

**BRIEF REPORTS**

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**KNOWLEDGE AND ATTITUDE OF NIGERIAN PHYSIOTHERAPY STUDENTS ABOUT LEPROSY**

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**ABSTRACT**

*Knowledge and attitude about leprosy was evaluated in a sample of 63 volunteer physiotherapy students, from various Nigerian universities using a three-part questionnaire. Attitude scores averaged  $54.6 \pm 21.0$  ranging from 0 to 77.8. Eighty-one percent of the students showed poor attitude, 13% showed fair attitude while only 6% showed good attitude. Knowledge scores averaged  $41.0 \pm 18.6$ , ranging from 6.3 to 93.8. Twenty-four percent demonstrated poor knowledge, 44% had fair knowledge while 32% demonstrated good knowledge. Relationship between attitude and knowledge was not significant ( $r=0.2; P=0.07$ ). Relationship between level of study and knowledge was significant ( $r=0.6; P=0.00$ ). Relationship between level of study and attitude was not significant ( $r=0.1; P=0.4$ ). In conclusion, the students have fairly good knowledge but poor attitude about leprosy. There is a need for a well-organised, specifically targeted educational programme for physiotherapy trainees. It is desirable that they spend time in a leprosy setting during their clinical attachment.*

**INTRODUCTION**

Leprosy is still one of the major health problems of developing countries. Nigeria ranks among the six countries with the highest number of leprosy cases (1). Leprosy is a disease associated with a lot of stigma. The stigma against leprosy seems to be related to the fact that leprosy deforms and disables, but seldom kills, so that those who have been crippled, live on, getting steadily worse, with their deformities visible to the whole community (2). Age, gender, educational level and religion have been found to play a significant role in the beliefs with respect to leprosy (2). A study in Tanzania, showed that Stigmatising attitudes and belief were associated with low level of education, female gender and rural residence and religion (3).

Many studies have been carried out concerning knowledge and attitude of health workers towards leprosy. A study in north-western Botswana, found that attitude of service providers towards leprosy was influenced by poor knowledge (4). In a study in Nigeria, about two thirds (65%) of final year nursing students, believed that leprosy was highly infectious and that deformities were inevitable in leprosy (5). It has been shown that training basic health workers on leprosy control programme improved their knowledge, attitude and service delivery (6). An Indian study of 118 secondary school children showed an improvement in knowledge following leprosy education, without any change in attitude towards leprosy (7). This study also showed that these children were able to improve the knowledge of their family members modestly. However family members' attitude towards leprosy was unaffected.

Physiotherapy plays a major role in the management of deformities and disabilities occurring in leprosy (8). Though some studies have examined the attitudes of physiotherapy students about Acquired Immunodeficiency Syndrome (9,10), there is a dearth of such studies on leprosy and physiotherapy students, especially in Nigeria. The National Leprosy Control Programme in Nigeria, specifies at least one physiotherapist in every State control programme (1). It is disheartening to note that over 90% of the State control programmes do not have a physiotherapist. The inability of physiotherapists to take up positions in leprosy programmes may be related to their knowledge and attitude about leprosy. There is therefore need to assess the level of knowledge and attitude of prospective physiotherapy practitioners, about leprosy and their willingness to work in leprosy hospitals.

This study was therefore, designed to evaluate the knowledge and attitude of Nigerian physiotherapy students concerning leprosy.

## **METHODOLOGY**

### **Subjects**

Subjects for this study consisted of 63 volunteer physiotherapy students from various Nigerian universities, who participated in a one-week scientific conference organised by the Nigerian Association of Physiotherapy Students (NAPS). Only students who were in the clinical part of their programme, were surveyed. All students in the pre-clinical years of the physiotherapy programme were excluded from the study. The Students' sociodemographic data is presented in Table 1.

### **Materials**

The instrument used in this study was a self-administered questionnaire designed by the researcher. The questionnaire consisted of **three** major parts.

Part 1, elicited sociodemographic information such as age, sex, ethnicity and religious affiliation. Part 2, contained nine items that evaluated the respondents' attitudes towards people affected by leprosy and willingness to work in an all leprosy hospitals. Part 3, evaluated the respondents knowledge about leprosy and consisted of **sixteen** items on respondents sources of knowledge and information about leprosy, cause, transmission, management and prevention.

### **Procedure**

The test instrument was administered to all volunteer students individually at the venue of the conference, by the researcher. The researcher introduced the questionnaire to the students and provided specific instructions on how to complete it. The students were told to answer the items in the questionnaire as honestly and as accurately as possible, without anybody's influence. No time limit was imposed, but majority of the students completed the questionnaire within 10-15 minutes.

### **Data analysis**

Each student's responses to items on the questionnaire were obtained. The number of positive responses on the items designed to evaluate attitude, was determined. Each positive attitude attracted one mark. Negative or no response attracted zero marks. The total marks scored by each respondent were divided by 9 and multiplied by 100 to obtain a percentage for attitude. Similarly, the number of correct responses on the items designed to evaluate their knowledge, was determined. Each correct response attracted one mark. Wrong or no response attracted zero marks. The total marks scored by each respondent was divided by 16 and multiplied by 100 to obtain a percentage score for knowledge. Knowledge and attitude score were classified into three categories thus; 0 to 39 **poor**, 40 to 59 **fair** and 60 to 100 **good**.

Pearson correlation test was used to test any relationship between knowledge and attitude of the respondents. It was also used to test the relationships between level of study and scores in attitude and knowledge. The data for this study was analysed using the Statistical Package for Social Sciences [SPSS] version 9.0.

## **RESULTS**

### **Attitude**

Mean score for attitude was  $54.6 \pm 21.0$  ranging from 0 to 77.8. Majority of the students (81%) showed a poor attitude about leprosy, 8 students (13%) showed a fair attitude while only 4 (6%) showed a good attitude about leprosy (Table 2).

68.3% of the respondents admitted to ever seeing a leprosy patient before, while 30.1% had not seen a leprosy patient before. 90.4% of the students would not eat with leprosy patients while 95.2% of the students would not marry a lady or man who had leprosy, only 47.6% of them would refuse marrying a lady/man whose parents had leprosy. Table 3 presents responses to specific questions on attitude.

### **Knowledge**

Mean score for knowledge was  $41.0 \pm 18.6$  ranging from 6.3 to 93.8. Fifteen students (24%) demonstrated poor knowledge concerning leprosy, 28 (44%) students had a fair knowledge about leprosy, while 20 (32%) students demonstrated good knowledge about leprosy (Table 2). Many (55.6%) of the students had never had any lecture on leprosy in their physiotherapy training, while 17.5% had 2 to 5 hours and 14.3% had 1 to 2 hours of lecture on leprosy. Forty-four respondents (69.8%) were able to identify **Mycobacterium leprae** as the causative organism for leprosy. Some of the students (21.3%) believed that it can be caused by one's enemies and 14 (22.2%) believed it could be inherited from parents. Twenty-seven students (42.9%) knew that leprosy is transmitted as a droplet infection while 29 (46.1%) believed that in addition to droplet infection, leprosy can be transmitted through sharing clothes and sexual intercourse. Twenty-three (36.5%) students believed that insects could transmit leprosy. Twenty-eight students (44.4%) knew that leprosy affects mainly skin and nerves, while 25 (39.7%) believed that it affects mainly fingers and toes. Twenty-one (33.3%) agreed that absorption of fingers and toes are the first clinical signs of leprosy. Seventy one percent of respondents believed that leprosy could be cured. Twenty-three (36.5%) believed that management of leprosy can effectively be done by an intersectorial approach. Majority of the students (87.3%) felt leprosy patients should be isolated. Thirty (47.6%) felt leprosy can be prevented by vaccine and 18 (28.6%) felt that deformities in leprosy are not preventable. Sources of knowledge about leprosy mentioned by the students were books, journals, and discussion with friends, Bible, television, radio, and seminars.

### **Correlation**

No significant relationship was observed between the scores for attitude and knowledge ( $r=0.2; P=0.07$ ). A significant relationship was observed between level of study and knowledge ( $r=0.6; P=0.00$ ). No significant relationship was observed between level of study and attitude ( $r=0.1; P=0.4$ ).

### **DISCUSSION**

As high as 81% of the respondents in this study showed a poor attitude about leprosy. This suggests a poor attitude among Nigerian physiotherapy students concerning leprosy. Most

worrisome is the fact that 62% of the students would not agree to work in a leprosy hospital and 65.1% would not agree that leprosy patients be treated in all conventional hospitals. This shows the students are not prepared to assist those patients, and would not be in support of the move towards integration. Conversely, only 24% of students showed poor knowledge about the disease. The knowledge of the students about leprosy could be described as fairly good. That, attitude about leprosy was not related to knowledge or level of study means other factors may be accountable for the poor attitude of these students. A majority of the students are from the Yoruba tribe and tribal prejudices against leprosy may be partly responsible for their attitude. In Yorubaland, it is a taboo to marry from a family with leprosy. Religion may be a potential culprit. Majority of the students were Christians and many of them listed the Bible as one of the sources in information on leprosy. The Christian religion teaches that lepers were isolated and treated with disdain. Majorities of the students were in their penultimate or final year but as high as 55% had not had any lecture on leprosy in their physiotherapy training. This may be an indication that the schools' curricula do not consider leprosy a priority area, or defer it until the students are about to leave school. It has been shown that medical students demonstrated a significant improvement in knowledge and attitude about old people after a 5-week attachment in their first clinical year (11). It is desirable that physiotherapy students spend some time in a leprosy hospital or colony, during their clinical attachment in the course of their training.

There are five universities with physiotherapy programmes in Nigeria. Not all the schools were adequately represented by the study sample, but the numbers are reflective of the distribution of student enrolment. While the sample may not warrant generalisations, it may be a pointer to the feelings of Nigerian physiotherapy students about leprosy. It is therefore important to replicate this study on a more representative sample of students.

## **CONCLUSION**

The attitude of Nigerian physiotherapy students about leprosy is poor, while their knowledge is fairly good. There is need for well-organised, specifically targeted educational programmes in leprosy, for physiotherapy trainees. It is also important to study the knowledge and attitudes of qualified physiotherapists in Nigeria, concerning leprosy.

**Table 1. Sociodemographic characteristics of the sample**

<b>Age</b>	Mean (x) Standard deviation (SD) Range	23.0 1.7 20-27
<b>Sex</b>	Male Female	36 27
<b>Tribe</b>	Yoruba Hausa Ibo Others	49 Nil 9 5
<b>Religion</b>	Christianity Islam Others	60 3 Nil
<b>Institution</b>	University of Ibadan, Ibadan University of Lagos, Lagos Obafemi Awolowo University, Ife. University of Nigeria, Nsukka Bayero university, Kano.	25 32 4 2 Nil
	Level of study 300 400 500	16 24 23

**Table 2. Categorisation of for attitude and knowledge scores of respondents**

Scores	Category	Attitude	Knowledge
0-40	Poor	51 (81%)	15 (24%)
40-60	Fair	8 (13%)	28 (44%)
60-100	Good	4 (6%)	20 (32%)

**Table 3. Distribution of responses to specific questions on attitude**

	Yes	No	No response
Have you ever seen a person affected by leprosy before?	43 (68.3%)	19 (30.1%)	1 (1.6%)
Do you think it is possible for you to have leprosy?	16 (25.4%)	47 (74.6%)	-
Would you agree to work in an all leprosy hospital?	20 (31.7%)	39 (62.0%)	4 (6.3%)
Would you eat with a person affected by leprosy?	5 (8.0%)	57 (90.4)	1 (1.6%)
Would you marry a lady/man that has leprosy?	1 (1.6%)	60 (95.2%)	2 (3.2%)
Would you marry a lady/man whose parents have leprosy?	31 (49.2%)	30 (47.6%)	2 (3.2%)
Do you think leprosy patients should be treated in all conventional hospitals?	20 (31.7%)	41 (65.1%)	2 (3.2%)
Would you agree to travel in a bus in which majority of the passengers are leprosy patients?	8 (12.7%)	53 (84.1%)	2 (3.2%)
If you were sick, would you agree to be admitted in the same hospital with leprosy patients?	14 (22.2%)	45 (71.5%)	4 (6.3%)

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