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PAMJ One Health

Research

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Received: 12 Sep 2020 - **Accepted:** 13 Dec 2020 - **Published:** 11 Jan 2021

Keywords: Pre-exposure prophylaxis, adolescent girls, young women

Cite this article: Sarah Hawi Ngere et al . Exposure and predictors of intention to use HIV pre-exposure prophylaxis (PrEP) among adolescent girls and young women: assessment of *Jipende JiPrEP* campaign in Kisumu, Kenya. PAMJ - One Health. 2021;4:3. 10.11604/pamj-oh.2021.4.3.26039

Available online at: https://www.one-health.panafrican-med-journal.com/content/article/4/3/full

Exposure and predictors of intention to use HIV pre-exposure prophylaxis (PrEP) among adolescent girls and young women: assessment of *Jipende JiPrEP* campaign in Kisumu, Kenya

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Abstract

Introduction: *pre-exposure Prophylaxis (PrEP), an effective user-dependent HIV prevention method is especially viable for adolescent girls and young women (AGYW). Behavioral interventions designed to enhance uptake of and adherence to PrEP among AGYW are few and their effectiveness unclear.* ***Methods:*** *a descriptive cross-sectional study design was used to evaluate level of exposure to Jipende JiPrEP mass media campaign. It assessed intention to use PrEP amongst those exposed to the campaign of which 419 females aged 15-24 years participated. Linear framework and poisson regression analysis was performed to estimate prevalence ratios and show significant predictors of intention to use PrEP. Chi-square test for trend was used to test whether the proportion of intention to use PrEP increases or decreases across level of exposure.* ***Results:*** *at least 67.1% (281/419) participants had low exposure to the campaign messages. More urbanites (7.2%) and those with higher education levels (9.2%) had higher exposure to the campaign messages. There was no change in intention to use PrEP with increased exposure (Chi-trend p-value = 0.403). Intention to use PrEP was higher with exposure to leaflets (aPR=1.51, 95% CI 1.01, 2.26, p = 0.043) and using radio almost every day (aPR =1.81, 95% CI 1.22, 2.69, p= 0.003). Those exposed to newspapers were 55% less likely to report intention to use PrEP (aPR=0.45, 95% CI 0.25, 0.81, p= 0.008).* ***Conclusion:*** *Jipende JiPrEP campaign has low reach among AGYW while majority of them reported low intent to use PrEP even after exposure to the campaign. Therefore, innovative messaging approaches are needed to improve campaign effectiveness.*

Introduction

Adolescent Girls and Young Women (AGYW) in sub-Saharan Africa are considerably vulnerable to HIV, accounting for one in every four new infections in 2019, despite making up about 10% of the population [1]. Furthermore, AGYW in this region are 5 - 14 times more likely to be infected with HIV than their male counterparts [2-4]. This is largely attributable to a combination of issues, including biological, behavioral and social transition factors and their being disadvantaged in negotiating for safer sex in diverse contexts [5-7]. Pre-exposure prophylaxis (PrEP) is an effective user-dependent prevention method which females can particularly initiate and manage, alongside other alternatives [3,8-10]. It is recommended for individuals with substantial risk of acquiring HIV, especially among key populations. Unfortunately, program reports indicate that of the women universally screened and counseled for PrEP fewer of them ever initiate use of PrEP. A study conducted in Kisumu, Kenya, showed only about 22% females < 24 years versus 26% of those older than 24 years old ever initiated PrEP [11]. Similarly, a study done in Kenya and Uganda showed a 19% versus 27% PrEP initiation among AGYW and those of older ages respectively [12].This indicates need to evaluate effectiveness of existing promotion efforts for best practices and determine ways to improve uptake of PrEP.

Whereas exposure of the target audience to health communication information is generally associated with improved knowledge and awareness [13,14] thus expected to translate to behavioral intention, interventions designed to enhance uptake of PrEP largely lack measurable theoretical constructs and have consistently been ineffective [15]. Mass media channels are not only important sources of information about HIV interventions, but also are easily affected by inherent multiple limitations. Media-poor groups do not always have easy access to these channels [13]. Of these, the poor and hard to reach are particularly of concern given their increased HIV risk and often disadvantaged

position in negotiating for safer sex [6,7]. On the other hand, individuals with higher socio economic status (SES) tend to gain more benefit from information flow than their counterparts from lower SES due to access to popular mass media outlets. Those with higher exposure to mass media campaign are more likely to utilize interventions being offered given they are more likely to have greater knowledge and thus change behavior [13,14,16-18]. However, the multiplicity of channels might not guarantee appropriate exposure of the PrEP user audience to the key message for them. But frequency of TV viewing, radio listening, newspaper reading and community discussion on targeted topics have been demonstrated to be important predictors of awareness of communication messages [19]. Other than media channels and frequency of access another important aspect in good health advertisement is a recognizable logo. Furthermore previous research state that an identifiable logo improves expansion and utilization of an intervention [20,21].

The launch of *Jipende JiPrEP*, a mass media social marketing campaign on PrEP, in Kenya in May 2017, aimed to achieve the following: i) increase knowledge of PrEP product for HIV prevention and provide information on where it can be accessed; ii) create a positive perception and improve the attitude towards PrEP amongst all stakeholder groups; and iii) increase demand for PrEP amongst the target audience [22]. Exposure to *Jipende JiPrEP* campaign is expected to influence both individual level and group/collective level behavior change. The effectiveness of messaging in each context strata however, might vary depending on certain characteristics of the message recipient, messaging strategies and, activity settings characterized by the prevailing contextual norms and social structures [23]. At the individual level, the motivation towards behavioral intention (the point of deciding to change one´s health prevention or promotion choices) to use PrEP among AGYW is important as it indicates an individual´s ability to try or, how much effort she is willing or planning to exert in order to use PrEP as recommended. The stronger the intention, the more likely she would access and use the product [24,25]. Additionally, intention being a strong predictor of uptake of a behavior may provide insight on how the campaign activity is being effective in terms of its ability to influence decision-making by AGYW to adopt PrEP [26]. Theoretically, behavioral intentions are a function of an individual´s perceived behavioral control (the ability to perform the intended actions); attitude (about the consequences of using PrEP before sexual exposure) and; perceived norms (their evaluation of the collective social pressure or beliefs about the consequences of using PrEP to preventing HIV prior to sexual exposure) [24,27]. The more favorable these factors are and the higher the degree, the more likely it is that an individual will take the recommended health action. There was need to evaluate the reach of *Jipende JiPrEP* campaign program among AGYW in Kisumu County, which is one of the four priority regions for HIV prevention, and identify what specific aspects still require further improvements to help maximize PrEP uptake.

Methods

Ethics statement: the study was approved by the Ethics Review Committee of Maseno University and National Commission of Science, Technology and Innovation (NACOSTI). Written informed consent was obtained from each participant in the study. Parents of minors provided parental-consent while the minor provided a written assent after parents´ consent. All persons involved in data collection/entry were trained in the handling of confidential information, and in good data management practices. For data security, all smart phones and laptop holding data were protected by a strong password for logging in users. User profiles were locked in smart phones and all users were required sign into the app using passwords. Mobile users were not allowed to download data from server nor were they allowed to edit the forms once submitted to the server. Only the lead researcher had the rights to access the cloud server.

Downloaded raw data were archived and a copy was used for data cleaning and analysis.

Study setting and population: Kisumu County in western Kenya has second highest HIV prevalence of 17.5% in the country [28] and jointly with Siaya, Homa Bay, and Migori counties in western Kenya and Nairobi County accounts for almost half of persons living with HIV in Kenya [29]. The study population comprised of self-reported HIV negative adolescent girls and young women of age 15-24 years who had been exposed to the *Jipende JiPrEP* mass media campaign in the past six months and were usual residents in the study area.

Study design and sampling procedures

Design: we applied mixed methods in a cross sectional design that combined quantitative and qualitative approaches using questionnaires and focus group discussions (FGDs) as data collection tools. We only present quantitative results in this paper. Data was collected between July 2019 and September 2019 within Kisumu County.

Sampling: sampling was performed in three steps: i) purposive sampling of three sub-Counties (Kisumu East, Kisumu Central and Nyando) with the highest population of AGYW out of seven which comprise Kisumu County; ii) Simple random sampling to select two (or about a third of all) administrative wards each from the selected sub-Counties. From each ward, 3 - 4 villages were selected depending on availability of eligible participants, excluding areas which were inaccessible due to flooding; iii) Potential participants were identified by Community Health Volunteers (CHVs) from the respective households they routinely serve. Community health volunteers (CHVs) are critical link service providers between communities and the formal health system [30]. The CHVs only identified eligible participants while the Research Assistants (RAs) screened and consented participants for study participation.

Data collection and instruments: data was collected through structured questionnaires. Question sets on "How likely or unlikely is it that you will actually use PrEP in the next 3 months" and "How likely or unlikely is it that you will actually use PrEP in your lifetime were measured using graphic rating scale (a type of continuous rating scale) which were self-administered. This type of scale has the advantage that literacy of a respondent may not affect their responses and it is easy to administer [31]. The scale ranged from 0 - 100, with "0" being most unlikely or completely disagree and "100" being most likely or completely agree. Respondents were required to make a mark at any point on the scale corresponding to their response. A ruler was later used by the investigators to determine the point on the scale as marked by the respondent. The number on the scale was identified, documented and later categorised.

Measurement of variables: intention to use PrEP was measured by 2 questions on a five-point continuous rating scale "How likely are you to use PrEP in the next 3 months?"; "How likely are you to use PrEP in future?" These variables were categorized in five levels as follows: 0-20=1 "highly unlikely or complete disagreement to low disagreement"; 21-40=2 "unlikely or disagree"; 41-60=3 "ambivalent"; 61-80=4 "likely or agree" and ; 81-100=5 "high likelihood or high to complete agreement". Based on these, a collapsed scale was used with scores 1 - 2 being denoted by 0 indicating no to use PrEP in the next 3 months, while1 denoted those scored at 4 and 5 indicating intention to use PrEP in the next 3 months and in future. Level of exposure was measured by the number of media channels used, frequency of interaction, recall of message, recognition of logo seen in the last 3 months. These were scored and the highest possible score was 31, being categorized as: Low 0-10; medium 11-21 and high 22-31 [13, 32-34]. This study adopted and modified Flowers et al level of exposure measurements [32]. Frequency of interaction with *Jipende JiPrEP* campaign was categorized into 2 as: i) almost every day and; ii) infrequent or rarely.

Data management and analysis: survey tool was built using *CommCare* mobile app (an advanced

Open Data Kit (ODK) application). *CommCare* is a free open source suite of tools that allows data collection using Android mobile devices and data submission to an online server, even without internet. Data were auto-synchronized in the cloud server when internet was available, with a manual data sync feature for data collectors to push data to the server after every successful interview. Raw data in *Excel* format, were downloaded daily from the server, checked for completeness, cleaned and backup. Data was cleaned and analyzed using STATA version 14.1 (STATA Corporation, College Station, Texas, USA). Prior to analysis, some variables were re-coded, collapsed or combined. Descriptive statistics included the overall frequencies and proportions of adolescent´s girls and young women, whereby frequencies and proportions of adolescent´s girls and young women stratified by intention to use PrEP. Pearson´s Chi-square test of association/Fishers exact test for categorical variables were reported. Chi-square test for trend was used to test whether the proportion of intention to use PrEP increases or decreases across the level of exposure.

The level of exposure to *Jipende JiPrEP* campaign among AGYW: frequencies and percentages were used to describe the level of exposure to *Jipende JiPrEP* campaign among AGYW. Demographic characteristics such as age, residency, ethnicity, education and marital status were stratified by the level of exposure. We employed generalized linear framework and poisson regression. We modeled occurrence of intention to use PrEP and compared it among categories of explanatory variables using crude and multivariable-adjusted prevalence ratios (PR) and 95% confidence intervals (CI). Variables significant at 0.25 levels in univariable analysis were further examined using a multivariable regression model [35]. We also examined the potential confounding effect of each covariate and two-way interactions and obtained final variable selection by applying backward elimination and retaining predictors significant at 0.05 level.

Results

Demographic characteristics of the study participants: of 419 adolescents and young women who participated in the study, more than a half of them 266 (79.3%) reported being single, approximately one-third (30%) reported incomplete secondary education. An estimated 86.5% reported being Luo by tribe (Table 1).

Demographic characteristics of factors associated with intention to use PrEP: overall, 100/335 (30%) reported high intention to use PrEP. High intention to use PrEP was more prevalent in rural compared to urban area (39.3 vs. 22.7, p-value= 0.001), with urban young women having 42% less likelihood of using PrEP (PR=0.58; 95% CI 0.41 - 0.80). In terms of the level of education, young women reporting primary complete were more likely to report intention to use PrEP compared to those with primary incomplete (54.5 vs. 31.6, p-value= 0.045) (Table 1).

Exposure to *Jipende JiPrEP* campaign: at least 67.1% (281) had low exposure level to *Jipende JiPrEP* campaign messages. Higher exposure was reported by AGYW living in the urban areas compared to their rural counterparts (7.2% vs 1.2%, p=0.001) respectively. The level of exposure increased with level of education (Table 2). Generally there was low intention to use PrEP across all the three levels, although individuals with high exposure to *Jipende JiPrEP* campaign tend to report low intention to use PrEP as shown in Figure 1. The intention to use PrEP seems to decrease with increasing exposure level, however, the increase is not statistically significant (Chi-trend p-value = 0.403).

Aspects of *Jipende JiPrEP* campaign that predicts the intention to use PrEP: bivariate analysis showed that intention to use PrEP was more likely among adolescent girls and young women exposed to leaflets (PR=1.41, 95% CI 1.00-1.99, p= 0.05), but less likely for those exposed to television (PR=0.58, 95% CI 0.40-0.83, p= 0.003) and newspaper

(PR=0.45, 95% CI 0.25-0.82, p= 0.009). Intention to use PrEP was more likely among AGYW who had access to radio almost every day (PR=1.82, 95% CI 1.21-2.72, p= 0.04); billboard almost every day (PR=1.93, 95% CI 0.98-3.81, p= 0.059) and television almost every day (PR=2.15, 95% CI 1.18-3.91, p= 0.012). There was no evidence of statistical significance in intention to use PrEP among adolescent girls and young women who recognized the *Jipende JiPrEP* logo, had seen the logo in the last 3 months and could remember message of the campaign (PR=1.15, 95% CI 0.78-1.69, p=0.495); (PR=1.02, 95% CI 0.72-1.46 p=0.89); (PR=0.99, 95% CI0.68-1.46, p=0.973) respectively (Table 3). In the multivariable model exposure to leaflet, newspaper and using radio almost every day independently predicted intention to use PrEP. Adolescents Girls and Young Women exposed to leaflets were nearly twice more likely to report intention to use PrEP (aPR=1.51, 95% CI 1.01, 2.26, p= 0.043). Those exposed to newspapers alone were 55% less likely to report intention to using PrEP (aPR=0.45, 95% CI 0.25, 0.81, p= 0.008), while those reporting using radio almost every day were about 81% more likely to use PrEP (aPR=1.81, 95% CI 1.22, 2.69, p= 0.003) in the next 3 months or in future (Table 4).

Discussion

There was generally low level of exposure to *Jipende JiPrEP* campaign given 67.1% of participants were classified in the "low" exposure group. Furthermore, there was no association between level of exposure to media (the extent to which audience members have encountered PrEP messages being given through the *Jipende JiPrEP* mass media campaign) and behavioral intentions. This observation is consistent with the recent systematic review findings that psychosocial behavior change interventions (BCIs) targeting adolescents in sub-Saharan Africa have limited effectiveness [36]. This may be attributed to a small impact phenomenon of mass media communications to a large population largely because it is passive with limited audience participation [37]. In addition, access to the campaign information, mainly through frequent access to popular media, was significantly skewed with fewer AGYW frequently accessing these media. The observed disadvantage in access to PrEP campaign information not only indicates individual-level access variations, but also reflects adverse impact of social disparities on media access at the community level. This calls for a more nuanced approach to designing media campaign interventions to not only focus on individual-level behavior change factors, but also modify the wider information environment with which the individual interacts variously, as well as expand availability and affordability of the media channels to enable access to information resources and uptake of content [38,39].

Whereas majority of the respondents recognized the PrEP national identity logo, this was not significantly associated with increased intention to use PrEP. In contrast, in a previous study in Kenya on promoting voluntary counseling and HIV-testing services [20]. It was observed that an identifiable logo improves expansion and utilization of the intervention. However, this may imply potential variability in effectiveness of media campaigns on demand creation for different HIV interventions since people respond differentially according to how messages are presented, given campaign contexts, media channels and over time. It is notable that while access to leaflets was limited, it was significantly associated with increased intentions to use PrEP. Placing information material at accessible location is recommended for maximum reach. Locations such as the health facilities which are the point of PrEP service delivery as well as of other HIV intervention packages are an important location for leaflet [22,36] hence the individual would have additional access to provider resources. This would potentially enhance increased interest in and uptake of PrEP. This indicates that clinics routinely accessed by AGYW can be effective platforms for PrEP delivery for them. Besides the leaflets, intention to use PrEP was high among those who accessed PrEP information through frequent listening to radio but,

lower for those who watched television and read newspapers. In a different context, using newspapers almost every day was significantly associated with increased use of condom at last sexual encounter [13]. This may indicate the importance of varying availability, by type and source, of information and communication materials where the target audience frequently visit [32]. Perceived risk would have been important in the assessment of intention to use PrEP among AGYW but the study did not investigate the role of perceived risk to HIV. This should be identified as a significant limitation in generalizing the findings. This limitation should be considered in future studies.

Conclusion

Whereas the importance of exposure to and strategic use of mass media in health promotion for HIV prevention is well documented, *Jipende JiPrEP* campaign has hitherto had low reach among the AGYW in this region and, simultaneously has been less effective in enhancing intention to use PrEP. The observed minimal change in intention to use PrEP with increased level of exposure indicates the importance of the broader socio-ecological environment around individuals. Thus, there is need for a more nuanced approach to designing media campaigns for PrEP interventions to not only focus on individual-level behavior change factors, but also components likely to modify the wider information environment with which the individual interacts.

What is known about this topic

- *There is a disproportionate media reach across socio-demographic strata;*
- *Behavioral intention is a strong predictor of uptake of a behavior.*

What this study adds

- *There is no difference in behavioral intentions across levels of exposure to mass media campaign;*
- *There is need for more nuanced approach to designing media campaign messages for PrEP interventions that targets the wider socio ecological environment of individuals rather than targeting the individual.*

Competing interests

The authors declare no competing interests.

Authors' contributions

SN designed the study, led data collection activities performed the analysis and interpretation of data, and drafted the manuscript. DA designed the study, drafted sections of the manuscript and provided substantial content for subsequent revisions to the manuscript. CN designed the study and provided substantial content for subsequent revisions of the manuscript. HA and PO provided substantial content in the manuscript for subsequent revisions. GO assisted with analysis and interpretation of the data. MN assisted in the implementation of the study, collection of data, reviewed the manuscript and provided content for subsequent reviews. All authors read and approved the final manuscript.

Tables and figures

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Table 2: the level of exposure to Jipende JiPrEP campaign among AGYW

Table 3: bivariate analysis of independent variables by intention to use PrEP

Table 4: multivariate analysis of independent variables associated with intention to use PrEP (N=335)

Figure 1: how intention to use PrEP changes with level of exposure

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Table 1: demographic characteristics of factors associated with intention to use PrEP in western Kenya (2019)				
		No (n=235)	Yes (n=100)	
Variable/Factor	**Total(N)**	**n (%)**	**n (%)**	**p value**
Age group in years				
15-18	155(46.3)	113(72.9)	42(27.1)	
19-24	180(53.7)	122(67.8)	58(32.2)	0.310
Area of residence				
Rural	140(41.9)	85(60.7)	55(39.3)	
Urban	194(58.1)	150(77.3)	44(22.7)	**0.001**
Education level				
Primary incomplete	38(11.4)	26(68.4)	12(31.6)	
Primary complete	44(13.2)	20(45.5)	24(54.5)	**0.048**
Secondary incomplete	100(30.0)	79(79.0)	21(21.0)	0.196
Secondary completed	82(24.6)	56(68.3)	26(31.7)	0.989
Tertiary	69(20.7)	52(75.4)	17(24.6)	0.440
Marital status				
Single	266(79.4)	197(74.1)	69(25.9)	
Married	64(19.1)	34(53.1)	30(46.9)	**<0.001**
Divorced/widowed	5(1.5)	4(80.0)	1(20.0)	0.965
Tribe				
Kisii	12(3.6)	7(58.3)	5(41.7)	
Luhya	24(7.2)	15(62.5)	9(37.5)	0.809
Luo	291(86.9)	209(71.8)	82(28.2)	0.318
Other	8(2.4)	4(50.0)	4(50.0)	0.559

Table 2: the level of exposure to Jipende JiPrEP campaign among AGYW				
		Low (n=281)	**Medium (n=118)**	**High (n=20)**
Variable/Factor	**Total(N)**	**n (%)**	**n (%)**	**n (%)**
Age group				
15-18	198	149 (75.3)	45 (22.7)	4 (2.0)
19-24	221	132 (59.7)	73 (33.0)	16 (7.2)
Residency				
Rural	167	137 (82.0)	28 (16.8)	2 (1.2)
Urban	251	144 (57.4)	89 (35.5)	18 (7.2)
Highest level of education attained				
Primary incomplete	44	39 (88.6)	5 (11.4)	0 (0.0)
Primary complete	54	47 (87.0)	6 (11.1)	1 (1.9)
Secondary incomplete	126	91 (72.2)	33 (26.2)	2 (1.6)
Secondary completed	105	58 (55.2)	38 (36.2)	9 (8.6)
Tertiary	87	43 (49.4)	36 (41.4)	8 (9.2)
Marital status				
Single	334	217 (65.0)	102 (30.5)	15 (4.5)
Married	79	59 (74.7)	16 (20.3)	4 (5.1)
Divorced/widowed	6	5 (83.3)	0 (0.0)	1 (16.7)
Tribe				
Kisii	17	10 (58.8)	6 (35.3)	1 (5.9)
Luhya	29	18 (62.1)	9 (31.0)	2 (6.9)
Luo	359	246 (68.5)	97 (27.0)	16 (4.5)
Other	14	7 (50.0)	6 (42.9)	(7.1)

Table 3: bivariate analysis of independent variables by intention to use PrEP					
				Unadjusted OR	
		Intention to use PrEP		**PR (95% CI)**	**P-value**
		No	**Yes**		
Variable/Factor	**Total (N)**	**n (%)**	**n (%)**		
Television					
No	185(55.2)	117(63.2)	68(36.8)	Ref	
Yes	150(44.8)	118(78.7)	32(21.3)	0.58 (0.40,0.83)	**0.003**
Leaflet					
No	257(76.7)	187(72.8)	70(27.2)	Ref	
Yes	78(23.3)	48(61.5)	30(38.5)	1.41 (1.00,1.99)	**0.050**
Newspaper					
No	269(80.3)	179(66.5)	90(33.5)	Ref	
Yes	66(19.7)	56(84.8)	10(15.2)	0.45 (0.25,0.82)	**0.009**
Frequency using media					
Radio					
Infrequent	140(61.7)	109(77.9)	31(22.1)	Ref	
Almost everyday	87(38.3)	52(59.8)	35(40.2)	1.82 (1.21,2.72)	**0.004**
Television set					
Infrequent	113(75.8)	94(83.2)	19(16.8)	Ref	
Almost everyday	36(24.2)	23(63.9)	13(36.1)	2.15 (1.18,3.91)	**0.012**
Billboard					
Infrequent	43(59.7)	33(76.7)	10(23.3)	Ref	
Almost everyday	29(40.3)	16(55.2)	13(44.8)	1.93 (0.98,3.81)	**0.059**
Social media					
Infrequent	24(45.3)	20(83.3)	4(16.7)	Ref	
Almost everyday	29(54.7)	25(86.2)	4(13.8)	0.83 (0.23,3.00)	0.773
Recognize campaign logo					
No	89(26.6)	65(73.0)	24(27.0)	Ref	
Yes	246(73.4)	170(69.1)	76(30.9)	1.15 (0.78,1.69)	0.495
Seen the logo in last three months					
No	109(32.5)	77(70.6)	32(29.4)	Ref	
Yes	226(67.5)	158(69.9)	68(30.1)	1.02 (0.72,1.46)	0.891
Recall message of campaign					
No	80(23.9)	56(70.0)	24(30.0)	Ref	
Yes	255(76.1)	179(70.2)	76(29.8)	0.99 (0.68,1.46)	0.973

Table 4: multivariate analysis of independent variables associated with intention to use PrEP (N=335)							
				Unadjusted		**Full Adjusted**	
		Intention to use PrEP		**PR (95% CI) p-value**		**aPR (95% CI) p-value**	
		No	Yes				
Variable	**Total(N)**	**n (%)**	**n (%)**				
Television							
No	108(47.6)	70(64.8)	38(35.2)	Ref			.
Yes	119(52.4)	91(76.5)	28(23.5)	0.52 (0.26,1.05)	0.003	0.67 (0.44,1.01)	0.055
Leaflet							.
No	176(77.5)	129(73.3)	47(26.7)	Ref			
Yes	51(22.5)	32(62.7)	19(37.3)	2.22 (1.06,4.67)	0.050	1.51 (1.01,2.26)	0.043
Newspaper							
No	172(75.8)	115(66.9)	57(33.1)	Ref			.
Yes	55(24.2)	46(83.6)	9(16.4)	0.70 (0.32,1.52)	0.009	0.45 (0.25,0.81)	0.008
Using radio							.
Infrequent	140(61.7)	109(77.9)	31(22.1)	Ref			
Almost everyday	87(38.3)	52(59.8)	35(40.2)	2.26 (1.13,4.54)	0.004	1.81 (1.22,2.69)	0.003
Using billboard							
Infrequent	38(16.7)	30(78.9)	8(21.1)	Ref			
Almost everyday	24(10.6)	12(50.0)	12(50.0)	2.37 (1.13,4.98)	0.059	1.88 (0.92,3.84)	0.082

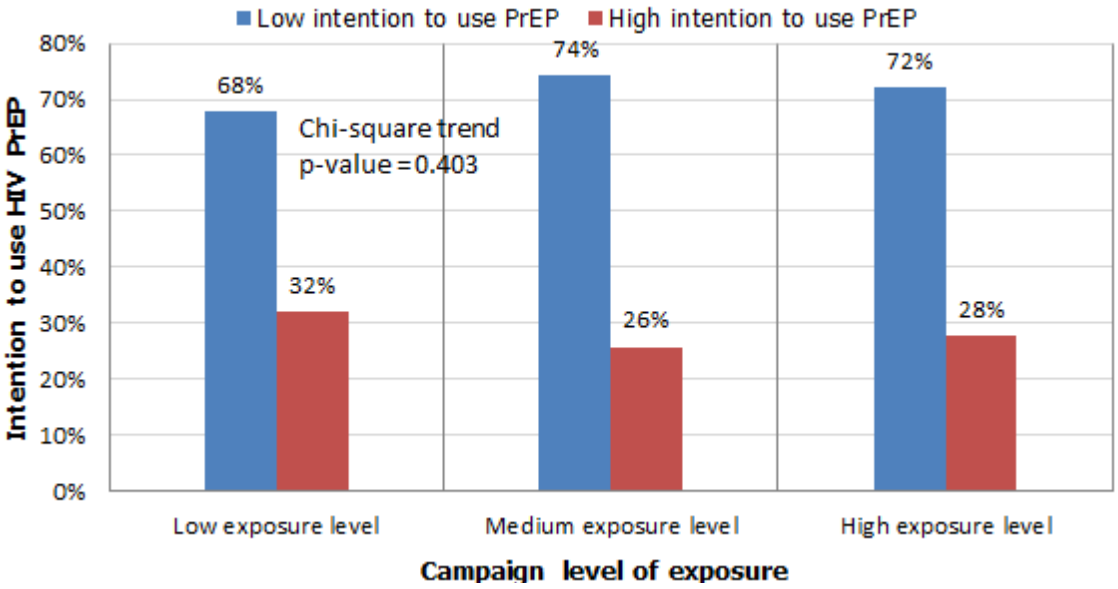

Figure 1: how intention to use PrEP changes with level of exposure