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Perception and Attitude towards Data Cooking: A Perspective of LIS Research Scholars

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Abstract

This paper aims to present the results of a study on fundamental and hidden factors of research ethics or plagiarism and also its significant aspects like data falsification, fabrication, data cooking, gifted authorship, neglected authorship and other factors. It investigated the perception of research scholars towards such activities. Findings of the study revealed that research scholars of Library and information science are partially aware of the research ethics and need some more counseling on this ethical education. They actively support that such activities are unethical and may cause harm to society. The present study is an original study because there is no survey kind of study on research misconduct in the field of library and information science which can bring the real perception of the research scholars of library and information science.

Introduction

Ethical problems and concerns are part of the everyday practice of doing research and in all kinds of research. It can be said that unethical behaviour is any substantial mistreatment of intellectual property or participation of other parties, deliberately hampering the research process or distortion of scientific evidence, as well as all the behaviours that affect the integrity of scientific practice. The Office of Research Integrity defines research misconduct as “fabrication,

falsification, or plagiarism in proposing, performing, or reviewing research, or in reporting research results.”

In this article, we find out the perception and attitude towards data cooking by focusing on research scholars of library and information science. We examine the knowledge and opinion of researchers regarding research ethics education and also find out the perception of gifted authorship. This article also examines the perception and attitude of researchers towards plagiarised authors and concern over the type of punishment should be given for this type of severe unethical activity of data falsification.

Committee on publication ethics (COPE) is dedicated to educate and support editors, publishers and those involved in publication ethics to move the culture of publishing towards one where ethical practices become the norm, part of the publishing culture. Their approach is firmly in the direction of influencing through education, resources and support of their members alongside the fostering of professional debate on the broader community. There are many cases of data cooking, plagiarism and unethical activities were recorded in COPE, which shows these things are every day in practice.

A case of plagiarism came into notice in front of COPE as a paper was published in a journal and reader contacted the publisher that the whole of the introduction part was copied directly from another publication. In another case claim of plagiarism is reported by author A that her review article of 2008 was used as the framework for a 2013 review article on the same subject in open access journals by a former student of hers who is author B in that paper. A similar case of data manipulation was recorded by COPE as a journal received an enquiry from a reader stating that they had found some discrepancies in the spectra published in the electronic supporting information for a published paper(COPE, n.d.) The editor checked the spectra and verified that the discrepancies that the reader had identified were a reasonable cause for concern. The editor also checked the author's related papers in the journal and identified a total of four papers that were affected by similar discrepancies in the spectra. In another case, the research integrity officer of an academic institution alleges that a paper published in their journal in 2013 includes fabricated data.

COPE received a communication from one of the authors of the paper reiterating this assertion and providing some further explanation; that a former student had fabricated data and that it affected the paper. Over the next week or so, other journals by the same publisher received

similar notifications from the same author. Another case of serial plagiarism came into notice of COPE as suspicions were raised by a reviewer who commented that some of the passages in a submission were similar to an earlier paper published in our journal by the same author. An iThenticate check indicates a similarity index of 60% however, the overlap was not from that earlier paper but from another source by a different author which had contributed 41% of the material.

Literature review

In a study by **Ahmed & Ullah (2015)** the use of plagiarism avoiding techniques can be helpful to maintain a better learning environment, intellectual honesty and academic integrity which explored the use of plagiarism avoiding techniques for creating ethical scholarship among research students. The association between the frequency of using plagiarism avoiding technique and satisfaction about knowledge of plagiarism was indicated. Differences were also found based on gender, discipline, level and stage of the study.

Fanelli (2009) conducted a meta-analysis of 18 studies involving surveys documenting the occurrence of research misconduct (15 from the U.S., three from the U.K, one from Australia, and two multinational). Between 0.3% and 4.9% admitted to having fabricated or falsified research data; meta-analysis yielded a pooled weighted average of 1.97% of scientists who admitted to having fabricated, falsified or modified data or results at least once; up to 33.7% admitted to other "questionable research practices"; the crude unweighted mean for these behaviours was 9.54%. In surveys inquiring about personal knowledge of a colleague who fabricated or falsified research data, between 5.2% and 33.3% of respondents replied affirmatively, whereas between 6.2% and 72% of respondents knew various "questionable research practices" committed by their colleagues.

Similar studies showing the extent of questionable research practices in India have recently been performed, but are few. A questionnaire-based study determined the extent of occurrence of misconduct in publications amongst biomedical researchers. Of the 155 respondents, 65.1% reported the offering of gifted authorship; 56.7% knew an individual who altered or fabricated data, and 53.5% observed plagiarism (**Dhingra and Mishra 2014**).

A study from Nigeria revealed that 68.9% of investigators admitted to at least one of eight listed forms of scientific misconduct. In a follow-up report, these authors from Nigeria showed that more than half of the respondents were aware of a colleague who had committed misconduct defined as “non-adherence to rules, regulations, guidelines and commonly accepted professional codes or norms” (**Okonta and Rossouw 2012**).

Another study (**Marwan et al. 2017**) from western countries indicates a significant level of questionable research practices and related data from low and middle-income countries are limited. The finding shows a high prevalence of misconduct as a majority of respondents committed at least one misbehaviour and reported having knowledge of any misbehaviours among any of their colleagues. The most common type of self-reported misconduct was “circumventing research ethics regulations”.

Dhingra & Mishra (2014) in their paper “Publication misconduct among medical professionals in India” planned an exploratory study to determine the extent of occurrence of misconduct in publication amongst biomedical researchers. 141 (91%) respondents agreed that they had some knowledge of publication ethics, but only 29% believed it was adequate. The most commonly observed misconduct was offering gift authorship, reported by 101 (65%); followed by alteration of data reported by 88 (56%). Plagiarism was observed by 83 respondents (53%); while 52 (33.5%) respondents had observed a colleague’s name being omitted from a paper to which she/he had significantly contributed. A majority of respondents in the present study reported witnessing publication misconduct, thereby revealing the frequent occurrence of this problem among Indian biomedical researchers (Stern et.al.2017).

A study by **Okonta and Rossouw (2014)** reports on the attitudes, perceptions and factors related to the work environment thought to be associated with research misconduct in a group of researchers in Nigeria. A survey of researchers attending a scientific conference was done. Half of the respondents (50.4%) were aware of a colleague who had committed misconduct, defined as “non-adherence to rules, regulations, guidelines, and commonly accepted professional codes or norms. Over 88% of the researchers were concerned about the perceived amount of misconduct prevalent in their institution, and 96.2% believed that one or more forms of scientific misconduct had occurred in their workplace. The finding shows that researchers in Nigeria perceive that scientific misconduct is commonplace in their institutions, but are however worried about the adverse effects of scientific misconduct on the credibility of scientific research.

Both authors **Okonta and Rossouwa (2013)** in another study “*Prevalence of scientific misconduct among a group of Researchers in Nigeria*” aimed at determining the prevalence of scientific misconduct in a group of researchers in Nigeria. Ninety-one researchers (68.9%) admitted having committed at least one of the eight listed forms of scientific misconduct. Disagreement about authorship was the most common form of misconduct committed (36.4%) while plagiarism was the least (9.2%). About 42% of researchers had committed falsification of data or plagiarism. The findings came from this study are training on research ethics has to be integrated into the curriculum of undergraduate and postgraduate students while provision should be made for in-service training of researchers. Penalties against acts of scientific misconduct should be enforced at institutional and national levels.

Objectives

The principal objective of this study is to find out the perception and attitude towards the unethical process, which is in practice or experienced by research scholars of library & information science.

The following objectives have been formulated for this study:

- To know about the previous knowledge of research ethics education and their perception of the need for research ethics.
- To find out the perception and attitude towards gifted authorship.
- To find out the perception and attitude towards data cooking/fabrication and falsification of data.
- To find out attitude and perception towards the plagiarised author.

Methodology

The study employs survey method and questionnaire prepared on Google form was sent electronically to record the responses of research scholars on perception and attitude on data cooking. The questionnaire consists 38 multiple choice questions divided into different sections like personal details, previous knowledge of ethics education, perception and attitude towards

gifted authorship, perception and attitude towards ignored (neglected) authorship, perception and attitude towards data cooking/fabrication and falsification of data and attitude and perception toward the plagiarised author.

The questionnaire was distributed through Facebook, E-mail, Whatsapp and LIS links. Total 54 responses were received from MPhil and PhD scholars of 9 different universities. Responses were recorded and analysed by using SPSS software and presented in tabular and graph form.

Data Analysis and Interpretation

Research ethics education

An online questionnaire was distributed via some social networking websites and mess, and it was found that only 54 research scholars from different universities had given their response. Where 40 scholars were male, and 14 were female. Once analysing the gender wise distribution of the scholars another criterion of classifying the scholars was their qualification and it was found that majority of scholars are pursuing PhD (83%) and remaining scholars were pursuing MPhil from different universities. In the present study, the qualification of the respondents had been taken as an essential variable for analysing the perception of scholars.

Like table 1 describes the awareness of Research Ethics Education (REE) among researchers belongs to the library and information science discipline, and it was found that 100% scholars were aware with the REE and they said they had got this information from different platforms like through their mentors, via conferences, courses. Statistics show that a total of 40 scholars said they got information about REE from their teachers, mentors, and guides, whereas 13 respondent says they got to know this REE concept firstly in the conferences and seminars. Only one scholar who was pursuing a PhD said that he has not any information regarding REE. Out of 54 scholars, 52 scholars said that this REE school be necessary and useful for every researcher in the country so that they do not commit plagiarism intentionally or unintentionally. Only two scholars said this kind of education is not useful for researchers. At the end of the section, respondents say they need some program on REE because a total of 29 scholars said that the information on research ethics they are having is insufficient.

Table 1: Perception of Research ethics education

Research ethics education		Pursuing PhD	Pursuing M.phil
Information about Research	Yes	45	9

Ethics	No	0	0
Education on Research Ethics	Through teachers/ Mentors/ Guides	33	7
	Conference/ Courses	11	2
	No Education/ Information	1	0
Opinion on the need for Research Ethics Education	Useful for Student	20	7
	Not Useful	2	0
	Necessary	23	2
Previous knowledge of Research Ethics Education	Sufficient	13	2
	Insufficient	24	5
	Not Sure	8	2

Perception about gifted authorship

To examine the attitude and perception of the scholars towards gifted authorship, different segments of questions was designed. Where 30 scholars accept the fact that nowadays gifted authorship is very common in nature, which is entirely wrong (32 respondents supports) and against the research ethics. However, when researchers asked about the actions regarding this kind of activity, 24 scholars say that only warning should be given whereas 12 scholars were strongly mentioned that punishment should be given to the actor of the activity and nature of the punishment should be moderate and total 44 scholars were supporting the statement. When the respondents have asked about the self-commitment of gifted authorship, they said they have never done this activity. Only 14 researchers admit the fact that yes they had given authorship as a gift to their superiors or seniors because they thought the paper could get quickly published in reputed publications.

Table 2: Perception of gifted authorship

Perception about gifted authorship		Pursuing PhD	Pursuing M.phil	Total %
Frequency of observed situation of gifted authorship	Never	11	0	20.37
	Rare	10	3	24.07
	Common	24	6	55.56
Thinking about Gifted authorship	Right	18	4	40.74
	Wrong	27	5	59.25
Action should be taken against Gifted authorship	Take no action	13	5	33.34
	Give Warning	22	2	44.45
	Give Punishment	10	2	22.23
Punishment should be	Moderate	38	6	81.48

	Severe	5	3	14.81
Ever done this gifted authorship	Had done	13	1	25.92
	Had never done	32	8	74.07
If never then reason	No opportunity	15	5	37.03
	Fear of Punishment	2	0	3.70
	Unacceptable	18	4	40.74
Future Opinion regarding Gifted authorship	Yes	18	6	44.45
	Would never do	27	2	53.70
If Yes then in case of	If Forced	8	1	16.67
	If given the opportunity	17	7	44.45
In future Chance of Gifted authorship is given	Accept	21	5	48.14
	Reject	24	4	51.85

Attitude towards data cooking/ falsification and fabrication of data

Data manipulation is the most frequent problem found among researchers (Okonta and Rossouwa, 2013). To find out the frequency and the attitude of researchers toward this fabrication and manipulation of data, further table 3 has been prepared. Among 54 groups of researchers, total 23 scholars said that frequency of data cooking and manipulation is rare and supports (39 respondents) the statement that this kind of activities are wrong and can be harmful to the society. Since scholars agreed that the data cooking is an unethical activity in research but for deciding action regarding this misconduct 48.14% scholar says that warning should be given and after a warning, if there is any provision for punishment then it should be moderate (68.51%). A situation was given to the respondent that in future if the will get any chance of data cooking and fabrication of data which sometimes they do 72.23% respondents reject the opportunity and follow the ethical way of research.

Table 3: Attitude towards data cooking/ falsification and fabrication of data

Data cooking/ falsification and fabrication of data	Pursuing PhD	Pursuing M.phil	Total %	
Frequency of observed situation of Data cooking	Never	13	4	31.48
	Rare	18	5	42.59
	Common	14	0	25.92
Thinking about Data cooking	Right	12	3	27.78
	Wrong	33	6	72.23
Action should be taken against	Take No action	8	2	18.51

Data cooking	Warning	21	5	48.14
	Punishment	16	2	33.34
Punishment should be	Moderate	30	7	68.51
	Severe	10	1	20.37
Ever done this Data cooking	Had done	6	2	14.81
	Had never done	39	7	85.18
If never then reason	No opportunity	13	4	31.48
	Fear of punishment	6	1	12.96
	Unacceptable	21	3	44.54
Future Opinion regarding Data cooking	Yes	8	5	24.07
	Would never do	37	4	75.92
If Yes then in case of	If Forced	11	4	27.78
	If given the opportunity	9	3	22.23
In future Chance of Data, cooking is given	Accept	10	5	27.78
	Reject	35	4	72.23

Perception towards the plagiarised author

In the study, plagiarism is the primary factor which has been measured. In India, researchers from different disciplines observe the frequency of plagiarism (**Dhingra and Mishra 2014**). Similarly, the present study reveals that researchers from Library and information science discipline thinks that there should be a provision of punishment (53.70%) against plagiarator who commit plagiarism whether intentionally or unintentionally and the nature of punishment should be moderate said by 62.96% scholars. Also, respondents strongly support (79.62%) that there should be clearly defined as legal clauses against plagiarator so that a person who is being plagiarised can take legal action against plagiarator.

Table 4: Perception of the plagiarised author

Perception towards the plagiarised author		Pursuing PhD	Pursuing M.phil	Total %
Attitude as a plagiarator	No measures against plagiarator	5	1	11.12
	Warning	14	5	35.18
	Punishment	26	3	53.70
Punishment should be	Moderate	28	6	62.96
	Severe	16	3	35.18
Reaction on being Plagiarized	Would react publicly	7	1	14.81
	Take legal action	36	7	79.62
	Would not react	2	1	05.56

Findings

- All researchers are aware of the concept of Research Ethics. However, 53.70 % of scholars say that the information they have is insufficient and they need some more counselling on REE.
- 55.56% scholars said that frequency of gifted authorship in the academics is prevalent. Which is wrong (said 59.25% scholars). For this activity, reasons can be many like the article can get published in a reputed journal quickly.
- 72.23% of scholars said that that data cooking is an unethical activity in research it is completely wrong, and for reducing such misconduct moderate kind of punishment should be given. Moreover, also 72.23% of scholars said that if they get an opportunity in the future to commit any misconduct with the research, they will reject the opportunity.
- The significant finding of the study is total 79.62% scholar said that there should be any legal action against plagiator.

Conclusion:

Plagiarism, as an intentional or unintentional breach of attribution, is at its core an issue of scientific misconduct, along with falsification and fabrication, as Hauptman (2008) has suggested. There are multiple harms perpetrated in and through plagiarism, as Snapper (2004) has pointed out: plagiarism harms not only the author but the reading public, as well as “scholarly effort itself”. For these reasons, plagiarism is a core information ethics issue.

It seems that most all the researchers are aware that fraud is a real threat to research since they condemned all three main types of fraud (falsification and fabrication of data, and plagiarism). Nevertheless, many think that the essential way to reduce academic misconduct is teaching on research ethics to students.

Expressing their need to learn more about Research ethics and misconduct, our participants have confirmed that they share this opinion. However, although they believe their knowledge of research ethics is insufficient, almost all the participants recognised all types of unethical research, to which they were strongly opposed.

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