Self-reported Occurrence and Correlates of Research Misconduct among HIV Researchers in Kenya

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Disclaimer

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Definitions

Research misconduct means fabrication, falsification, or plagiarism in proposing, performing, or reviewing research, or in reporting research results.

Does not include honest errors or differences in opinion.

The National Science Foundation, USA recognizes other Detrimental Research Practices (DRPs) aka Questionable Research Practices (QRPs) but focuses on FFP

Sources
1. https://ori.hhs.gov/definition-misconduct

Research Integrity principles include reliability, honesty, respect and accountability

Source: ALLEA (All European Academies) : The European Code of Conduct for Research Integrity (Revised ), 2017.
Occurrence of RM


- 2% – 14% of scientists may have fabricated or falsified data
- 33 – 75% may be guilty of “questionable research practices.”
Occurrence of RM


• Used SMQ-R tool
• 68.9% had committed at least one RM
• 42% of researchers had committed falsification of data or plagiarism
Misconduct accounts for the majority of retracted scientific publications

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• Reviewed 2047 retracted biomedical journal articles indexed in Pubmed 2012 (1975 -2012)
• 21.3% due to error
• \textbf{67.4% due to misconduct}
  • 43.4% fraud (Fabrication and falsification)
  • 14.2% duplicate publications
  • 9.8% plagiarism
• \textbf{10 fold increase in fraud since 1975}
Objective

• Estimate the occurrence of self-reported RM among HIV researchers in Kenya

• Describe factors associated with self reported RM.
Methods

• Cross-sectional survey
• Study population: HIV research investigators and coordinators approved by MTRH, KNH & Moi IREC and listed on NACC’s Maisha Maarifa database
• Census sample of 667 respondents
• Viewed an informed consent document before being invited to complete survey tool anonymously
• SMQ-R instrument (Broome et al, 2005) used – as an online survey on REDCAP platform
• The prevalence of self-reported personal experience with RM and associated factors assessed using Fishers Exact or Chi square tests were derived.
Methods ctd

• Used a modified Scientific Misconduct Questionnaire-Revised (SMQ-R) tool to estimate the prevalence of RM.

  • The tool assesses perceptions of various stakeholders on RM
Response Rate

• 100 out of 667 (15%) completed the survey after 3 reminders.
Frequency & correlates of Awareness of RM in the last 5 years.

Awareness of RM in the past 5 years (N=87)

Correlates of Awareness of RM in last 5 years

<table>
<thead>
<tr>
<th>Factors</th>
<th>Awareness report</th>
</tr>
</thead>
<tbody>
<tr>
<td>Position held (N=86)</td>
<td></td>
</tr>
<tr>
<td>Clinician (n=25)</td>
<td>17(42.5%)</td>
</tr>
<tr>
<td>Lecturer (n=20)</td>
<td>7(17.5%)</td>
</tr>
<tr>
<td>Researcher (n=22)</td>
<td>12(30%)</td>
</tr>
<tr>
<td>Other (n=19)</td>
<td>4(10%)</td>
</tr>
<tr>
<td></td>
<td>8(19.1%) 0.016</td>
</tr>
<tr>
<td>Severity of penalties for SM (n=88)</td>
<td></td>
</tr>
<tr>
<td>Low (n=60)</td>
<td>22(53.7%)</td>
</tr>
<tr>
<td>High (n=28)</td>
<td>19(46.3%)</td>
</tr>
<tr>
<td></td>
<td>38(80.9%) 0.006</td>
</tr>
<tr>
<td>Chances of getting caught for SM if it occurs</td>
<td></td>
</tr>
<tr>
<td>Low (n=60)</td>
<td>21(51.2%)</td>
</tr>
<tr>
<td>High (n=29)</td>
<td>20(48.8%)</td>
</tr>
<tr>
<td></td>
<td>39(81.3%) 0.003</td>
</tr>
<tr>
<td>Researchers support of rules and procedures</td>
<td></td>
</tr>
<tr>
<td>and procedures related to SM (n=88)</td>
<td></td>
</tr>
<tr>
<td>Low (n=33)</td>
<td>9(22%)</td>
</tr>
<tr>
<td>High (n=55)</td>
<td>32(78%)</td>
</tr>
<tr>
<td></td>
<td>24(51.1%) 0.005</td>
</tr>
<tr>
<td>The effectiveness of your institution’s rules</td>
<td></td>
</tr>
<tr>
<td>and procedures for reducing SM (n=88)</td>
<td></td>
</tr>
<tr>
<td>Low (n=46)</td>
<td>13(31.7%)</td>
</tr>
<tr>
<td>High (n=42)</td>
<td>28(68.3%)</td>
</tr>
<tr>
<td></td>
<td>33(70.2%) &lt;0.0001</td>
</tr>
<tr>
<td></td>
<td>14(29.8%)</td>
</tr>
</tbody>
</table>
Frequency & Correlates of Self Reported Ever involvement in any RM

**Ever-involvement in RM**
(N=80)

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>68.30%</td>
<td>31.70%</td>
</tr>
</tbody>
</table>

- **Correlates of ever-involvement in any RM**

<table>
<thead>
<tr>
<th>Characteristics/ Ratings</th>
<th>Ever-involvement in RM</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Category</td>
</tr>
<tr>
<td>Researchers' understanding of rules and procedures related to SM(n=81)</td>
<td>Low (n=30)</td>
</tr>
<tr>
<td></td>
<td>High (n=51)</td>
</tr>
<tr>
<td>Researchers support of rules and procedures related to SM(n=81)</td>
<td>Low (n=31)</td>
</tr>
<tr>
<td></td>
<td>High (n=50)</td>
</tr>
<tr>
<td>The effectiveness of your institution's rules and procedures for reducing SM(n=80)</td>
<td>Low (n=40)</td>
</tr>
<tr>
<td></td>
<td>High (n=40)</td>
</tr>
</tbody>
</table>

- Okonta et al, 2013: Nigeria - 68.9%
Self-Reported Ever-involvement in & correlates of FFP.

**Ever-involvement in FFP (n=79)**

<table>
<thead>
<tr>
<th>Factor</th>
<th>Category</th>
<th>Never</th>
<th>Yes</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chances of getting caught for SM if it occurs (N=81)</td>
<td>Low (n=53)</td>
<td>28(53.8%)</td>
<td>25(46.2%)</td>
<td>0.003</td>
</tr>
<tr>
<td></td>
<td>High (n=28)</td>
<td>24(46.2%)</td>
<td>4(13.8%)</td>
<td></td>
</tr>
<tr>
<td>Researchers support of rules and procedures related to SM (N=80)</td>
<td>Low (n=31)</td>
<td>15(29.4%)</td>
<td>16(55.2%)</td>
<td>0.023</td>
</tr>
<tr>
<td></td>
<td>High (n=49)</td>
<td>36(70.6%)</td>
<td>13(44.8%)</td>
<td></td>
</tr>
</tbody>
</table>

- Fanelli, 2009: HICs – 1.79% FFP & 33.7% QRPs on self report
- Higher frequency when reporting on colleagues
Conclusions

• Awareness of cases of RM, personal involvement in any RM and, specifically, FFP were frequent.

• Reports of RM were associated with:
  • Experience in research,
  • Perception of effectiveness of institutional rules and procedures relevant to RM and
  • Perceived severity of related penalties, were associated these reports.
Recommendations

• Research and Academic institutions should develop and disseminate widely rules & regulations governing responsible conduct of research.

• Such regulations should have clearly defined procedures and sanctions for managing research misconduct.
Acknowledgements

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• Kenyan HIV Researchers
• NACOSTI, Kenya
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Thank you