Bivariate analysis to assess differences in the subpopulation**: Attitudes Toward Digital Health Surveillance**

**Table 13: Belief in phone-based illness reporting by demographics**

| **Category** | **I believe using phones to report illness can improve healthcare in my community.** | | | | |
| --- | --- | --- | --- | --- | --- |
| **Strongly Disagree** | **Disagree** | **Neutral** | **Agree** | **Strongly Agree** |
| **Gender** |  |  |  |  |  |
| Female | 44 (5.7%) | 39 (5.7%) | 49 (5.7%) | 369 (5.7%) | 267 (5.7%) |
| Male | 25 (6.2%) | 10 (6.2%) | 28 (6.2%) | 181 (6.2%) | 162 (6.2%) |
| **Age group** |  |  |  |  |  |
| 18-39 | 44 (5.9%) | 35 (5.9%) | 50 (5.9%) | 361 (5.9%) | 258 (5.9%) |
| 40-59 | 17 (5.4%) | 10 (5.4%) | 21 (5.4%) | 135 (5.4%) | 132 (5.4%) |
| 60 above | 8 (7.2%) | 4 (7.2%) | 6 (7.2%) | 54 (7.2%) | 39 (7.2%) |
| **Education** |  |  |  |  |  |
| No formal education | 7 (9.3%) | 1 (9.3%) | 7 (9.3%) | 32 (9.3%) | 28 (9.3%) |
| Primary | 26 (4.7%) | 18 (4.7%) | 47 (4.7%) | 265 (4.7%) | 198 (4.7%) |
| Secondary | 29 (6.4%) | 25 (6.4%) | 21 (6.4%) | 215 (6.4%) | 162 (6.4%) |
| Tertiary | 7 (7.5%) | 5 (7.5%) | 2 (7.5%) | 38 (7.5%) | 41 (7.5%) |
| **Location** |  |  |  |  |  |
| Rural | 50 (7.6%) | 25 (7.6%) | 48 (7.6%) | 306 (7.6%) | 232 (7.6%) |
| Urban | 19 (3.7%) | 24 (3.7%) | 29 (3.7%) | 244 (3.7%) | 197 (3.7%) |
| **District** |  |  |  |  |  |
| Balaka | 3 (2.5%) | 4 (2.5%) | 7 (2.5%) | 57 (2.5%) | 48 (2.5%) |
| Blantyre | 4 (3%) | 0 (0%) | 7 (3%) | 73 (3%) | 48 (3%) |
| Chikwawa | 3 (3.2%) | 5 (3.2%) | 8 (3.2%) | 33 (3.2%) | 45 (3.2%) |
| Chitipa | 4 (3%) | 5 (3%) | 12 (3%) | 57 (3%) | 54 (3%) |
| Kasungu | 5 (4.6%) | 4 (4.6%) | 7 (4.6%) | 64 (4.6%) | 28 (4.6%) |
| Mzimba South | 12 (10%) | 6 (10%) | 5 (10%) | 73 (10%) | 24 (10%) |
| Phalombe | 15 (13.9%) | 8 (13.9%) | 8 (13.9%) | 39 (13.9%) | 38 (13.9%) |
| Salima | 2 (1.5%) | 6 (1.5%) | 15 (1.5%) | 63 (1.5%) | 47 (1.5%) |
| Thyolo | 21 (15.9%) | 8 (15.9%) | 8 (15.9%) | 30 (15.9%) | 65 (15.9%) |
| Lilongwe | 0 (0%) | 3 (3.1%) | 0 (0%) | 61 (3.1%) | 32 (3.1%) |

**Table 14: Comfortable in reporting health symptoms via SMS/Mobile apps, by demographics**

| **Category** | **I feel comfortable reporting my health symptoms via SMS/Mobile apps.** | | | |  |
| --- | --- | --- | --- | --- | --- |
| **Strongly Disagree** | **Disagree** | **Neutral** | **Agree** | **Strongly Agree** |
| **Gender** |  |  |  |  |  |
| Female | 30 (3.9%) | 47 (3.9%) | 54 (3.9%) | 427 (3.9%) | 210 (3.9%) |
| Male | 15 (3.7%) | 22 (3.7%) | 28 (3.7%) | 211 (3.7%) | 130 (3.7%) |
| **Age group** |  |  |  |  |  |
| 18-39 | 30 (4%) | 40 (4%) | 59 (4%) | 415 (4%) | 204 (4%) |
| 40-59 | 13 (4.1%) | 18 (4.1%) | 17 (4.1%) | 161 (4.1%) | 106 (4.1%) |
| 60 above | 2 (1.8%) | 11 (1.8%) | 6 (1.8%) | 62 (1.8%) | 30 (1.8%) |
| **Education** |  |  |  |  |  |
| No formal education | 5 (6.7%) | 5 (6.7%) | 7 (6.7%) | 37 (6.7%) | 21 (6.7%) |
| Primary | 15 (2.7%) | 31 (2.7%) | 41 (2.7%) | 314 (2.7%) | 153 (2.7%) |
| Secondary | 23 (5.1%) | 31 (5.1%) | 29 (5.1%) | 238 (5.1%) | 131 (5.1%) |
| Tertiary | 2 (2.2%) | 2 (2.2%) | 5 (2.2%) | 49 (2.2%) | 35 (2.2%) |
| **Location** |  |  |  |  |  |
| Rural | 29 (4.4%) | 47 (4.4%) | 47 (4.4%) | 355 (4.4%) | 183 (4.4%) |
| Urban | 16 (3.1%) | 22 (3.1%) | 35 (3.1%) | 283 (3.1%) | 157 (3.1%) |
| **District** |  |  |  |  |  |
| Balaka | 2 (1.7%) | 9 (7.6%) | 11 (9.2%) | 66 (55.5%) | 31 (26.1%) |
| Balaka | 2 (1.7%) | 9 (7.6%) | 11 (9.2%) | 66 (55.5%) | 31 (26.1%) |
| Blantyre | 1 (0.8%) | 3 (2.3%) | 7 (5.3%) | 72 (54.5%) | 49 (37.1%) |
| Chikwawa | 3 (3.2%) | 10 (10.6%) | 8 (8.5%) | 43 (45.7%) | 30 (31.9%) |
| Chitipa | 1 (0.8%) | 5 (3.8%) | 11 (8.3%) | 61 (46.2%) | 54 (40.9%) |
| Kasungu | 3 (2.8%) | 8 (7.4%) | 3 (2.8%) | 66 (61.1%) | 28 (25.9%) |
| Lilongwe | 1 (1%) | 6 (6.2%) | 3 (3.1%) | 70 (72.9%) | 16 (16.7%) |
| Mzimba South | 7 (5.8%) | 4 (3.3%) | 3 (2.5%) | 84 (70%) | 22 (18.3%) |
| Phalombe | 12 (11.1%) | 6 (5.6%) | 7 (6.5%) | 50 (46.3%) | 33 (30.6%) |
| Salima | 2 (1.5%) | 4 (3%) | 19 (14.3%) | 83 (62.4%) | 25 (18.8%) |

## Table15: Acceptance of using a digital system approved by Ministry of Health by Demographic

| **Category** | **I would accept using a digital system if it was approved by the Ministry of Health.** | | | | |
| --- | --- | --- | --- | --- | --- |
| **Strongly Disagree** | **Disagree** | **Neutral** | **Agree** | **Strongly Agree** |
| **Gender** |  |  |  |  |  |
| Female | 21 (2.7%) | 29 (3.8%) | 42 (5.5%) | 470 (61.2%) | 206 (26.8%) |
| Male | 18 (4.4%) | 5 (1.2%) | 20 (4.9%) | 229 (56.4%) | 134 (33%) |
| **Age group** |  |  |  |  |  |
| 18-39 | 26 (3.5%) | 17 (2.3%) | 47 (6.3%) | 460 (61.5%) | 198 (26.5%) |
| 40-59 | 8 (2.5%) | 13 (4.1%) | 10 (3.2%) | 176 (55.9%) | 108 (34.3%) |
| 60 above | 5 (4.5%) | 4 (3.6%) | 5 (4.5%) | 63 (56.8%) | 34 (30.6%) |
| **Education** |  |  |  |  |  |
| No formal education | 5 (6.7%) | 3 (4%) | 5 (6.7%) | 38 (50.7%) | 24 (32%) |
| Primary | 11 (2%) | 22 (4%) | 35 (6.3%) | 335 (60.5%) | 151 (27.3%) |
| Secondary | 19 (4.2%) | 9 (2%) | 19 (4.2%) | 276 (61.1%) | 129 (28.5%) |
| Tertiary | 4 (4.3%) | 0 (0%) | 3 (3.2%) | 50 (53.8%) | 36 (38.7%) |
| **Location** |  |  |  |  |  |
| Rural | 28 (4.2%) | 23 (3.5%) | 41 (6.2%) | 377 (57%) | 192 (29%) |
| Urban | 11 (2.1%) | 11 (2.1%) | 21 (4.1%) | 322 (62.8%) | 148 (28.8%) |
| **District** |  |  |  |  |  |
| Balaka | 3 (2.5%) | 3 (2.5%) | 10 (8.4%) | 70 (58.8%) | 33 (27.7%) |
| Blantyre | 3 (2.3%) | 0 (0%) | 4 (3%) | 84 (63.6%) | 41 (31.1%) |
| Chikwawa | 3 (3.2%) | 1 (1.1%) | 6 (6.4%) | 54 (57.4%) | 30 (31.9%) |
| Chitipa | 2 (1.5%) | 3 (2.3%) | 6 (4.5%) | 72 (54.5%) | 49 (37.1%) |
| Kasungu | 3 (2.8%) | 4 (3.7%) | 3 (2.8%) | 68 (63%) | 30 (27.8%) |
| Mzimba South | 3 (2.5%) | 3 (2.5%) | 2 (1.7%) | 85 (70.8%) | 27 (22.5%) |
| Phalombe | 8 (7.4%) | 3 (2.8%) | 6 (5.6%) | 54 (50%) | 37 (34.3%) |
| Salima | 1 (0.8%) | 4 (3%) | 11 (8.3%) | 92 (69.2%) | 25 (18.8%) |
| Thyolo | 13 (9.8%) | 10 (7.6%) | 10 (7.6%) | 45 (34.1%) | 54 (40.9%) |
| Lilongwe | 0 (0%) | 3 (3.1%) | 4 (4.2%) | 75 (78.1%) | 14 (14.6%) |

**Table 16: Belief that personal health data is safe via digital tools by Demographics**

| **Category** | **I believe my personal health data will be safe when submitted through digital tools.** | | | | |
| --- | --- | --- | --- | --- | --- |
| **Strongly Disagree** | **Disagree** | **Neutral** | **Agree** | **Strongly Agree** |
| **Gender** |  |  |  |  |  |
| Female | 21 (2.7%) | 61 (7.9%) | 77 (10%) | 418 (54.4%) | 191 (24.9%) |
| Male | 14 (3.4%) | 26 (6.4%) | 41 (10.1%) | 222 (54.7%) | 103 (25.4%) |
| **Age group** |  |  |  |  |  |
| 18-39 | 23 (3.1%) | 47 (6.3%) | 86 (11.5%) | 413 (55.2%) | 179 (23.9%) |
| 40-59 | 10 (3.2%) | 30 (9.5%) | 27 (8.6%) | 163 (51.7%) | 85 (27%) |
| 60 above | 2 (1.8%) | 10 (9%) | 5 (4.5%) | 64 (57.7%) | 30 (27%) |
| **Education** |  |  |  |  |  |
| No formal education | 3 (4%) | 8 (10.7%) | 6 (8%) | 35 (46.7%) | 23 (30.7%) |
| Primary | 12 (2.2%) | 39 (7%) | 52 (9.4%) | 315 (56.9%) | 136 (24.5%) |
| Secondary | 17 (3.8%) | 33 (7.3%) | 47 (10.4%) | 250 (55.3%) | 105 (23.2%) |
| Tertiary | 3 (3.2%) | 7 (7.5%) | 13 (14%) | 40 (43%) | 30 (32.3%) |
| **Location** |  |  |  |  |  |
| Rural | 21 (3.2%) | 55 (8.3%) | 67 (10.1%) | 368 (55.7%) | 150 (22.7%) |
| Urban | 14 (2.7%) | 32 (6.2%) | 51 (9.9%) | 272 (53%) | 144 (28.1%) |
| **District** |  |  |  |  |  |
| Balaka | 1 (0.8%) | 3 (2.5%) | 12 (10.1%) | 69 (58%) | 34 (28.6%) |
| Blantyre | 4 (3%) | 6 (4.5%) | 15 (11.4%) | 80 (60.6%) | 27 (20.5%) |
| Chikwawa | 1 (1.1%) | 6 (6.4%) | 9 (9.6%) | 44 (46.8%) | 34 (36.2%) |
| Kasungu | 3 (2.8%) | 6 (5.6%) | 8 (7.4%) | 71 (65.7%) | 20 (18.5%) |
| Lilongwe | 2 (2.1%) | 9 (9.4%) | 10 (10.4%) | 66 (68.8%) | 9 (9.4%) |
| Mzimba South | 4 (3.3%) | 9 (7.5%) | 14 (11.7%) | 78 (65%) | 15 (12.5%) |
| Phalombe | 6 (5.6%) | 9 (8.3%) | 11 (10.2%) | 53 (49.1%) | 29 (26.9%) |
| Salima | 2 (1.5%) | 18 (13.5%) | 14 (10.5%) | 76 (57.1%) | 23 (17.3%) |
| Thyolo | 12 (9.1%) | 18 (13.6%) | 15 (11.4%) | 32 (24.2%) | 55 (41.7%) |
| Chitipa | 0 (0%) | 3 (2.3%) | 10 (7.6%) | 71 (53.8%) | 48 (36.4%) |

**Table 17: Willingness to participate in digital programs** **by Demographics**

| **Category** | **I would be willing to participate in digital disease surveillance programs** | | | | |
| --- | --- | --- | --- | --- | --- |
| **Strongly Disagree** | **Disagree** | **Neutral** | **Agree** | **Strongly Agree** |
| **Gender** |  |  |  |  |  |
| Female | 16 (2.1%) | 34 (4.4%) | 42 (5.5%) | 495 (64.5%) | 181 (23.6%) |
| Male | 9 (2.2%) | 7 (1.7%) | 19 (4.7%) | 249 (61.3%) | 122 (30%) |
| **Age group** |  |  |  |  |  |
| 18-39 | 16 (2.1%) | 25 (3.3%) | 43 (5.7%) | 481 (64.3%) | 183 (24.5%) |
| 40-59 | 7 (2.2%) | 10 (3.2%) | 9 (2.9%) | 196 (62.2%) | 93 (29.5%) |
| 60 above | 2 (1.8%) | 6 (5.4%) | 9 (8.1%) | 67 (60.4%) | 27 (24.3%) |
| **Education** |  |  |  |  |  |
| No formal education | 2 (2.7%) | 7 (9.3%) | 6 (8%) | 42 (56%) | 18 (24%) |
| Primary | 11 (2%) | 22 (4%) | 35 (6.3%) | 345 (62.3%) | 141 (25.5%) |
| Secondary | 12 (2.7%) | 10 (2.2%) | 17 (3.8%) | 305 (67.5%) | 108 (23.9%) |
| Tertiary | 0 (0%) | 2 (2.2%) | 3 (3.2%) | 52 (55.9%) | 36 (38.7%) |
| **Location** |  |  |  |  |  |
| Rural | 16 (2.4%) | 23 (3.5%) | 39 (5.9%) | 428 (64.8%) | 155 (23.4%) |
| Urban | 9 (1.8%) | 18 (3.5%) | 22 (4.3%) | 316 (61.6%) | 148 (28.8%) |
| **District** |  |  |  |  |  |
| Balaka | 1 (0.8%) | 4 (3.4%) | 9 (7.6%) | 75 (63%) | 30 (25.2%) |
| Blantyre | 4 (3%) | 4 (3%) | 2 (1.5%) | 80 (60.6%) | 42 (31.8%) |
| Chikwawa | 1 (1.1%) | 2 (2.1%) | 5 (5.3%) | 53 (56.4%) | 33 (35.1%) |
| Chitipa | 3 (2.3%) | 2 (1.5%) | 7 (5.3%) | 75 (56.8%) | 45 (34.1%) |
| Kasungu | 1 (0.9%) | 3 (2.8%) | 1 (0.9%) | 74 (68.5%) | 29 (26.9%) |
| Mzimba South | 1 (0.8%) | 4 (3.3%) | 4 (3.3%) | 96 (80%) | 15 (12.5%) |
| Phalombe | 5 (4.6%) | 6 (5.6%) | 8 (7.4%) | 55 (50.9%) | 34 (31.5%) |
| Salima | 2 (1.5%) | 6 (4.5%) | 13 (9.8%) | 95 (71.4%) | 17 (12.8%) |
| Thyolo | 7 (5.3%) | 7 (5.3%) | 9 (6.8%) | 62 (47%) | 47 (35.6%) |
| Lilongwe | 0 (0%) | 3 (3.1%) | 3 (3.1%) | 79 (82.3%) | 11 (11.5%) |

**Table 18: Trust in digital systems for early outbreak detection** **by Demographics**

| **Category** | **I trust that digital systems can help detect disease outbreaks early** | | | | |
| --- | --- | --- | --- | --- | --- |
| **Strongly Disagree** | **Disagree** | **Neutral** | **Agree** | **Strongly Agree** |
| **Gender** |  |  |  |  |  |
| Female | 15 (2%) | 35 (4.6%) | 49 (6.4%) | 435 (56.6%) | 234 (30.5%) |
| Male | 15 (3.7%) | 9 (2.2%) | 15 (3.7%) | 216 (53.2%) | 151 (37.2%) |
| **Age group** |  |  |  |  |  |
| 18-39 | 20 (2.7%) | 33 (4.4%) | 45 (6%) | 410 (54.8%) | 240 (32.1%) |
| 40-59 | 7 (2.2%) | 10 (3.2%) | 12 (3.8%) | 173 (54.9%) | 113 (35.9%) |
| 60 above | 3 (2.7%) | 1 (0.9%) | 7 (6.3%) | 68 (61.3%) | 32 (28.8%) |
| **Education** |  |  |  |  |  |
| No formal education | 3 (4%) | 3 (4%) | 4 (5.3%) | 40 (53.3%) | 25 (33.3%) |
| Primary | 9 (1.6%) | 23 (4.2%) | 37 (6.7%) | 308 (55.6%) | 177 (31.9%) |
| Secondary | 16 (3.5%) | 16 (3.5%) | 16 (3.5%) | 256 (56.6%) | 148 (32.7%) |
| Tertiary | 2 (2.2%) | 2 (2.2%) | 7 (7.5%) | 47 (50.5%) | 35 (37.6%) |
| **Location** |  |  |  |  |  |
| Rural | 23 (3.5%) | 29 (4.4%) | 34 (5.1%) | 373 (56.4%) | 202 (30.6%) |
| Urban | 7 (1.4%) | 15 (2.9%) | 30 (5.8%) | 278 (54.2%) | 183 (35.7%) |
| **District** |  |  |  |  |  |
| Balaka | 2 (1.7%) | 2 (1.7%) | 4 (3.4%) | 58 (48.7%) | 53 (44.5%) |
| Blantyre | 1 (0.8%) | 2 (1.5%) | 5 (3.8%) | 89 (67.4%) | 35 (26.5%) |
| Chitipa | 1 (0.8%) | 2 (1.5%) | 9 (6.8%) | 72 (54.5%) | 48 (36.4%) |
| Lilongwe | 1 (1%) | 5 (5.2%) | 3 (3.1%) | 61 (63.5%) | 26 (27.1%) |
| Mzimba South | 5 (4.2%) | 7 (5.8%) | 3 (2.5%) | 87 (72.5%) | 18 (15%) |
| Phalombe | 6 (5.6%) | 7 (6.5%) | 5 (4.6%) | 50 (46.3%) | 40 (37%) |
| Salima | 2 (1.5%) | 6 (4.5%) | 13 (9.8%) | 81 (60.9%) | 31 (23.3%) |
| Thyolo | 12 (9.1%) | 8 (6.1%) | 13 (9.8%) | 37 (28%) | 62 (47%) |
| Chikwawa | 0 (0%) | 2 (2.1%) | 4 (4.3%) | 46 (48.9%) | 42 (44.7%) |
| Kasungu | 0 (0%) | 3 (2.8%) | 5 (4.6%) | 70 (64.8%) | 30 (27.8%) |

**Table 18: Community acceptance of digital tools, if explained** **by Demographics**

| **Category** | **I think people in my community would accept digital surveillance tools if properly explained** | | | | |
| --- | --- | --- | --- | --- | --- |
| **Strongly Disagree** | **Disagree** | **Neutral** | **Agree** | **Strongly Agree** |
| **Gender** |  |  |  |  |  |
| Female | 15 (2%) | 21 (2.7%) | 146 (19%) | 409 (53.3%) | 177 (23%) |
| Male | 13 (3.2%) | 10 (2.5%) | 43 (10.6%) | 227 (55.9%) | 113 (27.8%) |
| **Age group** |  |  |  |  |  |
| 18-39 | 18 (2.4%) | 17 (2.3%) | 128 (17.1%) | 403 (53.9%) | 182 (24.3%) |
| 40-59 | 8 (2.5%) | 14 (4.4%) | 46 (14.6%) | 169 (53.7%) | 78 (24.8%) |
| 60 above | 2 (1.8%) | 0 (0%) | 15 (13.5%) | 64 (57.7%) | 30 (27%) |
| **Education** |  |  |  |  |  |
| No formal education | 3 (4%) | 3 (4%) | 16 (21.3%) | 32 (42.7%) | 21 (28%) |
| Primary | 15 (2.7%) | 16 (2.9%) | 85 (15.3%) | 314 (56.7%) | 124 (22.4%) |
| Secondary | 10 (2.2%) | 12 (2.7%) | 69 (15.3%) | 245 (54.2%) | 116 (25.7%) |
| Tertiary | 0 (0%) | 0 (0%) | 19 (20.4%) | 45 (48.4%) | 29 (31.2%) |
| **Location** |  |  |  |  |  |
| Rural | 25 (3.8%) | 20 (3%) | 91 (13.8%) | 370 (56%) | 155 (23.4%) |
| Urban | 3 (0.6%) | 11 (2.1%) | 98 (19.1%) | 266 (51.9%) | 135 (26.3%) |
| **District** |  |  |  |  |  |
| Balaka | 2 (1.7%) | 3 (2.5%) | 14 (11.8%) | 63 (52.9%) | 37 (31.1%) |
| Blantyre | 2 (1.5%) | 1 (0.8%) | 20 (15.2%) | 80 (60.6%) | 29 (22%) |
| Chitipa | 2 (1.5%) | 2 (1.5%) | 28 (21.2%) | 58 (43.9%) | 42 (31.8%) |
| Lilongwe | 2 (2.1%) | 3 (3.1%) | 10 (10.4%) | 62 (64.6%) | 19 (19.8%) |
| Mzimba South | 1 (0.8%) | 1 (0.8%) | 14 (11.7%) | 83 (69.2%) | 21 (17.5%) |
| Phalombe | 6 (5.6%) | 1 (0.9%) | 13 (12%) | 58 (53.7%) | 30 (27.8%) |
| Salima | 1 (0.8%) | 3 (2.3%) | 24 (18%) | 86 (64.7%) | 19 (14.3%) |
| Thyolo | 12 (9.1%) | 11 (8.3%) | 20 (15.2%) | 45 (34.1%) | 44 (33.3%) |
| Chikwawa | 0 (0%) | 1 (1.1%) | 26 (27.7%) | 40 (42.6%) | 27 (28.7%) |
| Kasungu | 0 (0%) | 5 (4.6%) | 20 (18.5%) | 61 (56.5%) | 22 (20.4%) |