

# Workplace Perception and Attitude Towards People Living with HIV/AIDS of Persons in Senior Administrative Positions in Public Universities in Nigeria

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## To cite this article:

Mabel Omonigho Akpede, Austin Itohan Ojugo, Gloria Omolegho Omi-Ujuanbi, George Obozokhale Akpede. Workplace Perception and Attitude Towards People Living with HIV/AIDS of Persons in Senior Administrative Positions in Public Universities in Nigeria. *European Journal of Preventive Medicine*. Vol. 3, No. 6, 2015, pp. 172-179. doi: 10.11648/j.ejpm.20150306.12

**Abstract:** Persons in senior administrative positions (SAP) in public universities are an important segment of the workforce, which could play an important role in the control of HIV/AIDS through their impact on the attitude to people living with HIV/AIDS (PLWHA) both within and outside the university community. However, there is a gross dearth of information on their perception of HIV/AIDS and the corresponding attitude to PLWHA. This is unlike the profusion of data on the perception of students in tertiary institutions of higher learning. The objective of this study was thus to determine the level of awareness and perception of HIV/AIDS, and the workplace attitude to PLWHA, of persons in SAP in public universities and the association with the demographic factors of age, gender and religion. A self-administered questionnaire, 'Awareness and Attitude towards PLWHA scale' was used to elicit responses from 250 persons, representing 91.6% of those eligible, in a cross-sectional survey of Deans of Faculties, Directors and Heads of Departments in two public universities in Edo State, Nigeria. Mean scores and mean percentage responses were compared between groups using Student's t-test and one-way ANOVA. The level of significance was set at  $P < 0.05$ . The mean (standard deviation, SD) of Respondents with correct answers to the questions on perception was 72.7 (12.8)% on perception of the nature of HIV/AIDS, 45.1 (38.6)% on transmission, 90.9 (7.4)% on diagnosis and 85.8 (10.8)% on perception of its prevention ( $P = 0.034$ ). The mean (SD) of the responses on general attitude was 96.8 (2.9)% and that on workplace attitude 85.2 (7.5)% ( $P = 0.036$ ). There was no statistically significant difference between the mean overall scores on perception and attitude in relation to age, gender and religion. We conclude that the perception of HIV/AIDS and workplace attitude to PLWHA among persons in SAP in public universities in Nigeria are quite favourable, except in relation to the transmission of infection. We also conclude that the perception is unrelated to the demographic factors of age, gender and religion. These findings are relevant to the development of HIV/AIDS control messages, particularly those targeted at the reduction of stigmatization and discrimination, important attitudinal problems fueling the transmission of HIV/AIDS in resource-poor countries.

**Keywords:** Demographic Factors, HIV/AIDS, Nigeria, Persons in Senior Administrative Positions, Public Universities, Workplace Perception and Attitude

## 1. Introduction

Infection with the human immune deficiency virus (HIV), and the resultant acquired immune deficiency syndrome (AIDS), has generated great concern since the first descriptions of AIDS in the 1980s. The epidemic continues to

be a global threat although sub-Saharan African countries are particularly affected, having about 70% of the population of PLWHA [1-4].

HIV/AIDS has become a major cause of death in sub-Saharan Africa, and both the general public and healthcare workers have responded with fear, anxiety and prejudice [2, 5-8]. Thus PLWHA are frequently discriminated against and

rejected [2, 9] and HIV/AIDS has even been considered by some to be a well-deserved punishment for immoral behaviour [1, 2, 10-13].

Therefore, PLWHA often suffer from depression and anxiety and other psychiatric problems [14]. Some suffer from social isolation and could lose their jobs and housing, and both PLWHA and the caregivers are susceptible to workplace stress [14-18]. PLWHA may also avoid disclosing their status or seeking medical attention in order to avoid stigmatization and discrimination [19]. The university as a workplace may not be free from these issues [19]. In response, PLWHA often tend to avoid seeking medicated attention, choosing to remain silent about their sero-status and thereby avoid the risk of being recognized and stigmatized by co-workers.

The attitude and behavior towards PLWHA are oftentimes related to the level of awareness and knowledge of HIV/AIDS in the society and reducing stigma could increase the acceptance of PLWHA [9]. The level of knowledge is also of importance in the individual's attitude to the prevention of HIV/AIDS [20 - 25].

The lack of appropriate knowledge and information on the nature, transmission, diagnosis and prevention, and effects of HIV/AIDS is associated with risky behavior [26]. In this regard, although there have been significant research efforts on HIV/AIDS in Nigeria aimed at giving a clearer understanding of the issues, the efforts have been almost exclusively expended on studies of students and youths [4], as it is in much of sub-Saharan Africa [27-29]. Much is thus unknown in Nigeria regarding the knowledge level and perception and attitude of older adults including university workers. To our knowledge, this is particularly true of the perception of persons in SAP, whereas such persons could be critical as educators and are influential community members and leaders, who can reinforce attitudes and normative behavior [3]. They may also be active participants in intergenerational sexual relationship, which is one of the drivers of the HIV/AIDS epidemic in sub-Saharan Africa [3].

Therefore, the question of the level of awareness and perception and attitude of persons in SAP in the universities on HIV/AIDS is an issue. The purpose of the study was thus to determine the level and nature of HIV/AIDS awareness and perception and attitudes of persons in SAP in public universities in Nigeria and relate it to the demographic factors of age, gender and religion. These objectives were in relation to the research questions of what is the level of awareness of persons in SAP in public universities regarding HIV/AIDS, what is the perception or nature of the awareness, what is the workplace attitude towards PLWHA, and what is the variation in the level of awareness and attitude with the demographic factors of age, gender and religion? The information obtained could facilitate HIV/AIDS awareness campaigns towards the reduction of transmission of infection and reduction of stigmatization and discrimination against PLWHA. This could ultimately reduce the burden of HIV/AIDS in the society, bring the crisis under control and reduce the impact on the supply of and demand for

education, an issue of great importance in sub-Saharan Africa [30-32].

## 2. Methods

The study was carried out in the two public universities in Edo State, Ambrose Alli University, Ekpoma, which belongs to Edo State Government and University of Benin, Benin City, which belongs to the Federal Government of Nigeria. Edo State is one of the six States in the South-South Geopolitical Zone of Nigeria. Nigeria has six geopolitical zones, with three in the southern part and three in the northern part of the country. The study was descriptive and cross-sectional, and involved senior academic and non-academic staff with responsibility for supervision of the recruitment, training, promotion and discipline of staff. These included Deans of Faculties, Directors of Institutes and Centres, and Heads of Academic and Non-Academic Departments.

The study population comprised a total of 273 persons in SAP as described above, including 106 recruited from Ambrose Alli University, Ekpoma and 167 recruited from the University of Benin, Benin City. These data were obtained from the Personnel Division of the respective universities. Due to the relatively small size of the population ( $n = 273$ ), systematic sampling was not undertaken. Rather all the members were administered the questionnaire, and 250 (91.6%) of the 273 questionnaires administered were successfully retrieved for analysis. The study instrument was self-administered by the Respondents.

The study instrument was a structured questionnaire, the 'Awareness and Attitude towards people living with HIV/AIDS (PLWHA) scale', designed to elicit information on HIV/AIDS awareness and attitude. The instrument was in two sections, awareness and attitude. The section on awareness contained 15 questions designed to elicit information on HIV/AIDS perception while that on attitude contained 10 questions. The instrument was pretested and validated before use. The content validity of the questionnaire was by experts in sociology and educational test and measurement at Ambrose Alli University, Ekpoma, Edo State, Nigeria. The reliability was evaluated using the test-retest method at a two weeks interval and involved persons in SAP of the Federal Polytechnic, Auchi, Edo State, Nigeria. The reliability index was 0.78.

Perception was assessed in four areas, the nature of HIV/AIDS, its transmission, and its diagnosis and prevention. All the items in the questionnaire were positively framed and rated on a four (4) point Likert type scale of strongly agree (4 points), agree (3 points), disagree (2 points) and strongly disagree (1 point). For ease of analysis of the level and nature of HIV/AIDS awareness, the four response categories were collapsed into two: strongly agree and agree were taken to indicate agreement and strongly disagree and disagree taken to indicate disagreement. However, the raw scores were used in determining the variation of levels of awareness and attitude with demographic factors. For this

purpose, the mean overall scores were compared between dichotomous demographic groups using Student's t-test. The significance of the difference between the means of the proportions of Respondents with correct answers in the different sections of awareness was determined using one-way ANOVA. The difference between the means of the proportion of Respondents with correct answers on general versus workplace attitude was determined using Student's t-test. The level of statistical significance was set at  $P < 0.05$  in all the comparisons.

### 3. Results

Two hundred and 73 questionnaires were administered, out of which 250 (91.6%) were successfully retrieved. One hundred and seventy six (70.4%) Respondents were  $<40$  years of age and 74 (29.6%)  $\geq 40$  years. One hundred and fifty four (61.6%) respondents were males and 96 (38.4%) females, giving a male: female ratio of 1.6:1. Two hundred and twenty two (88.8%) were Christians and 28 (11.2%) Moslems.

The level of awareness of HIV/AIDS in terms of the

perception of its nature, transmission, diagnosis and prevention as determined using the proportion of Respondents who had correct answers, i.e., were in appropriate agreement or disagreement with the various items on HIV/AIDS awareness, is shown in Table 1. The responses of 70 - 98% of the Respondents were in correct agreement with nine items and that of 20.8 - 88.8% in correct disagreement with six items while the agreements and disagreements were incorrect among 2 - 30% and 28.4 - 79.2%, respectively, of the Respondents. The mean proportion (standard deviation, SD) of Respondents in correct agreement was 90.4 (8.4)% while that of those in correct disagreement was 57.4 (25.9)%. The difference was statistically significant ( $t = 3.61$ ,  $P = 0.003$ ).

The overall mean proportion (SD) of Respondents with correct answers was 76.9 (24.5)%. The mean proportion (SD) of Respondents with correct answers was 90.9 (7.4)% under awareness of diagnosis, 85.8 (10.8)% under awareness of prevention, 72.7 (12.8)% under awareness of nature of HIV/AIDS, and 45.1 (38.6)% under awareness of transmission (Table 1). The differences were statistically significant ( $F = 4.15$  and  $P = 0.034$  for ANOVA).

**Table 1.** Levels of perception of the nature, transmission, diagnosis and prevention of HIV/AIDS.

Aspect of perception and item description	Correct response	No. (%) with correct answers
Nature of HIV/AIDS		
HIV/AIDS is a curable disease	Disagreement	179 (71.6)
HIV/AIDS is a killer disease	Agreement	215 (86.0)
HIV/AIDS is a common disease like malaria	Disagreement	151 (60.4)
Transmission of HIV/AIDS		
HIV/AIDS is sexually transmitted	Agreement	224 (89.6)
HIV/AIDS is transmitted only by girls and young women	Disagreement	52 (20.8)
Sexual intercourse is the quickest means of transmitting HIV/AIDS	Disagreement	62 (24.8)
Diagnosis of HIV/AIDS		
There is usually a long interval between contracting the disease and manifestations of the symptoms	Agreement	223 (89.2)
Some people with HIV infection may look well and feel well	Agreement	235 (94.0)
HIV/AIDS carrier can be identified by mere observation	Disagreement	195 (78.0)
It is advisable to go for HIV antibody testing	Agreement	245 (98.0)
It is wise to refer a relative or friend suspected of having HIV/AIDS to a doctor	Agreement	243 (97.2)
Prevention of HIV/AIDS		
HIV/AIDS is a preventable disease	Agreement	225 (90.0)
HIV/AIDS can be prevented from spreading	Agreement	236 (94.4)
There are vaccines to prevent one from getting infected with HIV/AIDS	Disagreement	222 (88.8)
Condom can be used to prevent HIV/AIDS infection and other diseases	Agreement	175 (70.0)

**Table 2.** Levels of the general and workplace attitude to PLWHA.

Aspect of perception and item description	Correct response	No. (%) with correct answers
General attitude to PLWHA		
HIV/AIDS patients need love and care	Agreement	249 (99.6)
HIV/AIDS patients should occasionally be assisted	Agreement	232 (92.8)
HIV/AIDS patients should be assisted in buying their drugs or to get to medical institution where they can be catered for	Agreement	245 (98.0)
Workplace attitude to PLWHA		
A person living with HIV/AIDS could be appointed as a new employee	Agreement	214 (85.6)
I will accept a person living with HIV/AIDS being deployed to my department	Agreement	192 (76.8)
I will accept to share an office space with a person living with HIV/AIDS	Agreement	192 (76.8)
I can recommend a person living with HIV/AIDS in my department for further studies	Agreement	202 (80.8)
I can recommend a person living with HIV/AIDS in my department for a professional conference	Agreement	230 (92.0)
If my staff tests positive to HIV/AIDS, I will accept him/her back in the department	Agreement	214 (85.6)
If my staff, who is a person living with HIV/AIDS is reported sick and hospitalized, I will visit him or her	Agreement	247 (98.8)

The level of attitude to PLWHA in terms of the proportion of Respondents who had correct answers is shown in Table 2. The responses were in correct agreement for 76.8 – 99.6% of the Respondents for all 10 questions and in incorrect disagreement for 0.4 – 23.2% of the respondents. The overall mean (SD) of the proportion of Respondents with the correct answer was 88.7 (8.4)% while the overall mean proportion with incorrect answers was 11.3 (8.4)%. The responses to the questions on general attitude to PLWHA were positive and correct in 92.8 - 98.6% (mean (SD) = 96.8 (2.9)%) while the responses to questions on workplace attitude were positive and correct in 76.8 - 98.8% (mean (SD) = 85.2 (7.5)%). The

difference was statistically significant ( $P = 0.036$ ).

The variation of overall mean perception and attitude scores with demographic factors is shown in Table 3. The largest difference between the mean overall scores on awareness was in relation to age (0.94 in favour of those aged <40 years) while that on attitude was in relation to religion (1.58 in favour of Christianity). The smallest difference on both awareness and attitude was in relation to gender and in favour of males (0.13 for awareness and 0.47 for attitude). However, none of the differences attained statistical significance (Table 3).

**Table 3.** Variation of overall mean perception and attitude scores with demographic factors.

Factor	Status	n	Mean (SD) score		t- (P-) values	
			Perception	Attitude	Perception	Attitude
Age	<40 years	176	42.99 (3.81)	33.01 (4.32)	1.71 (0.089)	0.58 (0.562)
	≥40 years	74	42.05 (4.33)	32.65 (4.83)		
Gender	Male	154	42.77 (3.62)	33.08 (4.23)	0.25 (0.802)	0.81 (0.420)
	Female	96	42.64 (4.52)	32.61 (4.85)		
Religion	Christianity	222	42.69 (3.97)	33.08 (4.38)	-0.30 (0.765)	1.77 (0.079)
	Islam	28	42.93 (4.18)	31.50 (5.06)		

## 4. Discussion

Most of the studies on the awareness and perception of HIV/AIDS in tertiary educational institutions in African countries, including Nigeria have been on students [4]. This study may therefore be one of the (very) few on the staff of public universities in general, and those in SAP in particular, which is also an important segment of the university community with regards to the control of HIV/AIDS. The approximately 8% attrition rate of questionnaires is within the range of 0 – 20% reported from earlier studies which similarly used self-administered questionnaires [4]. The demographic characteristics of the Respondents are not unlike those of the senior staff in public universities in predominantly Christian areas of southern Nigeria.

The results show that the occupants of SAP in public universities in Nigeria have a high level of HIV/AIDS awareness, moderately to highly favourable perceptions of HIV/AIDS, and favourable attitudes to PLWHA, which does not vary significantly with the demographic factors of age, gender and religion. The results, however, also show that the level of awareness varies with the subtype of awareness and the level of attitude with the subtype of attitude. These findings have implications for the control of HIV/AIDS in public tertiary educational institutions, including the development of a more positive attitude to PLWHA.

The high overall level of awareness agrees with the results of earlier studies from Nigeria and other sub-Saharan African countries [4, 21, 24, 25, 27, 29, 33-37], involving the students of secondary schools and tertiary institutions. It also agrees with the level of awareness reported from studies in other population groups [1, 26, 38, 39]. The generally high levels of awareness may not be unexpected in that most segments of the society are exposed to the same information

media, whether primarily directed at them or not. The role of mass communication programmes in HIV prevention has been highlighted in earlier reports [40, 41].

The level of awareness was not significantly related to age, gender and religion. This is in keeping with the variation in the reported association between HIV/AIDS awareness and socio-demographic factors [29, 42, 43]. Alika [34] reported similar findings with respect to awareness and age and gender. Negin et al [3] on the other hand reported that the level of knowledge was lower at ≥50 years of age compared to younger adults while Burgoyne and Drummond [26] noted a higher level of awareness among men in sub-Saharan African countries. There has also been a lack of concordance between reports on the relationship between gender and knowledge [29, 42]. Adeneye et al [38] also reported that the level of knowledge varied with age, Oppong and Oti-Boadi [37] that it varied with age and gender, and Amposah and Afful-Mensah [44] that it varied with gender. Mwamwenda [42] has remarked that three types of responses have been reported from studies of the association between HIV/AIDS awareness and knowledge and gender: no gender difference, variation in gender difference with the questions, and one gender more knowledgeable than the other. Our results are within this variation, of which educational status may be a factor [38]. The high level of awareness among the workers drawn from the 2 main religious faiths in the country may in part be an attestation to the ongoing role of faith-based organizations in raising HIV/AIDS awareness.

Two other observations in respect of awareness and perception in this study should be discussed. First, the mean proportion of Respondents with correct answers was higher in relation to the questions on which agreement was required compared to the ones on which disagreement was required ( $90.4 \pm 8.4\%$  versus  $57.4 \pm 25.9\%$ ). There was also a wider variation in the proportion with correct answers on the latter

questions (20.8 – 88.8% versus 70 – 98%). The divergence was most noticeable in relation to the questions on the perception of transmission of infection. This variation is difficult to explain but it could mean that the issues in the questions, which required disagreement as the correct answers were more difficult to conceptualize. Whether this is true or not, however, the findings emphasize the need for further efforts at engendering more appropriate perceptions of the transmission of HIV/AIDS. Earlier reports have highlighted the problem of misconceptions in HIV/AIDS awareness and knowledge [1, 6, 26, 29, 35, 36, 38, 45, 46, 47].

Second, the level of awareness among the occupants of SAP varied with the typology of HIV/AIDS perception. It was highest with regards to diagnosis and lowest with regards to the transmission of infection. To our knowledge, awareness was not (usually) typed in previous studies on HIV/AIDS. Therefore, it is difficult to fully discuss the variation of the level of awareness with the typology of awareness observed in this study. Nonetheless, the finding might not be unconnected with the misconceptions related to the transmission of HIV/AIDS, which in this study was particularly with regard to the role of girls and young women and the role of sexual intercourse. Previous reports have highlighted the problem of misconceptions in HIV/AIDS knowledge, which is mostly in relation to the transmission of infection but also occurs with other aspects [36, 38], while Raj [35] reported that the level of knowledge of transmission and behavior was low (27-60%).

Paul and colleagues [29] carried out an in-depth study of the knowledge and perception of HIV/AIDS transmission among university students in Ethiopia and reported a gender dichotomy among students in rural but not urban areas, which paralleled the knowledge of HIV/AIDS. The current study was not on specific aspects of the knowledge of HIV/AIDS, but it can, nonetheless, be inferred from the results that the knowledge of persons in SAP in public universities in Nigeria could be suboptimal in many respects, particularly in relation to the transmission of infection and also in relation to knowledge of the prevention of infection, diagnosis and nature of HIV/AIDS.

The attitude towards PLWHA had been reported to be poor among healthcare workers and other workers in developing countries [5, 6, 9, 10, 46, 48], but recent reports have indicated a generally more favourable attitude [49, 50]. In keeping with this trend, most of the Respondents in this study had a positive attitude towards PLWHA in general and towards PLWHA in the workplace in particular. Also, the attitude did not differ significantly between older and younger, male and female and Christian and Moslem Respondents in this study, although the higher level of mean attitude score among the Christians approached significance.

Both the level of general attitude and the level of workplace attitude to PLWHA in this study compare favourably with the levels reported from India [51] and are encouraging. Kanengoni *et al* [52] also reported earlier from South Africa that most employees in a food processing

company were willing to work with PLWHA and attributed this to the effectiveness of the company's policy and awareness programme. Mahendra *et al* [48] noted an association between the index of stigmatization and knowledge of HIV whereas Yadav *et al* [49] found that the unwillingness of health workers to care for PLWHA was not associated with the knowledge of transmission and risk perception.

However, in spite of the high levels of positive perceptions and positive workplace attitude towards PLWHA, some of the findings are a cause for concern because misconceptions therein could contribute to discrimination and stigmatization of PLWHA and also contribute to further spread of the epidemic. First, are the perceptions that the transmission of HIV/AIDS is mainly by girls and young women and that the risk of transmission is fastest with sexual intercourse. The former could lead to or increase the stigmatization of girls and young women, although it could also arguably be built upon to promote abstinence, and discourage intergenerational sexual relationships, while the latter could lead to inadequate awareness of and exposure to other routes of transmission and sources of infection. Second, that still up to about a quarter of the Respondents have the misconception that HIV/AIDS can be identified by appearance, up to about a third do not agree that the transmission of HIV/AIDS can be prevented by the use of condom during sexual intercourse and almost a third think that HIV/AIDS is curable, several decades into the epidemic and in a country with a high prevalence of infection, is serious indeed. These misconceptions can all contribute to fuelling the epidemic. Accordingly, these aspects of awareness and perception require more vigorous effort at fostering an appropriate perception and change in behaviour. Third, about 15-25% of the Respondents have a discriminatory workplace attitude and would, for example, decline to share office space. In practice, for the reasons stated below, the proportion could actually be higher. Therefore, workplace discrimination against PLWHA may be a real problem in some of our tertiary institutions of education, although the level is lower than that reported from India [51]. Further studies are required on this.

The significant difference between the levels of the general and workplace attitudes to PLWHA in this study should also be discussed. Discrimination towards PLWHA in health care facilities has been highlighted repeatedly [6, 7, 48]. With the unexpectedly high levels of discrimination by health care workers [5, 6, 46, 53], who ought to know better, and the perception of HIV/AIDS fostered by some faith-based organizations [10, 11, 54], it may not be surprising that some measure of workplace discrimination against PLWHA could occur in public universities. Further studies are required to evaluate the extent and nature, and determine the factors involved, in order to reduce or possibly eradicate the practice.

Finally, there are limitations to this study, which should be discussed. First, the results may represent an overestimation of awareness, perception and attitude because of the

possibility of courtesy bias [29, 37] leading to socially acceptable responses being given in the self-administered questionnaires. Second, there is a limit to which the results can be generalized to actual behavior in view of the known problem of the dissociation between knowledge and behavior [23, 24, 25, 55] and also in view of the afore-stated courtesy bias in the responses given. Thirdly, while the results could be representative of the perception and attitude of persons in SAP in public universities in southern Nigeria, they may not be generalizable to the situation in private universities or in the universities in other regions in the country. This is because of the inherent intercultural variation between the regions in Nigeria and the diverse proprietorship of private universities in the country, with a significant and growing number of institutions owned by religious or faith-based organizations.

## 5. Conclusion

We conclude first, that the perception of HIV/AIDS among persons in SAP in public universities in Nigeria is quite favourable, although it varies with the typology of perception, second that persons in SAP have a favourable attitude towards PLWHA, although the general attitude is more favourable than the workplace attitude, and third, that neither the perception of HIV/AIDS nor the attitude towards PLWHA vary significantly with the demographic factors of age, gender and religion among the persons in SAP. It is recommended that persons in SAP in public universities have a potentially very useful role model in fostering a positive attitude towards PLWHA and that an active role should be fashioned out for them in the on-going efforts aimed at reducing discrimination and stigmatization of PLWHA in the workplace.

## Authors' Contributions

MOA and AIO conceptualized and designed the study; MOA administered the questionnaires and did the data analysis; GOA did the statistical analysis; MOA and GOA wrote the manuscript; AIO and GOO-U critically reviewed the manuscript; all authors approved the manuscript.

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