

A Cross-Sectional Survey Study to Assess Prevalence and Attitudes Regarding Research Misconduct among Investigators in the Middle East

Marwan Felaefel, Mohamed Salem, Rola Jaafar, Ghufraan Jassim, Hillary
Edwards, Fiza Rashid-Doubell, Reham Yousri, Nahed M. Ali, Henry
Silverman

Contents

- Background
- Methods
- Results
- Discussion
- Next Steps
- Questions

BACKGROUND

Available Data

Fanelli, 2009:

- Mainly from Western countries.
- Self reporting:
 - falsification and fabrication (1.97%)
 - Plagiarism (0.3%)
 - Other questionable practices (33.7%)
- Observed:
 - Falsification (14%)
 - Plagiarism (1.4%)
 - Other questionable practices (72%)



http://undsci.berkeley.edu/images/us101/misconduct_cartoon.gif

Other available data

Survey study in India targeting medical researchers:

- Between Aug 2012 and Mar 2013
- Observed:
 - Plagiarism (53%)
 - Denial of authorship (33.5%)
 - Gift authorship (65%)

The gap:

- Collaborative work with the Middle-East is on the rise.
- Lack of robust regulations and guidelines.
- Similar data on research misconducts in the region is scarce.



Sure it doesn't look very big from here, but it's just the tip of the iceberg

To bridge this gap:

- This study aims to:
 - a. Determine the **prevalence of and attitudes** regarding research misconduct in **the Middle-East.**
 - b. Determine the **independent factors** that might account for these attitudes and prevalence **regarding research misconduct.**

METHODS

A survey study to assess self reported and reserved misconducts

The survey

Adapted from survey studies performed by
Martinson and colleagues

Questionnaire designed to collect:

- *Demographic Information*
- *Prevalence of Scientific Misconduct*
 - *Self report and observation*
- *Acceptability of Practices in Conduct of Research*
- *Attitudes of Scientific Misconduct*

Population and Recruitment

- We approached individuals involved in scientific research activities
- In Egypt at:
 - The American University in Cairo (AUC),
 - Cairo University,
 - Suez Canal University,
- In Lebanon at:
 - Ain Wa Zain Hospital.
- In Bahrain:
 - Royal College of Surgeons in Ireland (RCSI) Medical University of Bahrain.

Population and Recruitment

- 348 Individuals recruited (278 completed) included:
 - undergraduate students,
 - MSc students,
 - PhD students,
 - and individuals working in research positions and teaching academic positions that may also involve research activities
- Recruited by convenience sampling and completed via a web link on SurveyMonkey® or by paper survey submitted anonymously.

Ethical considerations

- We obtained consent from all participants.
- We collected responses anonymously.
- We obtained ethical approval
 - Participating IRBs
 - IRB of the University of Maryland, Baltimore.

Responses Aggregated into Composites

- Circumventing research ethics regulations
- Falsification and Fabrication
- Plagiarism
- Authorship
- Conflict of Interest
- Other research practices

Analysis

- Descriptive analysis
- Chi-square analysis to assess correlations between responses and independent factors
- Multivariate analysis of the composites to determine significant associations with independent variables
- A p-value < 0.05 was considered significant.

Results

Demographics		%
Gender	Male	38.8
	Female	60.4
Nationality	Egyptian	72.7
	Lebanese	11.2
	Bahraini	2.9
	Other Middle East and North African countries	1.9
	Other Western countries	10.0
	Other Miscellaneous	1.5
Academic Position	Academic Faculty	44.6
	Masters, PhD and Postdoctoral	34.6
	Other (e.g. Undergraduates, Assistants)	20.8

	Characteristic	%
University location where graduate degree was obtained	Middle East or North Africa	78.8
	EU, UK, US, Canada, Australia	17.8
	Other Countries	3.4
Received Prior Ethics Training?	Yes	56.8
	No	43.2
Prior Research Experience?	Yes	83.3
	No	16.7

Composite rates of self reporting and observed practices:

Self reported:

- “circumventing research ethics regulations” (50.5%)
- “fabrication and falsification” (28.6%);
- “Authorship Misconduct” (20.5%)

Observed:

- “fabrication or falsification” (49.6%)
- “circumventing research ethics regulations” (46.4%)
- “authorship misconduct” (40.6%)

The overall data indicate:

- **59.4%** admitted to having committed at least one misconduct behavior from any of the composites
- **74.5%** reported having observed any misconduct behavior among one of their colleagues

Multivariate Analysis

Composite	Age		Female		Prior Ethics Training		Western School		Faculty Position	
	OR	P-value	OR	P-value	OR	P-value	OR	P-value	OR	P-value
Circumventing Research Ethics Regulation	0.96	0.001	-	-	0.49	0.016	0.62	0.235	-	-
Fabrication and Falsification	0.98	0.351	0.48	0.027	0.27	0.000	0.20	0.016	0.709	0.434
Plagiarism	-	-	-	-	0.47	0.084	0.23	0.156	0.48	0.098
Authorship	-	-	-	-	0.58	0.102	-	-	-	-
Conflict of interest	-	-	3.89	0.082	-	-	-	-	-	-
Other Research Practices	0.97	0.197	-	-	-	-	-	-	0.52	0.156
Any	0.96	0.002	-	-	0.38	0.002	0.66	0.295	-	-

Multivariate Analysis

Composite	Age		Female		Prior Ethics Training		Western School		Faculty Position	
	OR	P-value	OR	P-value	OR	P-value	OR	P-value	OR	P-value
Circumventing Research Ethics Regulation	0.96	0.001	-	-	0.49	0.016	0.62	0.235	-	-
Fabrication and Falsification	0.98	0.351	0.48	0.027	0.27	0.000	0.20	0.016	0.709	0.434
Plagiarism	-	-	-	-	0.47	0.084	0.23	0.156	0.48	0.098
Authorship	-	-	-	-	0.58	0.102	-	-	-	-
Conflict of interest	-	-	3.89	0.082	-	-	-	-	-	-
Other Research Practices	0.97	0.197	-	-	-	-	-	-	0.52	0.156
Any	0.96	0.002	-	-	0.38	0.002	0.66	0.295	-	-

Multivariate Analysis

Composite	Age		Female		Prior Ethics Training		Western School		Faculty Position	
	OR	P-value	OR	P-value	OR	P-value	OR	P-value	OR	P-value
Circumventing Research Ethics Regulation	0.96	0.001	-	-	0.49	0.016	0.62	0.235	-	-
Fabrication and Falsification	0.98	0.351	0.48	0.027	0.27	0.000	0.20	0.016	0.709	0.434
Plagiarism	-	-	-	-	0.47	0.084	0.23	0.156	0.48	0.098
Authorship	-	-	-	-	0.58	0.102	-	-	-	-
Conflict of interest	-	-	3.89	0.082	-	-	-	-	-	-
Other Research Practices	0.97	0.197	-	-	-	-	-	-	0.52	0.156
Any	0.96	0.002	-	-	0.38	0.002	0.66	0.295	-	-

Multivariate Analysis

Composite	Age		Female		Prior Ethics Training		Western School		Faculty Position	
	OR	P-value	OR	P-value	OR	P-value	OR	P-value	OR	P-value
Circumventing Research Ethics Regulation	0.96	0.001	-	-	0.49	0.016	0.62	0.235	-	-
Fabrication and Falsification	0.98	0.351	0.48	0.027	0.27	0.000	0.20	0.016	0.709	0.434
Plagiarism	-	-	-	-	0.47	0.084	0.23	0.156	0.48	0.098
Authorship	-	-	-	-	0.58	0.102	-	-	-	-
Conflict of interest	-	-	3.89	0.082	-	-	-	-	-	-
Other Research Practices	0.97	0.197	-	-	-	-	-	-	0.52	0.156
Any	0.96	0.002	-	-	0.38	0.002	0.66	0.295	-	-

Multivariate Analysis

Composite	Age		Female		Prior Ethics Training		Western School		Faculty Position	
	OR	P-value	OR	P-value	OR	P-value	OR	P-value	OR	P-value
Circumventing Research Ethics Regulation	0.96	0.001	-	-	0.49	0.016	0.62	0.235	-	-
Fabrication and Falsification	0.98	0.351	0.48	0.027	0.27	0.000	0.20	0.016	0.709	0.434
Plagiarism	-	-	-	-	0.47	0.084	0.23	0.156	0.48	0.098
Authorship	-	-	-	-	0.58	0.102	-	-	-	-
Conflict of interest	-	-	3.89	0.082	-	-	-	-	-	-
Other Research Practices	0.97	0.197	-	-	-	-	-	-	0.52	0.156
Any	0.96	0.002	-	-	0.38	0.002	0.66	0.295	-	-

Discussion:

- Research misconduct is not uncommon in the Middle East.
- Compared to the West,
 - For observed research misconducts 74.5% in the Middle East compared to 72% in the West (Fanelli, 2009)
 - For Self reported misconducts 59.4% in the Middle-East as compared to 33.7% in the West (Fanelli, 2009)

Limitations

- Self-reporting of practices, which could represent an underestimate of actual practice as individuals may be reluctant to admit wrongdoings, even though the survey was anonymized.
- Results from limited number of institutions in 3 countries may not be generalizable to other institutions in the Middle East.

Next Steps

- Qualitative Research
 - Explore reasons for misconduct practices
 - Lack of awareness (lack of prior training)
 - Academic culture (Western Vs Other universities)
- Establish training in curricula
- Investigate organizational culture.

Questions?

Thank you!