Available: https://doi.org/10.60787/jphtr.vol2no2.34 *Research article*

J. Pub. Health &Tox. Res., 2(2): 113-122 (2024)
DOI: https://doi.org/10.60787/jphtr.vol2no2.34

Evaluation of Health-Seeking Behavior for Sexually Transmitted Infections Among Female Undergraduates in Rivers State, Nigeria, using Virtual Risk Reduction Programme.

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Article History

Received: 20 August 2024
Accepted: 13 September 2024
Published: 24 October 2024

Abstract

Sexually transmitted infections (STIs) are caused by unhealthy sexual behaviors pose serious health burdens on the health of the individual and scarce health resources. The study evaluated the effectiveness of a virtual risk reduction program on the health-seeking behavior of female undergraduates in the Port Harcourt metropolis in Rivers State, Nigeria. A quasi-experimental study design used a multi-stage sampling method to recruit 90 female undergraduates in Port Harcourt Metropolis, Rivers State. Participants were randomly sampled into intervention and control groups of 45 participants, where the latter did not receive the virtual intervention. The intervention was an online HIV/AIDS Modified Minimum Prevention Package Intervention (MPPI) program that was conducted in three phases over three months. Data were compiled before and after the intervention using an online self-administered questionnaire designed with Google Forms and were analyzed using Statistical Package for Social Science (SPSS) Version 22.0. At baseline, the proportion of the sexually active who contracted sexually transmitted infections was 44% in the intervention group, 51.28% in the control group, and all sought treatment in both groups (P-value=0.569, $\chi 2$=0.32).

Post-intervention, the proportion of the sexually active who contracted sexually transmitted infections was 37.50% in the intervention group, 51.28% in the control group, and all sought treatment in both groups. (P-value=0.387, $\chi 2$=1.36). The results indicate a 6.5% decrease in the proportion of those seeking STI treatment at post-intervention for the intervention group and no difference in the control group.

A pharmacy or chemist was the most preferred place to seek treatment for the majority of the respondents, followed by government hospitals, private hospitals, and self-medication. The levels of health-seeking behavior for STI among the students were good, but there was no significant difference in the level of health-seeking behavior among the students after the intervention.

Keywords: Sexually transmitted infections, risk –reduction intervention, health seeking behavior, evaluation, female undergraduates..

How to cite this paper: *Kelechi F. A. et al., 2024 Evaluation of Health-Seeking Behavior for Sexually Transmitted Infections Among Female Undergraduates in Rivers State, Nigeria, using Virtual Risk Reduction Programme. Journal of Public Health and Toxicology Research, 2(2): 113-122..*

Introduction

Globally, sexually transmitted infections (STIs) are a major public health problem and are mainly caused by risky sexual behaviors that are carried out without any form of protection (Kassie et al., 2019).

Risky sexual behavior, poor sexual health decisions, and difficulty or delay in seeking health care among university students could be attributed to low sexual health literacy (Fortenberry et al., 2001; Yuen-Ha Wong et al., 2021).

However, being aware of STIs and their potential side effects can encourage young people to seek assistance when needed, aid in prevention and treatment, and assist them in making decisions about their sexual health. (Alubo et al., 2002; Anwar et al., 2010; Amu &Adegun, 2015; Rana et al., 2015; Tsadik & Lul Lam, 2019; Nigussie & Yosef, 2020).

Seeking care when infected with an STI is important, but the real concern is whether the young person is even aware that they are infected. And if infected, do they know where to go and what to do because everyone has different reasons for seeking help?

Most young people who need to seek information and care for sexual and reproductive health problems are often too embarrassed to seek help and also feel that they will be judged for being promiscuous once their counterpart sees them in such an environment (Bell 2009).

In Nigeria, undergraduates made use of both modern and traditional medical practitioners (TMP) when seeking treatment for STIs; they also used both private and government hospitals, government-owned hospitals, Self-medication, traditional healers, and chemist shops (Joda et al., 2013; Ajike et al., 2016). The study evaluated the effectiveness of the virtual behavioural intervention on the health-seeking behaviour of STIs among female students in tertiary institutions in the Port Harcourt metropolis, Rivers State.

Methodology

Study design, population, and sample: A quasi-experimental study was conducted among 90 female undergraduates between the ages of 18 and 29 within the Port Harcourt Metropolis, in the Rivers State of Southern Nigeria. The students were enrolled into intervention and control groups using a stratified random sampling method. The inclusion criteria for selection were female undergraduates aged 18–29 years who owned mobile phones, had user knowledge of required mobile applications with internet connections, and had completed the intervention and the questionnaire. Exclusion criteria also included failure to complete the pre-and post-test sessions.

The intervention used was an online modified Minimum Prevention Package (MPP) intervention that was carried out in three phases within three months. Data were collected before and after the intervention using an online self-administered questionnaire with a Google Form.

Design of the Intervention: This intervention was an online modified version of the Minimum Prevention Package Intervention (MPPI) designed by the National Agency for the Control of AIDS in Nigeria (NACA 2010) and was implemented in three phases:

***Behavioral Intervention*:** This was the first phase, where trained peer educators used the Zoom Application to conduct online peer education and small group discussions on topics such as STI prevention and correct condom use at agreed-upon dates and times convenient for all participants in the intervention group. Two weeks later, the same group was offered a second phase of the behavioural intervention. Where participants had small group discussions ranging from sexual and reproductive health to good negotiation skills. Both sections were very exciting and lasted 60 minutes.

Biomedical Intervention: This was done two weeks after the behavioural intervention, which is one month after the start of the intervention. This phase offered two services, which were provided to the same study participants that received the first phase intervention. These were STI/Sexual Health Counseling (online) and an Online Referral Service for STI/HIV screening and condom provision at a designated Centre. After the participants were counselled, two were referred to the University of Port Harcourt Teaching Hospital to seek help. About 80% of the participants did not show up at the condom collection point**.**

Structural Intervention: The next phase began two weeks after the completion of the second phase of intervention; this time frame was allowed for the completion of phase two.

This phase included the engagement of gatekeepers and leaders of existing institutions, associations, or communities to which the target group belongs. The idea was to enlist their support and participation to scale up the progress of previous interventions.

At this stage, two virtual consultation and advocacy meetings was held collectively with the student leaders of the departments whose students were participants of the intervention, the social director and information director of the association, and their course representatives. The meeting was well attended by the leaders and they promised that they will incorporate sexual health talks in their meetings and engagements with the students.

At the end of the third phase, all the participants received and completed a post-intervention questionnaire. This was the same as the previous pre-intervention questionnaire given earlier. Participants in the control group then received the same intervention as the treatment group at the end of the intervention period.

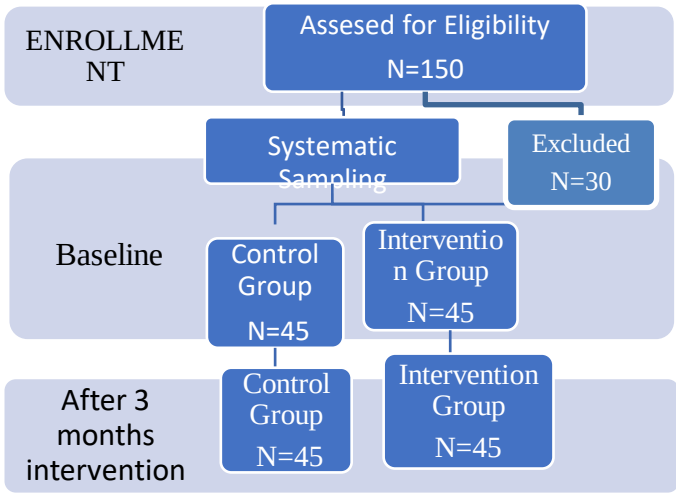

Figure I: Study Flow Diagram

Data Analysis: Statistical Package for the Social Sciences (SPSS) Version 22.0 analyzed the data. Descriptive statistics were performed using numbers and percentages for categorical variables, with the mean ± SD and range for quantitative variables. The student's *t*-test was used to compare quantitative variables between study groups and the chi square test was for the categorical variables. The data were analyzed using a t-test and Chi square test. All tests were conducted at a 95% significance level with α = 5%.

Ethical Consideration: The Ethics Committee of the University of Port Harcourt, Rivers State, Nigeria, approved the study with reference number (UPH/CEREMAD/REC/MM75/097). All the participants completed the informed consent form and signed it before participating in the study.

Results

Table I: Socio-demographic characteristics of respondents

Variables	**Pre-Group**				**χ2(p-value)**
	Control (n=45)		**Intervention (n=45)**		
	N	**%**	**N**	**%**	
Age					0.114$^{\gamma}$
18-21	24	53.33	32	71.11	
22-25	19	42.22	13	28.89	
26-29	2	4.44	0	0.00	
Mean (SD)	**20.80 (1.98)**		**21.44 (2.242)**		1.40 (0.166)$^{\mu}$
Class Level					**0.016**$^{\gamma*}$
Year 1	1	2.22	1	2.22	
Year 2	5	11.11	16	35.56	
Year 3	36	80.00	27	60.00	
Year 4	3	6.67	1	2.22	
Religion					
Christianity	45	100.00	45	100.00	
Who do you reside with					**0.001**$^{\gamma*}$
Parents	7	15.56	24	53.33	
Guardian	4	8.89	11	24.44	
Friends/ Peers	31	68.89	6	13.33	
Male partner	3	6.67	1	2.22	
Age at first menstruation					**0.013**$^{\gamma*}$
9-11	0	0.00	7	15.56	
12-14	40	88.89	34	75.56	
15-17	3	6.67	4	8.89	
18-20	2	4.44	0	0.0	
Mean (SD)	13.01(1.37)	13.96 (1.55)	3.10(0.0026)*$^{\mu}$		

χ2=Chi-Square; **γ**=Fisher's Exact p; μ=Student t-test

Participants were aged 18–29 years, with a mean age of 21.12 years before the intervention and 21.17 years after the intervention. Subjects were selected from the different levels of the university, and they reside with their parents, guardians, friends, a male partner, or live alone. The response rate of respondents was 100%.

All the participants in the study were Christians and hailed from 14 different states in Nigeria. The mean age of menarche for the respondents in the control group was 13.01 ±1.37 years (p-value = 0.754, $\chi2$ = 0.31). None of the respondents experienced their menarche between the ages of 9–11 years; 88.89% had theirs between 12–14 years; 6.67% had theirs between 15–17 years; and the remaining 4.44% had theirs between 18–20 years (p-value = 1.00). The mean age of menarche for the respondents in the intervention group was 13.96 ±1.55 years (p-value = 0.0026, $\chi2$ =3.10). 15.56% of the respondents experienced their menarche between the ages of 9–11 years, 75.56% had theirs between 12–14 years, 8.89% had theirs between 15–17 years, and none of them had theirs between 18–20 years. (**Table I).**

Table II: Sexual and Reproductive Health Behavior

Variables	Pre-Group				χ2(p-value)
	Control (n=45)		Intervention (n=45)		
	N	%	N	%	
Have you had sex before					10.60 **(0.001) ***
Yes	39	86.67	25	55.56	
No	6	13.33	20	44.44	
At what age did you first have sex? (n_1=39, n_2=25)				0.687γ	
Class Level					**0.016γ ***
13-15	4	10.26	2	8.00	
16-18	16	41.03	13	52.00	
19-21	14	35.90	7	28.00	
≥21	1	2.56	2	8.00	
I don't remember	4	10.26	1	4.00	
Mean (SD)	**18.46 (2.74)**		**18.41 (2.78)**		0.19 (0.847)μ
Do you have a boyfriend/partner					**6.81 (0.001) ***
Yes	34.	75.56	22	48.89	
No	11	24.44	23	51.11	
Are you concerned about contracting STI					1.95 (0.337)
Yes	29	64.44	29	64.44	
No	5	11.11	9	20.00	
Not really	11	24.44	7	15.56	
If the answer to above question is Yes, what did you do? (n_1=29, n_2=78)					**0.001γ ***
Abstinence	1	3.45	0	0.00	
Go see a doctor	1	3.45	3	10.34	
Take medcine	24	82.76	2	6.90	
Use condoms	3	10.34	13	44.83	
Other	14	24.14	11	37.93	

Table II presents the sexual behavior of the respondents of the two groups. Among the respondents in the control group, 86.67 % had reportedly had sex while 13.33% had not engaged in sexual intercourse while the respondents in the intervention group, 55.56 % had reportedly had sex while 44.44% had not engaged in sexual intercourse (p-value =0.001, $\chi 2$ =10.60). The mean age of sexual debut among respondents in the control group was 18.46 ±2.74 years (p-value = 0.847, t= 0.19). The participants of the control further reportedly experienced their age of sexual debut, 41.03% had between 16-18 years, 35.90% had theirs between 19-21 years, and 10.26% had theirs between 13-15 years, 2.56% had theirs when above 21years and 10.26% could not remember when they experienced theirs. While respondents in the intervention group reported the mean age of sexual debut as 18.41 ±2.78 years, 52% reportedly experienced theirs between 16-18 years, 28 % had theirs between 19-21 years, 8% had theirs between 13-15 years, 4% had theirs above 21years and 10.26% could not remember when they experienced theirs.

On the participants concerns on contracting STI, the respondents in the control group reported 46.67% are concerned about contracting sexually transmitted infections, 13.33% are not concerned and 40% were indifferent about contracting sexually transmitted infections (p-value =0.377, $\chi 2$= 1.95). For the respondents of the intervention group, 60% were concerned about contracting sexually transmitted infections, 13.33% were not concerned and 26.67% were indifferent about contracting sexually transmitted infections

For the respondents of the control group, 64.44% took preventive steps to prevent sexually transmitted infections, 11.11% took no steps and 24.44% were indifferent about taking any steps, but the respondents in the intervention group 64.44% took preventive steps to avoid sexually transmitted infections 20 % took no steps and 15.56% were indifferent about taking any steps (p-value =0.362).

The preventive step the respondents in the control group used was taking medicine 82.76%, condom use 10.34% followed by 3.45% abstinence followed by doctor visits with 3.45%. While the students in the intervention, used preventive methods condom use by 44.83% followed by seeing a doctor at 10.34% and others at 37.93% with a p-value of 0.001.

Table III: *Sexual Risk Behaviors*

Variables	Pre-Group				χ2(p-value)
	Control (n=45)		Intervention (n=45)		
	N	%	N	%	
Have you ever contacted STI? (n_1=39, n_2=25)					0.32 (0.569)
Yes	20	51.28	11	44.00	
No	19	48.72	14	56.00	
Did you seek treatment(n_1=20, n_2=25)					0.687 γ
Yes	20	100.0	11	100.0	
No	0	0.00	0	0.0	
What did you do when you contacted STI? (n_1=20, n_2=11)					2.70γ
See a Doctor	6	30.00	4	36.36	
Went to a chemist/pharmacy	14	70.00	4	36.36	
Self-Medicated	0	0.00	3	27.27	
Where did you seek treatment? (n_1=20, n_2=11)					**0.041** γ*
Government hospital/Health center	5	25.00	2	18.18	
Pharmacy/Chemist	14.	70.00	4	36.36	
Private Hospital/Doctor/Nurse	1	5.00	2	18.18	
Self-Medicated	0	0.00	3	27.27	
Did your sexual partner (any of your partners) also obtain treatment? (n_1=20, n_2=11)					**0.005** γ*
Yes	2	10.00	2	18.18	
No	0	0.0	4	36.36	
I don't know	18	90.00	5	45.45	
Which of these do you think would be the appropriate means for STI education for young adults					0.141 γ
Mobile webs	11	24.44	16	35.56	
Text Messaging	23	51.11	13	28.89	
Use of mobile Apps	5	11.11	10	22.22	
Phone calls	5	11.11	3	6.67	
Television/Radio	1	2.22	3	6.67	

χ2=Chi-Square; **γ**=Fisher's Exact p

Table III presents the Sexual Risk Behaviours of the respondents. Among the sexually active in the control group 51.28% had contracted sexually transmitted infections, and all who contracted sexually transmitted infections sought treatment while those in the intervention group who contracted STI was 44% and all sought treatment (P-value=0.569, χ2=0.32).

Majority (70%) of those in the control group who had contracted sexually transmitted infections sought care in a chemist or pharmacy ,30% sought help from the doctor while those in the intervention group 36.36% had seen a doctor and 27.27% went to a chemist(p-value=2.70)

Most of the respondents in both groups who sought treatment for sexually transmitted infections were not aware of the STI status of their sexual partner and if they also obtained treatment for the same infection (p-value 0.826).

Pharmacy or chemist was the most preferred place to seek treatment for many of the respondents in the two groups, followed by government hospital, Private hospital, and self-medication (P-value = 0.041).

The respondents reported that the appropriate and most preferred means for STI/HIV education and prevention for young adults are text messaging, mobile webs, use of mobile apps, phone calls, and television/radio (p-value=0.141).

Post-Intervention Result

Table IV: *Sexual and Reproductive Health Behavior*

Variables	Post-Group				χ2(p-value)
	Control (n=45)		Intervention (n=45)		
	N	%	N	%	
Have you had sex before					11.90 **(0.001)***
Yes	39	86.67	25	55.56	
No	6	13.33	20	44.44	
At what age did you first have sex?(n_1=39, n_2=24)					0.718γ
13-15	4	10.26	2	8.00	
16-18	16.0	41.03	13.	52.00	
19-21	14	35.90	7	29.17	
≥21	1	2.56	2	8.33	
I don't remember	4	10.26	1	4.17	
Mean (SD)	**18.46 (2.74)**		**18.41 (2.78)**		0.09 (0.932)μ
Do you have a boyfriend/partner					6.98 **(0.008)***
Yes	35	77.78	23	51.11	
No	10	22.22	22	48.89	
Are you concerned about contracting STI?					7.13**(0.029)***
Yes	21	46.67	23	51.11	
No	6	13.33	14	31.11	
Not really	18	40.00	8	17.78	
Do you take any steps in preventing STI?					**0.0002**γ*
Yes	33	73.33	45	100.0	
No	3	6.67	0	0.00	
Not really	9	20.00	0	0.00	
If the answer to above is Yes, what did you do? (n_1=33, n_2=45)					**0.0002**γ*
Abstinence	3	9.09	24	53.33	
Go see a doctor	1	3.03	1	2.22	
Take medicine	1	3.03	1	2.22	
Use condoms	27	81.82	19	42.22	
Other	1	3.03	1	1.28	

χ2=Chi-Square; γ=Fisher's Exact p; μ=Student t-test

Table IV presents the sexual and reproductive health behavior of the respondents of the two groups where among the respondents in the control group, 86.67 % had reportedly had sex while 13.33% had not engaged in sexual intercourse and the respondents in the intervention group, 55.56 % had reportedly had sex while 44.44% had not engaged in sexual intercourse (p-value =0.001, $\chi 2$ =10.60).

The mean age of sexual debut among respondents in the control group was 18.46 ±2.74 years (p-value = 0.847, t= 0.19). When asked about the age of sexual debut, 41.03% reportedly experienced theirs between 16-18 years, 35.90% had theirs between 19-21 years, 10.26% had theirs between 13-15 years, 2.56% had theirs when above 21years and 10.26% could not remember when they experienced theirs. While respondents in the intervention group reported 18.41 ±2.78 years When asked about the age of sexual debut, 52% reportedly experienced theirs between 16-18 years, 28 % had theirs between 19-21 years, 8% had theirs between 13-15 years, 4% had theirs above 21years and 10.26% could not remember when they experienced theirs.

Regarding the concerns, the respondents in the control group have about contracting sexually transmitted infections 46.67% were concerned about contracting sexually transmitted infections, 13.33% are not concerned about sexually transmitted infections and 40% were indifferent about contracting sexually transmitted infections. For the respondents of the intervention group, 51.11% were concerned about contracting sexually transmitted infections, 31.11% are not concerned about sexually transmitted infections and 17.78% are not concerned about contracting sexually transmitted infections (p-value =0.029, $\chi 2$= 7.13). This showed that fewer students in the intervention group were concerned with contracting STI after the intervention.

For the respondents of the control group, 73.33% took preventive steps to prevent sexually transmitted infections, 6.67% took no steps and 20% were indifferent about taking any steps, but the respondents in the intervention group. All of the respondents took preventive steps to avoid sexually transmitted infections (p-value =0.0002). There was a 35.6% improvement from the baseline of the study in which 64.44% of the participants took actions steps

The preventive step the respondents in the control group used was condom use with 81.82% followed by 9.09% abstinence followed by doctor visits and taking medicine

both having 3.03% respectively. While the students in the intervention, used preventive methods such as abstinence with 53.33%, followed by condom use 42.22%, followed by doctor visits and taking medicine both with 2.22% respectively and others 1.28% with a p-value of 0.0002. There were slight changes in the type of preventive steps taken by the participants after the intervention.

Table V: ***Sexual Risk Behavior***

Variables	**Post-Group**				**χ2(p-value)**
	Control (n=45)		**Intervention (n=45)**		
	N	**%**	**N**	**%**	
Have you ever contacted STI? (n_1=39, n_2=24)					1.36 (0.387)
Yes	20	51.28	9	37.50	
No	19	48.72	15	62.50	
Did you seek treatment (n_1=20, n_2=9)					
Yes	20	100.0	9	100.0	
No	0	0.00	0	0.0	
What did you do when you contacted STI? (n_1=20, n_2=9)					0.102 γ
See a Doctor	6	30.00	3	33.33	
Went to a chemist/pharmacy	14	70.00	4	44.44	
Self-Medicated	0	0.00	2	22.22	
Where did you seek treatment? (n_1=20, n_2=11)					0.203 γ
Government hospital/Health center	6	30.00	2	22.22	
Pharmacy/Chemist	14	70.00	5	66.65	
Private Hospital/Doctor/Nurse	0	0.0	1	11.11	
Self-Medicated	0	0.00	1	11.11	
Did your sexual partner (any of your partners) also obtain treatment? (n_1=20, n_2=9)					**0.016** γ*
Yes	1	5.00	1	11.11	
No	1	5.00	4	44.44	
I don't know	18	90.00	4	44.44	
Which of these do you think would be the appropriate means for STI education for young adults					0.529 γ
Mobile webs	12	26.67	13	28.89	
Text Messaging	24	53.33	22	48.89	
Use of mobile Apps	4	8.89	8	17.78	
Phone calls	4	8.89	1	2.22	
Television/Radio	1	2.22	1	2.22	
					0.001 γ*

χ2=Chi-Square; **γ**=Fisher's Exact p

Table V presents the Sexual Risk Behaviours of the respondents. Among the sexually active in the control group 51.28% had contracted sexually transmitted infections, and all who contracted sexually transmitted infections sought treatment while those in the intervention group who contracted STI was 37.50% (P-value=0.387, χ2=1.36).

For those in the control group who had contracted sexually transmitted infections 70% went to a chemist or pharmacy to seek help the others 30% sought help from the doctor while those in the intervention group had 44.44% went to the chemist while 33.33% had seen a doctor and 22.22% self -medicated (p-value=2.70)

Most of the respondents in the control group who sought treatment for sexually transmitted infections were not aware if their sexual partner also obtained treatment for the same infection while those in the intervention group showed that 44.44% did not know if their partner obtained treatment, 44.44% knew that their partner did not obtain treatment, and 11.11% knew their partner sought treatment (p-value 0.016).

The respondents in the control group showed that 55.56% responded positively that cell phones can be used in sexually transmitted infections prevention and elimination of barriers in accessing sexually transmitted infections care, 2.22% and 42.22% were not sure but the intervention group showed that,97.78% responded positively that cell phones can be used in sexually transmitted infections prevention and elimination of barriers in accessing sexually transmitted infections care, and 2.22% were not sure (P-value=0.001).

The respondents reported that the appropriate and most preferred means for STI/HIV education and prevention for young adults are text messaging, mobile webs, use of mobile apps, phone calls, and television/radio (p-value=0.529).

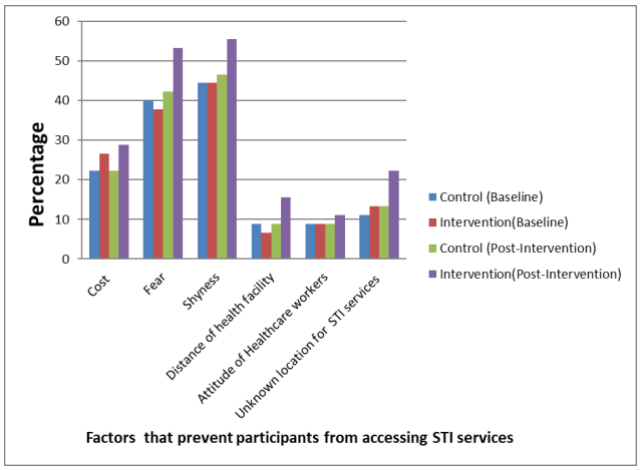

Figure II: Bar chart showing factors that prevent participants from accessing STI services.

The common factors which prevent young people from accessing STI/HIV services from hospitals as mentioned by the respondents include shyness, fear, cost of accessing care, unknown location of health care centers, the attitude of healthcare workers, and distance to the health care center (p-value=0.992).

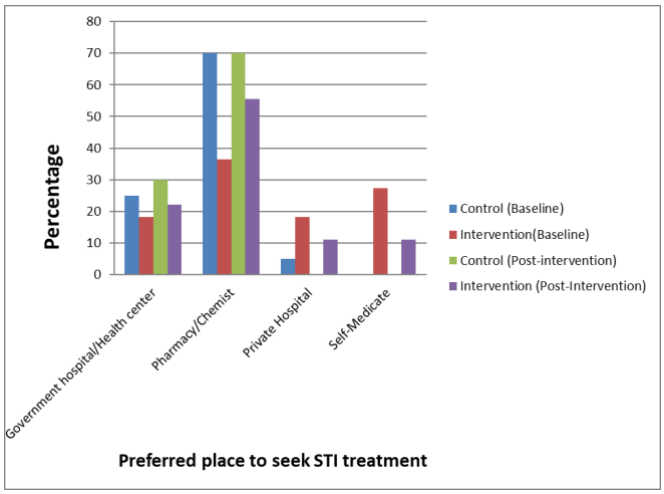

Figure III: Bar chart showing the participants most preferred place to seek treatment for STI.

Pharmacy or chemist was the most preferred place to seek treatment for many of the respondents in the two groups, followed by government hospital, Private hospital, and self-medication (P-value = 0.203).

Discussion

This study evaluated the effectiveness of a virtual risk reduction program on the health-seeking behavior of STI among female students in tertiary institutions in the Port Harcourt metropolis, Rivers State.

In the context of this study, health-seeking behavior on sexually transmitted infections (STIs) of students referred to the actions taken by the students when they suspected they had been infected by a sexually transmitted infection, where they went to seek help, and barriers that prevent them from seeking STI treatment.

Knowledge of STIs can affect the health-seeking behaviour of young people and help them make informed choices about their sexual health (Rana et al., 2015; Tsadik and Lul Lam, 2019; Nigussie& Yosef 2020).

According to the study's findings, 37.50% of the sexually active participants in the intervention group reported having STDs post-intervention, and they all sought medical attention. At baseline, 44% of these participants had STDs and sought treatment. This outcome was expected to increase the proportion of those who seek care as a result of the intervention, but it was better than that of a prior study by Handebo in 2020 among Ethiopian women, in which 33.3% sought care for STI-related cases, and care-seeking for STI-related cases was lower among educated women. This variation can be due to the respondents' access to STI knowledge. Ajike et al.'s 2016 study in Southwest Nigeria among undergraduates revealed 16.47% contracted sexually transmitted infections (STI) and sought treatment; this was lower than the findings of this study, which showed 37.50% had contracted STIs and sought treatment. This difference could be a time difference between when the studies were carried out and the location of the study areas.

Faxelid's (1998) study on the STI health-seeking behaviour among adolescents in an urban and rural setting of Zambia observed that more of the participants used clinics than traditional medicine, and this is different from the results obtained from this study, which revealed a pharmacy or chemist was the most preferred place to seek treatment for the majority of the respondents, followed by a government hospital, a private hospital, and self-medication. This could be because of the reduced cost of seeking treatment in the pharmacy and chemist and its accessibility to female students.

Pharmacy and chemists were the most preferred places to seek treatment for the majority of the respondents in this study, followed by a government hospital, a private hospital, and self-medication. This was similar to Ajike et al.'s (2016) study in Southwest Nigeria among undergraduates, which showed that among the respondents, their most preferred source of treatment for sexually transmitted infections (STIs) was private hospitals, government-owned hospitals, self-medication, traditional healers, and chemist shops.

Kadiri et al.,2014 carried out a study in Kwara State that showed that the high cost of STI treatment in hospitals and the poor attitude of health care workers were major drawbacks to young people accessing health care. This made them resort to roadside pharmacies, local herbs, and religious prayers. This was similar to the findings of this study, which had the same reason of poor attitudes of health workers and healthcare costs as a reason for accessing healthcare for STIs.

Voeten et al.,2004 postulated that socioeconomic status among young people is a major factor in their decision to seek treatment at government clinics; this was a key factor among the students in this study in choosing to know where to get sexually transmitted infections (STI) treatment.

Tsadik et al., 2019 did a cross-sectional study that explained the health-seeking behaviour of STI patients in Gambella town, Ethiopia. The results showed that there was a high proportion of delayed healthcare seeking among STI patients (about 57%). The study further explained that the reasons for a delay in seeking healthcare were feeling judged by healthcare workers, healthcare costs, self-medication, a feeling of embarrassment, and poor access to treatment. This was similar to the reasons the students gave for the barriers they faced in seeking STI healthcare. This was also similar to the drawbacks observed in Ajike et al.'s (2016) study.

The study showed that many of the participants felt that the right thing to do was to seek treatment when they had contracted an STI, but the majority of them sought treatment from the pharmacy and chemist and not the hospital or health Centre due to barriers like shyness, fear, the cost of accessing care, the unknown location of health care Centres, the attitude of health workers, and the distance to the health care Centre.

Study strengths and limitations

This study's research methodology and originality were its main advantages. By comparing the students' pre- and post-exposure to the intervention, the study's quasi-experimental design allowed researchers to monitor the students' health-seeking behaviour. The unique aspect of this study is that the intervention was conducted online and followed the three suggested phases of the Minimum Prevention Package (MPP) Intervention developed by the National Agency for the Control of AIDS in Nigeria (NACA, 2010).

This study was limited to female undergraduates who are internet users and are active on social media. Due to the sensitive nature of the topic under research, there is a possibility that STI health-seeking behavior may have been underreported in this study. This could be because of the problem of social desirability.

Conclusion

Due to the high incidence rates of STIs among young people, it was imperative to devise strategies and interventions to encourage young people to seek treatment when they notice any symptoms

The levels of health seeking behavior for STI among the students were good but there was no significant difference in the level of health seeking behavior among the students after the intervention.

Acknowledgements

This paper is a part of the thesis of the corresponding author.

The authors would like to thank the female students, course representatives, and student leaders for their support in this work.

Funding

No direct funding was received for this work.

Competing Interest

The author declares that they have no competing interests.

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