnership analysis by budget status reveals an interesting pattern which may appear contradictory to normal expectation. This applies particularly to the female budget groups among whom no respondents with low-budget status had up to five sexual partners within the last year, compared with 4.5 per cent of the surplus-income group who have had many sexual partners over the same period.

This pattern on the contrary seems to offer a clue concerning some issues of female sexual promiscuity and how the economic motive in sexual relationships tends to operate among women. Above-median sexual activity for economic gain may not necessarily be associated with sexual multi-partnership. It may involve a minimum level of sexual partnerships but with the element of concentration or focus in sexual interaction[8]. The pattern in the male group is also consistent as none of the low-budget men seem to have the economic capacity to indulge in large sexual partnership in comparison with the surplus budget group. While 15.6 per cent of the surplus-budget men had had not less than five sexual partners in the last year, no deficit-budget men had done so. However, the fact that many within the deficit budget group (90.9%) have had between two and four partners within the last year shows that their sexual activity has not been low.

The variations introduced by religion show that never-married Muslim males are more concentrated with the average number of sexual partners than their Christian counterparts: 17.4 per cent of Christian males have had at least five sexual partners compared with 5.9 per cent of Muslim males. Among the female respondents, the same pattern is repeated, with 46.1 per cent of Muslim respondents having restricted themselves to only one sexual partner within the last year. They have been less characteristic even of the moderate partnership range than their Christian counterparts: 53.6 per cent of Muslim females had had between two and four sexual partners, which is about 15.3 per cent lower than their Christian counterparts.

Non-marital sexuality within the last month

The pattern of sexual partnership within the last month shows some reduction in the size of each group actively involved in sexual relationship; the degree of reductions however varies among the gender groups as illustrated in Table 7. Generally, among the female respondents, 17.4 per cent had sexual partners in the last year but have been without sexual partners over the last month, while 16.5 per cent of never-married males were in this group.

The observed variations in the pattern of partnership distribution for each sex independent of the other did not seriously differentiate the various socio-economic groups from one another. Thus among male respondents, the two age groups are both characterized by a two or more modal sexual partnership category, except that the actual proportion shows

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[8] This argument seems to distinguish the economically-induced sexual behaviour of a purely commercial sex worker from that of a female concubine or a young woman and her sugar daddy. The former may, and indeed often does involve multipartnership, with or without sexual focus, while sexual focus seems to appropriately model the sexual interaction within the latter group.

Table 7: Sexual partnership in the past month[a] of never-married respondents by selected socio-economic characteristics in Freetown

	Males							Females						
	minimum (1)		average (2-4)		large (5+)		%drop from last year	minimum (1)		average (2-4)		large (5+)		%drop from last year
	N	%	N	%	N	%	%	N	%	N	%	N	%	%
Age														
less than 30 yrs	3	16.7	6	33.3	9	50.9	16.7	5	23.8	10	47.6	6	28.6	23.8
30 - 39 yrs	6	22.2	9	33.3	12	44.4	16.0	3	12.0	15	60.0	7	28.0	12.0
40 + yrs										2	66.6	1	33.3	33.3
Ethnicity														
Creole	2	22.2	1	11.1	6	66.6	12.5	3	23.1	6	46.1	4	30.8	23.1
Mende	2	25.0	3	37.5	3	37.5	14.3	4	33.3	5	41.7	3	25.0	33.3
Temne	2	16.7	5	41.7	5	41.7	16.7			4	80.0	1	20.0	
Others	3	18.7	6	37.5	7	43.7	18.7	1	5.5	11	61.1	6	33.3	5.5
Education														
none										3	75.0	1	25.0	
primary-secondary	5	14.3	11	31.4	2	50.0	11.8	4	11.4	18	51.4	13	37.1	11.4
post-secondary	4	75.0	2	25.0	19	54.3	60.0	4	40.0	6	60.0			40.0
Budget status														
low budget	3	25.0	2	16.7	7	58.3	18.2	6	27.3	13	59.1	3	13.6	40.7
surplus budget	6	18.2	13	39.4	14	42.4	15.6	2	9.1	14	63.6	6	27.3	9.1
Religion														
christianity	5	20.8	7	29.2	12	50.0	17.4	7	19.4	18	50.0	11	30.5	19.4
islam	3	16.7	7	38.9	8	44.4	11.8	1	7.7	9	69.2	3	23.1	8.3

[a]The three categories here differ from the earlier two as there is a column on inactivity: those who had sexual partners in the last-year analysis but did not have one in the last month. The other two categories are based on different numbers of sexual partnership. For example, the 'large' category in the last-year analysis refers to 5 sexual partners or more, while in the monthly analysis it refers to 2 partners or more. The other two groups have none and 1 sexual partners respectively.

that the younger male group has six per cent more respondents with above-median sexual activity than the 30-39-years age group. Among the female groups, greater proportions of the lower age groups have kept below three sexual partners in the last month. The larger percentage of the older age group with two or more sexual partners is perhaps caused by its relatively low sample size.

The ethnicity variable differentiates on the one hand between the Creole males with 66.6 per cent large sexual partnership and the three other groups whose above-median sexual activity varied generally between 37.5 per cent and 41.7 per cent. Among the female groups, those with large sexual partnership varied from 33.3 per cent for the 'others' group to 20 per cent for the Temne group.

Much of the variation introduced by educational variables seems to differentiate gender groups from the no-education and the primary-secondary groups. For example, no respondents in the post-secondary category, either males or females, had more than two sexual partners within the last month; similarly, the primary-secondary groups are characterized by a larger percentage with two or more sexual partners, closely followed by the no-education group.

The pattern of sexual partnership by religion did not deviate from the previous pattern which shows the stronger inclination of Christian males for above-median partnership: 50 per cent of Christian males have had at least two partners compared to 44.4 per cent of the Muslim males. The gap is slightly smaller in the female groups, among whom the Christians with two or more sexual partners exceeded the Muslims by 7.4 per cent. However, the percentage that dropped out of active sexual partnership was greater among the Christians than among the Muslims.

Extramarital sexual activity

Analysis on extramarital relationships was obtained from a combination of questions. These are whether respondents have ever had an extramarital relationship since their first marriage, the number of sexual partners since first marriage and the number of sexual partners in the last year and within the last month.

This perspective is informed primarily by two considerations. The first has to do with the realization that the practice of extramarital sex among respondents has a temporal dimension. That is, some of the respondents who had engaged in extramarital sexual relationships might have done so in the distant past, which is outside the temporal span considered dangerous, particularly for HIV infection. Secondly, the variations observed in the temporal pattern of AIDS awareness by respondents also suggest that any likely change in sexual behaviour due to such knowledge would likewise exhibit temporal variations.

Three aspects of the extramarital relationship have been examined. One is the variation in the incidence of extramarital relationship generally between the two sexes. The second is the pattern of variation in extramarital sexual activity with selected socio-demographic classificatory parameters by sex. The third aspect is the phenomenon of withdrawal from extramarital sexual activity against the observed differences in the temporal pattern of AIDS awareness as well as the incidence of a previous sexually transmitted disease. The particular STD referred to here is gonorrhoea, chosen because 32 per cent of all respondents said they had had gonorrhoea at some time. The relative variations introduced to extramarital sex by socio-economic variables are compared, *vis-à-vis* sexual morbidity factors.

Gender patterns of extramarital sex

The incidence of extramarital sex seems rather higher in Freetown than in some comparable cities[9]. From the response to the question on extramarital relationships at least 73.8 per cent of males and 69.7 per cent of females had had extramarital relationships since their first marriage. Further analysis shows that the range of extramarital sexual relationships lies between one and 19 sexual partners for both sexes. The mean number of extramarital partners for men was a little over four partners compared to 2.54 partners for women. Among the males 29.1 per cent had only one extramarital partner compared to 37.7 per cent of females. Although both the mean and the median number of extramarital partners for males exceeded those for females — 4.3 and 3.0 respectively for men against 2.5 and 2.0 partners for females — the women's modal partnership level of two exceeded that of men. Further desegregation of extramarital partnership is examined in Table 8 to see if there are variations in the number of extramarital partnerships among age cohorts by sex. It was assumed that the number of years spent in marriage might introduce variations to extramarital sexual activity[10].

The patterns of sexual partnership among the under-30-year-old males appear more evenly distributed than those of the older cohort. The under-30 cohort also has the largest proportion of respondents with only one extramarital partner since marriage. This pattern differs from the other male age cohorts, especially from the 30-39 years age group among whom 40.6 per cent of respondents had at least four sexual partners since first marriage. Number of extramarital sexual partnerships among the 40-year-old males is somewhere between the two younger cohorts, with a modal percentage of 2-3 sexual partners.

Female respondents on the other hand tend to contrast with the observed pattern among the males especially when the percentages of the three cohorts in the large sexual partnership range are compared. The youngest female age cohort in particular contrasts with the equivalent male group: for example, close to one-third of the under-30-year-old men had at least four sexual partners since marriage, but only 8.7 per cent of women under 30 had done so. The female pattern shows a positive variation between the magnitude of extramarital partnership and the number of years spent in marriage while this pattern seems reversed among the married male cohort.

The temporal sequence in extramarital relationships

A relatively high incidence of extramarital relationships has been observed, evidently involving both male and female respondents. However, within the cohort analysis which focuses primarily on the vulnerability of respondents to AIDS, the time when such extramarital relationships occurred becomes relevant as the incidence of the AIDS scourge only became very prominent in the 1980s.

The temporal pattern of extramarital relationships is examined further to ascertain what socio-demographic peculiarities seem to indicate the likelihood of extramarital relationships and the relative consistencies of such explanations as the level of extramarital sexual activity changes over time. A series of socio-economic variables were considered on the basis of

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[9] The extramarital relationship level in Lagos, for example, involved 58.9 per cent of married men and 17.4 per cent of married women.

[10] The respondent age cohort has been employed as a surrogate for the number of years spent in marriage, on the assumption that on the average, older respondents are likely to have spent more of years in marital unions than younger ones. This assumption was necessary as the data on year of marriage or number of years in marriage were not collected.

Table 8: Age cohort and extramarital sexual activity in Freetown

Levels of extramarital partnership	Males						Females					
	under 30		30-39 years		40+ years		under 30		30-39 years		40+ years	
	N	%	N	%	N	%	N	%	N	%	N	%
Minimum (1)	10	38.5	30	28.1	4	19.0	12	52.2	9	30.0	5	31.2
Average (2-3)	8	30.8	10	31.3	12	57.0	9	39.1	18	60.0	8	50.0
High (4+)	8	30.8	13	40.6	5	23.6	2	8.7	3	10.0	3	18.8
Total	26	100	53	100	21	100	23	100	30	100	16	100

published and unpublished works[11]. Some of these factors are designed to reveal divergences in the socio-economic and demographic traits of a married couple while a factor like intimacy is a psychological factor which may influence the chances of a married respondent engaging in extramarital sex.

The age difference and the educational gap between the couple were considered in the analysis, as were other variables which relate primarily to each respondent[12] exclusively, such as budget status, duration of stay in Freetown, incidence of premarital sexual activity, type of marital union (monogamous or polygynous), religion, childhood environment and ethnicity.

We first intended to analyse each sex separately, or at least to design each variable in a manner that would separate the two sexes. This idea was dropped as it tended to create too many categories, which diminished the reliability of our analysis; through an initial logistic analysis some variables were excluded as they had the tendency to reduce the number of respondents included in the analysis as well as to create many redundant matrices which ultimately reduces the reliability of the analysis. So not all the variables hypothesized were included in the logistic regression analysis. The analysis in Table 9 shows the classification of those who had had extramarital relationships within the last year as well as the last month. The table compares the extent of extramarital relationship in the last month with that in the last year, and assesses the variation in extramarital sexual activity between the last year and the last month.

A comparison of the level of extramarital relationship between those who have ever had such a relationship and those who did so within the last year shows only a negligible reduction. Extramarital relationships within the last year involved 62.2 per cent of male and 48.5 per cent of female respondents. This shows a much more significant reduction for female respondents among whom 21.2 per cent of those who had ever had an extramarital relationship had discontinued in the last year. Among male respondents, only 11.2 per cent had discontinued extramarital relationships within the last year. However, the extent of extramarital dropout increased for both sexes within the last month.

Among the married females there was a reduction of 54.2 per cent on the level of extramarital sex between the last year and the last month, and among males, 46 per cent. A comparative analysis of the variation in the patterns of extramarital relationships within the last year as well as the last month shows that in most cases there are minimal differences in the level of extramarital sex among the variable subcategories. This tendency is reflected also by the pattern of dropout in extramarital relationships among the variable subgroups. Among the four intimacy groups, the level of dropout varied from 22.6 per cent for men with low intimacy and 37.9 per cent for women with low intimacy. This tendency is reflected also by the pattern of dropout in extramarital relationships among the variable subgroups. Among the four intimacy groups, the level of dropout varied from 22.6 per cent for men with low intimacy and 37.9 per cent for women with low intimacy.

The pattern variations among the other variable subcategories are similar to what is observed in the intimacy analysis, so a logistic regression analysis was used to further assess the effect of each variable within a multi-variable arrangement. Through a selection process which involved variable combination and recombination a few variables were entered into the analysis. The sets of variables which entered the two analyses differed significantly.

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[11] Isiugo-Abanihe (1994)and Babatola (1995) were relevant. Much of the relationship between some of the selected variables and the propensity for extramarital relations was also explored in the latter study.

[12] Not all variables could be computed to show contrasts between partners since data were collected on a few variables on each respondent's partner.

Table 9: Temporal pattern of extramarital sexual relationship

Variables	year-month %drop	last year (emar1) yes N	last year (emar1) yes %	last year (emar1) no N	last month (emar2) yes N	last month (emar2) yes %	last month (emar2) no N
Intimacy level							
men, low	22.6	19	61.3	12	12	38.7	19
men, high	31.6	48	63.2	28	24	31.6	52
women, low	37.6	23	53.3	20	11	25.6	32
women, high	25.0	25	44.6	31	11	19.6	45
Budget status							
men, low	19.1	23	54.8	19	15	35.7	27
men, high	35.4	44	67.7	21	21	32.3	44
women, low	25.8	27	43.5	35	11	17.7	51
women, high	27.1	21	56.8	16	11	29.7	26
Duration of stay							
men, shorter	38.1	28	66.7	14	12	28.6	30
men, longer	20.6	35	60.3	23	23	39.7	35
women, shorter	34.2	19	50.0	19	6	15.8	32
women, longer	25.0	27	51.8	29	15	26.8	41
Education status							
none	26.0	27	54.0	23	14	28.0	36
primary	29.7	14	51.9	13	6	22.2	21
secondary	27.3	56	58.9	39	30	31.6	65
post-secondary	33.4	8	66.7	4	4	33.3	8
Marital type							
male monogamous	31.9	62	70.5	26	34	38.6	54
male polygynous	21.4	5	35.7	9	2	14.3	12
female monogamous	26.1	13	56.5	10	7	30.4	16
female polygynous	27.8	34	47.2	38	14	19.4	58
Religion							
male Christian	22.4	33	56.9	25	20	34.5	38
female Christian	22.6	21	39.6	32	9	17.0	44
male Muslim	36.2	33	70.2	14	16	34.0	31
female Muslim	28.9	26	57.8	19	13	28.9	32
Spousal age difference							
minimum age diff (both sexes)	30.6	51	60.0	34	25	29.4	60
wives with much lower age	18.4	22	44.9	27	13	26.5	36
wives with much higher age	50.0	6	60.0	4	1	10.0	9
husbands with much higher age	25.5	26	55.3	21	14	29.8	33
Childhood environment							
village	40.7	33	61.1	21	11	20.4	43
town	32.0	31)	62.0	19	15	30.0	35
Freetown	18.6	51	50.0	51	32	31.4	70
Ethnicity							
Creole	15.8	18	47.4	20	12	31.6	26
Mende	50.0	34	68.0	16	9	18.0	41
Temne	27.8	22	61.1	14	12	33.3	24
Others	19.5	41	50.0	41	25	30.5	57
Premarital sexual activity level							
male, low	23.7	22	57.9	16	13	34.2	25
male, high	35.5	43	69.4	19	21	33.9	41
female, low	19.6	26	46.4	30	15	26.8	41
female, high	36.3	14	63.6	8	6	27.3	16

As shown in Tables 10 and 11 the common variables to the two analyses are education status, spousal age difference, ethnicity, and childhood environment. The results for both periods show that groups are not statistically differentiated in their likelihood to have had extramarital relationships within either the last year or the last month, supporting the validity of the earlier result above. But there were still some relative differences among the subgroups. The analysis for the last year, for example, shows that all other groups, both male and female, under the duration factor have a lower likelihood of extramarital relationships than men who had stayed a short time in Freetown. The low level of differentiation among subgroups generally in the analysis may be due to the relatively small sample size. Perhaps a clearer insight would be obtained with larger sample analysis.

Table 10
Logistic results of extramarital relationship in the last year

Variables	Co-efficient	Odds ratio
Education		
none	0.00	1.000
primary	-0.3236	0.7235
seconary	0.4534	1.5737
post secondary	0.4597	1.5836
Spouse age difference		
minimum age diff (both sexes)	0.00	1.000
wives with much lower age	-0.3381	0.7131
wives with much higher age	0.5927	1.8089
husbands with wide age advantage	-1.1442	0.3185
Ethnicity		
Creole	0.00	1.000
Mende	0.8456	2.3294
Temne	0.5952	1.8134
Others	-0.1047	0.9006
Environment		
village	0.00	1.000
town	0.1464	1.5911
Freetown	-0.5258	0.5911
Duration		
men, short	0.00	1.000
men, long	-0.3925	0.6753
women, short	-0.7074	0.4929
women, long	-0.3865	0.6794
Budget status		
men, low budget	0.00	1.000
men, surplus budget	1.0378	2.823
women, low budget	a	
women, surplus budget	-0.4924	0.6112

[a]dropped automatically from the analysis because of redundant matrices

Educational analysis shows that those without education had less likelihood of extramarital relationship with the last month, than the other education groups, except for the primary education group, which had less likelihood than the non-education group. Both the secondary and the post-secondary respondents had the highest and somewhat comparable

Table 11
Logistic results of extramarital relationships in the last month

Variables	Co-efficient	Odds ratio
Education		
none	0.0	1.00
primary	-0.37.8	0.688
secondary	0.4660	1.5936
post-secondary	0.8740	2.3964
Spousal age difference		
minimum age diff.	0.0	1.00
wives, lower age gap	0.3269	1.3867
wives, higher age gap	-1.0344	0.3555
Husbands, wider age advantage	-6.2192	0.8032
Ethnicity		
Creole	0.0	1.00
Mende	-0.5594	0.5715
Temne	-0.0913	0.9128
Others	0.0250	1.0253
Environment		
village	0.0	1.0
town	0.7171	2.048
Freetown	0.6174	1.854
Intimacy level		
men, low	0.0	1.0
men, high	-0.4409	0.6435
women, low	-0.4925	0.6111
women, high	-0.8489	0.4279
Religion		
male Christian	0.00	1.00
male Muslim	0.1925	1.212
female Christian	a	
female Muslim	-1.1102	0.3269

[a] dropped automatically from the analysis because of redundant matrices

likelihood of extramarital relationship. Age differences showed that wives with wider age advantage had more likelihood of having extramarital relationships than those who are in the same age range as their spouses. The ethnic variables show that Creoles were less likely to have had extramarital relationships over the last year than either the Mende or the Temne. The orientation however changes when comparison is made with the respondents in the 'other' groups.

Those born within Freetown showed less likelihood of extramarital relationships than those born in a village. This pattern contrasts significantly with what was observed in Lagos where urbanity of childhood environment correlated with higher likelihood of extramarital sex. The budget status analysis shows that men with surplus budget were very likely to have had extramarital relations within the last year, about three times more likely than low budget-status men. The pattern shown in Table 11 is somewhat like that of Table 10 as it affects the relative differentiation of the various subgroups. Among the variables examined, only education, environment and to some extent spousal age difference seem to differentiate in a comparatively large measure the incidence of extramarital relationships within the last month.

The intimacy factor shows a rather poor differentiation in extramarital behaviour in this respect, although the pattern shows that men with low intimacy have a greater likelihood of

extramarital relationships over the past month. The two female intimacy groups had less likelihood of extramarital relationships over the same time than the low-intimacy men. Education differentiation showed that respondents with post-secondary education are about twice as likely to have had extramarital relationships as those without education. The secondary education group also exceeded the non-education group in their likelihood of extramarital sexual activity, but the primary education respondents had less likelihood.

The religion analysis shows that the Muslim males have a higher likelihood of extramarital relationships than their Christian counterparts while the female Muslims were less likely. Age difference patterns show that wives who are much younger than their husbands are the only group with a higher likelihood of extramarital relationships compared to spouses with minimal age difference with their partners. The two other groups, that is, those with higher age advantage and the husbands with wide age gap, show a lesser likelihood. The environment factors are in line with the results under the last-year analysis: respondents born in towns outside Freetown have a greater likelihood of extramarital relationships than those born either in Freetown or in the villages.

The pattern of extramarital relationship by ethnicity however shows the Creoles as having the greatest likelihood of extramarital relationships within the past month with the exception of the 'other' ethnic groups. The pattern above for the two periods tends to show less differentiation among the various subgroups in general. It shows perhaps that the propensity for extramarital relationships has become common regardless of socio-economic variations. Since much extramarital sexual activity was not explained exhaustively by these socio-economic variables, further analysis is carried out to explore the relevance of morbidity factors as conceptualized in the differential awareness patterns of AIDS and the incidence of gonorrhoea among the population. The next section analyses the relationship between extramarital dropouts and the incidence of gonorrhoea infection as well as the temporal differences in the AIDS awareness pattern.

Morbidity factors and discontinuance of extramarital relationships

Table 12 illustrates the incidence of extramarital relations discontinuance and how this relates to some morbidity variables. The emergent pattern is rather diffuse. Analysis of discontinuance[13] within the last year shows that only 20 per cent of male respondents who had had gonorrhoea had no extramarital relationship within the same period. This value is lower than the 40 per cent of males who had never had gonorrhoea, yet did not engage in such a relationship. Among the female respondents the same pattern is observable. It does not seem that having had gonorrhoea in the past had as much influence on the pattern of discontinuance as some other factors may have. A comparative analysis of the temporal pattern of AIDS awareness shows that among males, 33.3 per cent of pre-1990 'knowers' discontinued extramarital relationships in 1989 or thereafter, while among those who heard of AIDS in 1990, 21.2 per cent stopped extramarital relationships a year before their awareness. There is some relationship between early knowledge and higher degree of withdrawal from extramarital relationships, but the margin between the early knowers and the late knowers seems not to be large.

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[13] The discontinuance percentage was obtained by identifying those who had had extramarital relationships before, but who did not do so within the last year: they had stopped having extramarital relationships.

Table 12
Extramarital relations discontinuance

	Percentage dropout			
	Last year		Last month	
	Male	Female	Male	Female
Ever had gonorrhoea?				
Yes	20.0	25.0	66.6	33.3
No	41.4	34.7	55.2	73.5
Time awareness pattern of AIDS				
Early knowers (pre-1990)	33.3	29.0	58.9	61.3
Late knowers (post-1989)	21.2	37.5	60.1	75.0
Recency of gonorrhoea experience				
recent (post-1986)	25.0	33.3	37.5	16.7
past (pre-1986)	17.2	16.7	82.7	50.0

A contrary pattern is observed among the females, among whom the magnitude of discontinuance of 'late knowers' exceeded that of the 'early knowers' by 8.5 per cent. Analysis of recency of gonorrhoea experience shows that for both sexes, those with recent gonorrhoea experience had a greater percentage of discontinuance. About eight per cent more of men recently infected discontinued extramarital relationships in the last year than men infected with gonorrhoea before 1986. The difference between the percentage of dropout of non-infected and previously infected respondents was however not large enough to conclude that it was the incidence of previous gonorrhoea experience that caused the difference.

The pattern among female respondents shows greater differentiation, 33.3 per cent of those recently infected dropped out of extramarital relationships compared to 16.7 per cent of those infected before 1986. The pattern of extramarital dropouts within the last month seems to contrast significantly with that of the last year. Among the three morbidity variables, only a previous experience of gonorrhoea among men tends to differentiate extramarital sexual activity over the period. The other two variables, early and late knowledge of AIDS, and the recency of gonorrhoea experience did not give much weight to the morbidity variables' having had greater influence on extramarital sex discontinuance. The pattern observed above perhaps calls for better communication, information and educational strategies to ensure a healthier pattern of sexual behaviour.

Focus in sexual partnership

The importance of focus in sexual relationships has been highlighted elsewhere (Andersen 1992; Orubuloye, Caldwell and Caldwell 1992a). It has been observed that prolonged sexual relationship with a partner enhances the possibility of contracting HIV if one partner is infected. If intensive sexual intercourse is combined with multiple sexual partnerships, the risk of AIDS infection is heightened. Table 13 shows an analysis of focus in the sexual interaction of the respondents.

The pattern of multi-partnership sexual focus takes into account the marital status as well as the kind of marriage of the respondents. At the level of sexual intercourse with the first partner, at least 99.6 per cent of unmarried females and 77.8 per cent of unmarried males

were involved[14]. At that level, the unmarried female respondents had a greater concentration of focus in their sexual intercourse. The gap between their mean and median values shows greater divergences in the sexual intercourse frequency among its members than among the unmarried males.

The percentage of unmarried males who networked to the second level was higher than that of the unmarried females, 68.9 per cent for males and 61.2 per cent for females.

Table 13
Marital status and pattern of sexual networking

| | Levels of sexual partnership | | | |
	level 1	level 2	level 3	level 4
Unmarried males	35 (77.8)	31 (68.9)	12 (26.7)	8 (17.8)
mean	25.7	21.4	10.2	17.5
median	20.0	12.0	4.5	4.5
Unmarried females	39 (79.6)	30 (61.2)	9 (18.4)	2 (4.1)
mean	34.3	40.9	56.5	71.0
median	20.0	30.0	50	71.0
Married monogamous males		36 (40.9)	16 (18.2)	6 (6.8)
mean		30.3	30.5	20.3
median		15.5	12.5	14.0
Married polygynous males			4 (44.4)	
mean			30.2	
median			15.0	
Married females		29 (29.3)	8 (8.1)	3 (3.0)
mean		43.8	57.0	35.0
median		40.0	62.0	8.0

Note: The mean and the median values refer to the frequency of sexual intercourse by the reference group at that particular sexual partnership level

However, the phenomenon of sexual focus is far stronger among the female group than among unmarried males. On the average, the unmarried male had an intercourse frequency of 221 times with his partner at the second partnership level compared to 41 times for the unmarried female. This intense degree of focus compares with the focus reported by the married women at the same level of sexual partnership.

The level of coital frequency of unmarried males compared with unmarried females seems to characterize the difference in coital frequency of married males and unmarried females. What seems to differentiate multi-partner sexual activity between males and females at this level is that greater percentages of males of whatever categories are involved.

The third sexual partnership level shows a modal involvement of the married males with two wives; 44 per cent of males with two wives had an extra sexual partner in addition to their two wives. They were followed by the unmarried males among whom 26.7 per cent had at least three sexual partners within the last year. About 18 per cent of both never-married

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[14] The actual percentages were higher, but the current figures were based on those who provided answers to the questions on the frequency of sexual intercourse with their sexual partners, up to the fourth person within the last year. The married groups were generally omitted from the analysis at the first sexual partnership up to the level that is the same as the number of their wives.

females and monogamous males were involved in sexual partnerships at the third partnership level.

The analysis of focus at this level shows that the female groups have much sexual concentration at this level. Some element of sexual focus is also noticed in the sexual interaction of the married male groups, both polygynists and monogamists at the third partnership level. On the other hand, the unmarried males were less characterized by serious sexual focus at this level.

At least 17.8 per cent of single men said they had had fourth partners within the last year and about 4.1 per cent of single females did so. No respondent with two or more wives had a fourth partner; however, three per cent of married females networked to the fourth partnership level. The sexual intercourse pattern at this level still showed the largest focus almost characterizing the single females, followed by the married females, while the single males maintained their tendency for the lowest average of coital frequency even at the fourth partnership level.

Variations in the categories of sexual partnership among male groups

The role of sexual intercourse is not limited to the question of its concentration or diffusion, it also involves the identity of the sexual partner (Orubuloye, Caldwell and Caldwell 1992 a,b). It is generally believed that sexual intercourse with a prostitute may expose the individual to greater vulnerability to sexual diseases. Evidence from medical science, for example, shows that sexual intercourse with a prostitute subjects her customer to contact with sexually-related disease which the prostitute may have contracted from at least her last seven sexual partners.

It has been observed generally that respondents are often reluctant to identify their sexual partners as prostitutes, hence low percentage values of prostitution have often appeared in different studies. However, the methodological advances made so far in sexual networking analysis involve the use of other surrogates to estimate the proximate level of prostitution and, by extension, of the level of effects on the general sexual health of society.

Table 14 attempts to estimate the approximate level of prostitution among the population at the four levels of reported sexual partnership, for the two male categories. It compares for each level the professed level of prostitution-partnership and the incidence of monetary reward for sexual relationship. It combines the analysis with that of the level of contraceptive use across the four sexual partnership levels.

The emergent pattern from Table 14 confirms the tendency observed elsewhere to underreport the incidence of prostitute patronage. Among single males at the first partnership level, only 4.7 per cent said they had engaged a prostitute, understating the proximate percentage of about 23.3 per cent who paid money for sex. The pattern of monetary reward for sexual intercourse seems to indicate that the level of prostitute partnership may not be lower than 20 per cent for single males; the lowest level of financially rewarded sexual relationship was at the third partnership level where 28.6 per cent had engaged partners whom they rewarded financially.

Among the married males, the highest level of prostitute partnership admitted was 2.9 per cent at the third sexual partnership level. This is also relatively low if compared to the percentage of money-rewarded sexual relationships. At level one, 2.3 per cent said they had engaged prostitutes while 20.8 per cent said they had paid for their sexual relationship. Such wide deviations characterized the four partnership levels. The extent of financially rewarded sex culminates at the fourth sexual partners level, where 57.1 per cent of married males claimed to have paid money for sex.

The incidence of contraception, however, seems to fare better but only particularly so with single males, the lowest level of contraception being at the first partnership level with

Table 14: Proximate levels of prostitution among males and females

Partnership levels	Single males						Married males						Single females		Married females	
	level of reported sex with prostitutes		relationship involving monetary rewards		level of contraception		level of reported sex with prostitutes		relationship involving monetary rewards		level of contraception		level of contraception		level of contraception	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
level 1	2	4.7	10	23.3	14	33.3	2	2.3	18	20.9	29	33.7	29	40.3	29	60.4
level 2	5	15.6	12	37.5	18	56.3	3	5.6	17	30.9	16	29.6	16	64.0	20	74.1
level 3	2	14.3	4	28.6	8	57.1	2	9.6	10	47.6	10	47.6	5	100	9	100
level 4	2	22.2	3	33.3	5	55.6	-	-	4	57.1	2	28.6	-	-	2	100

33.3 per cent claiming to have contracepted, while 57.1 per cent represents the peak for them at the third partnership level. Among the married males, the rate of contraception was lower, varying from 29.6 per cent at the second partnership level to 47.6 per cent at the third partnership level.

However, the pattern of contraception reported by the women far exceeded the men's level. It is difficult to assess such a high level of reported contraception; it tends to contradict the observed pattern of premarital maternity observed in the earlier part of this work, except however that such sexual behaviour has gained acceptance of late.

Conclusion

This study has examined the pattern of sexual networking in Freetown, against the backdrop of the AIDS epidemic. It was based on the initial set of data collected at the initial period when the various aspects of research on sexual networking at least in West Africa were being articulated. The results obtained in Freetown seem to conform in certain respects with what has been found elsewhere in West Africa. However, some differences are observable.

One of the primary aspects of the Freetown findings is the high incidence of never-married respondents who claimed to have become fathers and mothers. The present result indeed also showed the phenomenon of a large percentage of deficit-budget respondents particularly among the females, however, the budget-status differentials did not seem to have differentiated the tendency for large sexual partnership. This perhaps may have to do with the unique differences in the way the economic factors operate between purely commercial sex and para-commercial sex. Contrary to some ordered correlations between extramarital relationships and some social, demographic and psycho-emotional variables identified elsewhere, extramarital relationships in Freetown seems to be highly undiscriminated by many factors.

There seems to be a probability of indiscriminate participation, especially given the percentage of women who still had extramarital relationships within the last month of the survey. Another issue that raises much concern is the relatively low level of response of extramarital sexual activity to AIDS awareness as well as to the incidence of previous sexually transmitted diseases. The observed pattern seems to show that the information received was not compelling or dissuading enough or that respondents are generally unperturbed by the threat of AIDS.

Indeed, from the percentages of those who opined that there is one form of solution to the problem of AIDS, the need is clear for better information and education programs for a significant proportion of the populace. A strong element of sexual focus also characterizes the population especially the female respondents, while the men seem to have a rather high level of sexual relations with prostitutes.

Although the reported level of contraception seems satisfactory, it rather doubtful that the reported level of non-marital parenthood could have occurred with this level of contraception, unless widespread contraceptive use is a new phenomenon; or perhaps the ex-nuptial births are evidence of contraceptive failure. An analysis of contraceptive use and failure seems necessary, and perhaps given the advances in the methodology of approaches to sexual networking, further investigation of Freetown sexual behaviour with a larger sample may produce useful information.

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