VOLUME 18 NUMBER 2 JULY 200

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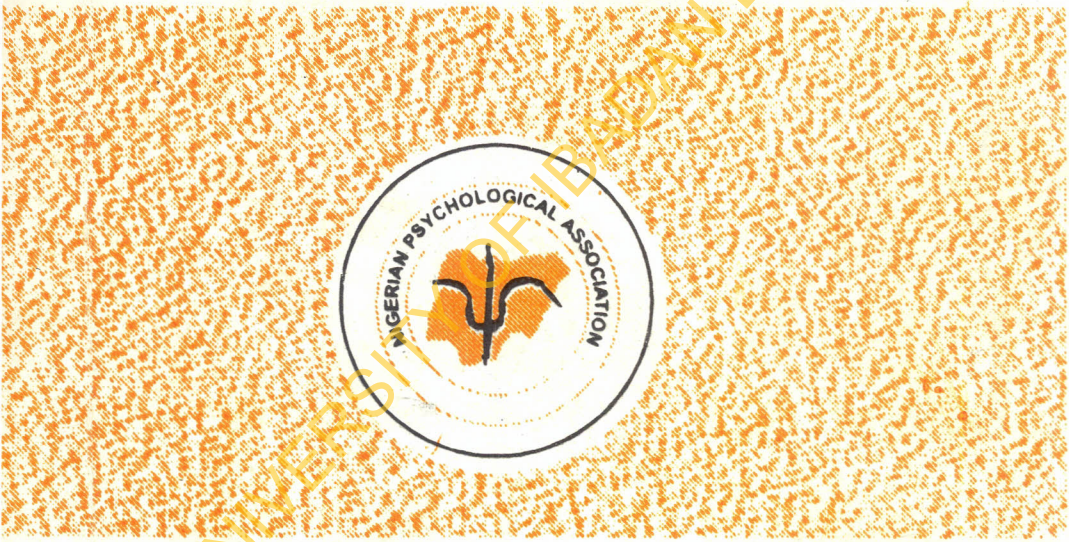
NIGERIAN JOURNAL OF PSYCHOLOGY



ISSN 0331-0574

PUBLISHED TWICE YEARLY

BY

THE NIGERIAN PSYCHOLOGICAL ASSOCIATION

CONTENTS

Differences In Knowledge About Hiv/Aids And Perceived Exposure To Risk Between Physicians And Nurses In Ibadan Nigeria

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ABSTRACT

Knowledge of health care providers in the management of their patients, particularly those with HIV/AIDS is very vital, yet studies evaluating this are still seriously in dearth despite the Nigerian peculiarity to the AIDS scourge. Two hundred and ten (210) physicians and nurses working with the University College Hospital Ibadan, Nigeria were assessed with a questionnaire, which tapped information about their knowledge on HIV/AIDS as well as their perceived exposure risk. Results showed that both the physicians and nurses have substantial overall knowledge about HIV/AIDS. However, a significant difference existed between physician and nurses regarding the following items: more physicians than nurses believed that HIV/AIDS is an infectious disorder (x^2 = 6.67; P < .03); and more nurses than physicians agreed that coming in contact with unsterilized equipment such as needles, blades can spread HIV/AIDS (x^2 = 22.3; P < .000). There was however no significant differences in their perceived exposure to risk across each of the statements assessed. The result suggests that both physicians and nurses are comparable in relation to their knowledge and perceived exposure risk to HIV/AIDS patients and their treatment procedure. It is therefore recommended that the assessment and evaluation of knowledge about HIV/AIDS of physicians and nurses should be a continuous exercise for the identification of their training needs, and in the improvement of the quality of life of patients with AIDS (PWA).

Introduction

There have been few reported studies which examined differences among hospital care workers (HCW) about their knowledge as well as perceptions of risk regarding HIV/AIDS, (Haughey, Scherer & Wu, 1989; Armstrong-Esther & Hewitt, 1989; Dow & Knox, 1991). Available data also showed that this knowledge vary as provided by diverse unit of measures, thereby making results incomparable across studies. The areas of knowledge which are typically tested include, epidemiology, pathophysiology, transmission and treatment of AIDS (Haughey et al, 1989); symptoms, transmission modes, handling of contaminated blood (Armstrong-

Esther & Hewitt, 1989); knowledge of AIDS, HIV transmission, testing and mental health aspects of AIDS (Dow & Knox, 1991).

Perceived personal risk has also been considered a possible variant of the knowledge of health care workers concerning HIV/AIDS (Berkowitz & Nuttall, 1996). Risk is defined as reported exposure to actual patient care incidents such as handling of contaminated body fluid without adequate safety precaution where transmission of HIV might occur (Berkowitz & Nuttall, 1996). Nurses are the caregivers who are considered to be at the forefront of AIDS patients' care (Dworkin, Albrecht & Cooksey, 1991) and may therefore report more exposure risk, than any other care providers.

Physician and nurses are vital groups of professionals in the hospital care that should be credible sources of knowledge and health information, particularly about HIV/AIDS, which is dramatically growing in endemic proportion, particularly in Nigeria (Shokunbi, 2001).

Diverse studies have reported low knowledge of HIV/AIDs among hospital care workers (HCW). For example, Falter Meyer (1990) found that 86% of qualified nurses did not know that AIDS test is done to detect HIV antibodies. Prince, Beard, Ivey and Lester, (1989) found even among pre-natal nurses low knowledge about transmission routes such as HIV in breast milk or intrauterine transmission. Plant and Foster (1993) found in their study in Edinburgh, an area with high incidence of HIV infection a relatively low mean knowledge scores (5.3 out of 10), although the nurses in the study were able to assess their level of knowledge accurately and felt high training need.

In a study conducted in the United Kingdom between 1988 and 1990, 32% of nurses were concerned about infection as a result of donating blood (Akisanya & Rouse, 1992). Dworkin, et al (1991) showed a correlation between knowledge and perceived knowledge to be .36 with nurses and social workers more likely to underestimate their knowledge than physicians. However, knowledge about precautions to be taken with HIV infected fluids generally appears to be quite good. For example, over 90% of nurses were aware that bleach is an effective disinfectant for blood spills and that the use of gloves is essential for those in potential contact with the HIV (Armstrong-Esther & Hewitt, 1989), though, there is a tendency to overestimate the risk from a needle – stick injury (Dow & Knox, 1991; Henry, Campbell & Willenbring, 1990).

Studies investigating knowledge and perceived exposure to risk of health care givers in Nigeria is in dearth. The only available study is that of Salihu, Olaseha, Adeniyi & Ajuwon, (1998) who found that only 47% of physician and nurses in Sokoto, could correctly state the causative agent of AIDS. However, more physicians (30.7%) than nurses (16%) had correct knowledge on the causative agent of AIDS ($P < 0.05$). While 70% of the physicians and nurses could name at least one route of HIV transmission, 30% incorrectly mentioned

kissing, hand shake or mosquito bite as possible ways of contracting the virus. The 19.3% who believed that AIDS was not yet present in Nigeria claimed that they had not yet seen any Nigerian living with HIV/AIDS. These findings raise concerns and underscore the need for enlightenment and educational program provided by both governmental and non-governmental agencies against the HIV/AIDS epidemic, especially among high-risk health care providers. This study as part of a larger survey investigates existing differences in knowledge and perceived exposure risk of physicians and nurses in Ibadan, Nigeria.

METHOD

Research Setting

The University College Hospital Ibadan, Nigeria the setting for the study was established in 1956 as a tertiary health facility and for the provision of medical education. The hospital comprises a College of Medicine and Dentistry, 8 Schools covering various paramedical disciplines within the health sector, a Virus Research Laboratory, a Postgraduate Institute of Medical Research, a W.H.O. Collaborating Centre in Immunology and many out-post facilities for appropriate community-based programs and relevant training for all health professionals in all aspects of Primary Health Care. The Hospital has 45 Specialty and Sub-Specialty disciplines and runs 75 Consultative Clinics a week.

The hospital presently has staff strength of 500 medical practitioners comprising 160 honorary consultants and 340 resident doctors on various residency training program. The staff nurses are 1000, ward assistants are 322 and the ward orderlies are 600. The pharmacists are 70 in number while the professional medical social workers are 10.

Participants:

Participants were 210 physicians and nurses in the University College Hospital, Ibadan. The response rate was 48% and represented fairly evenly the distribution of physicians and nurses in the University College Hospital. Of the respondents, 49% were physicians while 51% were nurses and their average age was 37.9, SD = 8.4. Gender breakdown showed that 44.3% were males while 55.7% were females. Respondents' mean years of education was 16.8, SD 7.0. They consisted 26.2% single, 71.1% married and 1.9% divorced or separated. 65.7% had attended workshop on AIDS less than 5 times while 19.5% had attended workshop on AIDS between 6 to 10 times and the remaining 14.8% had attended workshop on AIDS more than 10 times.

Measure:

Knowledge about AIDS:

Eleven questions which cover knowledge about route of transmission of HIV, symptoms of HIV, handling of contaminated blood, testing and treating of HIV/AIDS individual patients constituted a scale for the assessment of knowledge about AIDS for this study. They were developed and compiled from existing scale previously used for evaluating knowledge about AIDS (Dworkin, Albrecht & Cooksey, 1991). The items were scored on a three point Likert format of Yes, No and Undecided. Higher score on the scale indicates higher knowledge. For the purpose of this study, internal consistency of the items was established by the Cronbach Alpha (.65).

Measures of Exposure Risk:

Questions about exposure risk incidents were asked separately from items about experience caring for people infected with HIV. To ensure that relationships concerning exposure were based on occupational risk rather than HIV exposure risk in personal life, the likelihood of respondents' exposure to HIV in both personal life and from work-related sources were asked. Questions about occupational exposures, such as contact with infected body fluids and blood products or contaminated needle sticks, formed a scale considered to have very good reliability (Cronbach χ = 0.81) DeVellis (1991).

Scale for Socio-Demographic Data:

This contained basic bio-data of the health care workers which includes: occupation cadre, gender specifications, age, years of experience on the job, number of years of formal education and number of workshops attended.

Procedure:

The initial intention was to study the entire physicians and nurses (major health care workers) in the hospital but due to some logistic problems regarding accessibility, this could not be feasible. Subjects for this study were therefore sampled from among the population of doctors and nurses routinely posted to work at various units within the University Hospital complex. These units were those of: Theatre/Intensive Care Unit (ICU); Accident and Emergency (A & E); Oncology; Dentistry and General Outpatient Department (GOP). After the necessary permission from the authorities of the hospital and the various heads of units, physicians and nurses were then approached and given the questionnaire to fill after an explanation as to the purpose of the study and after due consent from them. They were then persuaded to drop the filled questionnaire in a locked-up box provided for the purpose in each of their units/wards. This data collection was strenuous and cumbersome due to the busy schedule of the health care workers. The researcher had to make several trips

to collect the filled questionnaires. From about 500 questionnaires administered, two hundred and ten were duly and correctly filled for analysis, giving a response rate of 48%. The other two hundred and ninety questionnaires were either incorrectly filled or were not returned for the data analysis.

Statistical Analysis:

Frequency distribution and a non-parametric statistics chi-square were used to analyze the significant difference between physicians and nurses on items assessing their knowledge about HIV/AIDS. The statistical package for the social sciences (SPSS) version 6.0 was used for the analysis.

Results

Differences in Knowledge about HIV/AIDS:

Table 1 presented differences in knowledge about HIV/AIDS of physicians and nurses. Results showed that a significant difference existed between physicians and nurses in two of the items assessing knowledge about HIV/AIDS: physicians than nurses believed that HIV/AIDS is an infectious disorder ($x^2 = 6.67$; $P < .03$); and nurses more than physicians agreed that coming in contact with un-sterilized equipment such as needles, blades can spread HIV/AIDS ($x^2 = 22.3$; $P < .000$). There were no significant difference in other items assessing knowledge about HIV/AIDS between the physicians and nurses, (Table 1).

Table 1: Response Breakdown of Knowledge about AIDS Among Physicians and Nurses (N = 210)

ITEM DESCRIPTION	AGREE	UNDECIDED	DISAGREE	x^2	p
HIV/AIDS is an infectious disorder. **Physicians** **Nurses**	48.6 46.7	0.3 2.4	0 2.0	6.67	.03
HIV/AIDS has no cure yet in both the world and Nigeria. **Physicians** **Nurses**	31.4 31.9	12.4 14.3	5.2 4.8	.27	ns
The causative agent of AIDS is HIV virus **Physicians** **Nurses**	46.7 47.6	1.9 2.9	0.5 0.5	.34	ns
HIV/AIDS can be spread by unprotected sexual intercourse with an infected person. **Physicians** **Nurses**	48.6 50.5	0 0.5	0.5 0	2.00	ns
Coming in contact with an infected blood can spread HIV/AIDS. **Physicians** **Nurses**	46.3 48.6	5.2 1.9	1.4 0.5	6.22	ns
HIV/AIDS can be spread by coming in contact with the body fluid of an infected person. **Physicians** **Nurses**	39.5 41.4	7.1 5.7	1.9 3.8	2.69	ns
Coming in contact with un-sterilized equipment such as needles, blades can spread HIV/AIDS. **Physicians** **Nurses**	21.4 37.1	9.0 7.6	18.1 6.2	22.3	.000
HIV/AIDS can be transmitted from an infected mother to child during pregnancy. **Physicians** **Nurses**	44.8 47.6	1.4 2.4	2.9 1.0	2.90	ns
HIV/AIDS is transmitted from infected mother to child through breastfeeding. **Physicians** **Nurses**	43.8 43.3	1.4 5.2	3.8 2.4	5.84	ns
HIV/AIDS symptoms include tuberculosis, diarrheoa, skin infections and loss of weight. **Physicians** **Nurses**	39.0 44.8	5.2 4.8	4.9 1.4	4.80	ns
HIV/AIDS can best be confirmed through screening of the blood. **Physicians** **Nurses**	48.6 50.5	0 0.5	0.5 0	2.00	ns

Differences in Risk of Exposure:

Physicians and nurses were compared on statements which asked about their personal exposure in relation to number of times, they had contact with and how many times, they carried out procedures relating to the treatment of HIV/AIDS.

There were no significant differences in their exposure to risk across each of the statements as shown in table 2. The result suggests that both health care workers are comparable in relation to their contact and exposure to HIV/AIDS patients and their treatment procedure.

Table 2: Responses Breakdown of Exposure Risk of Physicians and Nurses (N = 210)

ITEM DESCRIPTION	M/SD	t	P
The number of HIV/AIDS infected patients with whom you have had direct contact with **Physicians** **Nurses**	7.27/12.24 8.04/11.32	-.47	ns
The number of HIV/AIDS infected patients with whom you had giving primary care **Physicians** **Nurses**	4.37/6.23 5.46/9.04	-1.01	ns
The number of years caring for HIV/AIDS infected patients **Physicians** **Nurses**	2.67/5.88 5.29/17.78	-1.42	ns
The number of years caring for HIV/AIDS infected children **Physicians** **Nurses**	1.60/3.74 1.46/3.22	.28	ns
The number of times you had contact with infected body fluids of an HIV/AIDS patient **Physicians** **Nurses**	2.98/4.27 3.88/6.56	-1.18	ns
The number of times you had had contact with blood products of an HIV/AIDS patients **Physicians** **Nurses**	2.89/4.02 3.48/6.12	-.82	ns
The number of times you need to inject or handle needle sticks of an HIV/AIDS patients **Physicians** **Nurses**	3.28/5.50 4.81/7.10	-1.75	ns

DISCUSSION

On the basis of the findings of this study, physicians and nurses have a substantial knowledge about the causation and routes of transmission of HIV/AIDS. This finding showed different pattern of what was earlier documented in Sokoto, Nigeria (Salihu et al,

1998), where a significant low knowledge about AIDS was found among physicians and nurses.

Though the present result contradicts earlier contention of a low knowledge of HIV/AIDS, which existed among hospital workers (Prince, et al 1989; Faltermeyer, 1990; Plant and Foster 1993; Salihu, et al 1998), improvement in the knowledge of HIV/AIDS found in this study could be due to various effort and medium where hospital workers in Ibadan have been exposed to in improving their knowledge about HIV/AIDS. Evidence from the demographic analysis showed that these physicians and nurses had attended various workshop and conferences on HIV/AIDS, ranging between 5 to 10 times. The peculiarity of this sample therefore, regarding their number of workshop attendance, could have explained the high increase in knowledge comparable to other studies earlier reported.

This pattern of findings has a brightened hope in the current effort for AIDS prevention and control in Nigeria and better still giving hope for improved quality of life to individual patients with AIDS. What is however not certain is the reflection of this increased knowledge in a greater positive attitude and willingness to care for the patients with AIDS. Further studies in perceived attitude of physicians and nurses towards the care of AIDS would elucidate this concern.

The comparison between physicians and nurses about the knowledge of HIV/AIDS is not an attempt for superiority, but rather to identify training needs specific to their occupational cadre regarding HIV/AIDS. This comparison was not well elicited in previous reports, except for Salihu et al, (1998) who found that physicians were significantly ($P < .05$) more knowledgeable about the causes of HIV/AIDS than nurses. Results from this study showed significant differences in certain statements assessing knowledge about HIV/AIDS thereby supporting what was earlier reported by Salihu et al (1998). We must note however that physicians than nurses are often better equipped in the knowledge of disease entities, and this may have explained their increased knowledge, compared to that of the nurses. The result is however inconclusive and further research is needed in this regard.

CONCLUSION

This study was undertaken to document knowledge about HIV/AIDS of physicians and nurses to examine their relative differences regarding this knowledge and their perceived exposure risk in the care of Patients with AIDS (PWA).

Results from the present study showed that physicians and nurses are comparable in relation to certain knowledge about HIV/AIDS as well as their perceived exposure risk to the care of HIV/AIDS patients. It is therefore recommended that a continuous evaluation of both the knowledge and attitudes towards the care of HIV/AIDS patients by physicians and nurses be made. Also, a

targeted intervention program for improving knowledge about current opinions regarding the HIV/AIDS virus be made available to the physicians and nurses.

This study is limited in two ways: firstly, it was carried out in a tertiary hospital in Ibadan Nigeria thereby making the subjects highly selective. This makes generalization of the result to be made with caution. Secondly, time demands on the respondents precluded a more thorough assessment of HIV/AIDS – related attitudes and practices through the paper and pencil self-administered questionnaire.

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