

*Full Length Research Paper*

# HIV related stigmatizing attitude and practice among health care workers in Northern Nigeria

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**This study is designed to describe the HIV related stigmatizing attitude and practice among the health care workers in Nasarawa State, Northern Nigeria. This study is an analytical cross-sectional study. Multistage sampling technique was used to obtain a representative sample and structured self-administered questionnaire was used to collect relevant information. About half (40.9%) of the health care workers do not know their HIV status, 0.5% were positive and 5.2% refuse to disclose their HIV status. Only 1.7% of the health care workers reported giving confidential information to a patient's family member or relatives without the patient's consent in the last 6 months and 3.1% of health workers supported mandatory HIV testing for all health care providers. HIV related stigmatization attitude was highest among the Medical Doctors (OR = 2.21, C.I = 0.90 to 5.4) and the hospital orderlies (OR = 1.90, C.I = 0.83 to 4.40), those who work in tertiary hospitals OR = 2.39 (C.I = 1.37 to 4.18), female gender (OR = 0.92, C.I = 0.55 to 1.53), private hospitals (OR = 1.06, C.I = 0.61-1.83), urban areas (OR = 1.48, C.I = 0.83 to 2.66) and those that had recent HIV/AIDS related training or workshops (OR = 3.39, C.I = 0.34 to 34.13). The study concludes that HIV related stigmatization is mostly prevalent in tertiary facilities among the health care workers in Northern Nigeria. Interventions to address attitudes and cultural beliefs not necessarily scientific matters may be the key towards reduction of HIV related stigmatization among the health care workers in Northern Nigeria and other similarly low income populations.**

**Key words:** HIV, stigma, health workers, attitude, practice, Northern Nigeria.

## INTRODUCTION

HIV-related stigma has been defined as prejudice, discounting, discrediting, and discrimination directed at people perceived to have AIDS (Herek, 1999). In addition to experiencing possibly negative attitudes about people living with HIV/AIDS (PLWHA) themselves, health service providers may worry that others will perceive them negatively too if they care for PLWHA (Snyder, 1999). Understanding the extent and dimensions of HIV-related stigma among service providers who may need to care for patients living with HIV/AIDS is crucial in terms of both the provider-patient relationship and the mental health and well-being of the providers themselves (Li, 2007a). Furthermore, discriminatory practices and violations of international principles of medical ethics may serve to legitimize other forms of discrimination against people living with HIV/AIDS.

Different aspects of stigma would include general attitudes towards PLWHA, feelings about the rights of

such patients, professional attitudes, and the way service providers would feel about themselves if they were caring for such patients or associating with PLWHA. Stigmatizing attitudes among service providers may be more complex as they need to be able to separate their personal underlying prejudices of PLWHA from their professional responsibilities (Deacon, 2006; Emlet, 2005; Fife and Wright, 2000; Kang et al., 2005; Reidpath and Chan, 2005; Nyblade, 2006; Chen et al., 2005). The stigma associated with HIV is layered with other stigmas such as proscribed routes of transmission (e.g., sex work and injection drug use) as well as personal characteristics (Reidpath and Chan, 2005; Nyblade, 2006; Chen et al., 2005).

People living with HIV/AIDS (PLWA) in Nigeria have been found to be subject to discrimination and stigmatization in the work place, family and communities (Center for the Right to Health, 2001; Alubo et al., 2002).

PLWA may also face discrimination from those employed in the health-care sector (Center for the Right to Health, 2001) With an estimated 3.5 million people with HIV/AIDS, Nigeria is home to one of every 11 of the 40 million people with HIV/AIDS worldwide and approximately 310,000 AIDS deaths yearly (Joint United Nations Programme on HIV/AIDS, 2002, 2004). The HIV prevalence among adults in Nigeria increased from 1.8% in 1991 to an estimated 5.8% in 2001 but decreased to 4.4% in 2008 (Nigeria Federal Ministry of Health, 2001).

Discriminatory or unethical behaviour by health-care professionals against PLWA (Joint United Nations Programme on HIV/AIDS, 2001; Deyroey et al., 2003; Danziger, 1994; Richter, 2001; Tirelli, 1991), may create an atmosphere that interferes with effective prevention and treatment by discouraging individuals from being tested or seeking information on how to protect themselves and others from HIV/AIDS (Parker, 2002; Mann, 1994; Integrated Regional Information Networks, 2002). This study was therefore designed to describe the HIV related stigmatizing attitude and practice among the health care workers in Nasarawa state, Nigeria. This understanding is critical in order to facilitate the effectiveness of HIV intervention programs, especially in Nigeria and other medical setting in countries with high burden of HIV/AIDS.

## MATERIALS AND METHODS

### Study design

This study is an analytical cross-sectional study. The information was collected from the health care providers working in 3 local government areas in Nasarawa State from January to February 2009.

### Study area

Nasarawa State was created in 1st October, 1996 from the present Plateau State by the regime of late General Sanni Abacha, and has Lafia as its capital city. It covers a land area of approximately 27, 116.8 km<sup>2</sup>. It comprises of 13 local government areas namely; Akwanga, Awe, Doma, Karu, Keana, Keffi, Kokona, Lafia, Nasarawa, Eggon, Obi, Toto and Wamba.

The state has the following boundaries: In the north-west by the federal capital territory (FCT), Abuja, north-east by Plateau State, north by Kaduna State, south by Benue State, south-west by Kogi State and south east by Taraba State. Nassarawa State lies within the Guinea savannah region and has tropical climate. Rainfall is moderate with a mean annual rainfall of about 1311.75 cm. It is made up of plain lands and hills measuring up to 300 feet above the sea level at some points. According to 2006 census by the National Population Commission (NPC) Nasarawa state has a total population of 1,863,275.

Nassarawa State is a multi-ethnic state. The major ethnic groups found in the state are; Eggon, Mada, Gwandara, Bassa, Alago, Rindre, Nyamkpa, Migilli, Koro, Kantana, Arum, Afo, Tiv, Hausa, Fulani and Kanuri. Three major religious groups are predominant in the state namely; Christianity, Islam, and Traditional worshippers. Nasarawa state is a predominantly a rural and agrarian state. Majority of the people reside in the rural areas while a few are

found in the towns of Lafia, Keffi, Akwanga, Nasarawa and Karu. Therefore informal settlements with no direct access to health care facilities are common.

There is high level of illiteracy and ignorance in the state. The state has two tertiary health institutions which are Specialist Hospital Lafia and Federal Medical Centre Keffi. There are thirteen General Hospitals and Comprehensive Health care centres cited in each local government area and several private clinics and public health centres scattered all over the state. Nasarawa state has a current HIV/AIDS prevalence rate of 10.0% (NASACA, 2008), which was higher than most states in Nigeria. Similarly Lafia the state capital with HIV/AIDS prevalence of 19.0% (NASACA, 2008) was ranked 5th after Otukpo, Calabar, Kafanchan and Abakaliki in terms of HIV/AIDS prevalence. Hence, the impact of this condition on the health care workers in the state cannot be overemphasized.

### Study population

There were 1,680 health care workers as at December 2007. This comprised of 1357 in public/Government Health institutions and 323 registered health workers in Private Hospitals/Clinics throughout the state (MOH, Nasarawa state). This is as shown in Table 1.

### Sample size determination

The total number of registered health care workers in both public and private health facilities representing aforementioned health professionals at December 2007 was 1680 (Nasarawa State Ministry of Health, Lafia) . The sample size used for this study was calculated with the formula (used when total study population is less than 10000):

$$nf = n/1 + (n)/(N)$$

Where; nf = the desired sample size when population is less than 10000; n=the desired sample size when population is more than 10000; N = the estimate of population size.

Hence if n is approximated to be 400 derived from the formula,  $n = z^2 pq/d^2$ , and N is 1680 then:

$$nf = 400/1 + (400)/(1680) = 322$$

### Sampling technique

A multistage sampling technique was used to obtain a representative sample of the health care workers in the state:

1. Nasarawa state was selected from the 17 states in Northern Nigeria by random sampling technique (balloting);
2. Selection of local government areas. The first stage was the grouping or categorization of the 2 tertiary, 13 secondary and 13 comprehensive model primary health care facilities and 36 registered private hospitals in the 12 local government areas in the state. In order to obtain a representative sample, two local government areas was selected by random sampling technique;
3. Selection of facilities surveyed. A total of 12 health facilities were sampled. This comprises of 2 tertiary facilities, 2 general hospitals, 2 Comprehensive health facilities present in the local governments selected and 6 registered private health care centres. The 6 registered private health care centres were selected using simple random sampling (by balloting);
4. Selection of study participants. Equal no of respondents (112 health care workers) were allocated to each tertiary, secondary, PHC, and Private (mostly primary health care delivery) hospitals respectively. Proportional sampling technique was used to obtain a

**Table 1.** Socio-demographic characteristics and HIV related stigmatization.

Characteristics	Total number (%)	HIV related stigmatization attitude	Unadjusted odds ratio
<b>Age</b>			
20-30 yrs	172 (40.9)	35 (20.3)	0.96 (0.27-3.66)
31-40 yrs	165 (39.2)	46 (27.9)	1.45 (0.42-5.48)
41-50yrs	65 (15.4)	12 (18.5)	0.85 (0.21-3.67)
>50 yrs	19 (4.5)	4 (21.1)	1.00
Total	421 (100.0)		
<b>Sex</b>			
Male	284 (67.5)	64 (22.5)	0.92 (0.55-1.53)
Female	137 (32.5)	33 (24.1)	1.00
<b>Marital status</b>			
Single	116 (27.6)	25 (21.6)	0.31 (0.01-11.35)
Married	303 (72.0)	71 (23.4)	0.27 (0.01-10.49)
Widow(er)	2 (0.5)	1 (50.0)	1.00
<b>Profession</b>			
Medical Doctor	52 (12.4)	23 (44.2)	2.21 (0.90-5.46)
Nurse/Midwives	78 (18.5)	11 (14.1)	0.46 (0.17-1.20)
Pharmacists	53 (12.6)	0 (0.0)	0.00 (0.00-0.29)
Laboratory Scientists	54 (12.8)	19 (35.2)	1.51 (0.61-3.76)
Community Health workers	57 (13.5)	0 (0.0)	0.00 (0.00-0.27)
Hospital Orderlies	74 (17.6)	30 (40.5)	1.90 (0.83-4.40)
Others	53 (12.6)	14 (26.4)	1.00
<b>Years of work experience</b>			
0-5 yrs	198 (47.0)	43 (21.7)	1.87 (0.58-6.69)
6-10 yrs	111 (26.4)	32 (28.8)	2.73 (0.82-10.06)
11-15 yrs	48 (11.4)	10 (20.8)	1.78 (0.44-7.60)
16-20 yrs	33 (7.8)	8 (24.2)	2.16 (0.50-9.90)
>20yrs	31 (7.4)	4 (12.9)	1.00

representative sample of the health care workers in the state. The ratio of doctors to nurses in each hospital was used as the sampling scheme, and hospital laboratory Scientists and Pharmacists were over-sampled to allow for their adequate representation in the analysis.

A total of 421 randomly selected health care workers participated in the self-administered survey between January and February, 2009, with less than 5% refusal rate.

### Research instrument

The instrument or tool used in this study was a self administered questionnaire. The questionnaire was structured into three sections, namely: Bio-data (demographic characteristics); HIV related stigmatization attitude and practice; and ethical and psychological issue.

The subscales hypothesized to reflect discrimination were as follows (all items were reversed when appropriate to have higher scores reflect more prejudicial attitudes; choices ranged from 1 to 5): "You would be willing to work in the ward with HIV positive patients everyday"; (2) "People who got HIV/AIDS through sex and

drug use got what they deserved", (3) "People who got infected with HIV/AIDS through drug use deserve good quality medical care"; (4) "If you worked with HIV positive patients, you would feel embarrassed to tell other people about it", (5) "You feel afraid of PLWHAs."

This questionnaire was pre-tested on randomly selected 45 health care workers in the state representing about 10% of the required sample size. This was done to determine if the questions were clearly understood, hence necessary corrections or amendments were effected on the questionnaire before conducting the study.

### Data collection

Data were collected from three different local government areas in Nasarawa State. Participants consisted of service providers who were currently working at the health care facilities in the area. Public health care facilities in Nigeria are organized on three different levels: tertiary, secondary and primary health care. Generally, hospitals at higher levels serve a broader region and are more likely to have technologically advanced equipment and a

more highly educated staff. Such hospitals have the capacity and resources to perform more sophisticated operations, and therefore also are more likely to attract more patients.

The questionnaire was pre-tested in January 2009 on 45 respondents who were randomly selected health care workers. All the necessary adjustments and corrections were made in the question sequence. Most of the questions except a few were close-ended. Pre-coding was done to allow for easy data capturing. Data collection was carried out by the investigator and a research assistant who possessed senior secondary school certificate. The assistant was trained by the investigator on the research methodology and data collection procedure before the commencement of the research. At each selected health facility, the investigator explained to subjects the reasons for the study and its voluntary nature and sought for their cooperation before the distribution of questionnaires. An incentive of two birros (blue and red in colour) was given to each participant.

### Ethical consideration

Ethical approval was sort from the Ethics and Research Committee of the Nasarawa State Ministry of Health, evidence of which was an approval letter. It would be note worthy to state that although the Specialist Hospital Lafia and the Federal Medical centre Keffi had their own ethical and Research Committee; their management consented on presentation of the approval letter of the state Ministry of Health. A consent information sheet/form was designed which was used in seeking informed consent from health care facilities and individual respondents after explaining thoroughly the purpose, objectives, procedure and methodology of the study to them. Respondents were informed that they were free to withdraw from the research at any point if they so wished and that the final copy of the study would be made available to them on demand.

### Data analysis

To describe patient characteristics, we calculated proportions and medians. For categorical variables, we compared proportions using chi-square tests and, when appropriate, Fisher's exact test. Chi-square was used to determine association between categorical variables and a p value of less than 0.05 was considered significant. Data was presented in tabular form.

A logistic regression model was produced with discriminatory attitude and non-discriminatory attitude as outcome variable to identify associated factors. All explanatory variables that were associated with the outcome variable in bivariate analyses were included in the logistic models. P-value 0.8 was used to enter a variable in the model and 0.1 to remove a variable from the model.

## RESULTS

A total of 421 health workers were interviewed, 284 (67.5%) were males and 137 (32.5%) were females. Majority (77.2%) of the participants were aged 20 to 39 years and only 1(0.25) and 2 (0.5) were less than 20 years and greater 60 years respectively. The mean age of the health workers studied was 34.09 SD = 8.1 and the mean year of experience at work was 8.24, SD = 7.53. Among the health workers, 47.0% have been working for 5 years or less, 26.4% for 6 to 10 years, 11.4% for 11 to 15 years and 15.2% for more than 15 years and above. Three hundred and three (72.0%) were married and 116 (27.6%) were Singles, only 2 (0.5) were widower.

Precisely 309 (73.4%) were selected from government hospital and 112 (26.6%) from private health facilities. 52 (12.4%) were Medical doctors, 78 (18.5%) were Nurses. 54 (12.8%) were laboratory scientists, 53 (12.6%) were Pharmacists, 57 (13.5%) were community health workers, 74 (17.6%) were hospital orderlies and 53 (12.6) were from other professions in the hospital. The socio-demographic characteristics of the participants are summarized in Table 2. Sixty-four percent of the facilities surveyed reported not having antiretroviral medications in their facility. Moreover, the availability of other medications and dietary supplements was limited, and protective materials and other supplies and utilities were not always available.

### Discriminatory practices

About half (46.1%) of the health care workers, do not know their HIV status 172 (40.9%) and (5.2%) did not disclose their HIV status. Only 2 (0.5%) declared that they were HIV positive with 225 (53.4%) reported that they were HIV negative. Only 1.7% of the health care workers reported giving confidential information to a patient's family member or relatives without the patient's consent in the last 6 months; however 96.7% reported that they usually inform other health care providers involved in the management of the patients. Majority, 97.9% of the health workers believe that they have a strong legal and ethical obligation to treat PLWHAs and are not allowed to turn them down. Majority (97.1%) believe that confirmed cases of AIDS should be treated in a separate ward. About 2.1% of these health workers believe that other patients will be reluctant to attend hospitals where lots of AIDS patients are being managed. Only 3.1% of health workers surveyed supported mandatory HIV test for all health care providers.

### HIV related stigmatizing attitudes

HIV related stigmatization was highest among the medical doctors (OR = 2.21, C.I = 0.90 to 5.46) and the hospital orderlies (OR = 1.90, C.I = 0.83-4.40) when compared with other health care providers. Furthermore, discriminatory attitude was highest among those in tertiary hospitals (OR = 2.39, C.I = 1.37 to 4.18). There was however no statistically significant difference in HIV related stigmatization among the male workers compared to females (OR = 0.92, C.I = 0.55 to 1.53), Public health care providers when compared to private health workers (OR = 1.06, C.I = 0.61 to 1.83) and among those working in the rural areas when compared to urban areas (OR = 1.48, C.I = 0.83 to 2.66). Awareness of National policy on HIV in the workplace was not statistically significantly associated with reduction in HIV related stigmatizing attitude among the health care providers (OR = 1.68, C.I

**Table 2.** HIV related stigmatization and workplace related characteristics.

Characteristics	Total number (%)	HIV related stigmatization attitude number (%)	Unadjusted odds ratio
<b>HIV status</b>			
Known	249 (59.1)	39 (15.7)	1.19 (0.73-1.94)
Unknown	172 (40.9)	20 (11.6)	1.00
<b>Type of practice</b>			
Public	309 (73.4)	72 (23.3)	1.06 (0.61-1.83)
Private	112 (26.6)	25 (22.3)	1.00
Location of facility			
Rural	110 (26.1)	20 (18.2)	1.48 (0.83-2.66)
Urban	311 (73.9)	77 (24.8)	1.00
<b>Type of facility</b>			
Tertiary	179 (42.5)	55 (30.7)	2.39 (1.37-4.18)
Secondary	76 (18.1)	16 (21.1)	1.44 (0.68-3.02)
Primary	166 (39.4)	26 (15.7)	1.00
<b>HIV/AIDS related training in last 2 years</b>			
Yes	307 (73.1)	2 (50.0)	3.39 (0.34-34.13)
No	113 (26.9)	95 (22.8)	1.00
<b>Aware of HIV policy document in workplace</b>			
Aware	9 (2.1)	1 (33.3)	1.68 (0.29-7.26)
Not aware	412 (97.9)	96 (23.0)	1.00
<b>Accidental exposure to HIV blood and body fluid in the last 6 months</b>			
Exposed	22 (5.2)	7 (31.8)	1.60 (0.57-4.35)
Not exposed	399 (94.8)	90 (22.6)	1.00

= 0.29 to 7.26). Similarly recent training in infection control practices was not significantly associated with reduction in discriminatory attitude towards the PLWHAs (OR = 3.39, C.I = 0.34 to 34.13).

In the multiple logistic regression models, two variables were found to be independently associated with HIV related stigmatizing attitude among the health care providers. The only predictor of HIV related stigmatization was the health care workers working in tertiary hospitals (OR = 1.56, CI = 1.2 to 2.03). This is as shown in Table 3.

## DISCUSSION

The study found out that about half (46.1%) of the health care workers did not know or refuse to disclose their HIV status. HIV-related stigma and discrimination have been increasingly recognized as major obstacles to effective HIV/AIDS prevention and care programs (Parker, 2002) and the adoption of HIV prevention strategies. HIV-related stigma can cause people to refute risk, refuse

testing, delay treatment, not disclose their HIV status, and not seek public assistance (Lee et al., 2005; Valdiseri, 2002; Dlamini, 2007). Health workers have also been found to be reluctant to have an HIV test due to stigma and denial, and few had actually been tested, which inhibited their ability to be role models and to discuss HIV testing with clients (Dlamini, 2007; Atulomah, 2002; Adebajo, 2002). This suggests that HIV stigma reduction programs should be developed to target the health workers in this study population and other similar groups.

The fact that majority of these health workers (97.1%) believe that confirmed cases of AIDS should be treated in a separate ward and few 3.1% of health workers surveyed support mandatory HIV test for all health care providers indicated a high level of fear and discrimination on the part of these health workers. Health workers have also been shown to have many of the same stigmatizing attitudes toward HIV found in the general public (Atulomah, 2002; Adebajo, 2002; Mbanya et al., 2001; Ofili et al., 2003; Orji et al., 2002; Rahlenbeck, 2004; Reis et al., 2005). Stigmatizing attitudes further discourage

**Table 3.** Multivariate analysis- predictors of HIV related stigma.

Characteristics	Adjusted odds ratio
<b>Profession</b>	
Medical doctor	2.37 (0.98-5.43)
Nurse/midwives	0.48 (0.20-1.17)
Pharmacists	0.00 (0.00-0.25)
Laboratory scientists	1.62 (0.70-3.74)
Community health workers	0.00 (0.00-0.23)
Hospital orderlies	2.03 (0.94-4.41)
Others	1.00
<b>Type of facility</b>	
Tertiary	1.56 (1.2-2.03)
Secondary	0.84 (0.4-1.76)
Primary	1.00

respectful interactions with clients and their caregivers when the health worker knows or suspects that the client is living with HIV, and also make both health workers and clients reluctant to discuss HIV prevention. PLWHA and their caregivers have reported feeling that health workers treat them with less respect and discriminate against them, which discourages them from seeking help from the health care system. For PLWHA to receive optimum care, their service providers need to be able to separate their personal prejudices and feelings of stigmatization from their professional attitudes and behaviours toward their patients. The identification of various possible manifestations of HIV stigma can help service providers to better recognize and identify how HIV stigma may impact the lives of their patients as well as their own lives. Further exploring the source of each dimension identified in more detail will assist in the development of more focused and meaningful interventions.

On the other hand, almost all 97.9% of the health workers believe that they have a strong legal and ethical obligation to treat PLWHAs and are not allowed to turn them down their patients but they however informed other health care providers involved in the management of the patients. The study further show that very few 1.7% of the health care workers reported giving confidential information to a patient's family member or relatives without the patient's consent in the last 6 months. This is in line with various international principles of medical ethics and Nigerian codes of conduct which clearly provide for patient autonomy, that is the right to informed consent and confidentiality of patient information thus violations of human rights, the denial of treatment and breaches of informed consent and confidentiality detailed (United Nations General Assembly Official Records, 1967, 1989; Medical and Dental Council of Nigeria, 1995; The United Nations human rights system. Nigeria-Treaties: ratifications and reservations, 2002).

The fact that HIV related stigmatization was high though not significantly higher among the medical doctors and hospital orderlies, females' gender, public health care providers and those working in the rural areas suggests that urbanization and professionalism may not be a major factor influencing discriminatory attitude among the health workers in Northern Nigeria. Our findings are in contrast with studies done in China and other Asian countries but similar to studies done in Nigeria and other African countries (Li, 2007a; Deacon, 2006; Emet, 2005; Fife and Wright, 2000; Kang et al., 2005; Reidpath and Chan, 2005; Nyblade, 2006; Chen et al., 2005). This suggests that HIV stigma reduction programs among the health workers in this study population and other similar groups should address professional attitude and cultural beliefs along with scientific matters.

Awareness of National policy on HIV in the workplace was not statistically significantly associated with reduction in HIV related stigmatization among the health care workers. Similarly recent training in infection control practices was not significantly associated with reduction in discriminatory attitude towards the PLWHAs. This finding is supported by previous studies that demonstrate the effect of HIV/AIDS education of nurses and other health workers on their attitudes and behaviour towards patients who are HIV-positive in Nigeria and elsewhere (The United Nations human rights system Nigeria-Treaties: ratifications and reservations, 2002; McCann and Sharkey, 1998; Ezedinachi, 2002). However, no policy or law can alone overcome HIV/AIDS related stigma and discrimination. HIV/AIDS stigma and discrimination should be tackled at the community and national levels. These studies also suggest that education about scientific matters is not likely to be sufficient to achieve change in practice and that educational programs may also need to address attitudes and cultural beliefs.

The study concludes HIV related stigmatization is mostly prevalent in tertiary facilities among the health workers in Northern Nigeria. Furthermore, interventions to address attitudes and cultural beliefs may be the key towards reduction of HIV related stigmatization among the health care workers in Northern Nigeria and other similarly low income populations.

Given the cross-sectional nature of the results, interpretation of study results is restricted. Future research with a longitudinal approach would be valuable. Our analyses identified significant relations, but their relative strengths were often weak. We found a relationship between professional attitudes and discrimination. A major limitation is that our research investigated perceptions of the health workers; behaviour when faced with PLWHAs in a hospital environment might be different hence information provided by respondent could not be validated through direct observation by the investigator. However, the proportional sampling method and random selection of participants ensured that every cadre of health workers were proportionately included in the study,

thus leading to equal probability of survey inclusion of various perceptions in the various profession, this indicate that our study findings might represent the actual situation among the study population.

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