

PAPER II

**Prevalence and factors associated with anticipation of HIV/AIDS-related stigma among
Tanzanian teachers who have never been tested for HIV: an exploratory study**

Running title: **Anticipation of HIV/AIDS-related stigma**

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ABSTRACT

The present study assessed the prevalence and factors associated with anticipation of HIV/AIDS-related stigma among 737 primary school teachers (mean age 38.4 years) in Mwanza Region, Tanzania. Respondent teachers mainly anticipated gossip while fear of being neglected was the least. Teachers in urban areas (OR=0.54; CI: 0.40-0.74) and those with higher levels of education (OR=0.62; CI: 0.45-0.86) were significantly less likely to anticipate reactions of HIV/AIDS-related stigma, whereas teachers aged between 51-60 years were significantly more likely to anticipate reactions of HIV/AIDS-related stigma (OR=2.06; CI: 1.17-3.63). Regarding psychosocial correlates, teachers: who aspired to be tested for HIV (OR=1.43; CI: 1.04-1.97); who expected less care if they had AIDS (OR=4.41; CI: 3.08-6.33); and who had low efficacy related to testing for HIV (OR=1.52; CI: 1.09-2.11) were significantly more likely to anticipate reactions of HIV/AIDS-related stigma. Our findings provide opportunities for interventions and future studies that would reduce the level of anticipating HIV/AIDS-related stigma among the teachers who have never been tested for HIV.

KEY WORDS: HIV/AIDS, anticipated stigma, testing for HIV, teachers, Tanzania

INTRODUCTION

From the advent of HIV/AIDS, more than two decades ago, different societies have continued to react undesirably to the people who are known or suspected to have HIV/AIDS. Such reactions fit in with Goffman's (1963, p.3) conceptualization of stigma as "an attribute that is significantly discrediting". In relation to Goffman's conceptualization, reactions of HIV/AIDS-related stigma refer to negative responses that bring about disgrace, indignity, shame, humiliation, ignominy or dishonour to the person suspected or known to have HIV/AIDS. Accordingly, previous studies point out various responses of the society toward people who are known or suspected to have HIV/AIDS including: fear, anger, rejection, gossip, avoidance and blame as reactions that depict HIV/AIDS-related stigma (Biswalo and Lie, 1995; Kohi and Horrocks, 1994; Lie and Biswalo, 1994; Powell et al, 1998).

HIV/AIDS-related stigma presents a major challenge to the successful implementation of HIV prevention programmes. For the moment, there is compelling evidence that HIV/AIDS-related stigma has remarkable effects on people's response to the use of voluntary HIV counselling and testing (VCT) services (Herek et al., 2003). Fear of being stigmatized affects people's willingness (volunteerism) to use VCT services (Muyinda et al., 1997; UNAIDS, 1998; Brown, et al., 2001; Nyblade et al., 2003; de Paoli et al., 2004; UNAIDS, 2004) and some people have to go for HIV counselling and testing services secretly and choose a person who can keep their HIV test results confidential (Lie and Biswalo, 1994; de Paoli et al., 2004). Furthermore, HIV/AIDS-related stigma largely inhibits people who get tested their HIV status from disclosing their HIV status particularly when they are HIV positive (Derlega et al., 2002; Duffy, 2005; Lie and Lothe, 2002; UNAIDS, 2000).

The documented effects of HIV/AIDS-related stigma on the use of VCT services suggest that people may anticipate stigmatizing reactions even before they are actually stigmatized. As Kleinman noted, the stigmatization process usually begins with the society's actual responses, but eventually the person "comes to expect such reactions, to anticipate them before they occur and even when they don't occur" (Kleinman, 1988: p. 160). In spite of this, factors associated with anticipation of HIV/AIDS-related stigma have been given very little or no attention in previous studies. Information is therefore needed about the extent to which people anticipate stigmatizing reactions from key persons in their social networks as

well as factors associated with anticipation of HIV/AIDS-related stigma. Such information may be useful for HIV counselling service delivery and in designing interventions that could reduce the level of anticipation of HIV/AIDS-related stigma particularly among people who have never been tested for HIV. In terms of research, a clear understanding of factors associated with HIV/AIDS-related stigma would contribute significantly to improving conceptual frameworks that are used for studying the relationship between HIV/AIDS-related stigma and testing for HIV.

This paper follows a large study that was conducted under the Counselling, Education and Health Promotion (CEHP) project, a research and competence building co-operation programme between the University of Dar Es Salaam-Tanzania and the University of Bergen-Norway. The aim of the project was to assess psychosocial, socio-cognitive and socio-demographic aspects related to the use of VCT services among Tanzanian teachers. The focus of the present paper was to investigate the prevalence and factors associated with anticipation of HIV/AIDS-related stigma among Tanzanian teachers who had never been tested for HIV. The specific objectives were threefold. First, to assess the extent to which primary school teachers' anticipate reactions of HIV/AIDS-related stigma; second, to explore the association between teachers' socio-demographic characteristics and anticipation of HIV/AIDS-related stigma; and third, to examine the psychosocial and socio-cognitive factors that are associated with anticipation of HIV/AIDS-related stigma.

METHODS

Design, area and participants of the study

We conducted a cross-sectional survey between September and November 2003 among primary school teachers in Mwanza region, Tanzania. Mwanza was selected mainly because it has many public and private health care facilities that offer HIV counselling and testing services. The study covered fifty-four primary schools in four districts namely; Mwanza Municipal, Magu, Sengerema and Geita. The participating schools were randomly sampled from each participant district based on whether the school was located in an urban, semi-urban or rural area. All teachers in the sample schools were eligible for the study and 94% participated (918 of 977). Non-participant teachers were absent during the questionnaire

administration due to several reasons including: attending in-service examinations, sick leave, maternity leave, or family problems such as attending sick relatives or funerals.

Research procedures

A comprehensive anonymous questionnaire was used to collect the data. Prior to data collection, in-depth interviews were conducted so as to elicit culturally appropriate information. The questionnaire was also pilot tested before the main phase of field research. The research instrument was originally constructed in English and later translated into Kiswahili (the language spoken most widely in Tanzania). As this was a joint Tanzanian-Norwegian study, ethical clearance was sought and obtained from the Regional Medical Research Ethics Committee in Norway prior to the data collection. The research permit and institutional consent to carry out the study were obtained from the University of Dar Es Salaam and Mwanza Region Education Authority.

Variables and measurements

Socio-demographic variables: we measured respondents' age as a continuous variable, while school location, gender, marital status and education level were measured as categorical variables.

HIV testing variables: Participants were asked the question, "Have you ever been voluntarily tested for HIV to know your HIV status?" (yes or no). Aspiration of testing for HIV was measured by three items, i.e. how likely would respondents 1) be in need of, 2) request, and 3) accept, HIV counselling and testing services the next time they were to go for health care services. Responses were given on 4-point scale ranging from '*not likely at all*' to '*very much likely*' and an index of aspiration to test for HIV was constructed (Cronbach alpha = 0.75).

Anticipated reactions of HIV/AIDS-related stigma: we asked respondents to rate the extent to which they thought that they were likely to encounter stigmatizing reactions from key persons in their social networks if they would be suspected or known to have HIV/AIDS. A list of stigmatizing reactions included: fear, blame, anger, gossip, avoidance, neglect.

Responses were rated from '*not likely at all*' (=1) to '*very much likely*' (=4) and an index of HIV/AIDS-related stigma was constructed (Cronbach alpha = 0.91).

Perceived HIV susceptibility and AIDS severity: we asked respondents to indicate whether they agreed or disagreed with a statement which said that they and their partners were probably infected with HIV (2 items). Similarly, respondents were asked to rate the extent to which they thought it was possible for them or their partners to be HIV infected in the future (2 items). Responses were rated on 4-point scale ranging from '*strongly agree*' (=1) to '*strongly disagree*' (=4) and an index was constructed for perceived susceptibility (Cronbach alpha = 0.86). Likewise, respondents were asked to indicate the extent to which they agreed that AIDS was a dangerous disease; in general, in Tanzania, in their communities, among teachers of the same school, and for themselves (5 items). All responses ranged from '*strongly agree*' (=1) to '*strongly disagree*' (=4) and an index was constructed for perceived severity (Cronbach alpha = 0.84).

HIV/AIDS-related familiarity: two items were used to measure HIV/AIDS-related familiarity. First, respondents were asked to indicate whether they had cared for a person with AIDS, and second, if they knew a person who died of AIDS. The response was either "yes" or "no".

HIV/AIDS-related knowledge: we used 7 statements to examine HIV/AIDS-related knowledge among teachers. Questions were: a teacher who has the HIV virus may look healthy; it may take five or more years before an HIV infected teacher shows any symptoms of AIDS; an HIV infected teacher may be treated if detected early; the HIV virus may NOT be detected if a test is done immediately after infection; a teacher who is HIV infected may live longer than ten or more years; a teacher who has the HIV virus may be treated with traditional medicine; and a teacher who has the HIV virus may be healed spiritually. Responses ranged from '*certainly true*' (=1) to '*certainly wrong*' (=5) and we constructed an index of HIV/AIDS-related knowledge (Cronbach alpha = 0.62).

Expectation of receiving care: Respondents were given a list of ten key persons in their social networks and asked to rate the extent to which they thought such key persons were likely to care for them if they would become AIDS patients. The list included: a spouse/partner, friends, fellow teachers, employer, neighbours, religious leaders, relatives, own children, pupils, and pupils' parents. Their responses were scored from 'not likely at all' (=1) to 'very much likely' (=4) and an index was constructed for expected care (Cronbach alpha = 0.94).

Perceived efficacy related to testing for HIV: this was measured using 8 items. Respondents were asked to indicate how they were likely to use VCT services if: they anticipated unfavourable reactions of a spouse/partner; they thought that costs related to VCT services were high; they were afraid that their HIV test results would be positive; they believed that they would die quicker if they were to be tested for HIV and get informed that they are HIV positive; they thought that VCT service providers would not handle their HIV test results confidentially if they were positive; they thought that they would not disclose their HIV test results if the results were positive; they thought that they could be stigmatized and discriminated in case they were suspected or known to be HIV infected; they thought that they could not afford to buy anti-retroviral drugs if they were found to be HIV infected. Responses ranged from 'very much likely' (=1) to 'not likely at all' (=4) and an index was constructed for perceived efficacy (Cronbach alpha = 0.82).

Data analysis procedures

We analysed the data using the statistical package for social sciences (SPSS) version 13. Analysis of frequency, percentage, mean and standard deviation was done on reactions of HIV/AIDS-related stigma. Logistic regression analysis was run to assess the differences among the predictor categories and dependent variable. In order to perform logistic regression analysis, the sum-score indices were dichotomised using the split half method. Odds ratio (OR) and 95% confidence interval (CI) are reported for unadjusted and adjusted logistic regression analysis. The chi-square test was conducted in some cases to assess the association between variables.

RESULTS

Demographic characteristics of the sample

Of 918 primary school teachers who participated in the survey study, 737 (80%) had never tested for HIV and were included in the analysis. The mean age of the analysed group was 38.9 years (range = 21 to 59 years) and the majority were female teachers (64.9%). The analysed sample constituted teachers from urban (33.6%), semi-urban (29.9%) and rural (36.5%) areas. Information on marital status revealed that 77.6% were married, 11.8% were single, and 10.6% were divorced, separated or widowed, while 0.3% did not indicate their marital status.

Prevalence of reactions of HIV/AIDS-related stigma

With respect to reactions that would depict HIV/AIDS-related stigma if one was to be suspected or to be known to have HIV/AIDS (Table 1), the main reaction that teachers anticipated from significant others in their social networks was gossip and was followed by blame, fear, avoidance, anger while neglect was the least expected.

(Insert Table I here)

Association between socio-demographic characteristics and HIV/AIDS-related stigma

Results of unadjusted logistic regression revealed an association between anticipated reactions of HIV/AIDS-related stigma and school location, age as well as educational level (Table 2). Specifically, teachers who were living in urban areas and those with higher levels of education were significantly less likely to anticipate stigmatizing reactions related to HIV/AIDS whereas, teachers aged between 51-61 years were most likely to anticipate stigmatizing reactions from key persons in their social networks. However, when the analysis was adjusted for location, age, educational level, and aspiration to be tested for HIV, the difference to reach statistical significance was found only on school location.

(Insert Table II here)

Association between psychosocial factors and anticipation of HIV/AIDS-related stigma

With respect to psychosocial predictors, both results of unadjusted and adjusted logistic regression analysis show that teachers: who had less aspiration to be tested for HIV, who expected less care from significant others, and who had low efficacy of testing for HIV were significantly more likely to anticipate stigmatizing reactions (Table 3). However, teachers who perceived AIDS as a more severe disease were also more likely to anticipate HIV/AIDS-related stigma. Specific analysis of stigma items indicated that all stigmatizing reactions were significantly associated with low level of expected care ($p < .001$) as well as low efficacy of testing for HIV ($p < .05$), whereas anticipation of anger [$\chi^2 = 10,567$ (3), $p < .05$], gossip [$\chi^2 = 12,000$ (3), $p < .01$], and neglect [$\chi^2 = 12,314$ (3), $p < .01$] were significantly associated with less aspiration to be tested for HIV.

(Insert Table III here)

DISCUSSION

The high prevalence of HIV/AIDS in the basic education sector in sub-Saharan Africa (Bennell, et al., 2002; ILO, 2004; Kelly, 2000; World Bank, 2000) suggests that primary school teachers are prone to HIV infection and thus likely to anticipate HIV/AIDS-related stigma. As also observed in this study, the mean age of the analysed group indicates that the sample was appropriate for a study that focuses on HIV/AIDS-related stigma. In Tanzania, the age distribution of reported AIDS cases shows that most of the cases fall within the age range of 20-49 years (Ministry of Health, 2003; 2004).

Teachers anticipated stigmatizing reactions from significant others in their social networks at a substantial level. The three most frequent anticipated reactions namely: gossip, blame and avoidance, are discussed. First, teachers' anticipation of gossip from significant others if they would be suspected or known to have HIV/AIDS may be attributed to the lack of openness surrounding sexuality and HIV/AIDS (Reid and Walker, 2005). People who get AIDS are prone to be the target of rumours or hearsay about their incurable and "shameful" disease.

Second, teachers' anticipation of blame might emanate from a link between HIV infection and 'sexual promiscuity' (Lawless et al., 1996; Muyinda et al., 1997; Derlega et al., 1998; Ezedinachi et al., 2002; Nyblade et al., 2003). As HIV is mainly transmitted heterosexually, the society believes that HIV could be avoided if infected individuals were to make better moral decision regarding their sexual behaviours (Herek, 1999; Powell et al., 1998). This observation is in support of Lerner's just-world theory (Lerner, 1980) suggesting that people are motivated to see the world as just, and that people normally get what they deserve. Accordingly, people with HIV/AIDS are believed to have deserved the disease because they are assumed to have been 'sexually promiscuous' which is regarded as an undesirable behaviour.

Third, HIV may result in avoidance. Although the epidemic has existed for more than two decades, HIV transmission is still poorly understood by some people in the general population. This has caused some people to feel threatened by the mere presence of the disease and so they react undesirably to the people who are suspected or known to have HIV or AIDS. A study conducted in Ethiopia, Tanzania and Zambia (Nyblade et al., 2003), for example, reveals that people who have misperceptions about getting HIV through casual contact were more likely to avoid those who were suspected or known to have HIV/AIDS. In these cases, even the items infected people use (for example, utensils, clothes, linen) were avoided in fear of contracting HIV/AIDS.

It was observed in this study that teachers in rural schools were more likely to anticipate reactions of HIV/AIDS-related stigma compared to those in semi-urban and urban schools. It is possible that teachers in urban and semi-urban areas perceive people in their communities to be more understanding and tolerant to people with HIV/AIDS as compared to those in rural areas. This may be attributed to the fact that people in urban areas have a long experience of interacting with and caring for people living with HIV/AIDS. As the study conducted by Setel (1996) in Kilimanjaro-Tanzania revealed, until the early 1990s, the belief for many was that AIDS was a disease of urban rather than rural people. It is thus possible that the extent to which people who have never been tested for HIV anticipate HIV/AIDS-related stigma to be declining as they continue to experience shared life with relatives, friends, neighbours and other close people with AIDS.

The lack of association between gender and anticipated HIV/AIDS-related stigma was somewhat unexpected in this study. We had assumed that female teachers would be more likely to anticipate HIV/AIDS-related stigma compared to male teachers. Our assumption was based on the fact that women have largely been incorrectly and inappropriately labelled as the sources of the HIV infection (UNAIDS, 1998). In different communities of Tanzania, for example, the word 'malaya' (*prostitute*) that expresses sexual promiscuity has mostly been used to describe women who have sex with various customers who are men. However, their customers (men) are not regarded negatively. Our findings, however, are consistent with those reported in the previous study conducted by the Tanzania National AIDS Control Program (NACP) in the general population in Dar Es Salaam city. The study revealed that there was no relationship between gender and perceptions toward HIV/AIDS-related stigma (National AIDS Control Programme, 2001).

The present study adds to the available information on the relationship between HIV/AIDS-related stigma and testing for HIV/AIDS (Muyinda et al., 1997; UNAIDS, 1998; Brown, et al., 2001; Nyblade et al., 2003; de Paoli et al., 2004; UNAIDS, 2004; National AIDS Control Programme, 2001). In previous studies, respondents who were willing to use HIV counselling and testing services, were significantly less likely to report that they would be stigmatised compared to those who were not willing to use HIV counselling and testing services.

Respondents who expected that they would be less cared for if they were to get AIDS were more likely to anticipate HIV/AIDS-related stigma at higher levels. This observation supports the notion that care is a potential resource for adjustment, coping as well as for better quality of life (Burgoyne and Renwick, 2004). In the HIV/AIDS context, care may buffer the psychological problems that are linked with feelings of stigma. Likewise, self-efficacy which is a core construct in social cognitive theory (Bandura, 1986), showed to have an association with anticipation of HIV/AIDS-related stigma among people who had never tested their HIV status. As Bandura (1995) argues, self-efficacy may have some influence on the way people confront stressors in their lives. In this respect, people with high self-efficacy are more likely to view a stressful situation such as stigma related to HIV/AIDS as more challenging than threatening.

Some methodological limitations of the present study have to be noted. First, the study design was cross-sectional suggesting that the findings of the present study may not be interpreted in the specific direction of relationship. Second, the findings about anticipated HIV/AIDS-related stigma and social support may not be generalised to other groups in Tanzania because teachers compose a group of highly respected people who are regarded as role models to the entire society. It is possible that their responses might be unique due to their assumed high moral standards and professionalism. Third, the absence of respondents' sexual histories may have limited exploratory analysis particularly in the association between specific sexual behaviours and anticipation of HIV/AIDS-related stigma. Despite these methodological constraints, this study provides empirical information with regard to anticipation of HIV/AIDS-related stigma among Tanzanian teachers.

CONCLUSIONS

The findings of the present study are of relevance to the mitigation of anticipated HIV/AIDS- stigma among Tanzanian teachers who have never been tested for HIV. The findings also provide counsellors with avenues for exploration of anticipated stigma during pre-test and post-test HIV counselling. According to the findings, attention needs to be focused on teachers living in rural areas, teachers who have less aspiration to be tested for HIV, teachers who expect less care from significant others in their social networks, as well as teachers with low efficacy related to the use of VCT services. However, as the present study has only taken an initial step to explore socio-demographic, socio-cognitive and psychosocial factors that are associated with anticipation of HIV/AIDS related stigma, it is important for future studies to establish empirical grounds of the impact of HIV/AIDS-related stigma on the use of HIV counselling and testing services among teachers. Such studies need to employ a longitudinal design that may establish causal direction.

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Table I. Measures of anticipated reactions that would depict HIV/AIDS-related stigma from significant others (N = 737)

Anticipated reactions	^a n	Not likely at all	Somehow unlikely	Somehow likely	Much likely	^b mean	SD
Fear you	727	22.3	30.3	24.5	23.0	2.48	1.08
Blame you	721	20.5	25.4	30.8	23.3	2.57	1.06
Gossip about you	717	19.8	22.9	26.6	30.7	2.68	1.11
Avoid you	718	21.0	34.7	25.1	19.2	2.42	1.03
Get angry about you	717	29.8	31.5	21.6	17.1	2.26	1.06
Neglect you	715	32.0	35.7	18.5	13.8	2.14	1.02

SD=standard deviation

^aCases with missing information are excluded from the analysis

^bScale range: From 'not likely at all' (= 1) to 'much likely' (=4).

Table II. Unadjusted and adjusted logistic regression analyses for anticipated HIV-related stigma (low level = 0; high level =1) by socio-demographic variables
(N = 737)

Demographic predictors	n	Level of anticipated HIV/AIDS-related stigma		Unadjusted OR (95% CI)	Adjusted OR (95% CI)
		High (%)	Low (%)		
Location					
Rural	254	53.5	46.5	1.00	1.00
Urban	448	38.4	61.6	0.54 (0.40-0.74)***	0.55 (0.39-0.76)***
Sex					
Male	241	43.6	56.4	1.00	1.00
Female	461	44.0	56.0	1.02 (0.74-1.40)	1.24 (0.87-1.76)
Age (in years)					
21–30	154	41.6	58.4	1.00	1.00
31–40	244	37.7	62.3	0.85 (0.56-1.29)	0.81 (0.54-1.24)
41–50	227	47.1	52.9	1.25 (0.83-1.90)	1.09 (0.70-1.70)
51–60	74	59.5	40.5	2.06 (1.17-3.63)*	1.66 (0.91-3.02)
Marital status					
Married	537	43.9	56.1	1.00	1.00
Unmarried	86	37.2	62.8	0.76 (0.47-1.21)	0.95 (0.57-1.60)
Divorced or widowed	77	50.6	49.4	0.31 (0.81-2.11)	1.12 (0.67-1.87)
Educational level					
Grade B	213	52.1	47.9	1.00	1.00
Grade A or Diploma	487	40.2	59.8	0.62 (0.45-0.86)**	0.75 (0.50-1.13)

*p<.05; **p<.01; ***p<.001

^aCases with missing information are excluded from the analysis

^bAdjusted for location, age, education level, and desire to test for HIV.

Table III. Unadjusted and adjusted logistic regression analyses for anticipated HIV-related stigma (low level = 0; high level =1) by psychosocial variables (N = 737)

Demographic predictors	n	Level of anticipated HIV/AIDS-related stigma		^a Unadjusted OR (95% CI)	^b Adjusted OR (95% CI)
		High (%)	Low (%)		
Aspiration to test for HIV					
More aspiration	455	40.9	59.1	1.00	1.00
Less aspiration	223	49.8	50.2	1.43 (1.04-1.97)*	1.63 (1.17-2.26)**
Perceived susceptibility to HIV					
More susceptible	360	46.9	53.1	1.00	1.00
Less susceptible	341	40.8	59.2	1.23 (0.95-1.73)	1.21 (0.89-1.64)
Perceived severity of AIDS					
More severe	682	44.4	55.6	1.00	1.00
Less severe	15	26.7	73.3	0.46 (0.14-1.44)	0.50 (0.16-1.61)
Ever cared a person with AIDS					
Yes	237	45.1	54.9	1.00	1.00
No	427	43.1	56.9	1.92 (0.68-1.25)	1.93 (0.68-1.28)
Know a person died of AIDS					
Yes	628	44.1	55.9	1.00	1.00
No	70	44.3	55.7	1.01 (0.61-1.66)	0.91 (0.54-1.53)
HIV/AIDS-related knowledge					
More knowledgeable	412	42.7	57.3	1.00	1.00
Less knowledgeable	282	46.1	53.9	1.15 (0.85-1.56)	1.17 (0.86-1.60)
Expectation of receiving care					
Expecting more care	240	23.8	76.3	1.00	1.00
Expecting less care	380	57.9	42.1	4.41 (3.08-6.33)***	4.40 (3.04-6.37)***
Efficacy related to testing for HIV					
High level of efficacy	496	40.9	59.1	1.00	1.00
Low level of efficacy	201	51.2	48.8	1.52 (1.09-2.11)*	1.53 (1.09-2.15)*

*p<.05; **p<.01; ***p<.001; ^bAdjusted for location, age, and education level.

^aCases with missing information are excluded from the analysis