**Table 1. Sociodemographic and behavioural characteristics of 1,557 health workers who provide HIV-related services by country.**

|  | **Cadre of health worker** | **Country** |
| --- | --- | --- |
|  | **Health facility staff** **(n=736)** | **Community HIV care provider****(n=601)** | **Community-based health worker****(n=220)** | ***P*** | **Zambia** **(n=1051)** | **South Africa (n=506)** | ***P*** |
|  | **n** | **%** | **n** | **%** | **n** | **%** |  | **n** | **%** | **n** | **%** |  |
| **Cadre of health worker** |  |  |  |  |  |  |  |  |  |  |  | **<0.001** |
|  Health facility staff |  |  |  |  |  |  |  | 552 | 52.5 | 184 | 36.4 |  |
|  Community HIV care provider |  |  |  |  |  |  |  | 387 | 36.8 | 214 | 42.3 |  |
|  Community-based health worker |  |  |  |  |  |  |  | 112 | 10.7 | 108 | 21.3 |  |
| **Age group** |  |  |  |  |  |  | **<0.001** |  |  |  |  | **<0.001** |
|  <25 years | 57 | 7.7 | 58 | 9.7 | 15 | 6.8 |  | 69 | 6.6 | 61 | 12.1 |  |
|  25-34 years | 230 | 31.3 | 258 | 42.9 | 57 | 25.9 |  | 322 | 30.6 | 223 | 44.1 |  |
|  35-44 years | 199 | 27.0 | 142 | 23.6 | 61 | 27.7 |  | 267 | 25.4 | 135 | 26.7 |  |
|  >44 year | 250 | 34.0 | 143 | 23.8 | 87 | 39.5 |  | 393 | 37.4 | 87 | 17.2 |  |
| **Sex** |  |  |  |  |  |  | **<0.001** |  |  |  |  | **<0.001** |
|  Male | 198 | 26.9 | 183 | 30.4 | 29 | 13.2 |  | 340 | 32.4 | 70 | 13.8 |  |
|  Female | 538 | 73.1 | 418 | 69.6 | 191 | 86.8 |  | 711 | 67.6 | 436 | 86.2 |  |
| **Marital status** |  |  |  |  |  |  | **<0.001** |  |  |  |  | **<0.001** |
|  Married | 423 | 57.5 | 274 | 45.6 | 116 | 52.7 |  | 622 | 59.2 | 191 | 37.7 |  |
|  Not married | 313 | 42.5 | 327 | 54.4 | 104 | 47.3 |  | 429 | 40.8 | 315 | 62.3 |  |
| **Education** |  |  |  |  |  |  | **<0.001** |  |  |  |  | **<0.001** |
|  Did not complete secondary | 33 | 4.5 | 9 | 1.5 | 30 | 13.6 |  | 64 | 6.1 | 8 | 1.6 |  |
|  Completed secondary | 222 | 30.2 | 324 | 53.9 | 165 | 75.0 |  | 400 | 38.1 | 311 | 61.5 |  |
|  Further**a** | 481 | 65.4 | 268 | 44.6 | 25 | 11.4 |  | 587 | 55.9 | 187 | 37.0 |  |
| **How important is religion to you** |  |  |  |  |  |  | 0.221 |  |  |  |  | **<0.001** |
|  Very important | 632 | 85.9 | 522 | 86.9 | 189 | 85.9 |  | 965 | 91.8 | 378 | 74.7 |  |
|  Important | 82 | 11.1 | 68 | 11.3 | 25 | 11.4 |  | 73 | 6.9 | 102 | 20.2 |  |
|  Somewhat important | 11 | 1.5 | 6 | 1.0 | 1 | 0.5 |  | 5 | 0.5 | 13 | 2.6 |  |
|  Not important | 10 | 1.4 | 2 | 0.3 | 5 | 2.3 |  | 8 | 0.8 | 9 | 1.8 |  |
|  Missing | 1 | 0.1 | 3 | 0.5 | 0 | 0.0 |  | 0 | 0.0 | 4 | 0.8 |  |
| **Do you live in this community** |  |  |  |  |  |  | **<0.001** |  |  |  |  | **<0.001** |
|  No | 306 | 41.6 | 143 | 23.8 | 9 | 4.1 |  | 340 | 32.4 | 118 | 23.3 |  |
|  Yes | 430 | 58.4 | 458 | 76.2 | 211 | 95.9 |  | 711 | 67.6 | 388 | 76.7 |  |
| **Have you ever tested for HIV** |  |  |  |  |  |  | **0.042** |  |  |  |  | 0.952 |
|  No | 16 | 2.2 | 8 | 1.3 | 8 | 3.6 |  | 22 | 2.1 | 10 | 2.0 |  |
|  Yes | 711 | 96.6 | 592 | 98.5 | 211 | 95.9 |  | 1022 | 97.2 | 492 | 97.2 |  |
|  Missing | 9 | 1.2 | 1 | 0.2 | 1 | 0.5 |  | 7 | 0.7 | 4 | 0.8 |  |
| **Please indicate the result of your last HIV test** |  |  |  |  |  |  | **<0.001** |  |  |  |  | **<0.001** |
|  Negative | 549 | 74.6 | 428 | 71.2 | 132 | 60.0 |  | 742 | 70.6 | 367 | 72.5 |  |
|  Positive | 105 | 14.3 | 117 | 19.5 | 49 | 22.3 |  | 214 | 20.4 | 57 | 11.3 |  |
|  Undetermined | 3 | 0.4 | 2 | 0.3 | 4 | 1.8 |  | 4 | 0.4 | 5 | 1.0 |  |
|  Missing | 79 | 10.7 | 54 | 9.0 | 35 | 15.9 |  | 91 | 8.7 | 77 | 15.2 |  |
| **Did you ever receive training in infection control & universal precautions (including PEP & waste management)?** |  |  |  |  |  |  | **0.003** |  |  |  |  | **<0.001** |
|  No | 169 | 23.0 | 135 | 22.5 | 63 | 28.6 |  | 258 | 24.5 | 109 | 21.5 |  |
|  Yes | 532 | 72.3 | 419 | 69.7 | 134 | 60.9 |  | 747 | 71.1 | 338 | 66.8 |  |
|  Missing | 35 | 4.8 | 47 | 7.8 | 23 | 10.5 |  | 46 | 4.4 | 59 | 11.7 |  |
| **My co-workers sometimes treat people living with HIV poorly when providing them with health services** |  |  |  |  |  |  | 0.121 |  |  |  |  | **<0.001** |
|  Strongly Disagree | 265 | 36.0 | 240 | 39.9 | 73 | 33.2 |  | 356 | 33.9 | 222 | 43.9 |  |
|  Disagree | 333 | 45.2 | 269 | 44.8 | 101 | 45.9 |  | 487 | 46.3 | 216 | 42.7 |  |
|  Agree | 88 | 12.0 | 58 | 9.7 | 34 | 15.5 |  | 151 | 14.4 | 29 | 5.7 |  |
|  Strongly Agree | 25 | 3.4 | 13 | 2.2 | 2 | 0.9 |  | 30 | 2.9 | 10 | 2.0 |  |
|  Missing | 25 | 3.4 | 21 | 3.5 | 10 | 4.5 |  | 27 | 2.6 | 29 | 5.7 |  |
| **My co-workers sometimes talk badly about people thought to be living with HIV** |  |  |  |  |  |  | 0.322 |  |  |  |  | **<0.001** |
|  Strongly Disagree | 146 | 19.8 | 135 | 22.5 | 46 | 20.9 |  | 185 | 17.6 | 142 | 28.1 |  |
|  Disagree | 347 | 47.1 | 270 | 44.9 | 103 | 46.8 |  | 472 | 44.9 | 248 | 49.0 |  |
|  Agree | 177 | 24.0 | 136 | 22.6 | 43 | 19.5 |  | 287 | 27.3 | 69 | 13.6 |  |
|  Strongly Agree | 54 | 7.3 | 41 | 6.8 | 23 | 10.5 |  | 94 | 8.9 | 24 | 4.7 |  |
|  Missing | 12 | 1.6 | 19 | 3.2 | 5 | 2.3 |  | 13 | 1.2 | 23 | 4.5 |  |

aCompleted college/university or postgraduate studies.

**Table 2. Logistic regression describing health workers’ personal attitudes towards people living with HIV and key populations by country.**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | **People living with HIV****(n=1439)** | **Women who sell sex****(n=1408)** | **Men who have sex with men****(n=1366)** | **Young women who become pregnant before marriage****(n=1432)** |
| **I would be ashamed if someone in my family was(key population)** |  | n/N | aORs (95% CIs) a | n/N | aORs (95% CIs) a | n/N | aORs (95% CIs) a | n/N | aORs (95% CIs) a |
| Zambia  | HFS  | 32/528 (6.1%) | 1 [0.307] b | 437/523 (83.6%) | 1 [0.130] b | 451/500 (90.2%) | 1 [0.052] b | 257/517 (49.7%) | 1 [**0.005**] b |
| CHiP  | 13/373 (3.5%) | 0.57 (0.30-1.10) | 299/373 (80.2%) | 0.83 (0.58-1.19) | 314/366 (85.8%) | 0.71 (0.46-1.08) | 191/371 (51.5%) | 0.97 (0.73-1.28) |
| CHW  | 7/103 (6.8%) | 1.62 (0.72-3.67) | 79/106 (74.5%) | 0.61 (0.36-1.03) | 91/106 (85.8%) | 0.67 (0.35-1.30) | 69/108 (63.9%) | 1.32 (0.85-2.07) |
| South Africa  | HFS  | 8/159 (5%) | 1 [0.074] b | 108/153 (70.6%) | 1 [0.344] b | 75/147 (51%) | 1 [0.287] b | 36/162 (22.2%) | 1 [**<0.001**] b |
| CHiP  | 6/181 (3.3%) | 0.55 (0.18-1.66) | 119/162 (73.5%) | 1.27 (0.79-2.05) | 83/157 (52.9%) | 0.96 (0.62-1.48) | 58/178 (32.6%) | 2.10 (1.28-3.46) |
| CHW  | 10/95 (10.5%) | 2.58 (1.01-6.57) | 58/91 (63.7%) | 0.89 (0.52-1.51) | 51/90 (56.7%) | 1.20 (0.72-1.99) | 42/96 (43.8%) | 3.07 (1.78-5.31) |
| **(Key population) engage in irresponsible behaviours** |  |   |  |   |  |   |  |   |  |
| Zambia  | HFS  | 152/528 (28.8%) | 1 [**<0.001**] b | 432/523 (82.6%) | 1 [**0.001**] b | 387/500 (77.4%) | 1 [0.170] b | 237/517 (45.8%) | 1 [**<0.001**] b |
| CHiP  | 105/373 (28.2%) | 0.96 (0.71-1.31) | 302/373 (81%) | 0.92 (0.64-1.32) | 287/366 (78.4%) | 0.98 (0.70-1.38) | 203/371 (54.7%) | 1.33 (1.01-1.75) |
| CHW  | 40/103 (38.8%) | 1.45 (0.91-2.32) | 88/106 (83%) | 1.13 (0.62-2.05) | 87/106 (82.1%) | 1.10 (0.62-1.95) | 73/108 (67.6%) | 2.15 (1.36-3.40) |
| South Africa  | HFS  | 47/159 (29.6%) | 1 [**<0.001**] b | 92/153 (60.1%) | 1 [**0.049**] b | 79/147 (53.7%) | 1 [**0.010**] b | 63/162 (38.9%) | 1 [0.366] b |
| CHiP  | 36/181 (19.9%) | 0.67 (0.40-1.13) | 93/162 (57.4%) | 0.94 (0.59-1.50) | 67/157 (42.7%) | 0.80 (0.51-1.28) | 60/178 (33.7%) | 0.86 (0.54-1.35) |
| CHW  | 31/95 (32.6%) | 1.44 (0.83-2.51) | 55/91 (60.4%) | 0.93 (0.55-1.59) | 43/90 (47.8%) | 0.80 (0.47-1.35) | 37/96 (38.5%) | 1.09 (0.65-1.82) |
| **Other people deserve access to health services more than (key population)** |  |   |  |   |  |   |  |   |  |
| Zambia  | HFS  | 90/528 (17%) | 1 [**0.020**] b | 61/523 (11.7%) | 1 [**0.018**] b | 68/500 (13.6%) | 1 [**0.017**] b | 76/517 (14.7%) | 1 [0.088] b |
| CHiP  | 91/373 (24.4%) | 1.64 (1.17-2.31) | 69/373 (18.5%) | 1.78 (1.21-2.62) | 64/366 (17.5%) | 1.38 (0.94-2.03) | 61/371 (16.4%) | 1.16 (0.79-1.70) |
| CHW  | 30/103 (29.1%) | 2.23 (1.35-3.70) | 22/106 (20.8%) | 2.04 (1.16-3.60) | 28/106 (26.4%) | 2.42 (1.42-4.13) | 27/108 (25%) | 1.95 (1.15-3.33) |
| South Africa  | HFS  | 22/159 (13.8%) | 1 [**0.001**] b | 14/153 (9.2%) | 1 [**0.002**] b | 15/147 (10.2%) | 1 [0.106] b | 20/162 (12.3%) | 1 [**0.020**] b |
| CHiP  | 51/181 (28.2%) | 2.71 (1.53-4.82) | 27/162 (16.7%) | 2.52 (1.26-5.04) | 27/157 (17.2%) | 2.18 (1.09-4.32) | 36/178 (20.2%) | 1.75 (0.97-3.15) |
| CHW  | 32/95 (33.7%) | 3.54 (1.90-6.58) | 25/91 (27.5%) | 3.88 (1.90-7.92) | 20/90 (22.2%) | 2.90 (1.40-5.97) | 23/96 (24%) | 2.46 (1.30-4.64) |
| **If I had a choice, I would prefer not to provide services to (key population)** |  |   |  |   |  |   |  |   |  |
| Zambia  | HFS  | 37/528 (7%) | 1 [0.492] b | 39/523 (7.5%) | 1 [0.123] b | 53/500 (10.6%) | 1 [**0.165**] b | 27/517 (5.2%) | 1 [0.210] b |
| CHiP  | 20/373 (5.4%) | 0.84 (0.48-1.48) | 24/373 (6.4%) | 0.95 (0.55-1.63) | 33/366 (9%) | 0.90 (0.56-1.43) | 9/371 (2.4%) | 0.45 (0.20-0.98) |
| CHW  | 7/103 (6.8%) | 1.06 (0.45-2.50) | 17/106 (16%) | 2.51 (1.27-4.95) | 20/106 (18.9%) | 2.01 (1.08-3.73) | 8/108 (7.4%) | 1.41 (0.57-3.48) |
| South Africa  | HFS  | 4/159 (2.5%) | 1 [**<0.001**] b | 11/153 (7.2%) | 1 [**0.004**] b | 9/147 (6.1%) | 1 [0.128] b | 10/162 (6.2%) | 1 [**0.014**] b |
| CHiP  | 8/181 (4.4%) | 1.27 (0.38-4.23) | 11/162 (6.8%) | 0.92 (0.39-2.15) | 11/157 (7%) | 1.02 (0.42-2.47) | 11/178 (6.2%) | 1.09 (0.45-2.63) |
| CHW  | 13/95 (13.7%) | 8.74 (2.85-26.77) | 16/91 (17.6%) | 2.90 (1.29-6.49) | 15/90 (16.7%) | 3.38 (1.46-7.83) | 12/96 (12.5%) | 2.90 (1.23-6.84) |

a: Adjusted for sex, age and triplet b: Pm value for model.

aOR: adjusted Odds Ratio ; CIs: Confidence Intervals; CHiP: Community HIV care provider; CHW: Community-based health worker; HFS: Health facility staff.

HFS is the reference category with overall Padj value of the model presented in brackets.

**Table 3a. The association between sociodemographic characteristics of health workers and four stigma outcomes for people living with HIV**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | **I would be ashamed if someone in my family was a person living with HIV** | **People living with HIV engage in irresponsible behaviours** | **If I had a choice, I would prefer not to provide services to people living with HIV** | **Other people deserve access to health services more than people living with HIV** |
| **Variable** | **Categories** | **n/N (%) a** | **aOR** **(95% CIs) b** | **Pw c** | **n/N (%) a** | **aOR** **(95% CIs) b** | **Pw c** | **n/N (%) a** | **aOR** **(95% CIs) b** | **Pw c** | **n/N (%) a** | **aOR** **(95% CIs) b** | **Pw c** |
| Sex | Male | 25/386 (6.5) | 1 | 0.082 | 150/386 (38.9) | 1 | **<0.001** | 29/386 (7.5) | 1 | 0.074 | 88/386 (22.8) | 1 | 0.330 |
| Female | 51/1053 (4.8) | 0.63 (0.37-1.06) |  | 261/1053 (24.8) | 0.45 (0.35-0.59) |  | 60/1053 (5.7) | 0.64 (0.39-1.04) |  | 228/1053 (21.7) | 0.86 (0.64-1.16) |  |
| Age | <25 years | 7/117 (6.0) | 1 | 0.594 | 34/117 (29.1) | 1 | **<0.001** | 9/117 (7.7) | 1 | 0.170 | 30/117 (25.6) | 1 | 0.437 |
| 25-34 years | 24/490 (4.9) | 0.80 (0.33-1.92) |  | 115/490 (23.5) | 0.71 (0.45-1.13) |  | 21/490 (4.3) | 0.54 (0.24-1.22) |  | 99/490 (20.2) | 0.74 (0.46-1.20) |  |
| 35-44 years | 16/376 (4.3) | 0.66 (0.26-1.67) |  | 101/376 (26.9) | 0.87 (0.54-1.40) |  | 23/376 (6.1) | 0.78 (0.35-1.75) |  | 84/376 (22.3) | 0.89 (0.54-1.45) |  |
| >44 year | 29/456 (6.4) | 1 (0.42-2.39) |  | 161/456 (35.3) | 1.35 (0.85-2.13) |  | 36/456 (7.9) | 1 (0.46-2.19) |  | 103/456 (22.6) | 0.94 (0.57-1.52) |  |
| Education | Did not complete secondary | 5/64 (7.8) | 1 | **<0.001** | 22/64 (34.4) | 1 | 0.188 | 7/64 (10.9) | 1 | 0.065 | 12/64 (18.8) | 1 | 0.106 |
| Completed secondary | 51/650 (7.8) | 1.16 (0.43-3.17) |  | 204/650 (31.4) | 1.02 (0.58-1.81) |  | 51/650 (7.8) | 0.88 (0.37-2.12) |  | 174/650 (26.8) | 1.55 (0.79-3.07) |  |
| Further | 20/725 (2.8) | 0.31 (0.10-0.94) |  | 185/725 (25.5) | 0.80 (0.44-1.44) |  | 31/725 (4.3) | 0.49 (0.19-1.25) |  | 130/725 (17.9) | 1.18 (0.59-2.39) |  |
| Marital status | Married | 42/752 (5.6) | 1 | 0.886 | 231/752 (30.7) | 1 | 0.488 | 56/752 (7.4) | 1 | 0.094 | 165/752 (21.9) | 1 | 0.516 |
| Not married | 34/687 (4.9) | 0.96 (0.58-1.61) |  | 180/687 (26.2) | 0.91 (0.70-1.18) |  | 33/687 (4.8) | 0.65 (0.40-1.07) |  | 151/687 (22.0) | 0.91 (0.69-1.20) |  |
| Religion | Very important | 65/1245 (5.2) | 1 | 0.726 | 354/1245 (28.4) | 1 | 0.618 | 74/1245 (5.9) |  | 0.482 | 276/1245 (22.2) | 1 | 0.308 |
| Important | 8/160 (5.0) | 0.94 (0.43-2.04) |  | 47/160 (29.4) | 1.12 (0.76-1.64) |  | 12/160 (7.5) | 1.41 (0.73-2.73) |  | 31/160 (19.4) | 0.85 (0.55-1.30) |  |
| Somewhat important | 2/17 (11.8) | 2.44 (0.50-11.75) |  | 3/17 (17.6) | 0.48 (0.13-1.79) |  | 2/17 (11.8) | 2.71 (0.56-13.06) |  | 6/17 (35.3) | 2.14 (0.77-6.00) |  |
| Not important | 1/15 (6.7) | 0.87 (0.11-7.01) |  | 6/15 (40.0) | 1.29 (0.44-3.80) |  | 1/15 (6.7) | 0.85 (0.10-6.82) |  | 2/15 (13.3) | 0.51 (0.11-2.34) |  |
| Missing | 0/ 2 (0.0) |  |  | 1/ 2 (50.0) |  |  | 0/ 2 (0.0) |  |  | 1/ 2 (50.0) |  |  |
| Ever tested  | No | 4/29 (13.8) | 1 | 0.093 | 13/29 (44.8) | 1 | 0.109 | 4/29 (13.8) | 1 | 0.162 | 12/29 (41.4) | 1 | **0.020** |
| Yes | 72/1403 (5.1) | 0.39 (0.13-1.17) |  | 396/1403 (28.2) | 0.54 (0.25-1.15) |  | 85/1403 (6.1) | 0.46 (0.15-1.37) |  | 303/1403 (21.6) | 0.40 (0.19-0.87) |  |
| Missing | 0/ 7 (0.0) |  |  | 2/ 7 (28.6) |  |  | 0/ 7 (0.0) |  |  | 1/ 7 (14.3) |  |  |
| HIV status | Negative | 47/1029 (4.6) | 1 | 0.077 | 294/1029 (28.6) | 1 | 0.575 | 58/1029 (5.6) | 1 | 0.204 | 225/1029 (21.9) | 1 | 0.302 |
| Positive | 17/257 (6.6) | 1.75 (0.94-3.24) |  | 81/257 (31.5) | 1.10 (0.80-1.51) |  | 20/257 (7.8) | 1.44 (0.82-2.53) |  | 53/257 (20.6) | 0.83 (0.58-1.18) |  |
| Undetermined | 0/ 8 (0.0) |  |  | 2/ 8 (25.0) |  |  | 0/ 8 (0.0) |  |  | 2/ 8 (25.0) |  |  |
| Missing | 12/145 (8.3) |  |  | 34/145 (23.4) |  |  | 11/145 (7.6) |  |  | 36/145 (24.8) |  |  |

aOR: adjusted Odds Ratio ; CIs: Confidence Intervals ; n: Number of individuals reporting the four types of stigma within groups; N: Total number of individuals within groups; Pw: P value of the Wald test.

a:Proportion of health workers responding strongly agree or agree.

b:The aOR for sex is adjusted for age group, cadre of health worker and triplet; The aOR for age group is adjusted for sex, cadre of health worker and triplet; The aOR for all other predictor variables are adjusted for sex, age group, cadre of health worker and triplet.

c: A p value of less than 0.05 indicates that the predictor creates a statistically significant improvement in the fit of the model.

**Table 3b The association between health workers’ training, perceptions of co-worker attitudes, and stigmatizing attitudes with four stigma outcomes for people living with HIV**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | **I would be ashamed if someone in my family was a person living with HIV** | **People living with HIV engage in irresponsible behaviours** | **If I had a choice, I would prefer not to provide services to a person living with HIV** | **Other people deserve access to health services more than people living with HIV**  |
| **Variable** | **Categories** | **n/N (%) a** | **aOR** **(95% CIs) b** | **Pw c** | **n/N (%) a** | **aOR** **(95% CIs) b** | **Pw c** | **n/N (%) a** | **aOR** **(95% CIs) b** | **Pw c** | **n/N (%) a** | **aOR** **(95% CIs) b** | **Pw c** |
| 1 Training on infection control | No | 17/340 (5.0) | 1 | 0.640 | 94/340 (27.6) | 1 | 0.858 | 16/340 (4.7) | 1 | 0.156 | 68/340 (20.0) | 1 | 0.491 |
| Yes | 56/1019 (5.5) | 1.14 (0.65-2.02) |  | 293/1019 (28.8) | 1.03 (0.77-1.36) |  | 70/1019 (6.9) | 1.50 (0.86-2.65) |  | 219/1019 (21.5) | 1.12 (0.82-1.52) |  |
| Missing | 3/80 (3.8) |  |  | 24/80 (30.0) |  |  | 3/80 (3.8) |  |  | 29/80 (36.3) |  |  |
| 2 My co-workers sometimes treat people living with HIV poorly | Strongly disagree | 14/541 (2.6) | 1 | **<0.001** | 114/541 (21.1) | 1 | **<0.001** | 16/541 (3.0) | 1 | **<0.001** | 90/541 (16.6) | 1 | **<0.001** |
| Disagree | 35/658 (5.3) | 2.15 (1.14-4.07) |  | 209/658 (31.8) | 1.69 (1.28-2.21) |  | 40/658 (6.1) | 2.12 (1.16-3.85) |  | 148/658 (22.5) | 1.49 (1.10-2.00) |  |
| Agree | 19/172 (11.0) | 4.64 (2.23-9.66) |  | 64/172 (37.2) | 1.96 (1.33-2.89) |  | 22/172 (12.8) | 4.57 (2.29-9.11) |  | 61/172 (35.5) | 2.97 (1.98-4.45) |  |
| Strongly agree | 7/38 (18.4) | 8.00 (2.92-21.92) |  | 19/38 (50.0) | 3.16 (1.58-6.32) |  | 8/38 (21.1) | 8.38 (3.23-21.72) |  | 12/38 (31.6) | 2.78 (1.32-5.82) |  |
| Missing | 1/30 (3.3) |  |  | 5/30 (16.7) |  |  | 3/30 (10.0) |  |  | 5/30 (16.7) |  |  |
| 3 My co-workers sometimes talk badly about PLHIV | Strongly disagree | 10/297 (3.4) | 1 | **<0.001** | 48/297 (16.2) | 1 | **<0.001** | 7/297 (2.4) | 1 | **<0.001** | 53/297 (17.8) | 1 | **0.007** |
| Disagree | 25/672 (3.7) | 1.15 (0.54-2.45) |  | 200/672 (29.8) | 2.16 (1.51-3.11) |  | 36/672 (5.4) | 2.49 (1.09-5.73) |  | 138/672 (20.5) | 1.26 (0.88-1.81) |  |
| Agree | 24/339 (7.1) | 2.37 (1.10-5.13) |  | 109/339 (32.2) | 2.39 (1.60-3.56) |  | 30/339 (8.8) | 4.22 (1.80-9.89) |  | 89/339 (26.3) | 1.83 (1.23-2.72) |  |
| Strongly agree | 17/114 (14.9) | 5.30 (2.29-12.24) |  | 51/114 (44.7) | 4.13 (2.50-6.82) |  | 16/114 (14.0) | 6.96 (2.72-17.78) |  | 32/114 (28.1) | 1.93 (1.15-3.26) |  |
| Missing | 0/17 (0.0) |  |  | 3/17 (17.6) |  |  | 0/17 (0.0) |  |  | 4/17 (23.5) |  |  |

aOR: adjusted Odds Ratio ; CIs: Confidence Intervals ; n: Number of individuals reporting the four types of stigma within groups; N: Total number of individuals within groups; Pw: P value of the Wald test.

a:Proportion of health workers responding strongly agree or agree.

b: Adjusted for sex, age, cadre of health worker and triplet.

c: A p value of less than 0.05 indicates that the predictor creates a statistically significant improvement in the fit of the model.

1Infection control and universal precautions (including post-exposure prophylaxis and waste management)

2My co-workers sometimes treat people living with HIV poorly when providing them

3My co-workers sometimes talk badly about people thought to be living with HIV