

The Impact of Stigma and Discrimination on Adherence to Medication amongst People Living with HIV in Tiv Land, North Central Nigeria

Abstract

Despite the identification of stigma as a factor impeding public utilisation of HIV counselling, testing, and treatment services in Nigeria, gaps still exist in knowledge on the impact of stigma, and discrimination on adherence to medication amongst people living with HIV (PLWH) in the study area. This study adopted descriptive mixed methods (triangulation) to examine the impact of stigma and discrimination on adherence to medication amongst PLWH in Nigeria. A sample of 1,621 respondents was collected using multi-stage and purposive sampling methods. Structured interviews using questionnaires and in-depth interviews (using a guide) were utilised for data collection. SPSS (version 21) was used for quantitative data analysis while the qualitative data was analysed thematically. There are 46.3% men and 53.7% women. Generally, their income is low, 70.7% are earning less than N25, 000 (approximately \$125 USD) per month. The phenomenon of Stigmatisation and discrimination of PLWH is common. Hence they (PLWH) avoid public places, travel long distances away from their immediate community to collect drugs, to avoid been noticed around the centers. They sometimes miss taking drugs regularly as prescribed, suffer depression and die. Stigma and discrimination impede adherence to medication amongst PLWH in Nigeria. More efforts should be made to create awareness to reduce stigma and discrimination of HIV patients, while augmenting their income to meet up with the

25 challenges of adherence to medication. The overall benefits would be enhanced mechanism of
26 HIV prevention, treatment and control in the study area.

27

28 **Keywords:** Stigma; Discrimination; HIV; Adherence to Medication; Nigeria

29

30 **1.0 Introduction**

31 The view that HIV is ‘incurable and fatal, contagious, a threat to life of others, physically
32 degenerative and disfiguring, and associated with a painful death’ [1] has elicited
33 stigmatisation and discrimination of people living with HIV in Tiv land, North central
34 Nigeria. Stigma is defined as ‘an attribute that is deeply discrediting’; it is socially
35 constructed through a process that involves stereotyping and labelling which culminates in
36 distinguishing between ‘them and us’ [2]. Within the context of HIV infection and its
37 attendant medical conditions amongst the Tiv people, there are socio- medical constructions
38 of *nguedanzaria man nguedanzaria ga* (those living with HIV and those not living with
39 HIV). HIV possesses all the characteristics of stigmatised medical conditions [3].

40 Stigma had been and will continue to be one of the factors influencing prevention and
41 treatment of some diseases in the health sector, if adequate measures are not taken to address
42 it. For example, people suffering from diseases such as leprosy, mental illness and urinary
43 incontinence are stigmatised [4]. Stigma is also associated with HIV and in Sub-Saharan
44 Africa, it has been reported that people living with HIV are stigmatised [4, 5]. In Nigeria, 3.2
45 million people are living with HIV and the incidence cases of HIV infection in 2014 was
46 227,518 [6]. As the information about individuals who have tested positive, and have been
47 placed on drugs get to the people in the communities, it creates fear and the tendency to avoid
48 infection by those who are seronegative. The resultant effect is that those living with HIV

49 avoid people and public places including health centers where they receive Anti-retroviral
50 Therapy (ART). The focus of this study is on the impact of stigma on adherence to
51 medication amongst PLWH in Tiv land, North central Nigeira. Stigma is a critical factor for
52 the uptake of voluntary counselling services in Nigeria [7], **however**, its impact on adherence
53 to medication remains unclear. Information with regard to the relationship between stigma
54 and adherence to medication would benefit the individuals, and collectively, public health
55 with regard to HIV prevention, treatment and control.

56 In Sub-Saharan Africa, the negative implications of stigma and discrimination on HIV
57 voluntary counselling and testing have been noted in South Africa [8] and in Nigeria [7].
58 Russell and his colleagues [1] have reported that antiretroviral therapy has not significantly
59 changed the structural drivers of stigmatisation in Uganda. Other studies in Nigeria, have
60 implicated social isolation, discrimination, stigmatization, and abandonment by partner as
61 some of the reasons why HIV/AIDS seropositive individuals fear to disclose status to
62 partners, relations and the public [9, 10, 11]. It has been observed that even health care
63 workers isolate HIV/AIDS patients from other ones, refuse to admit them in the hospital,
64 wear extra cloves when examining them and charge very high fees for care [10].

65 It has been argued that uptake of ART can reduce some stigmatising characteristics
66 especially where the progress of the disease is reversed, allowing the individual to play his or
67 her social roles [12]. Other studies have reported that ART is capable of reducing
68 internalised and enacted stigma, as observed in Haiti [12] and South Africa, where some of
69 the individuals who recovered due to the utilisation of ART were no longer afraid to disclose
70 their HIV status and also campaigned for access to treatment [13]. Available information
71 indicate that ART is capable of reducing self-stigmatisation amongst PLWH **[see** 14, 15, 16,
72 17, 18].

73 In spite of the benefits of ART uptake, stigma still persist in sub-Saharan Africa [19,
74 20, 21]. In some instances where ART is unable to change the underlying causes of stigma
75 such as moral discourses that pass judgement on actions perceived to be against societal
76 norms, individuals may continue to anticipate and experience stigma from others [22, 23, 16,
77 17, 18]. The social conditions in Tiv land, have produced a pattern of stigma that is rooted in
78 the fear of HIV as excruciating terminal disease. Structural poverty and intake of mostly
79 unbalanced diet have made recovery and good physical appearance for most individuals on
80 ART very slow. Hence, their presence in any gathering, public institutions, or even at home
81 creates a picture of individuals in agony, thereby, enhancing both self and anticipatory stigma
82 from others amongst PLWH. Stigma has impacted negatively on HIV prevention and
83 treatment in Nigeria.

84 **1.1 Social Capacity, Motivation, Stigma and Discrimination**

85 Stigmatisation and discrimination of PLWH in Tiv land are based on the inequality that exist
86 between those whose health, strength and good physical appearance have been degraded by
87 HIV and those who are conceivably normal (HIV sero-negative). Those who are normal
88 don't want to suffer untold hardship and death, as a result of HIV infection. They are
89 motivated by the desire to remain healthy through avoiding PLWH. Further, the patients are
90 isolated at home where they sit, eat and drink water in personalised seats and plates;
91 uncomplimentary statements are made about them.

92 Conversely, most of the PLWH lack sound education, good income and other social support
93 that would have developed their social capacity to be resilient. This explains why some
94 PLWH indulge in self and anticipatory stigma by avoiding public places, if possible, they
95 travel long distances away from their immediate community to collect drugs, to avoid been
96 noticed around the centers

97 **2.0 Methods**

98 **2.1 Quantitative Methods**

99 This study adopted descriptive mixed methods (triangulation) to examine the impact of stigma
100 and discrimination on adherence to medication amongst PLWH in Nigeria. A sample of
101 1,621 (864 women; 757 men) respondents was collected from 2 clinics (Mkar; Aliade) and
102 other 2 locations (Jyovkundan; Udei) using multi-stage sampling methods. A probability
103 sampling without replacement (raffle draws) was used in selecting Gwer West (urban area)
104 and Guma (rural area) from the homogeneous settlements of Ichongu block; while Gboko
105 (urban area) and Konshisha (rural area) were selected from the Ipusu using the same method.
106 General Hospital, Aliade was then selected from Gwer West, while NKST Hospital, Mkar
107 was selected from Gboko to obtain samples of those living with HIV. The table of random
108 numbers was used in selecting Udei from Guma out of several other rural settlements such as
109 Kaseyor, Yerwata, Ukohor, Umenga, Agasha, Daudu, Uluva, Yogbo etc. Similarly,
110 Jovkyundan was selected from Konshisha out of other rural settlements such as Tse-
111 Agberagba, Gungul, Korinya, Agbeede, Awajir, Tsuwe, Mbaakpur, Achoho, Iber, Akputu
112 etc.

113 An eight page questionnaire with closed and open ended questions was used for quantitative
114 data collection amongst 805 HIV seropositive clinic attendees and 796 HIV seronegative
115 individuals on background characteristics, motivations for sexual relationships, sero-
116 discordant relationships, risky sexual behaviours, stigma and discrimination, and HIV risk.
117 The target groups were individuals including men and women aged between 18 and 65 years
118 old, who were presumed to be sexually active, in relationship (partners), had tested for HIV
119 prior to the study, and were either HIV positive or negative. The sample excluded those
120 below the age of 18years; those with AIDS and opportunistic infections, pregnant women and
121 those who were mentally ill. .

122 At the completion of data collection, the responses were coded and entered into Statistical
123 Product and Service Solution (SPSS) version 21 software, which has provision for the
124 Generalised Linear Regression with Cumulative Link, was used for the analysis of
125 quantitative data.

126 **2.2 Qualitative Methods**

127 In this segment of data collection, purposive sampling **method** was used in selecting 20
128 respondents who participated in in-depth interviews. Five individuals were selected in each
129 location. The interviews were conducted in Tiv language using a guide with questions on
130 structural factors, background characteristics, knowledge and attitude towards HIV, risky
131 sexual behaviours poverty, stigma and discrimination. An audio recorder was used for
132 recording the discussions during the in-depth interviews for the purpose of transcription after
133 the data collection sessions. The data were transcribed and analysed by the researcher
134 following the principles of concurrent transformative strategy (either nested or concurrent
135 triangulation). It ensures that better insight would be obtained from the qualitative data to
136 provide deeper understanding of some findings from the quantitative. The findings from
137 qualitative data provided further insight into the intricacies of sexual behaviours, HIV, stigma
138 and discrimination.

139 **3.0 Results**

140 **3.1 Descriptive Statistics on Background Characteristics of Respondents and other** 141 **variables**

142 **Table 1 shows** that the sample is made up of 46.3% men and 53.7% women. Those between
143 30 and 34 years are 23.4%, while those between the ages of 25 and 29 years are 21.9%.
144 Approximately 55% are married, 17.9% are either divorced or separated, while the single and
145 those cohabiting are 26.2% and 0.6% respectively. Generally, their income is low, 70.7% are

146 earning less than N25, 000 (approximately \$125 USD) per month, and by educational
147 attainment, 7.6% have not obtained formal education, while 11.7% have completed only
148 primary education. The percentage of completion of secondary education seems to be high
149 (47.5%) because all respondents who have completed some form of secondary education (the
150 junior secondary school) are in this category. The respondents who have completed some
151 form of higher education (Diploma, Higher Diploma, First degree, Postgraduate) are 530
152 (33.1%). One thousand five hundred and four (93.9%) of the respondents know someone
153 living with HIV. The respondents who were seropositive were on drugs at the time of the
154 interviews. And amongst those who were seronegative, 737 (92.6%) either agreed or strongly
155 agreed that they would feel bad if infected with HIV (see Table 1). Thus indicating that they
156 would do every possible to avoid being infected with HIV. The individuals known to the
157 respondents as living with HIV/AIDS were mostly friends 563 (35.2%), husband or wife 189
158 (11.8%), and sister 219 (13.7%, see Table 1).

159 Table 1: Selected Characteristics of Respondents, Attitude to and Knowledge of HIV Patients

Age	Frequency	Percentage
18-19yrs	163	10.2
20-24yrs	293	18.3
25-29yrs	342	21.4
30-34yrs	336	21.0
35-39yrs	120	7.5
40-44yrs	136	8.5
45-49yrs	98	6.1
50-54yrs	67	4.2
55-59yrs	35	2.2
60+	11	0.7
Total	1601	100
Relationship Status		
Married	820	51.2
Single	527	32.9
Widowed	123	7.7
Divorced	59	3.7
Separated	65	4.1
Cohabiting	7	0.4
Total	1601	100
Education		
No formal schooling	122	7.6
Primary	188	11.7
Secondary	761	47.5
Tertiary	530	33.1
Total	1601	100
Income		
Less than 25,000	1186	74.1
25,000-49,000	287	17.9
50,000-90,000	98	6.1
100,000+	30	1.9
Total	1601	100
<i>whether they will feel bad if infected with HIV</i>		
(Seronegative only)		
Strongly disagree	30	3.8
Disagree	29	3.6
Agree	307	38.6
Strongly agree	430	54.0
Total	796	100
<i>Knowledge of someone living with HIV Knowledge</i>		
Yes	1504	93.9
No	97	6.1
Total	1601	100
<i>Relationship of Respondents with someone living with HIV/AIDS</i>		
Husband/Wife	189	11.8
Brother	176	11.0
Sister	219	13.7
Friend	563	35.2
Parents	38	2.4
Children	27	1.7
Others	292	18.2
Don't know	97	6.1
Total	1601	100

160 *Note.* The source of data is from field survey, 2014

161 It is obvious that those who were not HIV positive would do every possible to avoid been
162 infected with HIV including stigmatising and discriminating against PLWH.

163

164 **3.2 Qualitative Findings on HIV Variables (Stigma, Discrimination, Non-disclosure of** 165 **Status and Non Adherence to Medication by those on Antiretroviral Drugs)**

166 The epidemic in the study area is a generalised type with sexual intercourse contributing
167 more than 80% of the cases of HIV infection [6]. There is general awareness about the
168 sources of spread of the disease in the study areas. However, there is common knowledge that
169 sexual intercourse constitutes a major source of infection, therefore HIV positive status is
170 considered as a product of **infidelity and such individuals are seriously stigmatised.** Hence
171 most men who are sero-negative status find it difficult to accept women who are HIV
172 positive. This issue is captured in the statement below:

173 *You see HIV is contracted through sex, so for women who have HIV and their partner don't*
174 *have it; it will take the grace of God for the man not to divorce the woman, because it is seen*
175 *as a product of infidelity* (Female; 30 years, Married).

176 Further, those who are **HIV positive are discriminated** upon by relations, friends, and
177 neighbours. They avoid them in a surreptitious manner believing that they may want to
178 deliberately infect them. The acts of discrimination against seropositive individuals are
179 captured in the following statement:

180 *We avoid people with HIV, we don't want to talk to them, or eat with them or wash their*
181 *clothes or sleep with them because we will be infected; but we do this secretly. If they know*
182 *that you are avoiding them, they will not be happy. Some people are wicked; they will want to*
183 *infect others, so we are afraid because we don't know the intention of the person* (Female; 23
184 years; single).

185 There are those who don't want to mingle with HIV positive individuals. They avoid drinking
186 water in the same cup or sleep in the same bed with them; just on very rare occasions, they
187 might eat with them:

188 *I don't want to be with those infected, but I go for tests very often so that if I am infected, I*
189 *will know. I will not sleep in the same bed with an infected person. I will not drink water in*
190 *the same cup with the person, not even my husband, but I can eat with the person, if the*
191 *person is my relation* (Female; 22 years; married).

192 Corroborating what others have said, another respondent points out that the treatment melted on
193 PLWH could be likened to one which slaves were subjected to during the slave era. She says

194 *Neighbours discriminate against HIV patients, if you drink water in a cup, they will not use*
195 *it; they will not eat with you. If you use a sponge for bath, they will not use it. When you are*
196 *with them, they see you as a different person just like they used to see slaves in the ancient*
197 *times* (Female; 30 years, Married).

198 **Consequent upon stigma and discrimination** of PLWH, HIV positive individuals are afraid to
199 disclose their status; they avoid public places and drug collection centres, in order not to be
200 seen by relations, friends or neighbours collecting antiretroviral drugs. A female respondent
201 captures the issue in the statement below:

202 *This has made many of the HIV patients to hide their status and avoid centres where they are*
203 *given drugs, so that they will not be seen collecting drugs* (Female; 21 years; single).

204 In another example, a female respondent points out that those infected with HIV suffer
205 discrimination as if they are cursed, as a result, they **refuse to disclose their status**, avoid
206 taking drugs and prefer death to life.

207 *I feel those people should be kind to those infected with HIV. It is like a curse. Some people*
208 *have died because of this. People are afraid to disclose their status because so and so person*

209 *will see them taking drugs, so they have refused to take drugs and they have died* (Female;
210 24years; Separated)

211 Furthermore, apart from hiding their HIV status. PLWH avoid drug collection centers so that
212 they may not be seen collecting drugs. These acts are captured in the following words:

213 *Sometimes when they are passing, people discuss them and point fingers at them, and avoid*
214 *sitting where they have sat. They refuse to eat from the plates used by them. This has made*
215 *many of the HIV patients hide their status and avoid centres where they are given drugs, so*
216 *that they will not be seen collecting drugs* (Female; 21 years; single).

217

218 Some HIV positive individuals who don't want to be seen collecting drugs travel to far
219 collection centers to do so.

220 *Some years ago, there were no drugs for HIV and so people who got the disease were highly*
221 *discriminated. But now it is better. However, people are still going to distant centres to*
222 *collect drugs, so that they will not be seen by their neighbours* (Male; 35 years; married).

223 As a result of stigmatisation, some individuals living with HIV suffer depression, they isolate
224 themselves and die.

225 *The people that I know who have HIV have their cups for drinking water; some people don't like*
226 *eating with them, though other people shake hands with them; some of them who have HIV don't like*
227 *to go to where there are people and even to attend church service. They are depressed. Many of them*
228 *are dying because of that* (Male; 31 years; married).

229 However, it is the desire of PLWH to be loved and cared for, just like those not living with the
230 disease. This feeling was expressed by most of the PLWH as captured in the excerpt below:

231 *People should stop discriminating those infected with HIV. Apart from giving drugs to them, they*
232 *should also help them with food; because those infected are afraid of discrimination, people move to*

233 *very far places like Makurdi and Abuja to collect drugs; the government should help* (Female; 24
234 years; separated).

235 **4.0 Discussion**

236 As indicated elsewhere, the full utilisation of programmes in place for prevention of HIV
237 infection and treatment of PLWH in Nigeria are threatened by stigma and discrimination. While
238 there is information on the negative implications of stigma and discrimination on the uptake of
239 voluntary counselling services in Nigeria [7] and elsewhere [3, 9], the influence of stigma on
240 adherence to medication remains unclear. This study has documented failure to adhere to
241 Anti-retroviral treatment due to stigma and discrimination.

242 Due to stigma and discrimination, some of the PLWH are afraid to disclose their HIV sero-
243 positive status and would like to be unnoticed collecting drugs. They travel to Drugs
244 Collection Centers that are far from their place of residence and where their identity may
245 remain hidden. Travelling to far places in search of conducive environment for drugs collection
246 has additional burden in terms of cost. It adds to the overall HIV burden on the individual who is
247 infected and his or her relations. In the face of low income and structural poverty, the individuals
248 would sometimes fail to raise enough funds, to enable them travel to these centers to honour
249 appointment and replenish their exhausted stock of drugs. Consequently, they sometimes miss
250 taking their drugs regularly as prescribed. The inability to adhere strictly to medication would
251 lead to treatment failure and attendant issues.

252 It is worthy to note that treatment failure may lead to complications and death. Thus stigma and
253 discrimination are capable of increasing treatment failure and death amongst PLWH. This finding
254 underscore the importance of eliminating stigma and discrimination in order to ensure adherence
255 to medication amongst PLWH. If stigma is eradicated, PLWH would disclose their sero-positive
256 status [10], and also feel free to patronise Drugs Centers closer to their place of residence.
257 Relatively, PLWH would need lesser amount of money to access treatment centres to honour

258 appointments, thereby increasing adherence to medication through regular check-up and
259 replenishment of exhausted stock of drugs. The overall benefits would be enhanced mechanism
260 of HIV prevention, treatment and control in the study area.

261 **5.0 Conclusion**

262 Evidence available suggests that PLWH suffer stigma and discrimination in the study area,
263 even though, they (PLWH) would like to be loved and cared for. In reaction, some PLWH
264 avoid public places, if possible, they travel long distances away from their immediate
265 community to collect drugs, to avoid been noticed around the centers. Thus, they sometimes
266 miss taking drugs regularly as prescribed, suffer depression and die. If stigma is eradicated,
267 PLWH would disclose their sero-positive status and also feel free to patronise Drugs Centers
268 closer to their place of residence. Relatively, PLWH would need lesser amount of money to
269 access treatment centres, thereby increasing adherence to medication. The overall benefits would
270 be enhanced mechanism of HIV prevention, treatment and control in the study area.

271 **Competing interest**

272 The authors declares no conflict of interest.

273 **Consent to Publish**

274 Both the consent to participate in the study and for the publication of the findings was
275 obtained from the participants using ACU (Australian Catholic University) consent form
276 before data collection activities.

277 **Availability of data and material**

278 The datasets during and /or analysed during the current study are not publicly available due to
279 ethical issues but are from the corresponding author on reasonable

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Reference

- 285 1. Russell S, Zalwango F, Namukwaya S, Katongole J, Muhumuza R.. Antiretroviral
286 therapy and changing patterns of HIV stigmatisation in Entebbe, Uganda. *Sociology*
287 *of Health and Illness*, 2015, Pp 1-15, doi:10.1111/1467-9566.12341
- 288 2. Goffman E. *Stigma: notes on the management of a spoiled identity*. New York: Simon and
289 Schuster, 1963
- 290 3. Alonzo AA and Reynolds NR. Stigma, HIV and AIDS: an exploration and elaboration of a
291 stigma trajectory. *Soc Sc Med*, 1995, 41:303–315.
- 292 4 Horizons/Population Council. HIV/AIDS-related stigma and discrimination: a conceptual
293 framework and an agenda for action. In Population Council, 1999, New York
- 294 5 ICRW. *Understanding HIV-related stigma and resulting discrimination in Sub- Saharan Africa:*
295 *Research Update*, 2002
- 296 6 National Agency for the Control of AIDS (NACA). Federal Republic of Nigeria, Global
297 AIDS response: country progress report (Nigeria GARPR), Abuja, Nigeria, 2014.
298 www.unaids.org/sites/default/.../country/.../NGA_narrative_report_2014
- 299 7 Muoghalu, C.O and Jegede SA. The role of cultural practices and the family in the care for
300 people living with HIV/AIDS among the Igbo of Anambra State, Nigeria. *Soc Work*
301 *Health Care*, 2010, 49(10):981–1006.
- 302 8 Kalichman SC and Simbayi LC. HIV testing attitudes, AIDS stigma, and voluntary HIV
303 counselling and testing in a black township in Cape Town, South Africa. *Sex Transm*
304 *Infect*, 2003, 79:442–447.
- 305 9. Johnson OE. Social impact of HIV/AIDS on clients attending a teaching hospital in Southern
306 Nigeria. *SAHARA-J: Journal of Social Aspects of HIV/AIDS*, 2012, 9(2), 47-53. doi:
307 10.1080/17290376.2012.683578

- 308 10. Owolabi RS, Araoye MO, Osagbemi GK, Odeigah L, Ogundiran A and Hussain NA.
309 Assessment of Stigma and Discrimination Experienced by People Living with HIV
310 and AIDS Receiving Care/Treatment in University of Ilorin Teaching Hospital
311 (UITH), Ilorin, Nigeria. *Journal of the International Association of Physicians in*
312 *AIDS Care* (JIAPAC), 2012, 11(2), 121-127. doi: 10.1177/1545109711399443
- 313 11 Sekoni O. A, Obidike OR, and Balogun M.R. Stigma, mediation adherence and coping
314 mechanism among people living with HIV attending general Hospital Lagos Island
315 Nigeria. *Afr J Prm Health Care Fam Med*, 2012, 4(1): 1-10.
- 316 12. Castro A, and farmer P. Understanding and addressing AIDS-related stigma: from
317 anthropological theory to clinical practice in Heiti, *American Journal of Public*
318 *Health*, 2005, 95, 1, 53-9
- 319 13. Robins S. 'From rights to ritual': AIDS activism and treatment testimonies in South
320 Africa, *American Anthropologist*, 2006, 108, 2, 312-23.
- 321 14. Campbell C, Skovdal M, Madanhire, C, Mugurungi, O. We, the AIDS people.. how
322 antiretroviral therapy enables Zimbabweans living with AIDS to cope with stigma.
323 *American Journal of Public Health*, 2011, 101, 6: 1004-10
- 324 15. Gilbert L, and Walker L. They (ARVs) are my life, without them I'm nothing: experiences of
325 patients attending an HIV/AIDS clinic in Johannesburg, South Africa. *Health and Place*,
326 2009, 15, 4: 1123-9
- 327 16. Mbonye M, Nakamanya, S, Birungi J, King R. Stigma trajectories among people living with
328 HIV (PLHIV) embarking on lifetime journey with antiretroviral drugs in Jinja. Uganda.
329 *BMC Public Health*. 2013, 13, doi: 10.1186/1471-2458-13-804
- 330 17 Roura M, Wringe, A, Busza, J, Nhandi, B. 'Just like a fever': a qualitative study on the impact of
331 antiretroviral provision on the normalisation of HIV in rural Tanzania and its implications for

- 332 prevention, *BMC International Health and Human Rights*, 2009a, 9, doi:[10.1186/1472-](https://doi.org/10.1186/1472-698X-9-22)
333 [698X-9-22](https://doi.org/10.1186/1472-698X-9-22).
- 334 18 Roura M, Urassa M, Busza J, Mbata, D. Scaling up stigma: the effects of HIV roll-out on
335 stigma and HIV testing: early evidence from rural Tanzania, *Sexually Transmitted Infections*,
336 2009b, 85, 4, 308–12.
- 337 19 Mbonu NC, van den Borne B, De Vries NK: Stigma of People with HIV/AIDS in Sub-
338 Saharan Africa: A Literature Review. *J Trop Med* 2009
- 339 20 Simbayi, L.C, Kalichman S, Strebel A, Cloete A. Internalized stigma, discrimination and
340 depression among men and women living with HIV/AIDS in Cape Town, South Africa,
341 *Social Science & Medicine*, 2007, 64, 9, 1823–31.
- 342 21 Wolfe WR, Weiser SD, Bangsberg DR, Thior I. Effects of HIV-related stigma among an early
343 sample of patients receiving antiretroviral therapy in Botswana, *AIDS Care*, 2006, 18, 8: 931–
344 3
- 345 22 Maughan-Brown B. Stigma rises despite antiretroviral roll-out: a longitudinal analysis in
346 South Africa. *Social Science and Medicine*, 2010, 70, 3, 368-74
- 347 23 Genberg BL, Hlavka Z, Konda KA., Maman, S. A comparison of HIV/AIDS related stigma in
348 four countries: negative attitudes and perceived acts of discrimination towards people
349 living with HIV/AIDS. *Social Science and Medicine*, 2009, 68, 12: 2279-87
- 350 24 Godwin Aondohemba Timiun, *Erotica scenes in Nollywood home videos : Unsafe sexual*
351 *behaviours and HIV risk amongst viewers in Tiv land, North Central Nigeria,*
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353 *Pages 229 - 23*
354
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