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*Full Length Research Paper*

# **Efficacy of HIV-prevention counseling of clients In Anambra State of Nigeria**

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**The study focused on the efficacy of HIV-prevention counseling of clients in Anambra State of Nigeria. Three research questions and three null hypotheses guided the study. A sample of 207 nurses selected from Tertiary, Secondary and Primary levels of Health Care Institutions were used for the study. The instrument for data collection was checklist titled Client-centered HIV-Prevention Counseling Scale (CHCS). Statistical weighted mean was used to answer the research questions, and Analysis of Variance (ANOVA) was adopted in testing the null hypotheses at 0.05 level of significance. The result showed that the HIV-prevention counselors in Comprehensive Health Centres (Primary Level) adhered mostly to the elements of HIV-prevention counseling and also possessed the best counseling skills, while the counselors in Voluntary Agency Hospitals (Secondary Level) were best in ensuring high quality HIV-prevention counseling. Significant differences existed in the mean scores of the counseling strategies and quality HIV-prevention counseling between the providers in tertiary, secondary and primary levels of Health Care delivery. Recommendations were given based on the findings.**

**Keywords:** Efficacy, Counseling, HIV – Prevention, HIV – Transmission, Risk – Behaviour.

## **INTRODUCTION**

Counseling is the helping relationship that includes someone seeking help, and someone willing to give help who is capable or trained to help in a setting that permits help to be given and received (Kozier et al., 2004). It is a specialized service of guidance, and basically an enabling process designed to help an individual come to terms with his/her life and grow to greater maturity through learning to take responsibility and make decisions for himself/herself (Basavanthapa, 2004).

Vedanayagam (1988) cited by Basavanthapa (2004) asserts that counseling is an accepting, trusting and safe relationship in which clients learn to discuss freely what

upsets them, to define their goals, to acquire essential social skills and to develop the courage and self-confidence to implement desired new behaviour. Thus counseling implies a learning – oriented process carried out in a social environment in which the professionally competent counselor attempts to assist the counselee using appropriate procedures to become a happy and productive member of the society by formulating realistic and purposeful goals for total growth.

HIV-prevention counseling seeks to reduce HIV acquisition and transmission through information. In HIV-prevention counseling, clients should receive information regarding HIV transmission, prevention and the meaning of HIV test results. It must be noted that provision of information is different from informed consent (DeLaune and Ladner, 2002).

All clients who are recommended for and who request

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HIV testing should, even if the test is declined receive information regarding how HIV can be prevented, the importance of obtaining test results and explicit procedures for doing so (DeLaune and Ladner, 2002).

Kelly and St. Lawrence (1987) indicated that additional useful information that should be given to clients in settings where HIV testing is offered include descriptions or demonstrations of how to use condoms correctly, information regarding risk-free and safer sex options, information regarding other sexually transmitted and blood borne diseases, descriptions regarding the effectiveness of using clean needles, syringes, cotton wool, water and other drug paraphernalia, information regarding drug treatment, and information regarding the possible effects of HIV vaccines on test results for persons participating in HIV vaccine trials. Kelly and St Lawrence (1987) further explained that in HIV-prevention counseling, information should be provided in a manner appropriate to the client's culture, language, sex, sexual orientation, age and developmental level.

Parker (2002) asserts that risk behaviours place an individual at risk of infection rather than associations with particular group. Therefore in HIV-prevention counseling, clients should receive help to identify the specific behaviours that put them at risk of acquiring or transmitting HIV, and commit to steps to reduce this risk. Parker (2002) also added that HIV-prevention counseling should focus on the client's own unique circumstances and risks, and should help the client set and reach an explicit behaviour change goal to reduce the chance of acquiring or transmitting HIV.

According to Centre for Disease Control (CDC) HIV CTR (1999), all HIV counseling, testing and referral (CTR) providers should ensure efficient HIV-prevention counseling of clients by subjecting themselves and their services to training and quality assurance, HIV-prevention capacity building activities and evaluation of major programme activities, interventions and services. CTR providers should conduct routine periodic assessments for quality assurance to ensure that the counseling being provided include the recommended essential counseling elements namely training and Continuing Education for counselors and supervisors, supervisor observations and immediate feedback to counselors, periodic evaluation of physical space, client flow and time concerns, periodic counselor or client satisfaction evaluations and periodic case conferences.

Kamalan (2005) warned that the emergence of HIV infection is a serious public health problem all over the world. According to Kamalan (2005), HIV has infected millions of women, men and children in developed as well as developing countries. WHO cited by Kamalan (2005) had predicted that by the turn of the last century, 30 to 40 million people would be infected with HIV. Also, the global AIDS policy estimated the figure of HIV infected people to be 110 million (Kamalan, 2005).

According to Rose (1996), clinical experience suggests that the "emerging epidemic" of HIV presents a unique challenge to women especially mothers. This rising trend of HIV certainly poses challenge to the effectiveness of the counseling strategies adopted by Health Care providers in HIV-prevention counseling. Hence the problem this study addresses is the efficacy of HIV-Prevention counseling of clients by health care providers.

## Research Questions

- To what extent do HIV-prevention counselors adhere to the elements of effective HIV-prevention counseling of clients?
- What is the extent of skills possessed by HIV-prevention counselors in ensuring effective HIV-prevention counseling of clients?
- To what extent do HIV-prevention counselors ensure high quality HIV-prevention counseling?

## Hypotheses

- There is no significant difference in the mean scores of the HIV-prevention counseling strategies adopted in the Tertiary, Secondary and Primary Care Health Institutions.
- Significant difference does not exist in the mean scores of the skills of the HIV-prevention counselors in Tertiary, Secondary and Primary Health Care Institutions.
- Significant difference does not exist in the mean scores among the HIV-prevention counselors in Tertiary, Secondary and Primary Health Care Institution with regard to ensuring high quality counseling.

## MATERIALS AND METHODS

The study was a survey. Judgmental sampling technique was adopted in selecting a Teaching Hospital (tertiary Health Institution) in Anambra State of Nigeria. Simple random sampling was used to select 4 General Hospitals (Secondary Health Institutions), 2 Voluntary Agency Hospitals (Secondary Health Institutions) and 2 Comprehensive Health Centres (Primary Health Institutions) out of the 24 General Hospitals, 7 Voluntary Agency Hospitals and 10 Comprehensive Health Centres in Anambra State. This was to give all the government and voluntary agency hospitals equal chance of being selected for the study (Nworgu, 1991).

A sample size of 23 nurses that participate in HIV-prevention counseling were selected from each of the selected Health institutions. Total nurses selected for the study was 207. Ethical approval and the participants' consent were obtained prior to the study.

**Table 1.** Extent of adherence to the Elements of HIV-prevention counseling by HIV counselors.

Variable	Health Institution	N	X	SD
Elements of HIV- Prevention Counseling	Teaching Hospital (Tertiary Hospital)	23	2.7826	0.36129
	General Hospitals	92	2.7826	0.45596
	Voluntary Agency Hospital	46	2.9766	0.39553
	Comprehensive Health Centres	46	3.0318	0.34991

**Table 2.** Mean score of the skills of the HIV-Prevention counselors towards ensuring effective counseling of clients.

Variable	Health Institution	N	X	SD
Skills for Effective HIV- Prevention Counseling	Teaching Hospital	23	2.9684	0.39112
	General Hospital	92	3.0287	0.50246
	Voluntary Agency Hospital	46	3.0277	0.37255
	Comprehensive Health Centre	46	3.1008	0.38770

The instrument used for data collection in the study was checklist titled client centred HIV – Prevention Counseling Scale (CHCS) which was made up of three sub-sections. Section A of the instrument was used for assessment of the elements of HIV-Prevention Counseling (eg keeping the session focused on HIV risk reduction, indepth personalized risk assessment of clients, supportive measures given to clients for positive steps already made, clarification of critical rather than general misconceptions, provision of skill-building opportunities, use of explicit language when providing test results, ensuring that client returns to the same counselor, avoiding providing unnecessary information, etc), section B has test items that were used to assess skills for effective counseling/counselor characteristics (eg. Completion of standard training courses by the counselor, belief that counseling can make a difference, genuine interest in the counseling process, active listening skills, ability to use open-ended rather than close-ended questions, ability in interactive negotiating style rather than persuasive approach, interest in learning new counseling and skill-building techniques, comfort in discussing specific HIV risk behaviour, etc) while section C evaluated quality assurance measures ensured in HIV-Prevention counseling by the counselor (eg continuing education programs, supervisor observation and immediate feedback to counselors, periodic evaluation of physical space for size and ventilation, periodic evaluation of client flow rate and defaults, periodic evaluation of client satisfaction, etc). The instrument was designed in 4-point scale ranging from 1 to 4 with poor having 1 point, 2 point for fair, 3 points for good and 4 points for very good. The instrument was also subjected to reliability test by collecting data through interview of 10 nurses who participate in HIV-Prevention Counseling in a State Hospital that was not used for the study. The aggregate scores were calculated, and then crumbach

alpha was employed to determine the internal consistency of the items. The result showed reliability coefficient score of 0.8.

The researchers used direct approach method in the data collection so as to interact with the respondents and also to facilitate the work. Trained research assistants were also used in the data collection. Mean scores and standard deviation were used to answer the research questions while Analysis of Variance (ANOVA) was employed in testing the null hypotheses at 0.05 level of significance. The statistical analysis was performed using SPSS package.

## RESULT

Table 1. shows that HIV-Prevention counselors in Comprehensive Health Centres had the highest mean score of 3.0318 with a standard deviation of 0.34991 with regard to adherence to the elements of HIV-Prevention counseling. Next in the rating was the mean score of 2.9766 by the HIV-Prevention Counselors in Voluntary Agency Hospitals while the counselors in Teaching and General Hospitals had the least mean scores of 2.7826 respectively.

In table 2 above, the HIV-Prevention Counselors in Comprehensive Health Centres had the highest mean score of 3.1008 with a standard deviation of 0.38770 in skills for effective HIV-Prevention Counseling. The second in the order were the HIV-Prevention Counselors in General Hospitals with mean score of 3.0287 and standard deviation of 0.50246. The third in the ranking were the HIV-Prevention Counselors in Voluntary Agency Hospital whose mean score was 3.0277, while the HIV-Prevention Counselors in Teaching Hospital had the least mean score of 2.9684 with a standard deviation of 0.39112.

**Table 3.** Mean scores for ensuring high quality HIV-prevention counseling by the HIV-Prevention counselors.

Variable	Health Institution	N	X	SD
Ensuring High Quality HIV-Prevention Counseling	Teaching Hospital	23	2.4928	0.52938
	General Hospital	92	2.7745	0.50555
	Voluntary Agency Hospital	46	3.0217	0.46628
	Comprehensive Health Centre	46	2.5670	0.46667

**Table 4.** Analysis of Variance (ANOVA) to compare the means of HIV-Prevention counseling strategies of Teaching Hospital, General Hospital, Voluntary Agency Hospitals and Comprehensive Health Centres.

Source	Sum of squares (ss)	Df	X	f-cal	f-crit	probability
Between groups	2.579	3	0.860	5.083	0.002	P<0.05
Within groups	34.340	203	0.169			
Total	36.919	206				

**Table 5.** Scheffee test of multiple comparison of the mean scores in the strategies (elements) of HIV-Prevention Counseling across the Health Institutions.

(I) Hospital	(J) Hospital	Mean Difference (I-J)	Std Error	F-crit (sig)
Tertiary (Teaching) Hospital	General Hospital	0.00000	0.09588	1.000
	Voluntary Agency Hospital	-0.19398	0.10503	0.397
	Comprehensive Health Centres	-0.24916	0.10503	0.112
General Hospitals (Secondary Health Institutions)	Tertiary Hospital	0.00000	0.09588	1.000
	Voluntary Agency Hospital	-0.19398	0.07427	0.058
	Comprehensive Health Centres	-0.24916*	0.07427	0.006
Voluntary Agency Hospitals (Secondary Health Institution)	Tertiary Hospital	0.19398	0.10503	0.397
	General Hospital	0.19398	0.07427	0.058
	Comprehensive Health Centres	-0.5518	0.08576	1.000
Comprehensive Health Centres (Primary Health Institution)	Tertiary Hospital	0.24916	0.10503	0.112
	General Hospital	0.24916*	0.07427	0.006
	Voluntary Agency Hospital	0.05518	0.08576	1.000

**KEY:** \* = The mean difference is significant at 0.05 level.

Above table 3 shows that the HIV-Prevention counselors in Voluntary Agency Hospitals had the highest mean score of 3.0217 with a standard deviation of 0.46628 in ensuring high quality HIV-Prevention counseling. Next in the ranking were the HIV-Prevention counselors in General Hospitals with a mean score of 2.7745 and standard deviation of 0.50555. The third in the rating were the counselors in Comprehensive Health Centres with mean score of 2.5670 and standard deviation of 0.46667. The HIV-Prevention counselors in Teaching Hospital had the least mean score of 2.4928 with a standard deviation of 0.52938.

Table 4 above shows that significant difference existed in the HIV-Prevention Counseling strategies of tertiary (Teaching) Hospital, General Hospitals, Voluntary Agency Hospitals and Comprehensive Health Centres.

The obtained F-ratio value (5.083) was more than the critical value (0.002) at 0.05 level of significance. So the null hypothesis which states that there is no significant difference in the mean scores of the HIV-Prevention counseling strategies adopted in tertiary, secondary and primary health institutions is rejected. Scheffee test of multiple comparison (Akuezuilo and Agu, 2002) was used to determine the order of significant difference across the four categories of Health Institutions.

Above table 5 shows that significant difference existed in the counseling strategies between the HIV-Prevention Counselors in General Hospital and those in Comprehensive Health Centres. The mean difference of 0.24916 was in favour of the Counseling Strategies in Comprehensive Health Centres.

**Table 6.** Analysis of Variance (ANOVA) to compare the mean skills for effective counseling between Teaching Hospitals, General Hospitals, Voluntary Agency Hospitals and Comprehensive Health Centres:-

Source	Sum of squares (ss)	df	X	f-cal	f-crit	Probability
Between Group	0.306	3	102			
Within Group	39.349	203	194	0.526	0.665	P>0.05
Total	39.655	206				

**Table 7.** Analysis of variance (ANOVA) to compare the mean scores for ensuring High Quality HIV-Prevention counseling between Teaching Hospitals, General Hospitals, Voluntary Agency Hospitals and Comprehensive Health Centres.

Source	Sum of squares (ss)	df	X	f-cal	f-crit	probability
Between Groups	6.513	3	2.171			
Within Groups	49.007	203	241			
Total	55.520	206		8.993	0.000	P<0.05

**Table 8.** Scheffee test of multiple comparison of the means across the Health Institutions with regard to ensuring High Quality HIV-Prevention Counseling.

(I) Hospital	(J) Hospital	Mean Difference (IJ)	Standard Error	f-crit (Sig).
Tertiary (/teaching) Hospital	General Hospital	-0.28170	0.11454	0.089
	Voluntary Agency Hospital	-0.52899*	0.12548	0.000
	Comprehensive Health Centres	-0.07428	0.12548	1.000
General Hospitals (Secondary Health Institution)	Tertiary Hospital	0.28170	0.11454	0.089
	Voluntary Agency Hospital	-0.24728*	0.08873	0.035
	Comprehensive Health Centres	0.20743	0.08873	0.122
Voluntary Agency Hospital (Secondary Health Institution)	Tertiary Hospital	0.52899*	0.12548	0.000
	General Hospital	0.24728*	0.08873	0.035
	Comprehensive Health Centres	0.45471*	0.10245	0.000
Comprehensive Health Centre (Primary Health Institution)	Tertiary Hospital	0.07428	0.12548	1.000
	General Hospital	-0.20743	0.08873	0.122
	Voluntary Agency Hospital	-0.45471*	0.10245	0.000

**KEY:\*** = The mean difference is significant at 0.05 level

Table 6 above shows that significant difference did not exist in the skills for effective counseling between the HIV-Prevention counselors in Teaching Hospital, General Hospitals, Voluntary Agency Hospitals and Comprehensive Health Centres. The obtained F-ratio value (0.526) was less than the critical value (F-crit) of 0.665 at 0.05 level of significance. Therefore the null hypothesis which states that significant difference does not exist in the mean scores of the skills of the HIV-prevention counselors in Tertiary, Secondary and Primary Health Institutions is accepted.

In table 7, significant difference exists between the HIV-prevention counselors in Teaching hospital, General Hospitals, Voluntary Agency Hospitals and Comprehensive Health Centres with regard to ensuring

high quality HIV-prevention counseling. The calculated f-ratio value of 8.993 was more than the critical value (f-crit) of 0.000 at 0.05 level of significance. Therefore the null hypothesis which states that significant difference does not exist with regard to ensuring high quality counseling among the HIV-prevention counselors in the Tertiary, Secondary and Primary Health Institutions is rejected. Scheffee test of multiple comparison (Akuezuilo and Agu 2002) was used to determine the order of significant difference across the four types of Health Institutions.

In table 8, significant differences exists between the HIV-prevention counselors in the three levels of healthcare Institutions with regard to ensuring high quality counseling. The mean difference of 0.52899 between

Teaching Hospital and Voluntary Agency Hospitals was in favour of the counselors in Voluntary Agency Hospitals. The mean difference of 0.24728 between General Hospitals and Voluntary Agency Hospitals was in favour of Voluntary Agency Hospitals. Also the mean difference of 0.45471 between Voluntary Agency Hospitals and Comprehensive Health Centres was in favour of Voluntary Agency Hospitals.

## DISCUSSION

The result indicates that HIV-Prevention counselors in Comprehensive Health Centres (CHC) adhere mostly to the elements of HIV-prevention counseling (table 1). This finding shows that the providers in the CHC conduct more periodic assessment as recommended by CDC HIV CTR (1999).

Findings from the study indicate that the counselors in CHC possess the best skills in HIV-prevention counseling (table 2). This will go a long way in reducing risky behaviours among their clients. Kelly and St. Lawrence (1987) stated that HIV-prevention counseling seeks to reduce HIV acquisition and transmission. Kozier et al (2004) explained that during counseling sessions, the nurse acts as a facilitator, promoting the clients' decision-making in regard to the health-promotion plan.

Findings from the study also revealed high quality HIV-Prevention counseling among the counselors in Voluntary Agency Hospitals (table 3). This finding shows that the counselors in Voluntary Agency Hospitals comply to the recommendations of CDC HIV CTR (1999) that all CTR providers should conduct routine periodic assessments for quality assurance to ensure that the counseling being provided includes the recommended essential counseling elements. Kozier et al (2004) pointed out that evaluating the quality of nursing care is an essential part of professional accountability, and that it promotes quality improvement as well as excellence in the health care provided to clients.

The significance difference observed in the counseling strategies of the counselors in the three levels of Health Care (table 4) is evidence of differences in the styles adopted by the three levels of health care providers in planning and implementing CDC recommended HIV-Prevention counseling. DeLaune and Ladner (2002) observed that most health care agencies device a variety of preprinted standardized plans for providing essential nursing care to specified groups of clients who have certain needs in common so as to ensure that minimally acceptable standards are met.

There was no significant difference in the skills possessed by the HIV-prevention counselors in the three

levels of health care institutions (table 6) but the mean score of 3.1008 for skills scored by the providers in Comprehensive Health Centres (table 2) comparatively places them superior to the other levels of health care providers.

The result of the study indicates significant differences among the providers of the three levels of healthcare in ensuring high quality HIV-Prevention Counseling (tables 7 and 8). This findings calls for development of a common curriculum for training of all the providers of HIV-Prevention counseling, monitoring by supervisors and uniform periodic evaluation of major programme activities, interventions and services for quality assurance and quality improvement.

## CONCLUSIONS

The findings of the study indicate that the HIV-Prevention Counselors in the different levels of Health care delivery are skillful, and that they adopt different strategies in ensuring quality counseling.

## RECOMMENDATIONS

Training and quality assurance, HIV-Prevention capacity building activities and periodic evaluation of major services should be intensified to ensure efficient HIV-Prevention counseling of clients.

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