Effectiveness of Peer and Parent-led Intervention to Improve the Perception of In-School Adolescents towards HIV Prevention

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Abstract

Background: Adolescents represent a growing share of people living with HIV worldwide. The number of adolescents dying from HIV related illnesses is estimated to have tripled over the last two decades. AIDS is the leading cause of death among adolescents in Africa with 85% of them living in developing countries. Ogun state has a prevalence of 1.6%, the highest in the south-west. Developing an optimistic perception of HIV/AIDS toward sexual health or HIV/AIDS preventive measures could produce tangible desirable behaviour changes in HIV-risk behaviours.

Objective: The objective of the study was to assess the effectiveness of peer and parent-led intervention to improve the perception of in-school adolescents towards HIV prevention in Ogun state Nigeria based on the Health Belief Model (HBM). The study population were selected in-school adolescents.

Methods: The study utilized a quasi-experimental design. A validated 22-Itemed Questionnaire measured on a 66-point rating scale was used for data collection. The multistage sampling technique was used in selecting participants.

Results: The mean age of adolescents was 14.90 ± 1.836 . The majority of the respondents had a moderate level of perception. The educational intervention effected a change in the level of perception of the adolescents between baseline and 8-weeks follow-up indicating a mean difference of 7.891 (p<0.01) for the peer-led, 16.618 (p<0.01) parent-led, 13.982 (p<0.01) peer and parent-led and a reduction in mean in the control group (-0.545; p<0.01).

Conclusion: In conclusion, the parent-led intervention had a higher impact on adolescents' perception compared to the other intervention. This is an indication that parent-child communication should be reinforced through further interventions.

Keywords: HIV, Adolescents, Perception, Peer-led, Parent-led, Education intervention, Health Belief Model.

Introduction

Adolescents represent a growing share of people living with HIV worldwide. The number of adolescents dying from HIV related illnesses is estimated to have tripled over the last two decades (UNICEF, 2015). An estimated 1.9 million people are living with HIV in Nigeria accounting for a prevalence of 1.4%. In 2017 alone, 590,000 young people between the ages of 15 to 24 were newly infected with HIV, of whom 250,000 were adolescents between the ages of 15 and 19 (UNICEF, 2019); West and Central Africa accounts for 6 per cent of the global population, but has the second largest which is likely to increase because of high HIV incidence among

adolescents. The National Agency for the Control of AIDS revealed that Nigeria has the second highest burden of adolescents living with HIV as 240,000 adolescents in the country representing 10 percent globally are living with the disease (NACA, 2017). One in 20 of these adolescents contract a sexually transmitted infection each year, and half of all cases of HIV infection take place among people under the age of 25 years (Odo, Samuel, Nwagu, Nnamani, & Atama, 2018). This could result from early sexual debut and early marriage, which increase adolescents' HIV vulnerability (Yaya & Bishwajit, 2018), and despite the global promotion of availability of sexual and reproductive health services, still lack these services (Denno, Hoopes, & ChandreMouli, 2015). Many preventive methods associated to unhealthy sexual behaviours have been employed over the years to forestall HIV/AIDS, but to no avail. Developing an optimistic perception of HIV/AIDS toward sexual health or HIV/AIDS preventive measures could produce tangible desirable behavior changes in HIV-risk behaviors (Asuquo, Ekuri, Asuquo, & Bassey, 2005). Perception is a key basis to learning and plays vital roles in the social interaction among adolescents, especially in accepting new ideas that will assist them to learn healthy behavior that would help prevent HIV/AIDS (Uwakwe, 2000). Adolescents constitute a significant portion of the productive population in any developing economy and the macroeconomic output of an economic/financial system that is already troubled is a significant problem. It becomes increasingly difficult to garner resources to fight the epidemic and this leads to an economic situation because of this, The GDP growth rates have significantly dropped in Nigeria (UNAIDS, 2018); with this, one can only imagine the stress on a significantly thin budget in Nigeria. Several resources are required to meet the individual needs of HIV/AIDS programs; this is why any step taken to improve their wellbeing is likely to have an exponential impact on not only the adolescents, but also the wellbeing of the general populace on a long term. Moreover, perception influences attitudes, which in turn influences action. If the control of HIV incidence can be achieved among adolescents, the national prevalence rates are expected to reduce. Ogun state had a prevalence of 0.6% in the year 2012 (FMOH, 2012), but current result revealed the prevalence has increased to 1.6% (NAIIS, 2019). The Health belief model (HBM) is a model widely used in health education Dini-Talatappeh, (Tavakoli. Rahmati-Najarkolaei, & Fesharaki, 2016 & Li, Lei, Wang, He, & Williams, 2016). As a cognitive model developed in the 1950s, HBM is used to identify the factors affecting behaviors and understand the effects of high-risk behaviors on people's health. The basis of this model is the individual's motivation to act. It emphasizes how one's perception creates motivation and movement and leads to behavior. In general, this model focuses on a change in beliefs, which in turn leads to change in behavior (Shojaei, Farhadloo, Aein, & Vahedian, 2016, & Tarkang, & Zotor, 2-15). HBM allows us to examine the beliefs that

influence people's decision to adopt preventive behaviors (Karimi, Ghofranipor, & Heidarnia, 2009, & Zak-Place, & Stern, 2004). The main objective of the study was to assess the effectiveness of peer and parent-led intervention to improve the perception of in-school adolescents towards HIV prevention in Ogun state Nigeria.

Materials and methods

The study utilized a quasi-experimental design comprising of three experimental group and one control group in order to assess the Effect of Peer-Led Educational Intervention on HIV Perception of In-School Adolescents in Selected Secondary Schools in Ogun State, Nigeria. The multistage sampling technique was used in selecting the participants. A senatorial district in Ogun state was selected by simple random sampling through balloting; and from the senatorial district selected; one local government were randomly selected. The list of secondary schools was obtained from the Ministry of Education and one public secondary school was randomly selected from the selected local government area. Upon selection of the secondary schools, the students were randomly selected from each of one junior class (JSS3); this is because the least age to be in JSS3 is 10 years so this made them eligible for the study and the three (3) senior classes (SS1, SS2 and SS3) through random sampling. The peer educator was randomly selected from the student leaders of the school. The peer educators were trained for a week after which they were evaluated.

The study population was in-school adolescents in selected government secondary schools in Ogun State. The students were within the age range of 10 and 19 years old from the selected schools. The criteria were the adolescents chosen were fully registered students in the selected secondary schools. The students were between the ages of 10 - 19 years old and were selected with the assumption that they are registered students in the school for the duration of the study intervention. The exclusion criteria for participants in this study are, Students who were not fully registered at the time of the study; Adolescents who were not attending the selected school; Teaching and non-teaching staff members of institution were excluded from the study and The students above and below the age bracket of young adulthood (10-19 years) were excluded from this study.

The sample size was derived from the computation using a level of significance of 95% and 80% power. The prevalence rate of HIV in Ogun state is 1.6. Thus, the sample size was determined using the given prevalence.

$$N = \frac{(Z_{\alpha} + Z_{\beta})^2 X P_0 (1 - P_0)}{(D)^2}$$

N = Sample size

 Z_{α} = Standard normal deviation at 95% confidence interval (1.96)

 Z_{β} = Statistical power at 80% confidence interval; 0.84

 P_0 = prevalence at 50%

 $P_1 = 80\%$ (desired level of outcome variable) d= level of precision at 5%

$$n = \frac{(1.96 + 0.84)^2 \times 0.016(1 - 0.016)}{(0.05)^2}$$
$$\frac{(2.8)^2 \times 0.016(0.984)}{(0.05)^2}$$
$$\frac{0.12343296}{0.0025}$$

=49.37 **≃**50

The minimum sample size is 50. 10% of the minimum sample size was added to take care of attrition. The total number of participants after adding 10% of 50 was = $50 + 5 \approx 55$.

Approximately 55 participants per group was considered for the study. Based on the computation a total number of 220 participant from the two selected secondary schools were enrolled for this study (representing 55 people per group).

A quantitative approach was adopted for the developed study. Instrument was using information gathered from review of literature and instruments from other similar studies. The instrument was a semi-structured, participantadministered questionnaire, which solicited information on the demographic characteristics; perception of In-School Adolescents in Selected Secondary Schools in Ogun State, Nigeria. The same instrument was administered at baseline; immediate post intervention and 8-weeks follow up.

The instrument is sectioned as follows:

Section A: This aimed at assessing respondents' socio demographic factors which include their gender, age, religion, class and ethnicity.

Section B: Perception of respondents about HIV prevention consists of the perception domain operationalized by sub-variables of perceived susceptibility towards HIV: perceived severity/seriousness of HIV; perceived benefits of HIV; and perceived barriers towards HIV prevention. Therefore, together this variable will consist of questions measured on a 66-point rating scale of Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD). For the negatively constructed questions, strongly agree (SA) was scored 0, Agree (A) was scored 1, Disagree (D) was scored 2 and Strongly Disagree (SD) was scored 3; while the positively constructed questions, strongly agree (SA) was scored 3, Agree (A) was scored 2, Disagree (D) was scored 1 and Strongly Disagree (SD) was scored 0.

To ascertain the reliability of the instrument, a test retest was conducted for internal consistency of the instrument using 10% of the projected sample size. The instrument was distributed to 10 adolescents in a community with same characteristics as the study population. The reliability score generated was 0.723. This study seeker ethical approval from the ethical committee of the university – Babcock University Health Research and Ethics Committee (BUHREC); the Ministry of Health Research Ethics and Ministry of Education Planning Research and Statistics, Ogun State for ethical approval to conduct the study. All persons were informed that their participation is voluntary and inform consent was sought from all participants prior to their participation. Confidentiality of participants was maintained, as no personal identifying information was not collected on the questionnaire.

Results

Two hundred and twenty students were recruited from four senior secondary schools in four local government areas (LGAs) of Ogun State, Nigeria to participate in the intervention. At baseline, each of the intervention and control groups had an equal amount of 55 participants. The response rate in the intervention and control groups were 100% after the health education intervention was administered.

There were more students in the middle adolescence (14 - 16 years) age bracket across the three intervention and control groups. The mean age of the students was between 14.5 years

and 15 years across the four groups. In each of the groups, over half of all the students were females (Table 1). The adolescents were recruited from the junior secondary school classes 3 and senior secondary school classes 1 to 3 (Table 2). Majority of the students were Christians and only a small combined proportion reported to be traditionalists. The ethnic distribution showed that majority of the students were from the Yoruba ethnic group and a few from the Igbo, Hausa and other minority ethnic tribes (Table 2).

the participants across the three All intervention and control groups reported that they had heard about HIV/AIDS. In the peer-led intervention group, almost half of the students reported to have obtained their information from their parents; half got their information from both friends and parents in the parent-led intervention group; about 40% of the students in the parent and peer-led and control group got their information from their parents (Table 3). Over 95% of all students across the four groups reported to have individually sought information about HI/AIDS at some period and the preferred source of information for the adolescents was in their schools.

Baseline distribution of adolescents' perception to HIV/AIDS

The level of perception was measured with a 22-item scale, which was sectioned to assess the perceived susceptibility, perceived severity, perceived benefits and perceived barriers. The responses were grouped and the results showed that across the four groups, over half of the total population had a low level of perceived HIV/AIDS susceptibility transmission. to Regarding the severity or seriousness, benefit and barrier of the disease, above half of the respondent had a moderate level of perception in the peer-led, parent-led, peer and parent-led and control groups respectively (Table 4).

The overall distribution of the level of perception of the adolescents showed that majority of the adolescents had a moderate level of perception. With a 66-point rating scale, the mean±SD scores for each group were 34.95±6.047, 38.42±6.938, 36.89±6.757, 36.29±5.527 for peer-led, parent-led, peer and parent-led and control groups respectively (Table 4).

Effectiveness of educational intervention on adolescents' perception of HIV

The effectiveness of the intervention on the perception of the adolescents to HIV was measured by testing for mean differences among the groups. The results indicate that on a 66-point rating scale, majority of the adolescents had a moderate level of perception across the groups. At post intervention, there was an increase across all the intervention groups unlike the control group which had a reduction in mean (Table 4).

Change in perception towards HIV from baseline to 8-weeks follow up

At the end of the intervention, the peer-led educational program had affected a statistically significant change in the means of the adolescents' perception. The mean difference observed was 7.891 (p<0.01). In the parent-led intervention group, the mean difference was 16.618 (p<0.01) (See Table 4.20), 13.982 in the peer and parent-led intervention group and a decrease of 0.545 in the control, group (Table 5).

Research hypothesis

There will be no significant difference between the levels of perception on HIV prevention of the adolescents at baseline and 8weeks follow-up. To determine the results, a paired T-test analysis was conducted. The result of the t-test showed that the observed difference in mean in the peer-led group ($\Delta = 7.891$; t₅₄ = 7.358; p<0.01), parent-led group ($\Delta = 16.618$; t₅₄ = 14.226; p<0.01) and peer and parent-led group ($\Delta = 13.982$; t₅₄ = 12.086) were statistically significant (See Table 6).

The null hypothesis is therefore rejected in favour of the alternative hypothesis. This implies that there is a statistically significant difference because of the interventions on the perception of in-school adolescents in Ogun State.

Discussion

The perception of HIV was assessed with a scale, which measured 4 other subscales (perceived susceptibility, perceived severity, perceived benefits and perceived barriers) in line with the constructs generated from the Health Belief Model. Though majority of the adolescents reported a high level of awareness of HIV

prevention, their perception of the risks involved with HIV transmission was moderate. This indicates that awareness may not equate to high level of knowledge, which in turn affects interpretation of risks. Awareness of the disease and inadequate knowledge of misconceptions and erroneous views about HIV transmission may influence the adolescents' decision-making process and make them underestimate their risks of HIV transmission. In addition, if adolescents are unable to assess their risk of HIV infection, they might not be able to apply their knowledge of disease transmission to assess their risk.

On the Perception construct in the experimental groups showed an increase after the intervention that was statistically significant. This finding is not consistent with studies in this area based on Health Belief Model, such as that of Pirzadeh & Sharifirad (2012) and Ghaffari, (2007), but it is consistent with many other studies, including Rahmati et al. (2009), Karimi et al. (2009), and Sharifi Rad et al. (2009). Results of Sadeghi et al. (2015), Vakili et al. (2011), as well as Aghmolaei et al. (2005), also showed the significant effect on the perceived susceptibility. High-perceived sensitivity is necessary to increase the motivation of individuals to adopt preventive health behaviors. Therefore, part of the HIV/AIDS educational programs should focus on this construct. If a person is sensitive to a health problem and believe that he/she can have the disease without symptoms, this susceptibility can lead him/her to avoiding high-risk behaviors and preventing HIV/AIDS transmission. It can be said that training was successful in increasing their perceived severity of the disease that is consistent with the findings of Pirzadeh & Sharifirad (2012), Karimi et al. (2009), Azaretal et al. (2013), and Mirahadi et al. (2013). This higher perceived severity of HIV/AIDS can be positive, as it can be beneficial in adopting preventive behaviors and changing health beliefs. People's perception and their evaluation of the danger are pivotal in application of the HBM; therefore, perceived severity should be developed as an important factor in shaping the behaviors in which weakness exists (Zainali, Asadpour, Aghamolaei, EsmaeliNadimi, Farshidi, & Gbannbarnejad. 2015).

Conclusion

This study demonstrated that the adolescents' perception towards HIV prevention could be changed through multi-approach educational intervention. The intervention programs utilized for this study were effective in building a high level of protection skills for the adolescents as regards HIV infection. The parent-led program had a better effect size compared to the other modules and this is an indication that parent-child communication should be reinforced through further interventions.

Further analysis on the impact of each intervention module showed that the parent-led educational program had a better impact on the HIV prevention skills of the adolescents in Ogun State.

Tables

Variables	Peer-led Group N (%)	Parent-led Group N (%)	Peer and Parent- led Group N (%)	Control N (%)
Age				
10 - 13	9 (16.4)	9 (16.4)	9 (16.4)	19 (32.7)
14 - 16	37 (67.3)	38 (69.1)	38 (69.1)	22 (40.0)
17 - 19	9 (16.4)	8 (14.5)	8 (14.5)	15 (27.3)
Total	55 (100)	55 (100)	55 (100)	55 (100)
Mean±SD	14.89±1.583	14.96±1.360	14.85±1.919	14.87±2.373
Gender				
Male	12 (21.8)	26 (47.3)	22 (40.0)	20 (36.4)
Female	43 (78.2)	29 (52.7)	33 (60.0)	35 (63.6)
Total	55 (100)	55 (100)	55 (100)	55 (100)

Table 1. Socio-demographic characteristics of respondents in control and intervention groups: Age and Gender

Variables	Peer-led	Parent-led	Peer and Parent-	Control	
	Group	Group	led Group	N (%)	
	N (%)	N (%)	N (%)		
Class					
JSS 3	18 (32.7)	21 (38.2)	27 (49.1)	20 (36.4)	
SS 1	14 (25.5)	12 (21.8)	16 (29.1)	9 (16.4)	
SS 2	12 (21.8)	13 (23.6)	8 (14.5)	12 (21.8)	
SS 3	11 (20.0)	9 (16.4)	4 (7.3)	14 (25.5)	
Total	55 (100)	55 (100)	55 (100)	55 (100)	
Religion					
Christianity	44 (80.0)	37 (67.3)	41 (74.5)	49 (89.1)	
Islam	8 (14,5(18 (32,7)	12 (21.8)	5 (9.1)	
Traditional	3 (5.5)	0 (0.0)	2 (3.6)	1 (1.8)	
Total	55 (100)	55 (100)	55 (100)	55 (100)	
Ethnicity					
Yoruba	41 (74.5)	46 (83.6)	40 (72.7)	49 (89.1)	
Igbo	6 (10/9)	5 (9.1)	0 (0.0)	4 (7.3)	
Hausa	0 (0.0)	1 (1.8)	0 (0.0)	0 (0.0)	
Others	8 (14.5)	3 (5.5)	15 (27.3)	2 (3.6)	
Total	55 (100)	55 (100)	55 (100)	55 (100)	

 Table 2. Socio-demographic characteristics of respondents in control and intervention groups: Class, Religion and Ethnicity

Table 3. Adolescents' awareness of HIV/AIDS

Variables	Peer-led Group	Parent-led Group	Peer and Parent-led	Control N (%)	p-value
	N (%)	N (%)	Group N (%)		•
Ever heard about					
HIV/AIDS	55 (100)	55 (100)	55 (100)	55 (100)	
Yes	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	
No	× ,			× ,	
Total	55 (100)	55 (100)	55 (100)	55(100)	
Source of Information					
Friends	12 (21.8)	14 (25.5)	10 (18.2)	22 (40.0)	
Parents	27 (49.1)	14 (25.5)	22 (40.0)	21 (38.2)	
Newspaper	1 (1.8)	2 (3.6)	1 (1.8)	2 (3.6)	
Textbooks	4 (7.3)	11 (20.0)	3 (5.5)	2 (3.6)	0.378 ^a
Radio	6 (10.9)	7 (12.7)	8 (14.5)	2 (3.6)	
Internet	0 (0.0)	2 (3.6)	4 (7.3)	1 (1.8)	
Television	2 (3.6)	4 (7.3)	2 (3.6)	5 (9.1)	
Flyers	3 (5.5)	1 (1.8)	5 (9.1)	0 (0.0)	
Total	55 (100)	55 (100)	55 (100)	55 (100)	
Ever sought					
information on	53 (96.4)	54 (98.2)	54 (98.2)	53 (96.4)	0.877 ^a
HIV/AIDS	2 (3.6)	1 (1.8)	1 (1.8)	2 (3.6)	
Yes					
No					
Total	55 (100)	55 (100)	55 (100)	55 (100)	
Where did you obtain					0.0028
such information?	5 (9.1)	4 (7.3)	4 (7.3)	1 (1.8)	0.093*

Library	31 (56.4)	24 (43.6)	33 (60.0)	35 (63.6)	
School	6 (10.9)	10 (18.2)	3 (5.5)	16 (29.1)	
Health center/Hospital	5 (9.1)	13 (23.6)	9 (16.4)	3 (5.5)	
Textbooks	3 (5.5)	4 (7.3)	4 (7.3)	0 (0.0)	
Parents	5 (9.1)	0 (0.0)	2 (3.6)	0 (0.0)	
Others					
Total	55 (100)	55 (100)	55 (100)	55 (100)	

^ap-value obtained by Chi-Square; *significant at <0.05

Table 4. Baseline distribution of adolescents' perception of HIV/AIDS

Perception	Peer-led Group N (%)	Parent-led Group N (%)	Peer and Parent- led N (%)	Control N (%)	p-value
Perceived	Measured on an 18-point rating scale				
Susceptibility					
$L_{OW}(0-6)$	13 (23.6)	9(164)	11 (20.0)	6 (10.9)	
$\frac{100}{1000} (0 - 0)$	36 (65 5)	13(78.2)	11(20.0) 11(74.5)	(10.7)	
High $(12 \ 18)$	50(05.5)	43(70.2)	41(74.5)	43(70.2)	
$\frac{111gll(13-16)}{T_{atal}}$	55(100)	5(3.3)	5 (3.3)	0(10.9)	-
Total	55 (100)	55 (100)	55 (100)	55 (100)	
Mean±SD	8.76±3.139	8.53±2.260	8.53±2.741	9.11±2.615	
Perceived Severity	Measured on a 15-point	rating scale			0.659 ^a
Low $(0-5)$	2 (3.6)	5 (9.1)	5 (9.1)	1 (1.8)	
Moderate $(6 - 10)$	36 (65.5)	35 (63.6)	40 (72.7)	46 (83.6)	
High $(11 - 15)$	17 (30.9)	15 (27.3)	10 (18.2)	8 (14.5)	
Total	55 (100)	55 (100)	55 (100)	55 (100)	-
M CD	0.05 (100)	9. (100)	9.02+2.714	9.0(:0.000	-
Mean±SD	9.25±2.179	8.69±2.410	8.93±3.714	8.96±2.009	
Perceived Benefits	Measured on an 18-point rating scale				
Low (0 – 6)	5 (9.1)	4 (7.3)	1 (1.9)	3 (5.5)	
Moderate $(7 - 12)$	31 (56.4)	37 (67.3)	50 (90.9)	45 (83.6)	
High $(13 - 18)$	19 (34.5)	14 (25.5)	4 (7.3)	6 (10.9)	
Total	55 (100)	55 (100)	55 (100)	55 (100)	-
Mean±SD	11.13±3.249	10.67±3.000	9.75±2.110	10.20±2.198	-
Perceived Barriers	Measured on a 15-point	rating scale			0.043 ^a
$I_{OW}(0, 5)$	9(164)	10 (18 2)	15 (27.3)	11 (20.0)	
$\begin{array}{c} \text{Low} (0-3) \\ \text{Moderate} (6-10) \end{array}$	$\frac{9}{10.4}$	10(10.2) 26(47.3)	13(27.3) 20(527)	11(20.0) 25(63.6)	
High (11 - 15)	22(40.0)	20(47.3) 10(24.5)	29(32.7)	33(03.0)	
$\frac{\text{High}(11-13)}{\text{Total}}$	24 (43.0) 55 (100)	19 (34.3) 55 (100)	<u>11 (200)</u> <u>55 (100)</u>	9 (10.4)	-
1 otal	55 (100)	55 (100)	55 (100)	55 (100)	
Mean±SD	9.27±3.530	9.00±3.305	7.75±3.550	8.02±2.799	
Perception	Measured on a 66-point rating scale				
Low $(0-6)$	1 (1.8)	1 (1.8)	2 (3.6)	0 (0.0)	
Moderate $(7 - 12)$	45 (81.8)	46 (83.6)	48 (87.3)	53 (96.4)	
High $(13 - 18)$	9 (16.4)	8 (14.5)	5 (9.1)	2 (3.6)	
Total	55 (100)	55 (100)	55 (100)	55 (100)	1
Maan SD	29.42+6.029	26.90+6.757	24.05+6.047	26.20+5.527	-
wiean±5D	30.42±0.938	30.89±0./3/	34.93±0.04/	30.29±3.321	

^ap-value obtained by One-way ANOVA; *significant at <0.05

Perception	Peer-led Group N (%)	Parent-led Group N (%)	Peer and Parent-led Group N (%)	Control N (%)				
Baseline								
Low (0 – 22) Moderate (23 – 44) High (45 – 66)	1 (1.8) 45 (81.8) 9 (16.4)	1 (1.8) 46 (83.6) 8 (14.5)	2 (3.6) 48 (87.3) 5 (9.1)	0 (0.0) 53 (96.4) 2 (3.6)				
Total	55 (100)	55 (100)	55 (100)	55 (100)				
Mean±SD	38.42±6.938	36.89±6.757	34.95±6.047	36.29±5.527				
Post Intervention								
Low (0 – 22) Moderate (23 – 44) High (45 – 66)	0 (0.0) 32 (58.2) 23 (41.8)	0 (0.0) 24 (43.6) 31 (56.4)	0 (0.0) 26 (47.3) 29 (527)	0 (0.0) 53 (96.4) 2 (3.6)				
Total	55 (100)	55 (100)	55 (100)	55 (100)				
Mean±SD	43.49±6.043	46.75±6.961	46.58±5.871	35.95±5.126				
8-weeks Follow Up	-							
Low (0 – 22) Moderate (23 – 44) High (45 – 66)	0 (0.0) 25 (45.5) 30 (54.5)	0 (0.0) 3 (5.5) 52 (94.5)	0 (0.0) 15 (27.3) 40 (72.7)	0 (0.0) 53 (96.4) 2 (3.6)				
Total	55 (100)	55 (100)	55 (100)	55 (100)				
Mean±SD	46.31±5.594	53.51±6.277	48.93±6.064	35.75±5.327				
Effect size	0.661	0.793	0.765	0.284				
Mean difference (Baseline to follow up)	7.891	16.618	13.982	-0.545				

Table 5. Change in perception towards HIV from baseline to 8-weeks follow up

 Table 6. Paired Sample T-test showing the paired differences between the adolescents' level of perception to HIV prevention at baseline and 8-weeks follow up

VARIABLE: PERCEPTION	Ν	Mean Diff	SE	Df	Т	Sig	
Peer-led							
Baseline vs 8-weeks follow up	55	7.891	1.072	54	7.358	0.000 ^a *	
Parent-Led							
Baseline vs 8-weeks follow up	55	16.618	1.168	54	14.226	0.000 ^a *	
Peer and Parent-led							
Baseline vs 8-weeks follow up	55	13.982	1.157	54	12.086	0.000 ^a *	
Control							
Baseline vs 8-weeks follow up	55	0.545	0.124	54	4.400	0.06 ^a *	

^ap-value obtained by t-test; ^{*}significant at p<0.05

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