Research Fairness and Research Intergrity: A cross-sectional surevy

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# Demographics

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Variable | N | Overall, N = 145 | Prefer not to disclose, N = 9 | the Global North, N = 54 | the Global South, N = 82 |
| **Which country are you from?** | 118 |  |  |  |  |
| East Asia and Pacific |  | 15 (12.7%) | 2 (33.3%) | 3 (6.4%) | 10 (15.4%) |
| Europe and Central Asia |  | 32 (27.1%) | 1 (16.7%) | 29 (61.7%) | 2 (3.1%) |
| Middle East and North Africa |  | 1 (0.8%) | 0 (0.0%) | 0 (0.0%) | 1 (1.5%) |
| North America |  | 12 (10.2%) | 0 (0.0%) | 10 (21.3%) | 2 (3.1%) |
| Prefer Not To Disclose |  | 2 (1.7%) | 1 (16.7%) | 0 (0.0%) | 1 (1.5%) |
| South Asia |  | 15 (12.7%) | 1 (16.7%) | 1 (2.1%) | 13 (20.0%) |
| Sub-Saharan Africa |  | 41 (34.7%) | 1 (16.7%) | 4 (8.5%) | 36 (55.4%) |
| Unknown |  | 27 | 3 | 7 | 17 |
| **What discipline of global health based describes you:** | 116 |  |  |  |  |
| Biology/Medicine |  | 32 (27.6%) | 1 (16.7%) | 13 (28.3%) | 18 (28.1%) |
| Biostatistics/Epidemiology |  | 41 (35.3%) | 2 (33.3%) | 17 (37.0%) | 22 (34.4%) |
| Mathematics/Computer science |  | 1 (0.9%) | 0 (0.0%) | 1 (2.2%) | 0 (0.0%) |
| Other (please specify) |  | 23 (19.8%) | 0 (0.0%) | 8 (17.4%) | 15 (23.4%) |
| Political sciences/Health economics |  | 7 (6.0%) | 0 (0.0%) | 2 (4.3%) | 5 (7.8%) |
| Prefer not to disclose |  | 5 (4.3%) | 3 (50.0%) | 1 (2.2%) | 1 (1.6%) |
| Sociology/Anthropology |  | 7 (6.0%) | 0 (0.0%) | 4 (8.7%) | 3 (4.7%) |
| Unknown |  | 29 | 3 | 8 | 18 |
| **What is you gender?** | 117 |  |  |  |  |
| Female |  | 56 (47.9%) | 2 (33.3%) | 26 (56.5%) | 28 (43.1%) |
| Male |  | 59 (50.4%) | 3 (50.0%) | 19 (41.3%) | 37 (56.9%) |
| Prefer not to disclose |  | 2 (1.7%) | 1 (16.7%) | 1 (2.2%) | 0 (0.0%) |
| Unknown |  | 28 | 3 | 8 | 17 |
| **How many years of involvement in research do you have?** | 117 |  |  |  |  |
| Early Career (< 3 years post-education) |  | 11 (9.4%) | 1 (16.7%) | 3 (6.4%) | 7 (10.9%) |
| Established (>10 years post-education) |  | 65 (55.6%) | 1 (16.7%) | 35 (74.5%) | 29 (45.3%) |
| Mid-career (3-10 years post-education) |  | 36 (30.8%) | 1 (16.7%) | 8 (17.0%) | 27 (42.2%) |
| Prefer not to disclose |  | 5 (4.3%) | 3 (50.0%) | 1 (2.1%) | 1 (1.6%) |
| Unknown |  | 28 | 3 | 7 | 18 |
| **What is your highest academic rank?** | 118 |  |  |  |  |
| Associate Professor or Full Professor |  | 33 (28.0%) | 0 (0.0%) | 20 (42.6%) | 13 (20.0%) |
| Bachelor or Master degree |  | 29 (24.6%) | 3 (50.0%) | 5 (10.6%) | 21 (32.3%) |
| Other (please specify) |  | 3 (2.5%) | 0 (0.0%) | 1 (2.1%) | 2 (3.1%) |
| PhD degree |  | 34 (28.8%) | 2 (33.3%) | 9 (19.1%) | 23 (35.4%) |
| Postdoc or Assistant Professor |  | 16 (13.6%) | 0 (0.0%) | 11 (23.4%) | 5 (7.7%) |
| Prefer not to disclose |  | 3 (2.5%) | 1 (16.7%) | 1 (2.1%) | 1 (1.5%) |
| Unknown |  | 27 | 3 | 7 | 17 |
|  | | | | | |

Out of the 145 respondents, only 118 people responded to the question about country of origin. Majority 41 (34.7%) were from sub-Saharan Africa working many of whom were based in the global south. The second highest group were from Europe and Central Asia, with 32 (27.1%), many of whom work were based in the global north. Only one person was from the middle-East and North America, currently based in the global south. However, 27 (18.6%) respondents did not respond to this question.

Majority, 41 (35.3%) of the respondents were from Biostatistics/Epidemiology discipline of global health of whom majority twenty-two were operating from the global south, accounting for 34.4% from the global south. Biology/medicine was the second highest global heal discipline among our respondents with 23 (27.6%) and was also the second highest among country of origin with 18 (28.1%) from the global south. Only one respondent was from the Mathematics/computer science discipline and based in global north. However, we had 29 (20%) non-response rate on this question.

Majority of the respondents 59 (50.4%) were of the male-gender, accounting for 37 (56.9%) from the global south. The global south still had majority 28 (43.1%)female-gender representation. However, 28 (19.3%) respondents did not respond to this question.

Majority of the respondents 65 (55.6%) were established researchers with >10years post education, accounting for 35 (74.5%) from the global north. The Mid-career (3-10 years post-education) were the second highest 36 (30.8%), accounting for 27 (42.2%) based in the global south. However, we had 28 (19.3%) non-response rate on this question.

For the highest academic rank, we had a non-response rate of 27 (18.6%). however, majority of the respondents 34 (28.8%) had Ph.D degrees, accounting for 23 (35.4%) from the global south. The Associate Professor or Full Professor were the second highest 33 (28.0%), accounting for 20 (42.6%) from the global south. However, we had 28 (19.3%) non-response rate on this question. Respondents with a bachelor or Master degree were 29 (24.6%), accounting for 21 (32.3%) from the global south.

# Prevalence of responsible research practices and Fair research practices

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Variable | N | Overall, N = 145 | Prefer not to disclose, N = 9 | the Global North, N = 54 | the Global South, N = 82 |
| **responsible research Practices** | 126 |  |  |  |  |
| Pass |  | 126 (100.0%) | 7 (100.0%) | 50 (100.0%) | 69 (100.0%) |
| Unknown |  | 19 | 2 | 4 | 13 |
| **fair research practices** | 116 |  |  |  |  |
| Pass |  | 111 (95.7%) | 5 (83.3%) | 44 (95.7%) | 62 (96.9%) |
| Fail |  | 5 (4.3%) | 1 (16.7%) | 2 (4.3%) | 2 (3.1%) |
| Unknown |  | 29 | 3 | 8 | 18 |
|  | | | | | |

Of the 145 respondents to the survey, 126 (86.9%) filled in the responsible research practices (RRP) questionnaire. Using a cutoff score of 70, which is the half the total possible score on the RRP tool, all respondents to this questionnaire from the global south and global north passed the questions and there was no statistically significant difference in the median score between global south 111 (95, 123) compared to global north 107 (97, 117) (P = 0.4). While, for fair research practices, with the same cutoff conditions and a response rate of 116 (80%), an equal number of two individuals failed and there was a statistically significant difference in the median score between global south 116 (99, 127) compared to global north 104 (90, 118) (P = 0.010).

# Responsible research practices and fair research practices by location (Global North or South)

In this analysis, I have removed those who chose the option prefer not to say

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| No. | Variable | N | Overall, N = 1361 | Global South, N = 821 | Global North, N = 541 | p-value2 |
| **1** | **Disclosed who funded my studies** | 110 | 7.00 (7.00, 7.00) | 7.00 (7.00, 7.00) | 7.00 (7.00, 7.00) | 0.8 |
|  | Unknown |  | 26 | 21 | 5 |  |
| **2** | **Took steps to correct errors in my published work** | 75 | 7.00 (5.50, 7.00) | 7.00 (6.00, 7.00) | 7.00 (5.00, 7.00) | 0.7 |
|  | Unknown |  | 61 | 38 | 23 |  |
| **3** | **Gave sufficient attention to the data collection tools** | 111 | 7.00 (6.00, 7.00) | 7.00 (6.00, 7.00) | 6.00 (6.00, 7.00) | 0.12 |
|  | Unknown |  | 25 | 17 | 8 |  |
| **4** | **Gave sufficient attention to the skills or expertise** | 114 | 6.50 (6.00, 7.00) | 7.00 (6.00, 7.00) | 6.00 (5.75, 7.00) | 0.040 |
|  | Unknown |  | 22 | 16 | 6 |  |
| **5** | **Sufficiently supervised or mentored junior co-workers** | 116 | 6.00 (5.00, 7.00) | 7.00 (6.00, 7.00) | 6.00 (5.00, 7.00) | 0.002 |
|  | Unknown |  | 20 | 15 | 5 |  |
| **6** | **Pilot-tested or field-tested my research instruments** | 103 | 7.00 (6.00, 7.00) | 7.00 (6.00, 7.00) | 6.00 (6.00, 7.00) | 0.2 |
|  | Unknown |  | 33 | 17 | 16 |  |
| **7** | **Chose adequate research designs** | 113 | 7.00 (6.00, 7.00) | 7.00 (6.00, 7.00) | 7.00 (6.00, 7.00) | 0.10 |
|  | Unknown |  | 23 | 16 | 7 |  |
| **8** | **Drew conclusions that were sufficiently substantiated** | 111 | 7.00 (6.00, 7.00) | 7.00 (6.00, 7.00) | 7.00 (6.00, 7.00) | 0.9 |
|  | Unknown |  | 25 | 19 | 6 |  |
| **9** | **Pre-registered my study protocols** | 93 | 6.00 (3.00, 7.00) | 5.50 (2.00, 7.00) | 6.00 (4.00, 7.00) | 0.5 |
|  | Unknown |  | 43 | 24 | 19 |  |
| **10** | **Kept adequate notes of my research process** | 112 | 6.00 (4.75, 7.00) | 6.00 (5.00, 7.00) | 6.00 (4.00, 6.50) | 0.2 |
|  | Unknown |  | 24 | 17 | 7 |  |
| **11** | **Mentioned clearly important details of my study method** | 112 | 7.00 (7.00, 7.00) | 7.00 (7.00, 7.00) | 7.00 (7.00, 7.00) | 0.9 |
|  | Unknown |  | 24 | 17 | 7 |  |
| **12** | **Managed my research data carefully** | 113 | 7.00 (6.00, 7.00) | 7.00 (7.00, 7.00) | 7.00 (6.00, 7.00) | 0.6 |
|  | Unknown |  | 23 | 17 | 6 |  |
| **13** | **My research was published under open access conditions** | 112 | 6.00 (5.00, 7.00) | 6.00 (5.00, 7.00) | 6.00 (5.00, 7.00) | 0.4 |
|  | Unknown |  | 24 | 18 | 6 |  |
| **14** | **Cited the source accurately** | 113 | 7.00 (7.00, 7.00) | 7.00 (7.00, 7.00) | 7.00 (7.00, 7.00) | 0.6 |
|  | Unknown |  | 23 | 17 | 6 |  |
| **15** | **Chose to submit or resubmit valid negative studies** | 89 | 7.00 (5.00, 7.00) | 7.00 (5.00, 7.00) | 7.00 (5.00, 7.00) | >0.9 |
|  | Unknown |  | 47 | 26 | 21 |  |
| **16** | **Fully disclosed the underlying data** | 102 | 5.00 (3.25, 7.00) | 6.00 (3.00, 7.00) | 5.00 (4.00, 6.00) | 0.3 |
|  | Unknown |  | 34 | 21 | 13 |  |
| **17** | **Fully disclosed my underlying programming code** | 77 | 4.00 (2.00, 6.00) | 4.00 (1.50, 6.00) | 4.00 (3.00, 5.75) | 0.6 |
|  | Unknown |  | 59 | 35 | 24 |  |
| **18** | **Sufficiently mentioned study flaws in my publications** | 107 | 6.00 (5.00, 7.00) | 7.00 (5.00, 7.00) | 6.00 (5.00, 7.00) | 0.4 |
|  | Unknown |  | 29 | 19 | 10 |  |
| **19** | **Sufficiently mentioned limitations in my publications** | 110 | 6.00 (6.00, 7.00) | 7.00 (6.00, 7.00) | 6.00 (5.00, 7.00) | 0.2 |
|  | Unknown |  | 26 | 19 | 7 |  |
| **20** | **Meticulously checked my work to avoid errors and biases** | 109 | 7.00 (6.00, 7.00) | 7.00 (6.00, 7.00) | 7.00 (6.00, 7.00) | 0.7 |
|  | Unknown |  | 27 | 20 | 7 |  |
|  | ***Fair research practices*** | |  |  |  |  |
| **1** | **Consulted representatives of affected populations** | 103 | 6.00 (4.00, 7.00) | 7.00 (6.00, 7.00) | 5.00 (3.00, 6.00) | <0.001 |
|  | Unknown |  | 33 | 20 | 13 |  |
| **2** | **Consulted end-end-users** | 104 | 6.00 (4.00, 7.00) | 6.00 (4.00, 7.00) | 5.00 (4.00, 6.00) | 0.032 |
|  | Unknown |  | 32 | 20 | 12 |  |
| **3** | **Planned in partnership with local researchers** | 101 | 6.00 (5.00, 7.00) | 6.00 (5.00, 7.00) | 6.00 (5.50, 7.00) | 0.6 |
|  | Unknown |  | 35 | 24 | 11 |  |
| **4** | **Detailed research protocols were prepared in consultation with all research partners** | 108 | 7.00 (6.00, 7.00) | 7.00 (6.00, 7.00) | 7.00 (6.00, 7.00) | 0.4 |
|  | Unknown |  | 28 | 19 | 9 |  |
| **5** | **Research instruments were locally adapted** | 104 | 7.00 (6.00, 7.00) | 7.00 (6.00, 7.00) | 6.00 (6.00, 7.00) | 0.2 |
|  | Unknown |  | 32 | 21 | 11 |  |
| **6** | **Clear study plans agreed upon** | 108 | 7.00 (6.00, 7.00) | 7.00 (6.00, 7.00) | 6.00 (6.00, 7.00) | 0.15 |
|  | Unknown |  | 28 | 19 | 9 |  |
| **7** | **Clear decision-making processes agreed upon** | 106 | 6.00 (5.00, 7.00) | 7.00 (6.00, 7.00) | 6.00 (5.00, 6.50) | 0.003 |
|  | Unknown |  | 30 | 19 | 11 |  |
| **8** | **Ethical approval (or a waiver) was obtained from all institutions** | 107 | 7.00 (7.00, 7.00) | 7.00 (7.00, 7.00) | 7.00 (7.00, 7.00) | 0.2 |
|  | Unknown |  | 29 | 18 | 11 |  |
| **9** | **Ethical approval (or a waiver) from all countries involved** | 91 | 7.00 (7.00, 7.00) | 7.00 (7.00, 7.00) | 7.00 (7.00, 7.00) | 0.9 |
|  | Unknown |  | 45 | 28 | 17 |  |
| **10** | **Executed in partnership with local researchers** | 102 | 7.00 (6.00, 7.00) | 7.00 (6.00, 7.00) | 7.00 (6.00, 7.00) | 0.8 |
|  | Unknown |  | 34 | 23 | 11 |  |
| **11** | **Data collection staff was selected according to both technical and cultural criteria** | 99 | 7.00 (6.00, 7.00) | 7.00 (6.00, 7.00) | 6.00 (5.25, 7.00) | 0.3 |
|  | Unknown |  | 37 | 21 | 16 |  |
| **12** | **Data was collected in a respectful and safe manner** | 107 | 7.00 (7.00, 7.00) | 7.00 (7.00, 7.00) | 7.00 (7.00, 7.00) | 0.8 |
|  | Unknown |  | 29 | 19 | 10 |  |
| **13** | **Clear and fair data ownership agreements** | 105 | 7.00 (6.00, 7.00) | 7.00 (6.00, 7.00) | 6.00 (5.00, 7.00) | 0.045 |
|  | Unknown |  | 31 | 18 | 13 |  |
| **14** | **Affected populations or their representatives were consulted** | 99 | 5.00 (4.00, 6.00) | 5.00 (4.00, 7.00) | 5.00 (3.00, 5.50) | 0.2 |
|  | Unknown |  | 37 | 22 | 15 |  |
| **15** | **End-users were consulted to develop lay dissemination products** | 100 | 4.00 (3.00, 6.00) | 5.00 (3.00, 6.00) | 4.00 (3.00, 6.00) | 0.6 |
|  | Unknown |  | 36 | 21 | 15 |  |
| **16** | **Lay dissemination—specifically for end-users of research** | 98 | 5.00 (4.00, 6.00) | 4.50 (2.00, 6.00) | 5.00 (4.00, 6.00) | 0.3 |
|  | Unknown |  | 38 | 22 | 16 |  |
| **17** | **Lay dissemination—specifically for affected populations** | 99 | 4.00 (3.00, 6.00) | 5.00 (2.00, 6.00) | 4.00 (4.00, 5.00) | 0.9 |
|  | Unknown |  | 37 | 23 | 14 |  |
| **18** | **Allocation and ordering of authorships in my publications** | 108 | 7.00 (6.00, 7.00) | 7.00 (6.00, 7.00) | 7.00 (6.00, 7.00) | 0.6 |
|  | Unknown |  | 28 | 20 | 8 |  |
| **19** | **Clear and fair publication agreements** | 107 | 7.00 (6.00, 7.00) | 7.00 (6.00, 7.00) | 6.00 (5.00, 7.00) | 0.093 |
|  | Unknown |  | 29 | 19 | 10 |  |
| **20** | **Strategies were put in place to encourage secondary analyses** | 92 | 5.00 (3.00, 6.25) | 6.00 (3.25, 7.00) | 4.00 (3.00, 6.00) | 0.037 |
|  | Unknown |  | 44 | 24 | 20 |  |
|  | **responsible research Practices score** | 119 | 109 (96, 122) | 111 (95, 123) | 107 (97, 117) | 0.4 |
|  | Unknown |  | 17 | 13 | 4 |  |
|  | **fair research practices score** | 110 | 112 (93, 122) | 116 (99, 127) | 104 (90, 118) | 0.010 |
|  | Unknown |  | 26 | 18 | 8 |  |

About responsible research practices, when respondents were asked whether in the last three years, they gave *insufficient* attention to the skills or expertise essential to perform my studies, global south respondents had a significantly higher score 7.00 (6.00, 7.00) compared to the global north 6.00 (5.75, 7.00) (P = 0.040). When asked whether In the last three years, I *insufficiently* supervised or mentored junior co-workers had a significantly higher score 7.00 (6.00, 7.00) compared to the global north 6.00 (5.00, 7.00) (P = 0.002). There were no statistically significant differences in all other 18 questions in the Responsible research practices.

About fair research practices, when respondents were asked whether in the research they have been involved in over the last three years, they did not consult representatives of affected populations during the preparation stage of research, global south respondents had a significantly higher score 7.00 (6.00, 7.00) compared to the global north 5.00 (3.00, 6.00) (P <0.001). When asked whether in the research they have been involved in over the last three years, they did not consult end users of research during the preparation stage of research, the global south had a significantly higher score 6.00 (4.00, 7.00) compared to the global north 5.00 (4.00, 6.00) (P = 0.032). When asked whether in the research they have been involved in over the last three years there were clear *decision-making processes* agreed upon by all study partners, the global south had a significantly higher score 7.00 (6.00, 7.00) compared to the global north 6.00 (5.00, 6.50) (P = 0.003). When asked whether in the research they have been involved in over the last three years there were no clear and fair data ownership agreements, the global south had a significantly higher score 7.00 (6.00, 7.00) compared to the global north 6.00 (5.00, 7.00) (P = 0.045). When asked whether in the research they have been involved in over the last three years, whenever data was made openly accessible, strategies were put in place to encourage secondary analyses by local researchers, the global south had a significantly higher score 6.00 (3.25, 7.00) compared to the global north 4.00 (3.00, 6.00) (P = 0.037). There were no statistically significant differences in all other 15 questions in the Fair research practices.

# Univariate analysis - Responsible research Practices

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Characteristic | N | Beta | 95% CI | p-value |
| **Location** | 108 |  |  |  |
| Global South |  | — | — |  |
| Global North |  | 0.32 | -7.3, 7.9 | >0.9 |
| **Academic rank** | 108 |  |  |  |
| Associate Professor or Full Professor |  | — | — |  |
| Bachelor or Master degree |  | -17 | -27, -6.9 | 0.001 |
| Other (please specify) |  | 15 | -7.6, 37 | 0.2 |
| PhD degree |  | -1.5 | -11, 7.8 | 0.8 |
| Postdoc or Assistant Professor |  | 0.73 | -11, 12 | 0.9 |
| Prefer not to disclose |  | -7.7 | -35, 19 | 0.6 |
| **Years of involvement in research** | 108 |  |  |  |
| Early Career (< 3 years post-education) |  | — | — |  |
| Established (>10 years post-education) |  | 8.2 | -5.6, 22 | 0.2 |
| Mid-career (3-10 years post-education) |  | 2.5 | -12, 17 | 0.7 |
| Prefer not to disclose |  | -15 | -56, 25 | 0.5 |
| **Sex of the respondent** | 108 |  |  |  |
| Female |  | — | — |  |
| Male |  | 2.5 | -5.1, 10 | 0.5 |
| Prefer not to disclose |  | 19 | -21, 58 | 0.4 |
| **Country of origin** | 108 |  |  |  |
| East Asia and Pacific |  | — | — |  |
| Europe and Central Asia |  | -1.5 | -14, 11 | 0.8 |
| Middle East and North Africa |  | -4.5 | -45, 36 | 0.8 |
| North America |  | -2.3 | -18, 13 | 0.8 |
| Prefer Not To Disclose |  | -36 | -76, 5.0 | 0.088 |
| South Asia |  | -7.5 | -23, 7.5 | 0.3 |
| Sub-Saharan Africa |  | 1.1 | -11, 14 | 0.9 |
| **Global health discipline** | 108 |  |  |  |
| Biology/Medicine |  | — | — |  |
| Biostatistics/Epidemiology |  | -0.86 | -10, 8.7 | 0.9 |
| Mathematics/Computer science |  | 14 | -26, 55 | 0.5 |
| Other (please specify) |  | -0.72 | -12, 10 | 0.9 |
| Political sciences/Health economics |  | -2.0 | -19, 15 | 0.8 |
| Prefer not to disclose |  | 2.3 | -38, 43 | >0.9 |
| Sociology/Anthropology |  | -5.7 | -22, 11 | 0.5 |

At Univariate analysis, only academic rank of the respondents had a category that was significantly associated with responsible research practices. Bachelor or Master degree was associated with -17 (95%CI:-27, -6.9) (P = 0.001) reduction in the responsible research score compared to Associate Professor or Full Professor. Other variables were not statistically significantly associated with responsible research practices.

# Multivariate analysis - Responsible research Practices

| *Characteristic* | *Adj. Beta* | *95% CI* | *p-value* |
| --- | --- | --- | --- |
| **Location** |  |  |  |
| Global South | — | — |  |
| Global North | -4.73 | -19.8, 10.3 | 0.540 |
| **Academic rank** |  |  |  |
| Associate Professor or Full Professor | — | — |  |
| Bachelor or Master degree | -16.5 | -30.6, -2.29 | 0.025 |
| Other (please specify) | 16.2 | -8.55, 41.0 | 0.203 |
| PhD degree | -2.60 | -14.9, 9.68 | 0.679 |
| Postdoc or Assistant Professor | 2.29 | -11.7, 16.3 | 0.749 |
| Prefer not to disclose | -8.28 | -38.5, 22.0 | 0.593 |
| **Years of involvement research** |  |  |  |
| Early Career (< 3 years post-education) | — | — |  |
| Established (>10 years post-education) | 6.71 | -9.12, 22.5 | 0.408 |
| Mid-career (3-10 years post-education) | 3.00 | -11.8, 17.8 | 0.693 |
| Prefer not to disclose | -6.21 | -49.2, 36.8 | 0.778 |
| **Gender** |  |  |  |
| Female | — | — |  |
| Male | 2.66 | -6.33, 11.7 | 0.563 |
| Prefer not to disclose | 15.9 | -27.5, 59.4 | 0.474 |
| **Country of origin** |  |  |  |
| East Asia and Pacific | — | — |  |
| Europe and Central Asia | 0.43 | -18.5, 19.3 | 0.965 |
| Middle East and North Africa | -5.43 | -46.7, 35.8 | 0.797 |
| North America | 0.06 | -19.5, 19.6 | 0.995 |
| Prefer Not To Disclose | -28.6 | -71.7, 14.5 | 0.197 |
| South Asia | -5.27 | -23.2, 12.6 | 0.566 |
| Sub-Saharan Africa | 3.69 | -10.7, 18.1 | 0.616 |
| **Discipline of global health** |  |  |  |
| Biology/Medicine | — | — |  |
| Biostatistics/Epidemiology | 5.96 | -4.41, 16.3 | 0.263 |
| Mathematics/Computer science | 19.5 | -21.2, 60.1 | 0.351 |
| Other (please specify) | 2.46 | -9.01, 13.9 | 0.675 |
| Political sciences/Health economics | 3.19 | -14.2, 20.6 | 0.720 |
| Prefer not to disclose | 19.6 | -22.1, 61.4 | 0.359 |
| Sociology/Anthropology | 0.07 | -17.4, 17.5 | 0.994 |

In the full model, after adjusting for Location, years of involvement, gender, country of origin and discipline of global health, Bachelor or Master degree was associated with -16.5 (95%CI: -30.6, -2.29) (P = 0.025) reduction in the responsible research practice score compared to Associate Professor or Full Professor.

# Univariate analysis - Fair research Practices

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Characteristic | N | Beta | 95% CI | p-value |
| **Location** | 108 |  |  |  |
| Global South |  | — | — |  |
| Global North |  | -10 | -19, -1.6 | 0.022 |
| Academic rank | 108 |  |  |  |
| Associate Professor or Full Professor |  | — | — |  |
| Bachelor or Master degree |  | -11 | -23, 1.7 | 0.10 |
| Other (please specify) |  | 9.0 | -18, 36 | 0.5 |
| PhD degree |  | -3.2 | -15, 8.2 | 0.6 |
| Postdoc or Assistant Professor |  | -8.0 | -22, 5.9 | 0.3 |
| Prefer not to disclose |  | -3.1 | -36, 30 | 0.9 |
| Years of involvement in research | 108 |  |  |  |
| Early Career (< 3 years post-education) |  | — | — |  |
| Established (>10 years post-education) |  | 3.5 | -12, 19 | 0.7 |
| Mid-career (3-10 years post-education) |  | 0.56 | -16, 17 | >0.9 |
| Prefer not to disclose |  | -55 | -101, -8.1 | 0.023 |
| **Gender** | 108 |  |  |  |
| Female |  | — | — |  |
| Male |  | -0.81 | -9.5, 7.9 | 0.9 |
| Prefer not to disclose |  | -33 | -78, 12 | 0.2 |
| Country of origin | 108 |  |  |  |
| East Asia and Pacific |  | — | — |  |
| Europe and Central Asia |  | 2.1 | -13, 17 | 0.8 |
| Middle East and North Africa |  | 27 | -19, 73 | 0.3 |
| North America |  | 5.9 | -12, 24 | 0.5 |
| Prefer Not To Disclose |  | -15 | -61, 31 | 0.5 |
| South Asia |  | 6.4 | -11, 24 | 0.5 |
| Sub-Saharan Africa |  | 15 | 0.24, 29 | 0.049 |
| **Global health discipline** | 108 |  |  |  |
| Biology/Medicine |  | — | — |  |
| Biostatistics/Epidemiology |  | -6.1 | -17, 4.6 | 0.3 |
| Mathematics/Computer science |  | -17 | -63, 28 | 0.5 |
| Other (please specify) |  | 6.9 | -5.6, 19 | 0.3 |
| Political sciences/Health economics |  | 3.6 | -15, 22 | 0.7 |
| Prefer not to disclose |  | 22 | -24, 67 | 0.4 |
| Sociology/Anthropology |  | -7.6 | -26, 11 | 0.4 |

At Univariate analysis, coming from the global north was associated with -10 (95%CI:-19, -1.6) (P = 0.022) reduction the fair research practices scores compared to respondent from global south, while those who preferred not to say their number of years of involvement in research had a -55 (95%CI:-101, -8.1) (P = 0.023) reduction in fair research practices scores compared to Early Career (< 3 years post-education). Respondent from the sub-Saharan region had a 15 (95%CI:0.24, 29) (P = 0.049) increase in fair research practices scores compared to those from East Asia and Pacific. Other variables were not statistically significantly associated with fair research practices.

# Multivariate analysis - Fair research Practices

| *Characteristic* | *Adj. Beta* | *95% CI* | *p-value* |
| --- | --- | --- | --- |
| **Location** |  |  |  |
| Global South | — | — |  |
| Global North | -15.6 | -32.7, 1.45 | 0.077 |
| **Academic rank** |  |  |  |
| Associate Professor or Full Professor | — | — |  |
| Bachelor or Master degree | -9.94 | -26.0, 6.12 | 0.228 |
| Other (please specify) | 12.3 | -15.8, 40.4 | 0.394 |
| PhD degree | -6.03 | -19.9, 7.89 | 0.398 |
| Postdoc or Assistant Professor | -4.79 | -20.7, 11.1 | 0.556 |
| Prefer not to disclose | 1.01 | -33.3, 35.3 | 0.954 |
| **Years of involvement in research** |  |  |  |
| Early Career (< 3 years post-education) | — | — |  |
| Established (>10 years post-education) | 5.15 | -12.8, 23.1 | 0.575 |
| Mid-career (3-10 years post-education) | -0.78 | -17.6, 16.0 | 0.928 |
| Prefer not to disclose | -50.0 | -98.7, -1.25 | 0.048 |
| **Gender** |  |  |  |
| Female | — | — |  |
| Male | -5.91 | -16.1, 4.29 | 0.259 |
| Prefer not to disclose | -19.4 | -68.6, 29.8 | 0.441 |
| **Country of origin** |  |  |  |
| East Asia and Pacific | — | — |  |
| Europe and Central Asia | 9.65 | -11.8, 31.1 | 0.380 |
| Middle East and North Africa | 14.0 | -32.7, 60.7 | 0.558 |
| North America | 10.7 | -11.5, 32.9 | 0.346 |
| Prefer Not To Disclose | -15.2 | -64.1, 33.6 | 0.543 |
| South Asia | 2.85 | -17.4, 23.2 | 0.784 |
| Sub-Saharan Africa | 10.8 | -5.51, 27.1 | 0.198 |
| **Discipline of global health** |  |  |  |
| Biology/Medicine | — | — |  |
| Biostatistics/Epidemiology | 3.09 | -8.66, 14.8 | 0.608 |
| Mathematics/Computer science | -9.98 | -56.1, 36.1 | 0.672 |
| Other (please specify) | 9.18 | -3.81, 22.2 | 0.170 |
| Political sciences/Health economics | 9.54 | -10.2, 29.2 | 0.345 |
| Prefer not to disclose | 30.0 | -17.3, 77.3 | 0.217 |
| Sociology/Anthropology | -6.28 | -26.1, 13.5 | 0.536 |

In the full model, after adjusting for Location, years of involvement, gender, country of origin and discipline of global health, respondents who preferred not to disclose their years of involvement in research had a -50.0 (95%CI: -98.7, -1.25) (P = 0.048) reduction in the fair research scores compared to Early Career (< 3 years post-education).