

## Assessment of the attitude of nuclear medicine staff towards patient care at a nuclear medicine centre in Nigeria

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### ABSTRACT

**Introduction:** The mutual relationship between health care providers and their clients (patients) is very important in achieving the desired result in seeking health care services by the patients. The crucial qualities in the patient-personnel relationship are effective communication, care, empathy, respect and trust. These are major components of attitude of personnel towards patients but there is a strong widespread negative attitude of health care providers towards patients. While it had also been shown that the level of knowledge of healthcare providers (healthcare workers) significantly determines their attitudes towards their clients, the attitude of medical professionals towards patient care has largely been ignored in studies so we decided to assess the attitude of medical personnel in nuclear medicine.

**Methods:** A self applied structured questionnaire was designed to collect data from the research population of patients who came to access nuclear medicine services in the department. Data were collected using the research instrument and were analyzed with Statistical Package for Social Sciences (SPSS) version 20 (SPSS, Inc. Chicago Ill) using descriptive statistics, Pearson correlation coefficient and regression analysis respectively.

**Results:** Majority of respondents rated the attitude of Nuclear Medicine staff in this department as positive. The result also showed that the attitude of health care providers (or health care professionals) correlates positively with clients' satisfaction.

**Conclusion:** We conclude that majority of the Patients were satisfied with the attitude of Nuclear Medicine Staff towards Patients Care and hence, were satisfied with the health services provided

**Keywords:** Health care providers, Patient care, Patient satisfaction, Personnel attitude, Personnel-patient relationship

### Introduction

Health care services are provided by Individuals who are known as health care providers (HCP). These are Doctors, Nurses, Midwives, Paramedics, Dentists, Medical Laboratory Scientists, Pharmacists, Physiotherapists, Psychologists, and other allied professionals. HCPs exhibit different attitudes towards patient care. In Nuclear Medicine, the health care professionals are mostly the Doctors, Nurses, Pharmacists, Medical Physicists, Imaging Scientists and other support staff such as Porters, Ward Assistants and Cleaners. Nuclear medicine practice is mostly in tertiary health care centers with specialized

consultative health care, usually for in-patients and patients who are on referral from primary or secondary health professionals. These centers usually have personnel and facilities for advanced medical investigations and treatment. The mutual relationship between the health care providers and their clients (patients) is very important in achieving the desired result in seeking health care services by the patients. The nurse for instance, establishes and maintains this key relationship by using nursing knowledge and skills as well as applying caring attitudes and behaviors. Therapeutic nursing services contribute a lot to the patients' health and wellbeing [1]. The attitude of doctors is also a key factor in the Doctor-patient relationship which is said to be a keystone of health care [2]. The Doctor-Patient relationship is therefore, the major influence on practitioners' and patients' satisfaction and major determinant of compliance with

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treatment instructions given to the patients [3]. Personnel attitude is comprised of accessibility of personnel by patients and courtesy level and these provide a sense that patients are important and respected [4]. Again, the crucial qualities in the patient-personnel relationship are effective communication, care, empathy, respect and trust. These are major components of attitude of personnel towards patients [1, 4, 5] and these should be imbibed by all personnel. Donohue [6] found several positive qualities of the nurse-patient interactions, including attitude, which correlates well with patient satisfaction. Health care providers' behaviour and attitude, especially respect and politeness is said to be as much important as the technical competence of the provider[7]. Patients' assessment suggest guidelines for improving the attitudes of nurses, doctors and other health workers in better serving the patients thereby improving health services[8]. In a study by Safran et al [9] it was demonstrated that trust, a form of attitude, was the variable most strongly associated with patients' satisfaction. It is interesting to know that patients were most satisfied with staff-patient relationship [10]. As a tertiary institution, patients attending Nuclear Medicine at this center are received from different specialties involved in cancer care. Some studies had shown that there is a strong widespread negative attitude of health care providers towards these kinds of patients [11, 12, 13]. In other studies, it had been shown that the level of knowledge of healthcare providers (healthcare workers) significantly determines their attitudes towards their clients [14, 15, 16]. The attitude of medical professionals towards patient care has largely been ignored in many studies [17, 18] and this informed our desire to carry out this study on the attitude of this set of professionals towards patient care in this specialty, more so a new specialty of care in Nigeria.

## Subjects and methods

### Patients

A total of 220 adult patients who visited our Department between January 2013 and July 2014 for various nuclear medicine services were included in the study.

### Method

A self applied structured questionnaire was designed to collect data from the research population. The questionnaire employed the force response format and used the Likert scale (weighted). The questionnaire was pretested and validated.

The questionnaire was thereafter distributed to the patients as they come in to access the Nuclear Medicine services on offer in the department. Respondents were briefed on the nature of the questionnaire and how they were expected to complete it. They were equally assured of the absolute confidentiality of the responses which they supply to the questionnaire. Data collected using the research instrument described above were analyzed with Statistical Package for Social Sciences (SPSS) version 20 (SPSS, Inc. Chicago Ill) using descriptive statistics, Pearson correlation coefficient and regression analysis respectively.

### Results

A total of 220 adult patients that visited the Nuclear Medicine Department and consented to the study between January 2013 and July 2014 for various nuclear medicine procedures and therapeutic services were enrolled. The results are as shown in Tables 1 to 4 below.

**Table 1: Assessment of the attitude of Nuclear Medicine Staff towards patient care**

Materials Used	Agree	Disagree	Uncertain	$\bar{X}$	SD
Were you given sufficient information about Nuclear medicine services to enable you give informed consent?	159(72.3%)	11(5.0%)	50(22.7%)	1.50	0.841
Do you think that Nuclear Medicine Staff are unfriendly in their approach to you?	29(13.2%)	160(72.7%)	31(14.1%)	2.01	0.523
Do you think that the Nuclear Medicine Staff are competent and skilful in carrying out their duties?	190(86.4%)	8(3.6%)	22(10.0%)	1.24	0.618
Do you think that the Nuclear Medicine Staff are sensitive to patients' expression?	185(84.1%)	4(1.8%)	31(14.1%)	1.30	0.703

Do you think that the Nuclear Medicine Staff gave individualized care?	149(67.7%)	19(8.6%)	52(23.6%)	1.56	<b>0.850</b>
Do you think that the Nuclear Medicine Staff listened attentively to patients complaints?	195(88.6%)	2(0.9%)	23(10.5%)	1.22	<b>0.618</b>
Did you feel comfortable talking with the Nuclear Medicine Staff?	196(89.1%)	2(0.9%)	22(10.0%)	1.21	<b>0.606</b>
Do you think that the Nuclear Medicine Staff is trustworthy?	175(79.5%)	2(0.9%)	43(19.5%)	1.40	<b>0.796</b>
<b>Total Average Mean</b>				<b>1.43</b>	<b>0.694</b>

Table 2: Level of improvement needed for services rendered

Items	Excellent	Very Good	Good	Fair	Poor	Very Poor	$\bar{X}$	SD
How would you rate the waiting period?	17(7.7%)	81(36.8%)	68(30.9%)	50(22.7)	3(1.4)	1(0.5)	2.75	<b>0.969</b>
How would you rate the process of the procedure?	46(20.0%)	81(36.8%)	86(39.1%)	6(2.7)	1(0.5)	0(0.0)	2.25	<b>0.831</b>
How do you perceive the care received from the: Nurses?	82(37.3%)	87(39.5%)	49(22.3%)	2(0.9)	0(0.0)	0(0.0)	1.87	<b>0.786</b>
Imaging scientist?	37(16.8%)	167(75.9%)	0(0.0%)	13(5.9)	3(1.4)	0(0.0)	1.92	<b>0.526</b>
Doctors?	32(14.5%)	181(82.3%)	7(3.2%)	0(0.0)	0(0.0)	0(0.0)	1.89	<b>0.406</b>
How would you rate the attitude of the domestic staff e.g. Porter, Health attendants?	55(25.0%)	111(50.5%)	52(23.6%)	2(0.9)	0(0.0)	0(0.0)	2.00	<b>0.725</b>
How would you rate the care you received in this department with what you had received in other departments?	57(25.9)	118(53.6)	43(19.6)	2(0.9)	0(0.0)	0(0.0)	1.95	<b>0.701</b>
<b>Total Average Mean</b>							<b>2.09</b>	<b>0.706</b>

Table 3: Correlation of attitude of Nuclear Medicine Staff towards Patients Care given.

Variables	N	$\bar{X}$	SD	r	P	Remark
Clients Satisfaction	220	18.59	2.146	-	-	
Assessment of Attitude of Nuclear Medicine staff	220	11.43	3.828	.724**	P=.000<0.05	Sig.*

Table 4: Relative contribution of the independent variables to the dependent variables (Test of significance of the regression coefficients)

Variable	Unstandardized Coefficients (B)	Std. Error	Standardized Coefficients Beta	T	Sig.	Remark
Model Constant(Client Satisfaction)	14.747	0.858	-	17.195	0.000	sig.
Assessment Perception of the Attitude	-3.552	0.036	-0.047	-.998	0.320	Not sig.
Assessment of the Attitude	0.402	0.026	0.717	15.197	0.000	sig.

Data revealed a higher percentage of female, 129 (58.6%) as compared to male. Majority of the respondents 56 (25.5%) were civil servants. Majority of respondents 151 (68.6.0%) had tertiary education, while only 2 (0.9%) had no formal education. University College Hospital (U.C.H) Ibadan was the highest source of referral 96 (43.6%) while other teaching and private hospitals contributed the rest. The majority of respondents 203 (92.3%) came for bone scan. The results also show that majority of the Patients

were satisfied with the attitude of Nuclear Medicine Staff towards Patients' Care in the Department. Table 3 showed Pearson Product Moment Correlation Coefficient (r) that there is a significant influence of the independent variable (attitude of Nuclear Medicine staff) on the dependent variable (Client Satisfaction with care given) in the department of Nuclear Medicine. The attitude of Nuclear Medicine Staff has significant relationship with Clients' satisfaction with care given ( $r=0.724$ ;  $P<0.05$ ).

**Table 5: Regression Analysis of the combined prediction of accessed services in the Department of Nuclear Medicine by the two independent variables**

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.725	0.526	0.521	1.48523

#### Summary regression anova

	Sum of Squares	df	Mean Square	F	P
Regression	530.500	2	265.250	120.245	0.000
Residual	478.682	217	2.206		
Total	1009.182	219			

**Table 6: Relative contribution of the independent variables to the dependent variables (Test of significance of the regression coefficients)**

Variable	Unstandardized Coefficients (B)	Std. Error	Standardized Coefficients (Beta)	T	P
Model	(B)	Std. Error	Beta	T	P
Constant(Client Satisfaction)	14.747	0.858	-	17.195	0.000
Assessment of Patients Perception	-3.552	0.036	-0.047	-.998	0.320
Assessment of the Attitude	0.402	0.026	0.717	15.197	0.000

Table 5 shows that the prediction of two independent variables (Attitude and Perception) to the dependent variable, (Clients Satisfaction with care given) correlated positively. The table also showed a coefficient of multiple correlations (R) of 0.725 and a multiple R square of 0.526. This means that 52.6% of the variance in the clients' satisfaction with the care given is accounted for by all the two predictor variables when taken together. This implies that the joint contribution of the independent variables to the dependent variable was significant and that other variables not included in this model may have accounted for the remaining variance.

Table 6 showed the relative contribution of the two independent variables to the dependent variable, expressed as beta weights. There was partial correlation coefficient of assessment of the attitude having positive relationship with the clients' satisfaction. While the assessment of patients' perception has negative and no relationship with the client satisfaction, the positive value of the assessment of the attitude of Nuclear Medicine Staff actually determined the reinforcement of the two variables. Using the standardized regression coefficient to determine the relative contributions of the independent variables to the explanation of the dependent variable, assessment of the attitude of Nuclear Medicine Staff (

$\beta=0.717$ ,  $t= 15.197$ ,  $p < 0.05$ ) is the most potent contributor to the prediction. While assessment of patient perception has negative and no relationship with the clients' satisfaction ( $\beta = -0.047$ ,  $t= -.998$ ,  $p>0.05$ ) in that order.

## Discussion

When the attitude of health care practitioners towards their clients is in the negative form, it is conceptualized as stigma and has many implications [11]. One of such implications is that the recipient of the health care service will end up not satisfied with the service (s) rendered. Sometimes these negative attitudes impact negatively on the prevention and treatment of certain ailments as well as rehabilitation and quality of life of such sufferers [19, 20]. In assessing the attitude of nuclear medicine staff towards patient care in the department, we observed that majority (72.3%) of the total respondents in our study agreed that they were given sufficient information about Nuclear medicine services to enable them give informed consent. In terms of unfriendliness, 72.7% of the total respondents disagreed that the Nuclear Medicine Staff were unfriendly in their approach to them; this could be informed by the fact that the department has very charming members of staff who are also well informed about the use of radiation in patient care. Another observation was that a greater percentage (86.4%) of the total respondents agreed that the Nuclear Medicine Staff are competent and skillful in carrying out their duties, while 3.6% of the respondents disagreed and 10.0% were uncertain. The above observation stems from the fact that the members of staff were well trained prior to undertaking the job in this specialty thereby underscoring the need for proper training of staff in this highly specialized area of medical practice.

Furthermore, 84.1% of the total respondents agreed that the Nuclear Medicine Staff are sensitive to patients' expression and 67.7% of the total respondents agreed that the Nuclear Medicine Staff give individualized care, all these can be attributed to the professionalism of the members of staff who are mostly high level personnel in the job due to the specialized nature of nuclear medicine. Again, it is found that 88.6% of the total respondents agreed that the Nuclear Medicine Staff listened attentively to patients' complaints and 89.1% of the respondents agreed that they felt comfortable talking with the Nuclear Medicine Staff. Finally, 79.5% of the respondents agreed that the Nuclear Medicine Staff are trustworthy.

In further assessing the attitude of members of staff towards patient care, majority (75.4%) of the respondent rated the waiting period good and 95.9% of the total respondents rated the process of the procedure to be good this is because at the first point of contact with the staff members, the procedures were well explained to the respondents and the period of waiting well justified. In

addition, 99.1% of the total respondents perceived the care received from the Nurses to be good, 92.7% of the total respondents perceived the care received from the Imaging Scientists as good and all (100.0%) the respondents perceived the care received from the Doctor as good, this goes to further confirm the charming nature and professional competence of the members of staff. Majority (99.1%) of the total respondents also rated the attitude of the domestic staff e.g. Porter, Health attendants etc. as good, since the senior members of staff are good in offering their services, the domestic staff will have no option than to be good since they are under the supervision of the professionals.

It was also shown in the result that the attitude of health care providers (or health care professionals) correlates positively with clients' satisfaction; therefore, health care professionals' attitude towards their clients should remain positive if their clients are to be satisfied with the service received.

From the results therefore, it is clear that majority of respondents rated the attitude of Nuclear Medicine staff in this department as positive. Hence, the level of satisfaction attained by the respondents after accessing the nuclear medicine services on offer was not surprising. This is because the results of the study also showed that the attitude of members of staff correlated positively with the clients' satisfaction with care given. The attitude exhibited by these professionals could be attributed to their level of training since Nuclear medicine is a specialty that requires high level of training of the various professionals. This tallies with the view that attitude of medical professionals towards their patients is correlated with the level of their knowledge and skills as pointed out earlier in the referenced literature [15, 16].

## Conclusion

From the results of the analysis carried out on data collected for this research, we conclude that majority of the Patients were satisfied with the attitude of Nuclear Medicine Staff towards Patients Care. Furthermore, it can be concluded from the results that staff motivation should be increased to propel the positive attitude shown towards the patients.

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