An Evaluation of a Quasi-Experimental Community Level HIV Intervention in Nigeria

Society for Family Health
Abuja, Nigeria
April, 2005

INDEX

INDEX OF TABLES

INDEX OF FIGURES

LIST OF ACRONYMS

COPOP	Council for Positive People
CSO	Civil Society Organisation
DOH	Development Options for Humanity
FBOs	Faith Based Organisation
FSW	Female Sex Workers
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome
M&E	Monitoring and Evaluation
MARC	Most at risk Community
MARCs	Most-at risk Communities
MARF	Most-at-risk females
MARM	Most-at-risk Males
PE	Peer Educator
PF	Peer Facilitator
PIPC	Participatory Inter Personal Communication
PSRHH	Promoting Sexual and Reproductive Health and HIV Risk Reduction Programme
RUWOYD	Rural Women and Youth Development
SCD	Society for Community Development
STI	Sexually Transmitted Infection
SWAAN	Society for Women and AIDS in Nigeria
SWATCH	Support for Women and Teenage Children
SWs/SW	Sex Workers/Sex Worker
VCT	Voluntary Counselling and Testing

EXECUTIVE SUMMARY

The Promoting Sexual and Reproductive Health and HIV/AIDS Reduction Programme (PSRHH) is a 7- year programme in support of the national response to HIV and AIDS and reproductive health. The goal of the PSRHH programme is to improve sexual and reproductive health among poor and vulnerable populations in Nigeria through increasing behaviours conducive to sexual and reproductive health among poor and vulnerable populations in Nigeria. The PSRHH programme employed a community level quasi-experimental demonstration involving 26 most-at-risk communities (MARCs) spread across Nigeria's six health zones. Thirteen intervention communities were purposively selected along with 13 matched control communities. They were matched in terms of geographical proximity, socio-economic characteristics, and perceived prevalence of HIV risk behaviour**.** The communities were predominantly high risk communities identifiable by a combination of poverty and high levels of transactional sex including multiple sexual partnering far higher than the national average. The programme consisted of four core interventions: edutainment (mainly in the form of road shows); peer education; parent child communication initiatives, and massive youth awareness programmes for young persons. Implementation took place at similar pace in all intervention communities for a period of 18 months from January 2003 to June 2004.

Data were collected at two points: prior to programme implementation from 4626 respondents and 18 months later from 4586 respondents based on multistage probability sampling design. Qualitative data were also collected through participatory methods at initial start-up, mid cycle and at the end of the first cycle of project implementation. These included focus group discussion, community group interviews, key informant interviews and a range of other participatory methods.

Impact was measured by comparing changes in outcome indicators for persons living in the 13 intervention with those in the 13 control communities with no intervention. Multivariate statistical methods were used to assess whether the changes on key indicators were significant after controlling for selected population characteristics.

Overall the programme made significant impact on condom use particularly among most-at-risk males (MARMs), young women and young men. On STIs, the programme was successful only to some extent. It improved knowledge on where to get STI services, but did not increase the proportion of young person and MARMs who sought treatment, except sex workers. Knowledge levels were considerably improved as a result of the programme**.** The programme also significantly reduced stigma and discrimination among most of the target groups. In terms of interventions, it was found that peer education was the most effective intervention among MARMs, sex workers, and young females in increasing condom use. There was no evidence that edutainment (in the form of road shows) had any impact on behaviour change, even though it was found to increase knowledge. For youth interventions, massive youth awareness initiatives as well as parent-child communication did not affect behaviour change.

In terms of working with the target groups, most-at-risk-persons were often mobile. Consequently, changing their behaviour is difficult as it takes time and involves intensive programming. Road shows were found to be effective in increasing knowledge, so where knowledge was already high, road shows had limited use. Among sex workers, the programme improved the level of condom use with fee-paying clients, but not so within non-fee paying 'loving' relationships.

The most effective intervention was peer education. Road shows on its own did not impact behaviour change. It is recommended that any future scale up may consider implementing peer education among all target groups while the value added by road shows is explored further when interventions are implemented in the former control communities.

1 CHAPTER ONE: **INTRODUCTION**

1.1 HIV/Situation

The HIV prevalence in Nigeria has increased from 1.8% in 1991 to 5.8% in 2001. Although the 2003 HIV/Syphilis sero-prevalence sentinel survey put the country at 5%, figures across the country are still alarming particularly in some states where prevalence is as high as 10%. Presently, it is estimated that more than 3.5 million Nigerians aged 15-49 years are infected with the virus. Since 1999, the epidemic in Nigeria has extended beyond the commonly classified 'high risk' groups and is now common in the general population.

1.2 Response to HIV/AIDS Situation in Nigeria.

Nigeria has passed through several phases in her response to the epidemic. The stages included an initial period of denial, a largely health sector response and now a multi-sectoral response that focuses on preventing, treatment, and impact mitigation; a central body is dedicated to leading and co-ordinating the distinct response components, while the various sectors including civil society organisations, faith based organisations and people living with AIDS support groups, focus on packaging and implementing interventions based on a HIV national action plan.

Nigeria currently benefits from a high level of political commitment and international support. There is a high level of activity in all sectors: advocacy, prevention, care and support and mitigation of the impact of the epidemic. However, there is a need to scale up activities, improve coverage, and monitor and evaluate the progress and effects of interventions to ensure that defined goals and objectives are achieved.

1.3 PSRHH

The Promoting Sexual and Reproductive Health and HIV Risk Reduction (PSRHH) is a seven year programme co-funded by the British Department for International Development (DFID) and the United States Agency for International Development (USAID). Population Services International (PSI) is the managing agent for the programme, and is implementing it in partnership with the Society for Family Health (SFH), Actionaid International Nigeria (AAN) and Crown Agents.

The goal of the PSRHH programme is to improve sexual and reproductive health among poor and vulnerable populations in Nigeria, through the promotion of behaviours conducive to sexual and reproductive health. The key programme outputs include:

- Increased knowledge and attitudes conducive to safer sexual and family planning practices, largely through developing and implementing comprehensive behaviour change strategies;
- Increased access to safer sex products and services; and
- Creating an enabling environment of sustained behaviour change, largely through engaging with public institutions, civil society organisations and networks to influence institutional policies and practices that will support behaviour change interventions.

1.4 Need for Community-based Interventions Targeting High Risk Groups

If the HIV epidemic is to be contained, the best means is through interventions that alter the behaviour of both individuals and of communities. (Hoffman, 1996). Traditionally, the focus of health interventions has been on the individual, however, because the interpersonal nature of HIV disease is influenced by individuals, peers and community norms, interventions need to encompass all of these contexts to be optimally effective. Kelly et al (1992) recommend multifaceted community activation, social marketing and mass media.

The community-level behaviour change strategy is therefore a critical component in addressing the HIV/AIDS and reproductive health problems in communities (and nationally when scaled up) in a coherent and integrated manner to ensure achievement of sustainable behaviour change. It also represents an effective way of reaching a large number of individuals in a participatory and interactive manner, and is likely to be particularly empowering for women. Programme interventions took place in high risk communities characterised by high risk sexual activities. The approach was to target the entire population within the selected high risk communities and carry out special interventions for each of the identified high risk groups.

1.5 What did we set out to do?

The main focus of the community-level BC intervention component was to mobilise community action on HIV/AIDS and reproductive health through targeted preventive interventions among the population at highest risk within the community. The programme set out to achieve four set goals:

(a) To develop an approach to working with high risk groups via community mobilization to have impact on PSRHH programme objectives;
(b) To test programme effectiveness using a quasi-experimental design selecting 13 intervention and 13 control sites over a period of 18 months;
(c) To use lessons learnt to improve approach and develop a model for each of the target groups to scale up interventions.
(d) Strengthen institutional and programming capacity of civil society organizations to deliver community level behaviour change interventions

1.6 Theoretical Framework

Interventions without a conceptual framework are usually intuitive and hardly evidence-based. Tested and solid theoretical foundations have been found to contribute immensely in effective HIV prevention interventions. Two closely linked theoretical approaches informed this community level behaviour change interventions; the Information - Motivation – Behavioural (IMB) skills model and the newly developed Opportunity - Ability and Motivation (OAM) framework. The IMB model has proven in recent years to be very successful in HIV prevention interventions. The selection of these models is based on their simplicity and ability to integrate theory and research. As with other models of determinants of behaviour such as the theory of reasoned action, social cognitive theory or the theory of planned behaviour, the basic assumption is that changing the proposed determinants will be an effective means of changing behaviour. The IMB model conceptualises the determinants of HIV preventive behaviour and provides a general framework for understanding and promoting prevention across populations and preventive behaviours of interest. The IMB model is based on an analysis and integration of theory and research in the HIV prevention and social psychological literatures, and focuses comprehensively on the set of informational, motivational, and behavioural skills factors that are conceptually and empirically associated with HIV prevention but often are dealt with in isolation.

The Social Marketing Behaviour Change Framework

Effective social marketing encourages behaviour change through a combination of commercial sector marketing techniques and public health approaches to behaviour change communication and service provision. Individuals are influenced by a number of 'opportunity', 'ability', and 'motivation' (OAM) factors, and a behaviour change project needs to consider these factors to create real impact. Generally, these factors belong to the following categories:

- The **opportunity** of target populations to adopt safer behaviours and seek care and support
- The **ability** of target populations to adopt safer behaviours and seek care and support
- The **motivation** of target populations to adopt safer behaviours and seek care and support

The OAM model is presented in Appendix 1

1.6.1 Characteristics of Programme Communities

The most-at-risk-communities (MARCs) were identified by a combination of two broad sets of characteristics: firstly high levels of transactional sex or commercial sex, and secondly, the presence of socio economic features that impinges on, and in many ways contributes to high risk sexual behaviour. The communities have high population density and mobility, high level of unemployment and poor accessibility to health and social amenities. In addition, to qualify as a MARC, the community must exhibit HIV risk behavioural patterns higher than the national average: high levels of multiple partnering; high degree of pre/extra marital sex; high levels of serial monogamy; presence of brothel or non-brothel based sex work; and comparatively early sexual debut. For example, only two-fifths (41%) of men 15-24 have never had sex in the 26 communities compared to nearly three-fifths (56%) for Nigeria as a whole. Furthermore, for females while at the national level only three percent of people who had sex in the last twelve months had multiple partners, the figure in the MARCs is as high as 10%.

1.6.2 Who were the programme target groups?

The programme targeted three main groups in the communities:

Most-at-risk-males (MARMS). These are the potential clients of female sex workers. They are defined mainly by their occupations in the communities. In MARC communities, MARMs include transport workers (inter-city long distance drivers and intra-city commercial bus, taxi and motorcycle drivers), hawkers and vendors. Also included are uniformed men, artisans (mechanics, vulcanisers, carpenters etc), butchers and other market men. Most of the MARMS had access to daily disposable income which can be expended on transactional or commercial sex.

(b) Sex Workers. Brothel-based sex work is a key characteristic of the communities. All sex workers in all the brothels were targets of programme interventions.

Out of School Youth (15-24 year olds). Out-of-school youth are more likely to have sex early, more likely to have non-marital sex, and less likely to use condoms. In addition this group is not often exposed to HIV interventions as they are often harder to reach than in-school use. These reasons explain why they were considered vital programme targets. In terms of intervention and data analysis the group was disaggregated by sex.

2 CHAPTER TWO: **DESCRIPTION OF INTERVENTION**

This section presents the programme objectives, who the programme implementers are and a brief description of the programme interventions

2.1 Programme Objectives

The MARM and sex worker component sought to achieve the following specific objectives:

1. To increase safer sex practice among sex workers and their clients by empowering the sex workers to negotiate condom use with partners (including regular customers and boyfriends) and encourage the clients to practice safer sex by using condom and reducing number of sex partners;

2. To improve the health seeking behaviour of sex workers and clients in STI prevention and treatment;

3. To create a supportive environment for sustained behaviour change among sex workers and clients by engaging with key gatekeepers and authority figures in the community.

The specific objectives of the intervention among young persons were to:

- achieve increased safer sex practices (including abstinence ,partner reduction and condom use for those that are sexually active and mutual fidelity) among young persons in the intervention communities;
- increase knowledge about HIV/STI
- enhance peer, parental and community support towards risk-reduction;
- promote the acquisition of risk-reduction behavioural skills;
- improve STI health seeking behaviour

2.2 The Primary Outcomes expected were:

- Increase in the proportion of persons who had correct knowledge about HIV and AIDS;
- Reduction in the proportions of young persons aged 15-24 who were sexually active
- Reduction in the proportion of persons who had multiple non-marital non-cohabitating sexual partners
- Increase in the proportion of persons who used condoms with last non-marital sexual partners
- Reduction in the level of stigma and discrimination against people living with HIV and AIDS
- Increase in the proportion of persons who have had an HIV test and obtained their test results.

2.3 Programme Objectives

The interventions were implemented by Society of Family Health and Actionaid International, Nigeria with the support of other Civil Society Organisations (CSOs). Civil society organizations are recognized as being particularly effective in reaching vulnerable groups especially at community level. For each of the 13 communities, a CSO was selected as a local implementing partner.

2.3.1 Implementation Stages

Programme implementation was made up of four key stages, of which three are now completed, with the exit stage still in progress in the phase 1 pilot communities. The stages were

- Pre-entry stage
- Entry stage
- Intensive stage
- Exit stage

2.3.2 Pre-entry Stage

This critical phase was the period to determine which MARC community to select for intervention, to decide which strategies, structures and systems to put in place, to find out the gaps in capacity and skills and to determine which monitoring and evaluation approach to adopt. Other activities included the clarification of programme objectives, strategies to achieve the objectives, the implementation process including partnering, collaboration and networking; development of work plans and budgeting.

2.3.3 The Entry Stage

This was the stage that the actual community level intervention began. The two main activities at this stage included information gathering (mapping) and community mobilisation. Mapping activities resulted, among others, in identifying formal governance structures in each of the communities including community networks and how extensive such networks were, (based on civil or traditional power structures). Key gatekeepers and stakeholders were also identified. At this stage also the mapping of brothels (total numbers and location of brothels, nature of brothel management, etc) was undertaken as well as the assessment of health facilities around the community, the staffing and quality of service delivery for the purpose of future referral and linkages. Community mobilisation was embarked upon at this stage aimed at ensuring community participation and ownership of the programme. It entailed sensitising, integrating and working with sub groups and stakeholders to achieve programme objectives.

The climax of the entry phase was the 'Full Open Community Meeting' in each intervention community held to introduce the programme to the community and explain the design and objective of the programme. The open community meetings were used to invite participants of the various population sub groups (e.g. young persons, most-at risk males, most-at risk females) and introduce all partners (all those involved in one form or the other in programme implementation e.g. CSOs, health officials, sponsors etc) and share programme objectives and the duration with the community.

2.3.4 The Intensive Stage

This is the stage at which all the components of the intervention were implemented vigorously among the different sub groups. The following mix of the interventions was implemented among the sub-groups in an integrated manner. On the whole, there were no marked variations in terms of interventions from community to community.

2.3.5 Duration of Intervention

The first phase of the demonstration pilot interventions lasted for 18month; from January 2003 to June 2004.

2.4 Intervention Descriptions

The intervention employed multi-method approaches aimed at ensuring all groups were covered and that messages were reinforced. The programme consisted of four core interventions: edutainment (mainly in the form of drama road shows); peer education (including participatory interpersonal communication (PIPC)); massive youth awareness programme; and parent child communication initiatives (see Table 2.1). The last two were specific only to young persons. In addition there were special interventions in the area of advocacy as well as access to services (mainly condoms and lubricants).

Table 2.1: Programme Intervention Mix

	Edutainment	Peer Education (including participatory interpersonal communication)	Massive youth awareness programme	Parent-Child Communication
Sex workers	X	X		
Most-at-risk males MARMs)	X	X		
Young persons	X	X	X	X

A detailed description of each of the interventions is given below:

2.5 Peer Education

Peers gain more when they are actively involved in programme design and implementation, which is a core premise of peer education. Peer education is also expected to enhance behavioural skills, a requirement for behaviour change. The common characteristic of the peer activities is that they are based on the principles of like changing like. They are interactive and the facilitators are members of the peer group, which enhances ownership. It also builds peer support and self esteem. In the youth peer education intervention, the facilitator may work with a diverse number of peers both individually and in small groups in naturally occurring situations in the community. Variants of peer education used are described below.

2.5.1 Participatory Interpersonal Communication [PIPC]

PIPC as an aspect of peer education was based on the principle of social diffusion. In MARC communities, like others, there exists a social structure in which certain opinion leaders play a vital role in diffusing new ideas. In participatory interpersonal groups, discussions on how to embark on HIV behaviour change took place and skills needed to negotiate behaviour were discussed. PIPC discussion topics were designed to boost motivation and enhance behavioural skills needed for HIV behaviour change. PIPC was found to be participatory, experiential and personalised and was aimed at providing behavioural skills to build self-efficacy. It was intended that these members as 'innovators' through interpersonal networks in the community would spread the new behaviour. PIPC members were drawn from influencers within community based market women, taxi/'okada' drivers, youths etc. A typical PIPC session involved 12 –20 persons within the community; usually homogenous in terms of profession, sex, age and social class and were conducted weekly, bi-weekly or monthly depending on the convenience. There was always a call to action for the participants who reported on their progress during subsequent sessions.

2.5.2 Sex worker peer education

Sex workers' facilitation consisted of series of meetings between the peer facilitators and colleagues living in the same brothel. The facilitator's role was to create an environment for different sets of issues to be discussed and a call for action followed up by the whole group committing to putting all discussed into practice.

2.5.3 Youth peer education

In the youth peer education intervention, the facilitator worked with a diverse number of peers both individually and in small groups in naturally occurring situations in the community. Each peer educator was expected to interact with a minimum of 12 peers every two weeks. A review and monitoring meeting was also held every two weeks. These meetings allowed for experience sharing and review of modules from the peer educators manual.

2.5.4 Edutainment

Edutainment is the intentional incorporation of educational messages into an entertainment format in order to change audience behaviour. In MARC communities, edutainment was able to attract and hold the attention of a large audience usually by engaging their emotions. The main purpose was to enhance knowledge skills needed to embark on behaviour change. In a few communities community-based artistes were used in performing community relevant plays/sketches and this was particularly refreshing, as it took into account local sensitivities.. A key feature of the drama was that it generated and facilitated audience participation during and after the shows/performances. The dramas in the form of road shows were performed by a third party on behalf of the programme managers, although all other aspects, including cast and content were mutually agreed. Each show was specifically designed to appeal to a particular at-risk group (young persons, most-at-risk males, sex workers, and the general population). In some communities, there were in addition local drama troupes who also performed. The shows were held in popular spots in the community, while the drama for sex workers often held in brothels. There was one show for each target group per quarter.

2.5.5 Parent-child Communication

The purpose of PCC in the programme was two fold; first to strengthen the communication skills of parents to discuss sensitive issues such as sex, HIV and reproductive health issues with their children and other parents. The second was to provide a non threatening forum for sustained dialogue between parents and their children.

Parent Child communication initiatives were in two parts, parent education sessions and parent-child communication fora. Parent education sessions were to equip parents with skills in communicating with children on sexuality issues, as well as to act as peer educators. Those who normally participated in the parent child communication initiatives were parents whose wards were involved in the peer education process as well as other influential members and leaders of existing groups within the community.

The activities often culminate in parent child communication fora where parents, children and teachers shared concerns and experiences emerging from peer education and parent education sessions. They were aimed at encouraging intergenerational communication on sexuality and reproductive health matters between parents and teachers on the one hand and children on the other.

Role plays and other short drama sketches provided platforms for discussion with each group presenting their expectations on sexuality education and communications. The outcome of these discussions led to agreed action points at various levels: child, parent and community. The action points were revisited in the next forum before new issues were discussed. This helped monitor progress on action points.

2.6 Massive Youth Awareness Programme

The massive youth awareness programme was aimed at increasing the information and knowledge level of youths within the community. To ensure wider community coverage it employs carnivals, youth meetings, large community festivals and events to reach young people.

2.7 Advocacy

Supportive changes in the wider society are an important factor in motivating and sustaining HIV prevention behaviour change. Strategic advocacy initiatives aimed at creating this social support were incorporated into all the key interventions to create enabling environment. Generic advocacy initiatives need to be carried out throughout the duration of the programme to ensure community support for programme intervention and ensure that programme links with other national programmes and service delivery points.

2.7.1 Access to Services, Linkages and Referral System

The HIV and STI needs in terms of services were a key programme intervention. Where no STI services were directly provided, functional links and referral systems were established with service providers within appropriate health facilities both in the public and private sectors. The services included STI management, voluntary counselling including testing and care.

3 CHAPTER THREE: EVALUATION DESIGN AND METHODOLOGY

To ensure robust evaluation, two key research approaches were triangulated: Quasi experimental study and Qualitative approaches.

3.1 The Quasi-experimental Design

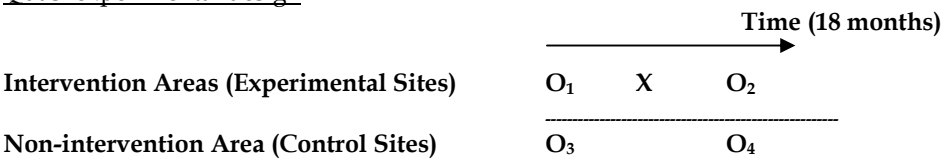
This study employed the most frequently used quasi-experimental design – the non-equivalent control group design - as the evaluation method. (See Figure 3.1).This design is a particularly good one to use when a programme intervention is introduced into one area (community/district) and the interest is in the comparison of the programme effects in that area against a similar, but not necessarily equivalent, neighbouring area. The intention was to compare the conditions of persons who have experienced our intervention with those of equivalent persons who have not. The pre and post intervention studies utilised both quantitative and qualitative approaches.

3.1.1 How were the Experimental Communities Assigned?

Thirteen intervention communities were purposively selected because of their 'high risk' characteristics, along with 13 matched control communities. The communities were matched in terms of geographical proximity, socio-economic characteristics, and perceived prevalence of HIV risk behaviours (see Figure 3.1).

Figure 3.1

Quasi experimental design



Key
O_1 =Baseline survey in intervention community
O_2= Post intervention survey in intervention sites
O_3=Baseline survey in control sites
O_4= Post intervention survey in control sites
X= Interventions

3.2 Sampling Design

The same sampling strategy was employed for both pre-and post intervention surveys. A multi-stage probability sampling procedure was adopted. Within each study area (i.e. community), all elements at each stage of selection had an equal probability of being included in the sample. With an equal allocation (222 eligible persons) to each study area, the final sampling fraction for each study area was dependent on the population of eligible persons in the study area divided proportionately among 'person resident in permanent structures'; 'road transport workers and other men who may or may

not live in the community but work there'; and sex workers. In total, the study is based on 9212 respondents. For the baseline study, the total sample size was 4626 (2281 intervention and 2345 control) and 4586 for the post intervention survey (intervention 2292 from intervention sites and 2294 from control). The baseline study took place in December 2002, while the post intervention was in July/August 2004.

3.3 Fieldwork

An independent research agency was contracted, through a competitive bidding process, to undertake the fieldwork only. A detailed research agency brief was prepared before the selection of the agency followed by a binding contractual agreement. To ensure that local peculiarities were taken into account, the selected agency was expected to work closely with the local National Population Commission staff in the listing of households and eventual selection of respondents. Training of all field workers was done by the PSRHH research team and the research agency. Interview schedules were completed in English by interviewers after asking respondents in local language or Pidgin English where appropriate.

3.4 Questionnaire

The questionnaire items were developed to measure a list of indicators derived from the OAM theoretical framework. Based on the programme logframe, a set of questions addressed each of the three constructs: 'Opportunity'; 'Ability'; and 'Motivation' in the framework (See appendix 1). The same questions were asked at both pre-and post intervention surveys. A set of questions to assess exposure to programme interventions was added during the post intervention survey in 2004.

3.5 Training

Training of survey personnel was done at two levels: central level and community level. Central level training took place at SFH head office in Abuja. The trainers included a mixture of PSRHH staff, the research agency and NPC. All 26 field supervisors (one per community) and 13 local NPC staff attended the training. The training included mock interviews and actual field trials as well as household listing, selection and enumeration. Training included the development of a translated version of selected key words into local language and Pidgin English. A comprehensive interviewer field manual was developed and used as part of the training.

3.5.1 Role of Supervisors and Interviewers

There were two supervisors appointed by the research company for each of the 13 sites and were assisted by local NPC staff in household enumeration and listing. There was one supervisor for every five interviewers and in selecting the interviewers; consideration was given to ensure gender balance. The detailed responsibilities of the supervisors and interviewers were laid out in an interviewer manual. SFH research staff based in Abuja provided overall oversight for the fieldwork.

3.6 Pilot Survey

A pilot was conducted, among others, to test the instrument. It assisted in determining problems in the questionnaire and other elements were revised accordingly.

3.7 Data Retrieval

This was done on a daily basis. The interviewer collected the information from the respondent, edited the questionnaire in the field and submitted his/her quota for the day to the supervisor. The

supervisor checked that all instructions were followed, that responses were consistent and the questions fully answered.

3.8 Data Collection and Entry

Data entry was done by the PSRHH research team with external consultants using the Census and Surveys Processing System (CSPro®) software and later exported into SPSS® for analysis. Special coders were selected and trained. Data entry was done using a code book developed by PSRHH research team. After data cleaning, frequency tables of all variables were prepared for further validation before a final cleaned and edited dataset was produced.

3.9 How was Data Analyzed?

Impact was measured by comparing changes in outcome indicators for persons living in the 13 interventions or 'treatment' communities versus those in the 13 control communities with no intervention. Analyses were performed separately for each of the four target groups: most-at risk males (MARMS); sex workers; young men (15-24 years old); and young women (15-24 years old).

To assess whether observed changes in outcomes could be plausibly attributed to the programme, outcome behavioural indicators in the post-intervention survey were related to the respondent's degree of exposure to programme intervention activities. Efforts were also made to find out which intervention had the greatest impact on each of the outcome behaviours. Even though communities were matched, we used logistic regression and adjusted proportions to control for any differences in socio-demographic characteristics of respondents. In the process, logistic regression models were fitted, and the odds ratios were converted to adjusted proportions.

(a) Quantitative Evaluation Indicators

Programme effect was measured in relation to two sets of logframe indicators: 'purpose' level indicators and 'output' level indicators. The former set is largely made up of outcome behavioural indicators while the latter consists of knowledge, belief and attitudinal intermediate variables which often explain behaviour change.

'Purpose' level indicators

- Abstinence (primary and secondary) of young persons aged 15-24
- Sex with multiple non-marital non-cohabitating partners
- Condom use with last non-marital sexual partner
- Stigma and discrimination against people living with HIV and AIDS
- HIV testing
- Contraceptive use

The P M and E component of the evaluation was in three parts

1. Qualitative using mainly FGDs among community members
2. End of Cycle assessment of CSO partners
3. Comprehensive mid term review of the entire programme

(b) <u>Participatory monitoring and evaluation indicators:</u> Participatory monitoring and evaluation using mainly qualitative research tools was carried out. Throughout the implementation period, a total of over 80 focus group discussions were conducted in thirteen different locations: with some at the beginning of the intervention; others at mid-cycle and the rest after 18 months of programme implementation.. This offered very useful information in explaining and giving depth to the quantitative results. Unlike the quantitative survey, the actual data FGDs were undertaken by the PSRHH team.

3.10 Focus Group Discussions

Group participants were selected in advance of the discussions by members of the PSRHH research team, although in a few instances, especially with young men, a 'captive audience' approach was used to recruit participants on site. In all cases discussions were held within the communities but in varied locations. The overriding criterion was its appropriateness to the discussants. Such locations included brothels for sex workers, beer parlours/bars/drinking joints and other open spaces mainly for the youth. In one instance, discussions were held in the palace of the regent. Each focus group discussion had a moderator and a note-taker mainly consisting of PSRHH team members. Discussions, which lasted around one and a half hours, were held in the appropriate local language, but in some cases Pidgin English was used. Permission was obtained to tape record discussions which were later transcribed in full. No monetary incentives were offered, although refreshments were provided after the discussion and transportation costs reimbursed. Efforts were made after the discussions by the research team to correct misconceptions and other incorrect statements mentioned by participants during the discussions.

Mid term review

The programme benefited from a continuous process evaluation with an in-built thorough mid-term evaluation the purpose of which was to find out how the programme was operating in all the communities, assess quality of the programme and gauged whether the programme was reaching its intended audience. The result of the evaluation was used to fine-tune the programme.

3.11 Ethical Concerns

As in several such studies, the traditional ethical dilemma was an issue: 'Is it ethical to withhold an intervention from some people in order to evaluate an intervention?' To go a long way to address this, the intervention was designed as a 'delayed' intervention with the control communities being subsequently given the intervention. It is anticipated that this will permit a strong programme impact evaluation to be undertaken in the future.

4 CHAPTER FOUR: **PROGRAMME EXPOSURE**

4.1 Exposure of community to the programme

The level of exposure to programme interventions is crucial. Without exposure, programme impact cannot be attributed to programmes. This section attempts to find out what proportions of residents in the intervention communities were exposed to which interventions.

Table 4.1 shows the proportions of community members who were exposed to the programme interventions. For some of the interventions we looked at those who have heard of the particular programme component, or had a friend/relative who was involved in delivering that intervention, or whether the respondent himself or herself was directly involved.

Table 4.1: Exposure to MARC Programme Interventions

Intervention			**Heard of intervention**	**Has friend who is a peer**	**Member of the intervention peer group**	**N**
			%	%	%	
Peer Education	Male	15 –24	39.4	28.9	15.6	**454**
		25+	40.9	29.4	10.0	**921**
	Female	15 –24	41.0	25.9	9.0	**402**
		25+	35.5	22.6	8.3	**504**
	Total		**39.2**	**27.0**	**10.5**	**2294**
Participatory Interpersonal Communication (PIPC)	Male	15 –24	36.1	22.2	9.5	**454**
		25+	40.7	26.7	9.4	**921**
	Female	15 –24	35.3	20.1	5.2	**402**
		25+	34.1	21.2	8.9	**504**
	Total		**37.2**	**23.3**	**8.5**	**2294**
Parent Child communication	Male	15 –24	12.8	8.4	4.0	**454**
		25+	15.1	11.7	6.7	**921**
	Female	15 –24	15.9	12.7	7.7	**402**
		25+	14.5	11.1	7.7	**504**
	Total		**14.6**	**11.0**	**6.5**	**2294**
Massive Youth Awareness	Male	15 –24	34.6	25.1	13.7	**454**
		25+	19.7	13.6	4.6	**921**
	Female	15 –24	33.6	23.9	12.2	**402**
		25+	15.9	10.7	2.6	**504**
	Total		**24.1**	**17.0**	**7.2**	**2294**
Road Show	Male	15 –24	58.6			**454**
		25+	54.9			**921**
	Female	15 –24	48.0			**402**
		25+	45.2			**504**
	Total		**52.0**			**2294**
Seen T shirts with inscriptions	Male	15 –24	67.8			**454**
		25+	61.6			**921**
	Female	15 –24	60.7			**402**
		25+	54.0			**504**
	Total		**60.6**			**2294**

4.2 Have you ever heard of MARC Programme?

At the community level, the programme was dubbed *Make We Talk*. Respondents were asked whether they have heard of *Make We Talk.* Fifty eight percent reported in the affirmative.

The exposure of the programme at the community level was far reaching. Eighty percent of respondents were aware of the programme. This was in response to whether they have heard of the catchphrase *Make We Talk* or seen a *Make We Talk* T- shirt, or been exposed to any of our four core interventions. The relatively high exposure is a reflection of the multiple nature of programme interventions. It is important to note however, that one in five (20%) knew nothing whatsoever about the programme but this proportion rises to 24% among adult women (25 or more years old), and is lowest among young males (15-24) (see Table 4. 2).

Table 4.2: Percentage of Persons not exposed to the Programme

			Not exposed to components but were aware of programme	Not exposed to the programme at all in any way	N
Not exposed to any intervention	Male	15 –24	24.0	15.0	454
		25+	27.7	18.0	921
	Female	15 –24	29.4	18.7	402
		25+	32.5	24.2	504
	Total		28.7	19.7	**2281**

4.3 Exposure to Peer Education

A total of 521 youth peer educators were trained who reached a total of 32,828 youth with the various messages. An average of 116 parents were also trained by each CSO partner on HIV information and skills for intergenerational communication on sex and sexuality.

As shown in Table 4.1 above, two out of every five (39%) community residents were aware of peer education. The proportion of young males compared to adults who had friends or relatives involved in peer education was the same for both groups (29%). The proportions for females were also similar. In terms of actual involvement, however, the differences between young and old were pronounced. Sixteen percent of all men aged 15-24 were peer educators themselves or had been exposed to a community peer educator compared to only 10% among men over 24 years old. Compared with men, women were less likely to have been involved in peer education. For young persons (15-24 years) the proportion for males was 16% compared to only 9% for females. The level of exposure through peer education was probably lower than expected. The nature of peer activities was more of peer educators talking to their peers as part of their normal way of life rather than organised peer groups sessions led by the trained facilitator.

4.4 Exposure to Participatory Interpersonal Communication [PIPC]

Thirty seven % of respondents knew of PIPCs, but unlike peer education, and according to programme implementation strategy, similar proportions of 9% were involved in PIPCs either as facilitators or having ever attended a PIPC session. However, with females, higher level of involvement was among adults (9% vs. 5% in young females). This fairly high exposure rate of PIPCs may be the result of a successful diffusion process where information passed on PIPC members.

4.5 Exposure to Parent-Child Communication (PCC)

Compared with other interventions, exposure to PCC was low, with only 15% of community residents reporting having heard of it. PCC is an intervention designed to reach both young persons and their parents. The proportions of both young persons and adults who were exposed were similar. For males, for example, the proportions were 13% for those aged 15-24 and 15% for respondents over 24 years.

4.6 Massive Youth Awareness Initiative

As its name implies, this initiative targeted young persons. About one-quarter (24%) of all community members have heard of it, although, as expected, about twice as many young persons as adults had heard of it. The involvement of young females is not very different from men (12% and 15% respectively).

4.7 Exposure to Edutainment

The intervention with the highest exposure is the drama road show/community drama: 52% of respondents have watched at least one road show. It was watched by both young and old and appears to be even more popular among males than females as 59% of men aged 15-24 had watched a road show compared to only 48% of women.

5 CHAPTER FIVE: **PROGRAMME ACHIEVEMENT AMONG MOST-AT-RISK MALES**

5.1 Programme Achievement among Most-at-Risk Males (MARMs)

Condom Use

A core programme objective was to increase condom use and reduce the proportion engaging in multiple partnering among most-at-risk males (MARMs). To assess the effectiveness of the interventions, we compared changes between baseline and post-intervention surveys for intervention and control communities separately and checked which of the two groups experienced statistically significant changes. The findings are presented in Table 5.1. The findings show that the programme was effective in increasing condom use with last risky partner (i.e. non-marital partner). The change in the intervention community was significant– rising from 60% in 2003 to 72% in 2004 ($p<0.01$). Although there was an increase in the control communities, the change was not significant. This finding was confirmed through qualitative research. Participants mentioned that condom use was on the increase. In Oluku community a MARM underscored his allegiance to condoms: *Like me now as I dey now if the girl carry N1miilion give me I no go do if I no use Gold Circle I no do* (As for me, even if a girl offers me N1million to have sex with her, I will not without a *Gold Circle* condom). This is evidenced in the words of Corporal Amusan (not real name) at Kara Police Station describing his new experience of behaviour change "*Me I like flesh to flesh, I don't like rubber, but after reading your books and attending your programme, I changed and started enjoying it*". To support the increase in condom use, in some communities, e.g. Tafa, many provided evidence by pointing to used condoms in refuse dumps. Alcohol and sexual risk taking abuse was addressed as a means of reducing risk. There was evidence of positive impact in this direction too. and this may not be unrelated to the rise in condom use. A participant in Tafa confirmed: **"***Youths and adults in the community now use condoms and you can see the condoms in dump areas, (pointing to the refuse damp) also youths no dey (don't) drink too much (alcohol intake) again after the sensitization on effects of alcohol and substance abuse on ability for self discipline.*

Table 5.1

MONITORING TABLE: COMPARING MARMs IN INTERVENTION SITES WITH THOSE IN CONTROL SITES ON KEY PROGRAMME INDICATORS

	Intervention communities				**Control Communities**		
	Intervention				Control		
	2002	2004	Significance		2002	2004	Significance
SAMPLE SIZE	**867**	**783**			**754**	**632**	
Behaviour							
Behaviour Use of condoms in the last sex act with a non spousal partner	60.0	71.5	**		55.2	61.4	ns
Stigma indicator	2.3	8.4	***		5.4	5.3	ns
Stigma index adjusted means	2.1	2.8	***		2.4	2.4	ns
Reported symptoms of STI in past 12 months	5.2	4.4	ns		3.2	4.0	
Reported symptoms of STI and sought treatment at appropriate medical facility	50.4	42.1	ns		53.2	64.3	ns
Had sex with more than one partner last 12 months	27.0	28.4	ns		24.6	28.7	ns
OPPORTUNITY							
Availability: Know a place where STI can be treated	28.8	40.3	***		33.7	35.4	ns
Social Norms: Relatives approve of youth using condoms	23.3	32.4	***		19.2	31.7	***
Social Norms: Community leaders approve of youth using condoms	38.6	54.1	***		35.4	50.4	***
ABILITY							
Knowledge: Know at least 3 symptoms of STDs in women	27.5	39.3	***		19.6	34.2	***
Knowledge: Know at least 2 symptoms of STDs in men	44.7	55.6	***		34.4	54.9	***
Self efficacy: Know how to wear a condom properly	51.3	59.2	***		42.3	54.8	***
Knowledge: Know all forms of transmission of HIV	99.1	95.9	***		99.3	98.2	*
Knowledge: Know abstinence prevents HIV	81.0	81.0	ns		77.3	81.5	**
Knowledge: Know a healthy looking person could be HIV positive	87.1	88.9	ns		84.8	88.1	ns
Knowledge: Knowledge of mother to child transmission	88.2	85.4	ns		85.7	82.1	ns
Knowledge: Knowledge that breast feeding can transmit HIV	73.4	84.5	***		74.0	77.6	ns
Knowledge: Knowledge that condoms have an expiry date	62.6	65.0	ns		63.5	60.6	ns
Knowledge: that using condoms and staying faithful to one partner prevents HIV	94.0	93.4	ns		93.6	92.2	ns
MOTIVATION							
Attitude: Want an HIV test	12.3	18.7	***		49.5	43.1	*
Attitude: Went to collect results of HIV test	9.04	17.9	***		11.7	10.2	ns
Perception: Feels that condoms are affordable	68.6	84.9	***		71.8	81.9	***
Perception: Disagree with the statement	12.9	18.0	***		12.1	10.1	ns

that condoms break often								
Perception: Believe that condoms have a date after which they should not be used		52.3	64.5	***		49.0	66.0	***
Perception: Are not embarrassed to buy condoms in public		57.1	70.2	***		55.8	60.6	ns
Perception: Believe that condoms are easy to obtain		80.3	86.6	***		77.4	82.6	*
Perception: Believe parents approve of youth using condoms if they are sexually active		31.1	54.5	***		26.7	46.7	***
Perception: Believe that friends approve of youth using condoms if they are sexually active		60.9	77.5	***		52.4	71.8	***
Perception: Attitudes to multiple partnering		27.0	28.4	ns		24.6	28.7	ns
Had an HIV test		12.2	18.6	***		14.6	12.4	ns
Belief: Believe that condoms protect against STDs		83.8	83.2	ns		79.9	80.4	ns
Belief: Believe that condoms protect against HIV		80.3	80.8	ns		73.2	77.4	ns
Check expiry date of condoms before using them		31.3	38.5	***		27.0	32.3	*
POPULATION CHARACTERISTICS								
Have a friend with HIV				ns				ns
Age 24 and above				ns				ns
Hausa				ns				ns
Igbo				ns				ns
Yoruba				ns				ns
Secondary education or more		54.2	47.2	*		58.8	51.3	**
Non Muslims				ns				ns
south				ns				ns
Not married				ns				ns

ns p>0.05 *Indicates p≤ 0.05 ** Indicates p≤ 0.01 *** Indicates p≤ 0.001

The programme also observed some unintended positive consequences. In some communities (e.g. Ijora) traditional medical practitioners who often treated young men who contracted STIs, complained of 'poor business' as fewer and fewer people in the community were presenting with STIs apparently as the result of safer sex behaviour arising from the success of programme activities. Conversely patent medicine stores in the community reported of brisk business in condoms sales.

Multiple Partnering

Unlike condom use, there was no programme impact on the level of multiple partnering. The proportion who engaged in multiple partnering did not significantly change in the intervention communities (as well as in the control communities). There was considerable evidence to show that many of the MARMs, while ready to use condoms were not so ready to reduce the number of sexual partners.

STI Health Seeking Behaviour

Reducing STIs, especially among MARMs was a major programme objective. The programme was effective in educating MARMs where STI services can be provided. The proportion of those who knew a place where STIs can be treated increased significantly in the intervention sites from 29% in 2003 to 40% in 2004 without a corresponding increase in the control communities. A MARM spontaneously listed STI service delivery points in and around his community: *If you come to Emene (*an intervention community*), we have St. Bridget and St. Jude Hospitals, Pronominal, Ana Station…..* Notwithstanding the undoubted increase in knowledge about access, the findings show that there was no significant impact on reduction in STIs. The proportion of sexually active MARMs who reported symptoms of STIs in the last 12 months did not change significantly in both the intervention

and control sites. Similarly, the programme was unable to impact on STI health seeking behaviour: the proportion who reported of STI symptoms and also sought appropriate treatment did not improve.

Stigma and Discrimination

Did the programme intervention lead to a reduction in stigma and discrimination among MARMs? The answer is in the affirmative. This can be explained by the successful community response to stigma and discrimination described. There was a significant rise in the UNAIDS stigma and discrimination index (i.e. non-discriminatory attitude) in the intervention sites compared to the control. It is important to note also that there is a significant relationship between working with PLWHA and the decline in stigma. Stigma reduction was significantly higher in sites where PLWA support groups, as CBOs, implemented aspects of the programme as in Gadan Tambarawa (Kano) and Kwanawa (Sokoto), or in areas such as Ijora Badiya (Lagos) and Calabar where PLWHA, although not resident in the community, were periodically invited from contiguous communities, to deliver certain aspects of the intervention, particularly PIPCs. Conversely, the least reductions were observed in sites where the involvement of PLWHA was minimal or non-existent including Kara (Ibadan) and Maimalari (Maiduguri). This reduction in stigma and discrimination is also evidenced by a community member, Mallam Umar below.

Stigma reduction

"*I never knew that people with kanjamau (AIDS) can be this healthy looking as all of you are looking. In this community, anyone with kanjamau is considered a "saniyar ware" (outcast) and dead person. Thank you for helping us understand"*

*With these words, Mallam Umar (*not real name*) welcomed back his niece who was driven out of the family house 6 months earlier on returning home sick with AIDS. For Fati who was married off at a tender age of 13 to Mallam Hassan, a petty business man who shuttled between Lagos, Sokoto and Shuni to buy and sell '**goro**'. It was the end of a harrowing experience which had started in December 2002 when she lost her husband to what was later confirmed as AIDS. Sick and with no financial support she had returned to her family only to be thrown out because of the stigma associated with AIDS.*

When she came in contact with KAPOP her fortunes changed. Based on the outcome of her CD4 count, KAPOP immediately enrolled her as one of the beneficiaries of the drug revolving funds supported by PSRHH. Three months later, having improved, she was reunited with her family in Shuni. Fati summed up like this 'if not because of these people (PSRHH and KAPOP) I would have been a dead woman by now I will do everything I can to let every body in my village know about this disease."

Other behavioural determinants

We also compared changes in both communities in some behaviour change determinants (see table 5.1). While in several cases the changes in the control were as significant as in the intervention sites, there were some important variations. The programme was effective in improving knowledge that HIV can be transmitted through breastfeeding (from 73% to 85%; $p<0.001$), and increased the proportion who were not embarrassed to buy condoms significantly (from 57% to 70% $p<0.001$). The programme also impacted VCCT. It significantly motivated people not only to want an HIV test but also increased the proportion that actually had a test and also went to collect their test results.

5.2 Which Interventions worked better for MARMs?

To help programmers decide on which interventions to use in subsequent scale-up communities, a major component of the analysis was to ascertain which of the interventions worked best to increase condom use in last non-marital sex. To answer this, multivariate logistic regression analysis was done. A total of 313 persons were used for the analysis and the full model was significantly successful ($\chi^2 = 24.81$; df = 8; $p < 0.01$). The only intervention that had significant impact on condom use at last sex was peer education (including PIPC). The odds ratio was 2.468 ($p<0.05$). The findings therefore showed that MARMs who were members of peer education were two and a half times more likely to use condoms at last sex with non-marital partner than those who were not members. Edutainment in

the form of road shows had no significant impact on condom use although further analysis showed that it significantly increased knowledge among MARMS.

5.2.1 Was the behaviour change actually the result of PSRHH?

The analysis went further to assess whether in the intervention communities, there were any difference between those who were exposed to PSRHH interventions and those who were not. This will enable us to attribute changes to PSRHH interventions. All the interventions were scored and based on their aggregate scores, respondents were grouped into four exposure categories: the control group (as reference because they were not exposed to any intervention); low exposure; medium exposure and high exposure. We then explored whether the level of exposure was associated with condom use. In other words are those who have been exposed to PSRHH intervention more likely to use condoms at last risky sex? The results are presented in adjusted proportions in Table 5.2 and figure 5.1. There was a positive significant relationship ($p<0.001$) between exposure and condom use: the higher the exposure the higher the level of condom use. Condom use rose from 64% among MARMs who were lowly exposed to 74% for medium exposure to as high as 79% for those who were highly exposed. When data are analysed for behavioural determinants (see also table 5.2), it was found that for most knowledge and 'motivational indicators', exposure was positively associated with risk reduction.

Fig. 5.1

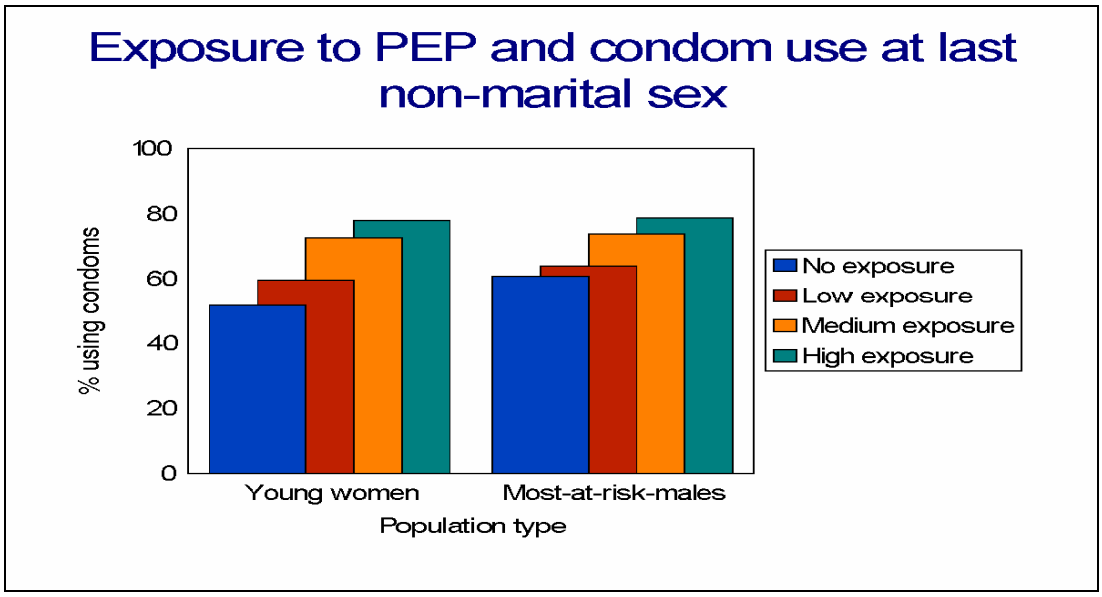


Table 5.2

RELATIONSHIP BETWEEN EXPOSURE AND BEHAVIOUR AND BEHAVIOUR CHANGE DETERMINANTS AMONG MARMs

	Control (Reference	No /low exposure	Low exposure	High exposure	Significance
SAMPLE SIZE	**632**	**352**	**189**	**242**	
BEHAVIOUR					
Behaviour use of condoms in the last sex act with a non spousal partner	60.6	63.7	73.7	78.6	***
Stigma indicator	5.0	7.6	11.6	8.1	**
Stigma index (adjusted means)	2.41	2.75	3.02	2.86	***
OPPORTUNITY					
Know a place where STI can be treated	34.8	28.0	39.4	57.4	***
Relatives approve of youth using condoms					ns
Community leaders approving of youth using condoms	49.1	49.3	53.9	61.8	***
ABILITY					
Know at least 2 symptoms of STDs in men	54.6	49.3	58.0	63.8	***
Know how to wear a condom properly					ns
Believe that condoms protect against STDs	78.1	75.4	85.2	91.5	***
Believe that condoms protect against HIV	75.2	72.2	84.4	89.4	***
Know all forms of transmission of HIV					ns
Know abstinence prevents HIV					ns
Know a healthy looking person could be HIV positive	86.6	86.1	90.7	92.4	*
Knowledge of mother to child transmission					ns
Knowledge that breast feeding can transmit HIV	77.1	82.0	86.9	86.3	***
Knowledge that condoms have an expiry date					ns
MOTIVATION					
Want an HIV test	41.6	41.1	48.2	49.9	ns
Had an HIV test	14.3	15.5	22.9	25.8	***
Went to collect results of HIV test	9.7	12.0	19.8	22.1	***
Feels that condoms are affordable	80.9	81.0	86.6	90.1	***
Disagree with the statement that condoms break often	10.0	12.8	18.5	24.1	***
Believe that condoms have a date after which they should not be used	59.0	60.0	63.1	71.3	ns
Are not embarrassed to buy condoms in public	58.9	64.9	77.6	71.5	***
Believe that condoms are easy to obtain	81.4	81.7	88.7	91.1	***
Believe Parents approve of youth using condoms if they are sexually active	45.0	43.8	55.6	66.9	***
Believe that friends approve of youth using condoms if they are sexually active	69.5	66.0	85.3	88.3	***
Attitudes to multiple partnering					ns
POPULATION CHARACTERISTICS					
Have a friend with HIV					***
Age 24 and above					ns
Hausa					**
Igbo					***
Yoruba					ns
Secondary education or more					*
Non Muslims					ns
South					ns
Not married					ns

6 CHAPTER SIX: PROGRAMME ACHIEVEMENT AMONG SEX WORKERS

6.1 Condom use with paying and non paying clients

One key finding from the baseline data was that among sex workers, reported use of condoms with fee-paying clients was high in both intervention and control communities (see table 7). Notwithstanding, there was noticeable impact. Although there were significant increases in both intervention and control communities, the changes were substantially higher in intervention (from 79% to 89%; $p< 0.001$) than in control sites (from 86% to 91% $p< 0.05$).

The programme, however, did not have any significant impact on condom use with boyfriends. The proportion that used condoms with boyfriends in the intervention (as well as control) did not change significantly. In all communities, the sex workers agreed that condom use was now the norm but only in commercial fee paying sexual encounters. According to one of the sex workers at Ijora Badia the "no condom no sex policy" (pointing to a programme poster on the door) was being practiced in nearly all the brothels. She claimed this has already reduced HIV/AIDS deaths within the community. But when prodded on whether they use condoms with boyfriends, many said 'No'. She, like many others, explained that boyfriends were "safe" and that they have known them for a long time. To them this meant there was no need for condoms.

STI

STI health seeking and treatment behaviour among sex workers was a key programme focus. The findings show that the programme did not impact on the experience symptoms of STIs. For both intervention and control communities, there were no significant changes in the proportion who reported of STI symptoms in the two months prior to the survey. There was a higher improvement in health seeking behaviour at both intervention and control sites among those who reported of symptoms. Among those who reported of symptoms, the changes in the proportion who sought treatment at an appropriate medical facility was greater in the intervention (from 14% to 52%; $p< 0.001$) than in control sites (from 12% to 42%; $p< 0.01$). Qualitative evaluation in the intervention sites confirmed the shift away from self-medication and/or visiting inappropriate facilities towards positive attitudes to appropriate treatment of STIs as shown by the following sex worker: *Me dey go UBTH* (University of Benin Teaching Hospital), *na general hospital I dey go…"* as opposed to prior to the intervention when treatment was mainly sought from unregistered non-traditional outlets and traditional healers. It is important to point out that the programme subsidized treatment cost, and this may explain the increase in uptake of appropriate treatment.

HIV Knowledge:

In terms of HIV knowledge, there was no significant programme impact and this may be because HIV knowledge among sex workers is already high and appears to have reached a plateau. It appears that the few with poor knowledge may be deliberately reluctant to learn about HIV. Qualitative discussions seem to suggest that for some of the women, knowing more about HIV and AIDS was rather discomforting and destabilising and would not want to know more. Many would rather want to be 'balanced' by refusing to know details about HIV transmission. There was no evidence that sex workers with low knowledge were less likely to use condoms. This suggests that many in this group use condoms without bothering to have detailed knowledge about HIV transmission and prevention.

Condom Lubricant.

The proportion of sex workers who reported using *Lubrica* (PSRHH's own brand of condom lubricant) rose from almost zero in 2002 to 69% in 2004 in the intervention sites. But it also rose to 31% in control sites where *Lubrica* was not supposed to have been made available. The high mobility of sex workers meant that it was almost impossible to avoid 'cross contamination' between intervention and control sites. The figures on the use of the programme condom lubricant- *Lubrica* – is a case in point.

Table 6.1

MONITORING TABLE: COMPARING SEX WORKERS IN INTERVENTION SITES WITH THOSE IN CONTROL SITES ON KEY PROGRAMME INDICATORS

	Intervention Communities			Control Communities		
	2002	2004	Sig.	2002	2004	Sig.
SAMPLE SIZE	**550**	**534**		**477**	**440**	
Consistent condom use over the last five sex acts	79.4	89.1	***	86.1	90.7	*
Used condom at last sex with boyfriend	52.1	56.5	ns	51.4	46.4	ns
STI last 2 months	7.7	9.5	ns	7.6	5.5	ns
Use *Lubrica*	0.30	68.6	***	6.1	39.4	***
Had no condom, no sex policy in brothels	50.0	65.2	***	57.5	63.2	ns
Police harassment in last six months	64.2	60.7	ns	62.5	49.5	***
OPPORTUNITY						
Availability: Know a place where STI can be treated	50.9	60.1	**	50.1	37.9	*
Availability : have a law on no condom no sex in the brothel where she operates	50.2	65.2	***	57.4	63.2	ns
Police harass her mates often or very often in the brothel	-	-	ns	-	-	ns
Social Norms: Encouraged peers to use condoms	79.5	89.4	***	78.7	77.6	ns
Social Norms: Encouraged by peers to use condoms	80.4	86.8	**	79.1	74.9	ns
Social Norms: Discussed HIV with peers	80.6	87.7	**	82.2	71.8	***
ABILITY						
Knowledge: Know at least 3 symptoms of STDs in women	50.9	56.8	*	40.0	43.4	ns
Knowledge: Know at least 2 symptoms of STDs in men	48.8	55.2	*	38.6	45.1	*
Self efficacy: Know how to wear a condom properly	-	-	***	93.9	98.2	***
Knowledge: Know a healthy looking person could be HIV positive	91.0	94.9	*	87.2	87.8	ns
Knowledge: Knowledge of mother to child transmission	87.8	90.6	ns	-	-	**
Knowledge: Knowledge that breast feeding can transmit HIV	78.1	91.8	***	81.3	81.5	ns
Knowledge: STDs can affect a woman's ability to have children in future	76.2	84.2	***	76.4	67.9	**
Know that using condoms and staying faithful to one partner prevents HIV	81.9	85.8	ns	75.5	80.9	*
Knowledge: know where to get information on HIV	60.9	79.7	***	59.9	60.9	ns
Heard of Lubrica	7.8	79.6	***	6.2	39.4	

ns p>0.05 *Indicates p≤ 0.05 ** Indicates p≤ 0.01 *** Indicates p≤ 0.001

MOTIVATION						
Perception: Feels that condoms are affordable	-	-	ns			ns
Perception: Disagree with the statement that condoms break often	28.6	27.0	ns	28.9	23.3	ns
Perception: Are not embarrassed to buy condoms in public	67.8	72.1	ns	67.2	69.5	ns
Perception: Believe that condoms are easy to obtain	-	-	***			ns
Perception: Believe condoms can be obtained at a distance of 30 mins to brothels	68.2	98.2	***	73.7	97.9	***
Perception: Attitudes to condom use scale (adjusted means)	11.1	11.5	*	11.4	11.4	ns
Belief: Believe that condoms protect against HIV	91.3	94.7	*	93.9	89.9	*
Belief: Believe that condoms protect against STDs	-	-	ns	-	-	**
Intention: Intend to use condoms with boyfriend in next sex act	39.4	42.7	ns	41.5	38.9	ns
Self efficacy: Ask all boyfriend to use condoms	40.8	43.5	ns	43.9	41.8	ns
Self Efficacy: Believe that she can convince her boyfriend to use condom	45.3	48.3	ns	51.6	45.2	ns
Self Efficacy: Believe that she can convince all regular partners to use condom	64.4	55.8	**	58.7	53.6	ns
Self efficacy: Ask all regular partners to use condoms	61.2	54.5	*	54.6	49.8	ns
Self Efficacy: Believe that she can convince all non regular partners to use condom	64.4	55.8	**	58.7	53.6	ns
Self efficacy: Ask all non regular partners to use condoms	61.2	54.5	*	54.6	49.8	ns
Self efficacy: Perceive that she is at high risk of HIV	9.4	5.8	*	11.4	11.5	ns
Perception: Would like the barman or hotel management to provide HIV information	89.2	96.9	***	87.4	92.1	*
Would like the mates in the brothel to provide HIV information	88.4	96.7	***	88.2	88.3	ns
Would like condoms to be brought and sold in the brothel where she lives	93.3	98.5	***	93.5	93.0	ns
Perception: Perceive that services are friendly	48.4	30.4	ns	48.3	30.4	***
Perception: Perceive that services are close to her brothel	41.8	44.8	ns	42.5	28.8	***
Perception: Perceive that services are affordable	33.7	42.4	**	36.7	26.8	**
POPULATION CHARACTERISTICS						
Have a friend with HIV	16.2	33.7	***	15.5	36.9	***
Age 24 and above			ns			ns
Hausa			*			ns
Igbo			ns			ns
Yoruba			ns			ns
Secondary education or more			ns	52.3	39.4	***
Non Muslims			ns			ns

Desire to have HIV Test

Across programme communities, sex workers claimed that an increasing numbers of them were going for HIV test. This view was substantiated by the PSRHH teams who have been involved in referring them to test centres. In Ipodo, Gadan in Kano, Kara and Ijora, there was evidence of increase numbers of sex workers and other community members going for HIV test based on the outcome of the programme.

6.2 Empowerment of Sex workers

The empowerment of sex workers was one of the positive outcomes noted in the communities. In Kara for example working with the PSRHH team, the sex workers have actively engaged the Police through the Police Community Relations Committee in addressing issues associated with frequent police harassments. While the Sex Workers have developed an internal mechanism to ensure that under aged girls are not enlisted into sex work or forced into it, and also that no sex worker harbours criminals in her room, the police in return promised to stop raiding and arresting the girls for unsubstantiated charges. Notwithstanding the reported rapport, the level of police harassment in the intervention communities did not significantly reduce, in statistical terms. Two reasons may be surmised: Sex workers in the intervention communities might have been over-sensitive in their reporting by recording the slightest disagreement with law enforcement as a form of police harassment. Secondly, since PSRHH often engaged in advocacy meetings with only senior police officers, it is likely that junior officers who felt slighted, took the law into their hands to harass the women. Programmes need to find out whether assurances given by senior law enforcement agencies were in fact respected.

6.2.1 Which intervention worked better among sex workers?

Based on logistic regression analysis, peer education was found to be the most effective in explaining increase in condom use. Sex workers in the intervention communities who were exposed to peer education were twice as likely to use condoms consistently in their last five sex acts compared to those who were not. As with MARMs, edutainment in the form of road shows did not have any significant impact on condom use.

6.2.2 Was the behaviour change actually the result of PSRHH?

Nearly all the sex workers were exposed to intervention at about the same level. Consequently, as a full coverage programme, there were no 'comparison' group in the intervention communities.

7 CHAPTER SEVEN: **PROGRAMME ACHIEVEMENT AMONG YOUNG PERSONS**

7.1 Condom Use

The programme was effective in significantly increasing the proportion of young males who used condoms in last risky sex from 64% to 75% ($p < 0.05$). The change in the control communities was not significant. (See Table 7.1).

Other indicators

The interventions also led to an improvement on the knowledge relating to where to obtain STI treatment. The programme however did not have any impact on knowledge about HIV. The increase in knowledge was statistically not significant in both intervention and control communities. The programme had positive impact on stigma. Stigma and discrimination significantly reduced in the intervention communities but not in control communities. In terms of other HIV prevention behaviours, the programme did not have any impact on either abstinence or partner reduction. The changes in the intervention were not significantly different from control communities.

Table 7.1 MONITORING TABLE: COMPARING YOUNG MALES IN INTERVENTION SITES WITH THOSE IN CONTROL SITES ON KEY PROGRAMME INDICATORS

	INTERVENTION			CONTROL		
BEHAVIOUR	**2002**	**2004**	**Sig**	**2002**	**2004**	**Sig.**
SAMPLE SIZE	**435**	**454**		**423**	**433**	
Condom use last sex act with non-marital partner	63.9	74.9	*	66.0	56.7	ns
Had non-marital partner	38.8	42.3	ns	35.9	37.5	ns
More than one non-marital partners	16.8	17.4	ns	14.1	17.5	ns
Never had sex						
Stigma indicator	3.2	7.2	**	3.7	2.9	ns
Stigma index adjusted means	2.2	2.7	***			ns
OPPORTUNITY						
Availability: Know a place where STI can be treated	24.3	36.1	***			ns
Social Norms: Religious leaders approve of youth using condoms	21.7	31.8	***	18.0	34.1	***
Social Norms: Community leaders approve of youth using condoms	37.2	56.9	***	31.7	49.3	***
ABILITY						
Knowledge: Know at least 3 symptoms of STDs in women	22.2	30.8	**	13.2	20.2	**
Knowledge: Know at least 2 symptoms of STDs in men	30.8	46.1	***	27.9	35.5	*
Self efficacy: Know how to wear a condom properly			ns			ns
Knowledge: Know all forms of transmission of HIV			ns	99.4	98.1	*
Knowledge: Know abstinence prevents HIV			ns	79.7	85.7	*
Knowledge: Know a healthy looking person could be HIV positive	85.6	90.7	*	81.7	87.1	*
Knowledge: Knowledge of mother to child transmission			ns			ns
Knowledge: Knowledge that breast feeding can transmit HIV	75.6	86.8	***	73.2	79.9	*
Knowledge: Know condoms have an expiry date	55.7	70.2	***	49.0	64.9	***
Knowledge: Know that using condoms and staying faithful to one partner prevents HIV			ns			ns
MOTIVATION						
Attitude: Want an HIV test			ns	54.2	43.2	**
Attitude: Went to collect results of HIV test			ns			ns
Perception: Feels that condoms are affordable	70.2	85.8	***	70.6	79.4	**
Perception: Disagree with the statement that condoms break often			ns	12.7	6.3	***
Perception: Believe that condoms have a date after which they should not be used	55.7	70.2	***	49.0	64.9	***
Perception: Are not embarrassed to buy condoms in public	43.3	50.4	*			ns
Perception: Believe that condoms are easy to obtain	80.1	87.3	**	76.5	82.0	ns
Perception: Believe parents approve of youth using condoms if they are sexually active	29.9	59.0	***	21.3	50.3	***
Perception: Believe that friends approve of youth using condoms if they are sexually active	63.5	80.2	***	56.6	72.7	***
Perception: Attitudes to multiple partnering	7.6	8.0	*	8.1	7.6	**
Had an HIV test			ns	11.1	6.4	*
Belief: Believe that condoms protect against HIV			ns			ns
Belief: Believe that condoms protect against STDs			ns			ns
Attitude: Check the expiry date of condoms before using them			ns			ns
POPULATION CHARACTERISTICS						
Have a friend with HIV			**			ns
Age 24 and above			ns			ns
Hausa			ns			ns
Igbo			ns			ns
Yoruba			**			ns
Secondary education or more			ns			ns
Non Muslims			ns			ns
South			ns			ns

ns p>0.05 *Indicates p≤ 0.05 ** Indicates p≤ 0.01 *** Indicates p≤ 0.001

Table 7.2
RELATIONSHIP BETWEEN EXPOSURE AND BEHAVIOUR AND BEHAVIOUR CHANGE DETERMINANTS
OUT-OF-SCHOOL MALES 15-24 YEARS

SAMPLE SIZE	**433 Control**	**178 Low/no exposure**	**119 Medium exposure**	**162 High exposure**	**Sig.**
BEHAVIOUR					
Behaviour Use of condoms in the last sex act with a non spousal partner	55.4	74.0	81.2	68.7	**
Stigma indicator					
Stigma index adjusted means	2.3	2.6	2.9	2.9	***
OPPORTUNITY					
Know a place where STI can be treated	32.0	18.3	36.7	54.2	***
Relatives approve of youth using condoms					ns
Community leaders approve of youth using condoms	48.9	49.6	55.2	65.4	**
ABILITY					
Know at least 2 symptoms of STDs in women	20.4	30.4	24.0	34.5	**
Know at least 2 symptoms of STDs in men	35.1	43.8	43.9	49.2	*
Know how to wear a condom properly	36.2	39.9	44.3	49.7	*
Believe that condoms protect against STDs	77.0	78.1	77.0	88.8	***
Believe that condoms protect against HIV	72.3	71.7	76.2	89.5	***
Know all forms of transmission of HIV					ns
Know abstinence prevents HIV	85.1	90.8	92.8	83.8	*
Know a healthy looking person could be HIV positive					ns
Knowledge of mother to child transmission					ns
Knowledge that breast feeding can transmit HIV	78.9	83.8	84.8	89.9	**
Knowledge that condoms have an expiry date	22.1	24.5	28.3	40.3	**
MOTIVATION					
Want an HIV test	41.9	40.5	55.2	58.8	***
Had an HIV test					ns
Went to collect results of HIV test					ns
Feels that condoms are affordable	77.4	80.5	84.9	93.6	***
Disagree with the statement that condoms break often	6.7	12.2	17.3	13.9	**
Believe that condoms can be obtained within 30 mins. walk	57.6	72.3	74.5	67.9	***
Believe that condoms have a date after which they should not be used	62.6	65.6	69.3	76.9	*
Are not embarrassed to buy condoms in public	37.8	46.4	53.4	51.9	**
Believe that condoms are easy to obtain	79.8	84.9	88.7	89.8	**
Believe parents approve of youth using condoms if they are sexually active	48..9	47.9	62.7	69.1	***
Believe that friends approve of youth using condoms if they are sexually active	70.9	70.0	84.3	89.6	***
Attitudes to multiple partnering					ns
POPULATION CHARACTERISTICS					
Have a friend with HIV			ns		**
Age 24 and above			ns		ns
Hausa			ns		ns
Igbo			ns		**
Yoruba			ns		ns
Secondary education or more			*		*
Non Muslims			ns		ns
South			ns		ns

ns p>0.05 *Indicates p≤ 0.05 ** Indicates p≤ 0.01 *** Indicates p≤ 0.001

7.1.1 Which interventions worked better among young males?

There were four main interventions targeting young persons. Logistic regression analysis showed that none of the interventions on its own impacted condom use. However, exposure to the peer interventions had impact mainly on HIV knowledge among young men (OR 1.920; $p<0.01$). The model fit was good ($X^2 = 40.67$; df = 8; $p< 0.001$) and the full model predicted 62.1% of HIV knowledge among young men. Even after controlling for exposure to other interventions, those exposed to peer intervention were two times more likely to have higher knowledge about HIV transmission and prevention than those who were not exposed($p<0.01$). Edutainment (in the form of road shows) massive youth awareness initiatives and parent-child communications did not, as single interventions, have significant impact as single interventions.

7.2 Effect of Intervention on Knowledge & Behaviour of Young Females

Condom Use

The programme had significant impact on condom use among female youth. The proportion of females 15-24 years that used condoms in last non-marital sex significantly increased from 54% to 69% ($p< 0.05$). As with young males, the programme did not have any significant impact on HIV knowledge. Again, as with males, the programme had no significant impact on two key indicators: abstinence and partner reduction.

Other indicators

Knowledge of where to obtain STI treatment rose significantly higher among female youth in the intervention than in control communities. The programme also made significant impact on stigma reduction among young persons.

Reduction in Unwanted Pregnancy

From qualitative evaluation, appreciation of gender roles and how parents sometimes place their daughters in vulnerable positions were cited by men and women in Kara, Obinagu and Tafa. This relates to parent asking their young daughters to hawk or sell along the pavements. Many however mentioned that this issue is gradually being addressed in the communities. The new initiative is claimed to have contributed significantly to sustained girl education and reduction of previous teenage pregnancy which was a result of neglect of the girl child. There was some evidence that there has been an increase are marrying even earlier than before. As in the words of of Ibrahim a.k.a "Ibro condom" a young professional Tailor in Tafa who summed up his experience : "*Before I no fear any woman and dey carry them, no matter their size, but now I don go marry to avoid problem and other youths don dey marry or hold themselves*". He claimed that most of his mates in the northern programme sites are all getting married as it is better than risking ones life on a continuous basis.

Table 7.3
MONITORING TABLE: COMPARING YOUNG WOMEN IN INTERVENTION SITES WITH THOSE IN CONTROL SITES ON KEY PROGRAMME INDICATORS

	INTERVENTION			CONTROL		
	2002	2004	Sig.	2002	2004	Sig.
SAMPLE SIZE	**399**	**402**		**469**	**424**	
Behaviour						
Condom Use Last Sex Act	53.9	69.1	*	58.2	54.8	ns
Had sex with non-marital partner	27.0	31.0	ns	25.6	31.1	ns
More than one partner last 12 months	4.9	5.5	ns	7.1	7.4	ns
Stigma						
Stigma indicator	2.6	6.4	**	3.6	3.0	ns
Stigma index adjusted means	2.28	2.67	***	2.3	2.5	ns
OPPORTUNITY						
Availability: Know a place where STI can be treated	21.7	32.5	***	20.8	25.3	ns
Social Norms: Religious leaders approve of youth using condoms	15.4	24.1	**	19.7	29.5	***
Social Norms: Community leaders of youth using condoms	32.3	50.9	***	32.5	47.9	***
ABILITY						
Knowledge: Know at least 3 symptoms of STDs in women	20.2	37.2	***	13.1	21.5	***
Knowledge: Know at least 2 symptoms of STDs in men	17.1	39.4	***	15.0	20.5	*
Self efficacy: Know how to wear a condom properly	14.4	25.1	***	18.4	18.9	ns
Knowledge: Know all forms of transmission of HIV			ns	99.0	97.1	*
Knowledge: Know abstinence prevents HIV			ns	77.5	76.8	ns
Knowledge: Know a healthy looking person could be HIV positive			ns	84.6	88.7	ns
Knowledge: Knowledge of mother to child transmission			ns	84.8	82.9	ns
Knowledge: Knowledge that breast feeding can transmit HIV	77.9	84.5	*	74.3	80.6	*
Knowledge: Know condoms have an expiry date	8.9	17.4	**	11.7	15.4	ns
Knowledge: Know that using condoms and staying faithful to one partner prevents HIV	73.9	84.2	***	72.8	75.0	ns
MOTIVATION						
Attitude: Want an HIV test			ns	50.6	43.0	*
Attitude: Went to collect results of HIV test			ns	7.5	8.5	ns
Perception: Feels that condoms are affordable	47.9	69.8	***	50.8	64.6	***
Perception: Disagree with the statement that condoms break often			ns	8.5	7.1	ns
Perception: Believe that condoms have a date after which they should not be used	30.3	51.8	***	33.2	44.6	***
Perception: Are not embarrassed to buy condoms in public	19.7	34.1	***	30.6	24.6	*
Perception: Believe that condoms are easy to obtain	56.3	76.8	***	62.1	70.8	**
Perception: Believe Parents approve of youth using condoms if they are sexually active	29.1	50.9	***	25.5	44.5	***
Perception: Believe that friends approve of youth using condoms if they are sexually active	60.8	73.7	***	47.6	69.5	***
Perception: Attitudes to multiple partnering			ns	99.5	99.3	ns
Attitude: Had an HIV test			ns	11.1	10.8	ns
Belief: Believe that condoms protect against HIV	62.1	78.8	***	65.1	69.9	ns
Belief: Believe that condoms protect against STDs	68.2	80.2	***	66.7	69.9	ns
Attitude: Check the expiry date of condoms before using them	8.9	17.4	***	11.7	15.3	ns
POPULATION CHARACTERISTICS						
Have a friend with HIV						ns
Age 24 and above						ns
Hausa						ns
Igbo						ns
Yoruba						ns
Secondary education or more						ns
Non Muslims						ns
South						ns

ns p>0.05 *Indicates p≤ 0.05 ** Indicates p≤ 0.01 *** Indicates p≤ 0.001

7.3.1 Which interventions worked better among young females?

A logistic regression analysis showed that the intervention which mostly accounted for the increase in condom use among young females was peer education. The full model predicted correctly 72.5% of condom use. The model fit was good (X^2 23.72 df 8 $p<0.01$). The key finding is that young women who were members of the peer or PIPC groups were four times as likely to use condoms in their last sex act with a non-marital partner compared with those who were not members (OR 4.266 $p<0.05$).

7.3.2 Was the behaviour change among young females actually the result of PSRHH?

Table 7.4 presents, among others, the relationship between exposure to PSRHH interventions and condom use at last non-marital sex. The analysis showed a significant positive relationship ($p<0.05$): the higher the level of exposure to PSRHH interventions, the higher the level of condom use after controlling for relevant population characteristics. While only 59% of those who were lowly exposed or not exposed used condoms, the proportion rose to 72% among those with medium exposure and to 78% for those with high exposure.(See also Figure 5.1)

Table7.4 RELATIONSHIP BETWEEN EXPOSURE AND BEHAVIOUR AND BEHAVIOUR CHANGE DETERMINANTS AMONG OUT-OF-SCHOOL FEMALES 15-24 YEARS

SAMPLE SIZE	**424**	**190**	**86**	**126**	
	Control	**Low/no exposure**	**Medium exposure**	**High exposure**	Significance level
BEHAVIOUR					
BEHAVIOUR Use of condoms in the last sex act with a non spousal partner	51.5	59.4	72.4	77.8	*
Stigma indicator					
Stigma index adjusted means	2.9	6.6	2.2	8.7	ns
OPPORTUNITY					
Know a place where STI can be treated	25.7	22.4	34.9	48.4	***
Relatives approve of youth using condoms	29.3	26.3	20.6	26.8	ns
Community leaders of youth using condoms	47.8	45.2	52.4	59.6	ns
ABILITY					
Know at least 2 symptoms of STDs in women	21.5	32.6	30.5	48.9	***
Know at least 2 symptoms of STDs in men	19.8	35.6	30.9	51.8	***
Know how to wear a condom properly	18.2	16.8	27.9	40.6	***
Believe that condoms protect against STDs	69.3	75.2	77.6	92.4	***
Believe that condoms protect against HIV	69.4	75.3	74.6	90.6	***
Know all forms of transmission of HIV	96.5	96.3	98.2	99.3	ns
Know abstinence prevents HIV	76.3	87.3	90.3	86.1	***
Know a healthy looking person could be HIV positive	88.2	90.6	87.5	94.5	ns
Knowledge of mother to child transmission	83.1	91.3	91.5	87.9	*
Knowledge that breast feeding can transmit HIV	80.2	81.7	87.8	88.3	ns
Knowledge that condoms have an expiry date	14.4	12.1	11.7	34.6	***
MOTIVATION					
Want an HIV test	43.1	33.9	56.8	59.1	***
Had an HIV test	10.9	3.9	7.9	10.1	*
Went to collect results of HIV test	9.6	3.5	8.1	8.2	*
Feels that condoms are affordable	64.1	64.3	67.2	82.6	**
Disagree with the statement that condoms break often	7.3	4.9	16.5	12.4	**
Believe that condoms can be obtained within 30 mins walk	42.3	42.2	52.7	68.5	***
Believe that condoms have a date after which they should not be used	54.9	62.5	77.9	69.2	***
Are not embarrassed to buy condoms in public	23.6	37.5	28.9	31.4	**
Believe that condoms are easy to obtain	70.7	67.5	79.0	89.2	***
Believe Parents approve of youth using condoms if they are sexually active	44.8	50.6	45.0	57.6	ns
Believe that Friends approve of youth using condoms if they are sexually active	68.7	66.6	71.9	87.8	***
Attitudes to multiple partnering					ns
POPULATION CHARACTERISTICS					
Have a friend with HIV	56.1	55.6	43.4	55.4	ns
Age 24 and above					ns
Hausa					ns
Igbo					ns
Yoruba					**
Secondary education or more	76.1	59.9	64.5	65.3	**
Non Muslims	85.4	85.8	86.3	90.7	ns
South	53.6	52.2	58.2	53.9	ns

ns p>0.05 *Indicates p≤ 0.05 ** Indicates p≤ 0.01 *** Indicates p≤ 0.001

8 CHAPTER EIGHT: **SUMMARY AND CONCLUSIONS**

In the past one and a half years, the PSRHH programme has demonstrated that the behaviour and the determinants that influence behaviours among most-at-risk populations can be changed through painstaking behaviour change communication efforts.

The key achievements, conclusions and lessons learned from the pilot programme are presented in this chapter.

8.1 Most-at-risk males (MARMs)

- Knowledge levels were considerably improved as a result of the programme.
- The most significant conclusion is that the intervention had a positive impact on condom use in risky sex
- It significantly increased MARMs knowledge about sources of STI treatment and service delivery but did not improve their use of STI services.
- The intervention also significantly increased the percentage of people who tested for HIV and obtained results..
- The programme was not effective in reducing multiple partnering

For MARMs, the only intervention that had significant impact on condom use at last sex was peer education (including PIPC). MARMs who were members of peer education were two and a half times more likely to use condoms at last sex with non-marital partners than those who were not members. Edutainment in the form of road shows had no significant impact on condom use although it significantly increased HIV knowledge among MARMs. It was also observed that MARMS who were exposed to our intervention were more likely to use condom.

Sex Workers

1. Condom use in fee-paying commercial sex increased in both intervention and control communities, however, the level of change was significantly higher in intervention sites than control sites.
2. The intervention significantly increased STI health seeking behaviour of sex workers as well as the introduction and implementation of condom policies in the brothels.
3. The programme had no significant programme impact on knowledge of sex workers
4. The programme had no impact on condom use in non fee-paying sexual encounters with boyfriends.
5. The programme did not significantly reduce the level of police harassment among sex workers.

On which intervention worked better, peer education was found to be the most effective in explaining increase in condom use. Sex workers who were exposed to peer education were twice as likely to use condoms consistently in their last five sex acts compared to those who were not. As with MARMs, edutainment in the form of road shows did not have any significant impact on condom use.

Young males (15-24 years)

- The programme was effective in significantly increasing the proportion of young males who used condoms in last non-marital sex.
- There was a significant increase in knowledge relating to where to obtain STI treatment.
- The programme had positive impact on stigma. Stigma and discrimination significantly reduced in the intervention communities but not in control communities.

- In terms of other HIV prevention behaviours, the programme did not have any impact on either abstinence or partner reduction.

For young males, analysis showed that none of the interventions on its own impacted condom use. However, exposure to the peer interventions had impact mainly on knowledge about HIV. Edutainment (in the form of road shows) massive youth awareness initiatives and parent-child communications did not, as single interventions, have significant impact as single interventions.

Young females (15-24 years)

- The programme had significant positive impact on condom use among young females in last non-marital sex.
- Similarly, knowledge of where to obtain STI treatment rose significantly higher among female youth in the intervention than in control communities.
- The programme also made significant impact on stigma reduction among young persons.
- As with males, the programme had no significant impact on abstinence and partner reduction among young females

The intervention which significantly accounted for the increase in condom use among young females was peer education. Young women who were members of the peer or PIPC groups were four times as likely to use condoms in their last sex act with a non-marital partner compared with those who were not members.

Overall the programme made significant impact on condom use particularly on MARMs, young women and young men. On STIs, the programme was successful only to some extent. It improved knowledge on where to get STI services, but did not increase the proportion of young persons and MARMs who sought treatment, except sex workers. The programme had no impact on abstinence in youth, or partner reduction among youths and MARMs. However, the interventions significantly reduced stigma and discrimination among the target groups. In terms of interventions, it was found that peer education (including PIPC) was the most effective intervention among MARMs, sex workers, and young females in creasing condom use. There was no evidence that edutainment (in the form road shows) had any impact on behaviour change, even though it was found to increase knowledge. For youth interventions, massive youth awareness initiatives as well as parent-child communication did not appear to affect behaviour change.

8.2 Lessons Learnt

This section attempts to summarise some of the key lessons learnt in the last eighteen months in effecting sustainable behaviour change for sexual and reproductive health at community level.

Edutainment does not appear to result behaviour change among MARMs, although it does lead to improved knowledge. If programme objective is to increase knowledge, then road shows are recommended. Where knowledge is already high, it appears road shows have limited use. Peer education came out as the only intervention that impacted behaviour change. Peer education is recommended if BC is the programme objective, scale up activities may consider scaling up the peer education component only.

Sex worker find it difficult to use condom in non paying sexual relationships. The programme interventions were found to have impact on condom use in commercial sex, but no significant effect on condom use with boyfriends. This confirms the challenges that HIV programmers face in dealing with the thorny issue of condom use in non-commercial sexual relationships which are almost always risky.

The programme led to the institution of 'no condom no sex policy' in brothels. It is necessary to find an innovative way of introducing this into non-commercial sexual relationships. PIPCs need

to concentrate on this, especially as it appears that condom use in commercial sex is now very high. This in fact could be the platform for subsequent interventions.

The most effective intervention was peer education. It is recommended that any future scale up may consider implementing peer education as the main intervention.

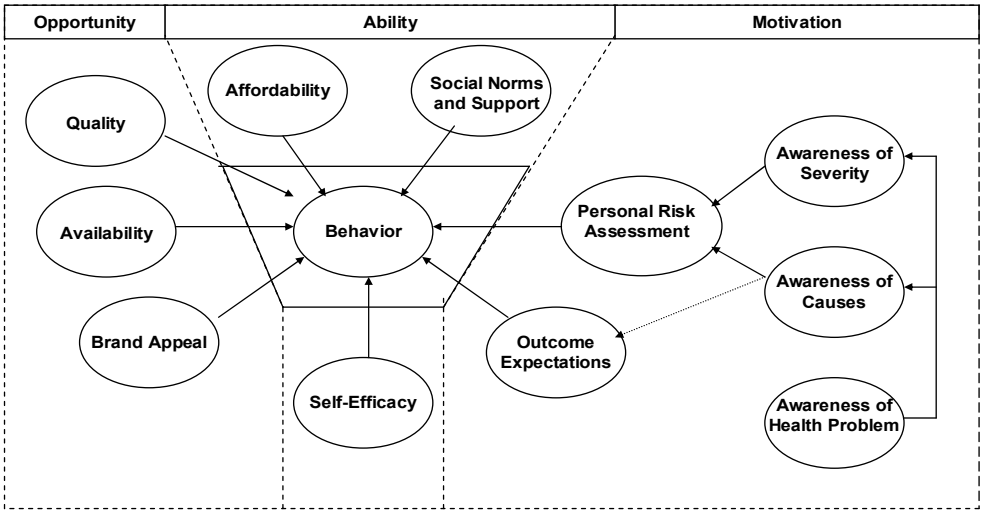
The lessons learnt from the first eighteen months of implementation will guide the course over the next phase of implementation and scale up. Certainly challenges are envisioned but the way forward for behaviour change programmes across various communities in Nigeria has been charted by the findings and many lessons found in this report.

REFERENCES

1. Hoffman M.A. (1996) Counselling Clients with HIV Disease: Assessment, Intervention and Prevention. The Guildford Press. New York
2. Kelly J.A (1995) Changing HIV Risk Behaviour: Practical Strategies. The Guildford Press. New York

APPENDIX

Appendix 1: Social Marketing Behaviour Change Framework



Appendix 2: Sampling Procedure for Quasi Experimental Study

A. PEOPLE IDENTIFIABLE WITH PERMANENT STRUCTURE:

i. All structures (buildings) within the study area were identified and numbered in a single serial order.

ii. Thirty (30) residential, residential cum-commercial, and commercial buildings were systematically selected within each community.

iii. All households within each building were identified and members therein listed by age and sex.

iv. All eligible persons (females age 15-49 and males 15-64) residing or doing permanent business listed in the selected buildings were identified and numbered.

v. The number of eligible persons listed by age group (15-24) and (25-64) in (ii) above was obtained by the supervisor who systematically selected 55 persons age 15-24 and 89 persons age 25-64 for interview. If however, either of the two age groups or both could not yield the minimum specified, then a second round of buildings was selected systematically taking into consideration the average number of eligible persons per building during the first round selection.

B. TRANSIENT PERSONS: Physical count of transient persons was taken at peak of business in the community, classifying each person as driver, touts, hawker, trader or others. The 33 persons allocated were distributed proportionately to the estimated size of each class.

C. SEX WORKERS: All sex workers in all brothels within the community were listed in a single serial order by building number on a form. By measure of size (MOS) of each of the brothels (size being the number of sex workers), the 45 sex workers to be interviewed

in the study area were allocated to brothels by the supervisor. Within each brothel, rooms were randomly selected and the occupants were interviewed. In a situation where the sample size of sex workers was equal to or less than the sample size of sex workers in the study area, a census was done of all sex workers in the community.

Appendix 3: Sample Allocation per Community

The final sample field return for analysis for each community was as follows

		Pre Intervention		Post Intervention	
	Name and site of community	**Number sampled excluding sex workers**	**Number of sex workers sampled**	**Number sampled excluding sex workers**	**Number of sex workers sampled**
Intervention	Aba South	205	57	175	72
	Benin Oluku Junction	174	45	175	45
	Calabar South	182	36	178	8
	Enugu Emene NNPC Depot Area	177	30	167	37
	Ibadan Kara In Bodija	175	45	178	45
	Lagos 1 Ijora Badia	161	47	174	45
	Lagos 2 Ipodo Ikeja	166	40	175	45
	Abuja Tafa Dulu	173	43	173	45
	Jos Garda Biyu In Garbong Jos	149	44	177	45
	Kano Gadan Tambarawa	176	40	175	47
	Maiduguri Maimalari Army Barracks	167	34	178	35
	Makurdi North Bank	175	44	174	45
	Sokoto Giginya Barracks	201	45	225	47
	Total	**2281**	**550**	**2294**	**561**
Control	Aba Umuonyima	234	49	180	0
	Benin Aviele Junction	162	40	162	45
	Calabar Uyo Central Park Area	189	24	177	23
	Enugu 9th Mile Area	168	41	173	23
	Ibadan Molete	171	44	174	45
	Lagos 1 Otto In Oyingbo	175	46	170	46
	Lagos 2 Mile 12 Ketu	162	44	165	45
	Gwagwalada	165	41	176	45
	Jos Kangorosha	175	38	178	19
	Kano Dakatsalle	192	29	171	45
	Maiduguri Giwa Barracks	175	36	180	10
	Makurdi Gboko Central Park	163	45	164	47
	Birnin Kebbi Duku Barracks	214	0	222	0
	Total	**2345**	**477**	**2292**	**393**
Overall Sample		**4626**	**1027**	**9212**	**954**