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Investigating attitudes towards caring for people with HIV/AIDS among hospital care workers in Ibadan, Nigeria: the role of self-efficacy

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Fear of HIV infection and its consequences may affect the willingness and capacity of health care workers to provide good quality care for people with HIV/AIDS (PWHAs). The study was founded on the proposition that self-efficacy may mediate the attitudinal disposition of health care workers related to provision of care to PWHAs. Two hundred and ten physicians (n = 103) and nurses (n = 107) sampled from the University College Hospital, Ibadan, Nigeria, responded (48% response rate) to a questionnaire which addressed self-efficacy relating to HIV/AIDS, knowledge about HIV/AIDS and treatment of and attitudes towards HIV/AIDS patients. Attitude questions included items on fear of HIV infection, futility in providing care for HIV patients, distress in caring for the patient who is likely to die and willingness to care for PWHAs. The major finding was a significant association between reported high self-efficacy and less fear of acquiring HIV, less futility in providing care for PWHAs and increased willingness to provide such care. More years of education was associated with higher willingness to care, less fear associated with care as well as lower perceived futility related to the care of PWHAs. Female gender was significantly related to the perception of futility related to the care of PWHAs. There was no significant relationship between self-efficacy and knowledge about HIV/AIDS. The findings have significant implications for hospital care for PWHAs and suggest that self-efficacy, rather than knowledge about HIV/AIDS may be important in mediating attitudes towards PWHAs and also in developing intervention programmes aimed at helping health care providers to reframe their attitudes.

Keywords: attitudes, health care workers, HIV/AIDS care, Nigeria

Introduction

In 2002 UNAIDS reported that 42 million people world-wide were infected with HIV, and that 6.4 million deaths have occurred since the beginning of the pandemic (Stephenson, 2003). The area most affected by HIV/AIDS is sub-Saharan Africa and in this region Nigeria ranks second in the number of HIV infected adults (NASCP, 2001).

Despite efforts to contain the HIV epidemic in Nigeria, HIV prevalence rates show no sign of abating. The National AIDS Control Program (NASCP) in Nigeria reported that 5.8% of pregnant women are HIV infected, and that within the next five years, more than 4.9 million Nigerians will be HIV infected (NASCP, 2001).

With improvements in treatment options, many PWHAs are expected to live longer and to require ongoing therapeutic management. As the number of these patients increases the burden of care and treatment that predominantly falls on health care workers also increases and one of the biggest challenges facing many clinics and hospitals in sub-Saharan Africa is providing care to the increasing numbers of PWHAs. These patients comprise, in many instances (Mungherera, Straten, Hall, Faigeles, Fowler & Mandel, 1997), the majority of the patients utilising these facilities.

Despite the burden of HIV infection and related morbidity and mortality, few studies have been conducted in Nigeria to explore attitudes of health care workers towards PWHAs; and in particular their fears of occupational exposure to HIV and how this may influence their willingness to care for these patients and the quality of such care.

Horsman and Sheeran (1995), in an extensive review of international research reported substantial evidence that health care workers were reluctant to care for PWHAs. There is evidence of increased numbers of medical students applying to medical schools in lower HIV/AIDS prevalence areas (Bernstein, Rabkin & Wolland, 1990) and it has been reported that physicians, nurses and social workers who care for PWHAs worry more about getting infected (Dworkin, Albrecht & Cooksey, 1991) than those who do not. Both physicians and dentists reported concern about contagion by HIV-infected patients (Berkowitz & Nuttall, 1996). In a primary care physician's survey, 50% of the sample reported that they would refuse to care for HIV/AIDS patients if they had a choice (Gerbert, Maguire, Bleecker, Coates & McPhee, 1991). A substantial proportion of nurses reported that they should have the right to refuse care of patients with AIDS (Bond, Rhodes, Philips, Setters, Foy & Bond, 1990; Campbell, Maki, Willenbring & Henry, 1991). Also, physicians have been found to be less willing to interact with AIDS patients than with leukemia patients (Kelly, St Lawrence, Smith, Hood & Cook, 1987). In Kampala, Uganda, physicians and nurses differed in their HIV/AIDS related attitudes and practices. The physicians had a more positive attitude

than did the nurses, towards the care of patients with HIV disease (Mungherera *et al.*, 1997).

Barricks (1988) found no relationship between nursing experience, education and willingness to care for PWHAs. Henry, Campbell and Willenbring (1990) in a cross-sectional survey found that more years of formal education were not related to attitudes, anxiety or behaviour. Krasnik, Fouchard, Bayer and Keiding (1990), however, found that nursing aids who had the shortest education had the most negative or restrictive attitudes toward PWHAs. More positive attitudes to AIDS have been reported among younger hospital care workers (Gordin, Willoughby, Levine, Gure & Neill, 1987; Pleck, O'Donnell, O'Donnell & Snarey, 1988; Shapiro, 1989; Krasnik *et al.*, 1990).

There has been some inconsistency in findings concerning the relationship between the gender of health care workers and their attitudes to HIV/AIDS (Bernstein *et al.*, 1990; Krasnik *et al.*, 1990; Horsman & Sheeran, 1995). However, the weight of evidence seems to suggest, following Barbour (1994), that greater proportions of males than females have positive attitudes towards PWHAs. This finding is supported by the work of Shapiro (1989) and Henry *et al.* (1990).

In Nigeria, there is a dearth of studies concerning health workers' attitudes towards PWHAs, with the exception of a survey reporting physicians' and nurses' knowledge about and attitudes concerning HIV/AIDS (Salihu, Olaseha, Adeniyi & Ajuwon, 1998). The above study was done when HIV/AIDS was beginning to emerge as a public health problem, and it is therefore relevant to examine to what extent health workers' attitudes have changed over time particularly when HIV/AIDS has grown to be a serious health problem in Nigeria. It is also relevant to examine attitudes in other areas as cultural differences may affect attitudinal disposition, and the reported study was limited to the northwestern part of Nigeria.

There has been little use of perceived self-efficacy as a variable in investigating attitudes towards PWHAs among health workers (Horsman & Sheeran, 1995). According to Bandura (1977), expectations of self-efficacy are the most powerful determinants of behavioural change because self-efficacy expectancies determine the initial decision to perform a behaviour, the effort expended, and persistence in the face of adversity. If self-efficacy plays a role in mediating health worker attitudes to care, it would be worthwhile and important to develop interventions to focus on self-efficacy; for example, by helping providers reframe what they can do given insufficient resources to cope, and in the face of negative cultural attitudes. The present study was conceived with a view to exploring the role of self-efficacy and its possible implications.

The study builds on previous efforts and offers to fill the gap in the literature concerning health workers knowledge and attitude towards HIV/AIDS in Nigeria. It firstly examines the patterns of such attitudes through four attitude factors, and secondly investigates the differential explanatory power of perceived self-efficacy and other important factors such as age, gender, years of education, occupational category, number of workshops attended concerned with the treatment of HIV/AIDS patients, and knowledge about HIV/AIDS in predicting health workers' attitudes.

Methods

Setting

The University College Hospital, Ibadan, Nigeria, the setting for the study, was established in 1956 as a tertiary health facility and an affiliate of the University College of Medicine for the provision of medical education. Part of its structure is a Viral Research Laboratory, with a World Health Organization Collaborating Centre in Immunology. In the context of the HIV/AIDS epidemic in Nigeria, the centre has served as the sole referral centre for the screening of blood for the whole of western and part of northern Nigeria. Yet the hospital lacks a structural facility for the care of patients diagnosed with AIDS and care for HIV/AIDS patients is achieved through multi-disciplinary joint management between the Gastro Intestinal Unit (GIU) of the Medicine Department and the Hematology Department of the hospital. Patients are admitted in the general ward amidst other patients, as there is no special ward for AIDS patients. At the time of the study the GIU unit received about 20–50 referred patients per month.

Participants

Participants were 210 physicians and nurses in the University College Hospital, Ibadan. The response rate was 48% and the sample is representative of the distribution of physicians and nurses in the College Hospital. Of the respondents 49% were physicians and 51% were nurses. Their average age was 37.9 years (SD = 8.4). The gender breakdown was 44.3% males and 55.7% females. Respondents' mean years of education was 16.8 years (SD = 7.0; range 15–25). Sixty-six percent had attended workshops on AIDS less than five times, 19.5% had attended workshops on AIDS six to 10 times and the remaining 14.8% had attended workshops on AIDS more than 10 times.

Measures

Four basic measures, constituting 88 questionnaire items were used for this study.

Attitude measures

A 39-item scale (Berkowitz & Nuttall, 1996) was used which assesses professional health care attitudes on four-factors: willingness to care for an HIV-infected child; fear of acquiring HIV infection from providing care; 'futility' of providing care for HIV infected children and their families; and 'distress' associated with caring for a child who is likely to die and to whom one has become emotionally attached. Most items on the scale focussed on attitudes toward children. This is particularly relevant in the Nigerian context with an increasing number of babies/infants and children infected and dying of AIDS, and representing part of the HIV/AIDS patient population likely to be seen by physicians and nurses.

The respondents were asked to rate these attitudinal items along a seven point Likert scale ranging from strongly disagree to strongly agree. Thus any score mean above 4.0 indicated a tendency to agree and any score mean below 4.0 indicated a tendency to disagree. All items were recoded so that higher scores reflected a more positive attitude towards the care of patients, with a maximum possible score

of 273. The correlations between the four-attitudinal subscales (willingness to care, fear, futility and distress related to the care of PWHAs) ranged from 0.79 to 0.85 and the alpha coefficient for all 39 items was 0.81.

The self-efficacy scale

This scale was adopted from the work of Sheerer and Maddux (1982). It measures generalised expectancies any individual has about his/her personal mastery and success when confronted with specific tasks or situations and measures beliefs about one's abilities in problem solving situations or tasks. The self-efficacy questionnaire is a 23 multi-item scale with two factor subscales of general self-efficacy and social self-efficacy. Its construct as well as criterion validity has been confirmed and reported through study of several predicted conceptual relationships with other personality and vocational measures (Sheerer & Maddux, 1982). Items in this scale include: 'if I can't do a job the first time, I keep trying until I can'; 'I avoid facing difficulties'; 'I feel insecure about my ability to do things'; and 'I give up easily'.

In Nigeria construct validity for the self-efficacy scale has previously been established in relation to the internal–external control scale (r = 0.40) and a self-esteem scale (r = 0.47) (Olley & Sholuwa, 2000). In the course of the current study internal consistency of items was found to be high (r = 0.81).

Knowledge about HIV/AIDS

Knowledge about HIV/AIDS was assessed by the 11-items scale used in previous studies (Dada, Olaseha & Ajuwon, 1997; Olley & Sholuwa, 2000). It assesses knowledge about transmission, treatment, symptoms, and transmission modes, handling of contaminated blood and testing aspects of HIV/AIDS. In the current study internal consistency of items was found to be high (r = 0.85).

Measures of socio-demographic data

Basic demographic data collected from health care workers included: occupational category, gender, age, years of work experience, number of years of formal education and number of HIV/AIDS workshops attended.

Procedures

The initial intention was to study the entire physician and nurse population in the hospital but due to logistical problems this was not 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: Theatre/Intensive Care Unit (ICU); Accident and Emergency (A&E); Oncology; Dentistry and General Outpatient Department (GOP). After the necessary permission was obtained from hospital authorities and the various heads of units, physicians and nurses were approached and given the questionnaire to fill in, after having the purpose of the study explained and after due consent had been obtained. The matron in-charge of each of the units was used as a link person to collect the questionnaires from the respondents. From about 500 questionnaires administered, 210 were duly and correctly completed, giving an attrition rate of 48%. The other two hundred and ninety questionnaires were either incorrectly completed or were not returned.

Results

Bi-variate analysis

Increase in self-efficacy of health care workers was positively associated with willingness to care ($r = 0.41$, $P = 0.00$), but inversely related to fear ($r = -0.18$, $P < 0.00$) and a sense of futility($r = -0.22$, $P < 0.00$) associated with the care of PWHAs. Increase in self-efficacy was not found to be associated with expressed distress relating to the care of PWHAs ($r = 0.06$, NS). Age of health care workers was found to be associated with willingness to care ($r = 0.20$, $P < 0.00$), and negatively related to fear ($r = -0.23$, $P < 0.00$) and perceived futility($r = 0.15$, $P < 0.05$) about the care of PWHAs. Increase in years of education, rather than increased knowledge of HIV/AIDS, was found to be associated with willingness to care ($r = 0.25$, $P < 0.001$). Increase in years of education was inversely related to fear ($r = -0.21$, $P < 0.00$) and perceived futility ($r = -0.18$, $P < 0.00$), but not to distress relating to the care of PWHAs.

Specific occupational category and number of workshops attended were not significantly associated with the four attitudinal factors.

Multivariate analysis

Using stepwise regression, seven independent variables were regressed against the four health care attitude factors. Independent variables included gender, age, years of education, workshop attendance, occupational category, self-efficacy and knowledge about HIV/AIDS. These variables were 'stepped in' if they added statistically significant ($r = <0.05$) variance and added at least 1% to the explained variance (r^2). From Table 1, self-efficacy constituted the most effective contributor in the explained variance of willingness to care, fear and perceived futility in the care of PWHAs. Of the 21% explained variance on willingness to care, self-efficacy accounted for 18% with years of education contributing 3%. Regarding the fear factor, health workers with lower scores on self-efficacy were more fearful of infection, as self-efficacy was negatively related to fear and contributed 5% of the total 14% fear variance. Female gender of the health workers was significantly and positively related to the fear factor with 9% explanation of the total variance of fear. For futility, and also as reported for the fear factor, female gender of the health workers was significantly and positively related to perceived futility in the care of PWHAs, and contributed 4% of the total 9% of futility variance. Health workers with less self-efficacy are more likely to have a sense of futility about the care of PWHAs, as self-efficacy and futility are negatively related, though they contributed 5% to the total variance of futility. The only variable entering the regression equation for experience of distress in the care of PWHAs, was health workers' workshop attendance. Workshop attendance was positively related to distress, with those who had greater workshop attendances expressing more distress and contributing 4% to the total variance of distress. Other independent variables either did not enter the regression equations or explained less than 1% of the

Table 1: Regression of independent variables against health care attitude factors

Independent variables	β	r^2 change	Significance
Willingness to care	r^2_{Adj} 0.21	$F_{(201)}$ = 9.16	<0.000
Self-efficacy	0.39	0.18	<0.00
Years of education	-0.17	0.03	<0.03
Fear	r^2_{Adj} 0.14	$F_{(201)}$ = 4.76	<0.000
Gender	0.25	0.09	<0.001
Self-efficacy	-0.14	0.05	<0.02
Futility	r^2_{Adj} 0.09	$F_{(201)}$ = 2.97	<0.000
Self-efficacy	-0.19	0.05	<0.00
Gender	0.18	0.04	<0.01
Distress	r^2_{Adj} 0.04	$F_{(201)}$ = 1.41	ns
Workshop attendance	0.17	0.04	<0.01

variability.

Discussion

It has been shown above that for the sample of health care workers in this study, those with high self-efficacy ratings are more willing to care, less likely to perceive care as futile and less likely to experience fear in caring for PWHAs.

This is consistent with the view that individual opinions and beliefs about own-capacities are a basic and crucial component in task-related performance. Individual's perceptions of their capabilities affect how they behave, their level of motivation, their thought patterns and emotional reactions in taxing situations such as caring for PWHAs. It follows that in the interest of developing favorable attitudes towards the care of PWHAs, how an individual health worker perceives his/her capabilities relating to the care of PWHAs should be viewed as important. Self-efficacy can determine the level of commitment and ultimately the quality of care received by patients with AIDS. Further investigation in this direction is required and especially intervention studies based on programmes that might be developed to promote self-efficacy among health workers. Also it may be worthwhile to look at categories of patients other than PWHAs, for which care may also pose a potential health hazard.

Female gender of the health care workers was found in this study to be significantly and positively related to increased fear and increased perceptions of futility in the care of people with AIDS, but not related to perceived distress. Female gender specifically, also contributes to the variance of perceived fear and futility but not to attitudes of willingness to care and distress. The current study lends support to other studies discussed above, that found appreciable associations between female gender and negative attitudes related to HIV/AIDS. The finding of a positive relationship between female gender of health workers and the attitude of fear and sense of futility in the care of PWHAs, nonetheless seems surprising. It contradicts perceived ideologies of association of femininity with primary responsibilities for care taking and emotional work, and related characteristics of nurturing, sensitivity and emotional expression (Rosenfield, 2000). The results suggest a need for a more focused investigation of gender-specific differences in attitudes towards PWHAs.

This study also reported a positive association between years of education of health care workers and willingness to care for PWHAs, and an inverse relationship between education and fear, and education and perceived futility in the care of PWHAs. This is not consistent with earlier reports (Barricks, 1988) where there was found to be no relationship between length of nursing education and willingness to care for PWHAs. It is also not consistent with a previous report (Henry *et al*, 1990) where there was found to be no relationship between more years of formal education and anxiety towards the care of PWHAs. It is, however, consistent with work by Krasnik *et al.* (1990), who reported how low educational levels of nursing aids was related to negative/restrictive attitudes towards PWHAs.

Workshop attendance of hospital care workers did not relate to any attitude dimension but contributes a low percentage of the variance of the perceived distress experience of these health workers in relation to the care of PWHAs. This finding is puzzling and contradicts what was reported by Henry *et al.* (1990) where it was found that attendance in an HIV/AIDS in-service programme was associated with more positive attitudinal and behavioural scores. It might be speculated that the increase in workshop attendance of the health care workers in the present study may have further exposed them to perceived 'dreadfulness' of HIV/AIDS disease as an incurable ailment, and thereby heightened their anxiety about the disease. However, the meaning of the findings is inconclusive without further understanding of the quality and focus of such workshops, and the reasons for people attending them.

The study presented here has some important limitations. First, because it was conducted in a major tertiary health facility in Ibadan, Nigeria, assumptions based on the study results may not apply to health care workers at other hospitals in other parts of the country, or where there are different workloads. Second, time demands on the health care workers required an assessment of their perceived attitudes towards PWHAs through a paper and pencil self-administered questionnaire. Use of other data collection methods such as focus groups would be of value in eliciting in-depth information on the content and context of attitudes. Third, the variables included in the regression equations are not exhaustive and exclude other potentially relevant factors that could play a role in understanding the knowledge and attitudes of the health care workers. Fourth, stable personality characteristics such as neuroticism and locus of control

may shed further light on the importance of personal dispositions to the care of PWHAs.

Conclusions and recommendations

Health care workers (physicians and nurses) in Ibadan differ in their willingness to care; degree of exercised fear and their perceived futility and distress in relation to care of PWHAs. Perceived self-efficacy, has been found to have a significant impact on these attitudes. Other factors such as level of education, the number of workshops attended and gender have also accounted for the variance associated with various dimensions of attitudes to the care of PWHAs.

In view of these findings, it is recommended that an intervention programme be developed and incorporated into routine ward/hospital meetings where issues concerning the care of PWHAs might be discussed. Such programmes might emphasise the re-orientation of health workers to their differential professional obligations. In addition it might afford health care providers the opportunity to recognise the influence that beliefs about their own capabilities have in shaping their attitudes to caring for PWHAs. Re-orientation might also involve equating HIV/AIDS with other chronic medical conditions, and resolving ambiguous perceptions of PWHAs. The goal of such training might be to bring to health-workers a renewed understanding of their unique strengths and talents, to help develop confidence in the acts of care giving to PWHAs and to see themselves as bringing about improvement in the quality of life of people with HIV/AIDS. This can be achieved through group oriented sessions, and new skills in care for PWHAs acquired through opportunity to practice and be perceived as having acquired new skills, in line with the need to improve the sense of self-efficacy related to HIV/AIDS care.

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The author — Dr Olley has a PhD (Clinical Psychology). His predominant research interests include reproductive health issues in adolescents and adults, mental health matters relating to HIV/AIDS, and patient care and psychological support.

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