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The frequency of questionable research practices in the domain of medical writing among the various health professionals of Pakistan: An analytical cross-sectional study

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Abstract--Background and Aim: The vibrant cases of scientific misconducts have gained a significant attention in the recent times; however less obviously questionable research practices (QRPs) might be more ubiquitous and can thus ultimately severely affect the academic originality. The present study aimed to explore the frequency of questionable research practices among the doctors and dentists of Pakistan. Materials & Methods: The current study was a descriptive analytical cross-sectional one which included 108 doctors and dentists of different Medical and Dental Colleges of Lahore, Pakistan. All the participants were selected from academia; were briefly explained about the purpose of the study and finally an informed consent was obtained

prior to their incorporation in the study. The subjects included in the study were questioned about QRPs. The questionnaire included the following questions: 1) Refusal of research data sharing with legitimate authors? 2) Any author addition to research without their contribution? 3) Any honorary authorship claimed without contribution to research? 4) Have you eliminated someone who justified their contribution? 5) Have you submitted any publication data without the consent of other authors? 6) Any research paper submitted to more than one journal at a time? All the data were entered and analyzed via Statistical Package for Social Sciences (SPSS) version 27. Results: Out of the 108 doctors and dentists, there were 62 (57.4%) males and 46 (42.6%) females. About 48.1% (n=52) participants admitted that they never refused to share research data with their legitimate colleagues. Approximately 30.6% (n=33) participants showed that they practiced the addition of author(s) to a publication they never contributed. About 27.8% (n=30) participants claimed the honorary authorship without any contribution in research. Mostly participants 63% (n=68) denied their practice for elimination of author(s) who justified their contribution. About 64.8% (n=70) denied their research submission without other author(s) consent. The frequency of participants who denied their submission of a single paper to more than one journal at a time was 57.4% (n=62). Conclusion: According to the research, questionable research practices (QRPs) in terms of cooperation as well as authorship selection criteria and its finalization when analyzed among doctors and dentists are fairly low as compared to other academic professions (apart from medicine and dentistry).

Keywords--questionable research practices, ethical policies, academia, doctors, dentists.

Introduction

Questionable research practices (QRPs) are the steroids of scientific competitiveness, artificially boosting performance thus making the researchers who rigorously follow these at a constant deleterious disadvantage. As QRPs are frequently problematic rather than clearly illegal, they allow for a great deal of rationalization and self-deception [1, 2]. Although cases of overt misconduct in science have recently received significant media attention, exploitation of the grey area of acceptable practice is undoubtedly much more common and in the long run may cause more damage to the academic enterprise as compared to the outright frauds [3-5].

In a normal legal way, scientific practices are usually founded on the conduct of research in a transparent manner. On contrary, Questionable research practices (QRPs), such as removing data points based on post hoc criteria, can artificially boost the chance of finding evidence to support a hypothesis [6, 7]. Adopting a defined method of doing research is extremely pivotal for knowing any particular phenomena adequately. It should be unbiased and genuine since it will serve as a

guideline for others to comprehend the same process [8]. Data falsification misleads the audience and falls under the domain of unethical research practices. It raises questions about such improper endeavors and also forms rationalizations for self-deception [9]. These unlawful practices are prevalent which are detrimental to science and harms its reputation [10, 11]. Eventually, QRPs deplete resources while providing an imbalanced benefit to select some researchers over others and creates a discriminating example for the rest of the investigators, particularly research students [12].

Health education for professionals is not immune to the negative implications of research based misconduct. Honorary authorships are prevalent in the setting of health professional education, which is categorized under dubious research procedures, among other issues [13, 14]. Even after establishing ethical committees and including an ethics course into the curriculum, research misconduct persists in health professional education. The present study aimed to investigate the prevalence of malpractice in offering and accepting honorary authorships among doctors and dentists mainly along with other QRPs as well.

Methodology

The current study was a descriptive analytical cross-sectional one which included 108 doctors and dentists of different Medical and Dental Colleges of Lahore, Pakistan. All the participants were selected from academia; were briefly explained about the purpose of the study and finally an informed consent was obtained prior to their incorporation in the study. The subjects included in the study were questioned about QRPs. The questionnaire included the following questions: 1) Refusal of research data sharing with legitimate authors? 2) Any author addition to research without their contribution? 3) Any honorary authorship claimed without contribution to research? 4) Have you eliminated someone who justified their contribution? 5) Have you submitted any publication data without the consent of other authors? 6) Any research paper submitted to more than one journal at a time? All the data were entered and analyzed through frequencies and percentages via Statistical Package for Social Sciences (SPSS) version 27.

Results

Out of the 108 doctors and dentists, there were 62 (57.4%) male and 46 (42.6%) female study participants. About 48.1% (n=52) participants admitted that they never refused to share research data with their legitimate colleagues. Approximately 30.6% (n=33) participants showed that they practiced the addition of author(s) to a publication they never contributed. About 27.8% (n=30) participants claimed the honorary authorship without any contribution in research. Mostly participants 63% (n=68) denied their practice for elimination of author(s) who justified their contribution. About 64.8% (n=70) denied their research submission without other author(s) consent. The frequency of participants who denied their submission of a single paper to more than one journal at a time was 57.4% (n=62). Table-I depicts the statistical detail of these aforementioned QRPs in detail.

Table-I: Questionable research practices (QRPs) among health professionals (doctors and dentists) of Pakistan

Questions	Never	Once	Occasionally	Sometimes	N/A
Refusal of research data sharing with legitimate authors?	48.1% (n=52)	20.4% (n=22)	13% (n=14)	14.8% (n=16)	3.7% (n=4)
Any author addition to research without their contribution?	30.6% (n=33)	8.3% (n=9)	22.2% (n=24)	25.9% (n=28)	13% (n=14)
Any honorary authorship claimed without contribution to research?	27.8% (n=30)	7.4% (n=8)	26.9% (n=29)	24.1% (n=26)	13.8% (n=15)
Have you eliminated someone who justified their contribution?	63% (n=68)	3.7% (n=4)	13.9% (n=15)	12.0% (n=13)	7.4% (n=8)
Have you submitted any publication data without the consent of other authors?	64.8% (n=70)	4.6% (n=5)	11.1% (n=12)	10.2% (n=11)	9.3% (n=10)
Any research paper submitted to more than one journal at a time?	57.4% (n=62)	9.3% (n=10)	14.8% (n=16)	13.9% (n=15)	4.6% (n=5)

Discussion

The results of the current investigation showed that a high proportion of health professionals (doctors and dentists) have never engaged in questionable research practices (QRPs) in terms of honorary authorships, which contrasted with the findings of a similar study, which revealed a high rate of practicing a give and take of unethical honorary medical and dental authorships [15]. There are other previously published researches on QRPs as well which have shown concerns about such scientific misconducts [16]. In our study, we aimed to offer realistic estimates of the prevalence of QRPs that are especially pertinent to research in light of current concerns about scientific integrity among various health professionals. Apart from QRPs such as selective deletion of observations/experimental conditions and studies from the scientific record, this study gives factual evidence for Scholar's allegations. Saberi-Karimian et al., went even farther demonstrating that how readily QRPs may produce incorrect results and also recommended apt changes required in the processes of reporting research and accepting scientific submissions for publication [17].

QRPs can squander researchers' time and stymie scientific progress by pursuing futile expansions of effects that are not genuine and hence cannot be duplicated. More broadly, the ubiquity of QRPs calls into question the reliability of study findings and jeopardizes research integrity by presenting unrealistically elegant outcomes that may be impossible to replicate. This can result in a "race to the bottom," with dubious research breeding even more such researches. In this regard, due legit changes can effectively reduce the occurrence of QRPs and can not only strengthen the scientific integrity but may also relieve pressure on researchers to deliver fake outcomes [18, 19].

The illegal credit given to a person who did not qualify for authorship is the result of unethical honorary authorship offers and demands to fraudulently portray the services he/she contributed to the literature [20]. Our study findings contradict with other researches carried out in the field of health professional education.

They have revealed a rather higher frequency of medical writing malpractice in terms of the mutual exchange of unethical honorary authorships [21, 22]. It was discovered that 17.6% of corresponding authors agreed to accept the honorary authorships [23].

According to the current survey, 13.9% of the health professionals (doctors and dentists) claimed that they occasionally refuse deserving contributors. This percentage is fairly low as compared to the findings of another study which showed that 58.9% of the health providers to do this activity rendered as a QRP [24]. This malpractice has made the editorial boards of the Scientific Journals more vigilant so as to ask for the authors' contributions whenever a manuscript is submitted to them for publication [25]. The current study found that the frequency of providing honorary authorships is 48.1%, which is nearly identical to a previous research, which found it to be somewhere around 60.6% [26].

Conclusion

According to the research, questionable research practices (QRPs) in terms of cooperation as well as authorship selection criteria and its finalization when analyzed among doctors and dentists are fairly low as compared to other academic professions (apart from medicine and dentistry).

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