

**Original Article:****“Do the editors-in-chief of Iranian medical journals have a good Knowledge, attitude and practice of plagiarism?”****Zohreh Abbasiyan<sup>1</sup>, Maryam Shekofteh<sup>1,\*</sup> ■, Ebrahim Afshar<sup>2</sup>, Erfan Ghasemi<sup>3</sup>, Forough Rahimi<sup>4</sup>**

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**ABSTRACT**

Plagiarism is one of the misconducts which are specifically observed in scientific journals. It is important to prevent and reduce it in scientific communities. The chief editors of journals can play an effective role in this regard. Therefore, this study aims to determine the knowledge, attitude, and the practice (KAP) of the chief editors of scholarly journals in Universities of Iran about plagiarism. The data for this descriptive survey were collected through a researcher-made questionnaire which was developed and validated in three sections of knowledge, attitude, and practice. The statistical population of the study included all the chief editors of scholarly journals in Universities of Medical Sciences in Tehran. The scores of the editors were calculated separately in each section. The data collection procedure was followed either by email or in-person. The collected data were analyzed through SPSS. The chief editors' score is %88.8 in the section of “knowledge of plagiarism” which represents a high score. The chief editors' “attitude toward plagiarism” indicates a high level (%61.3), which represents a negative attitude of plagiarism, and their “practice” is also at a mid-level approaching towards high level. In general, the knowledge, attitude, and practice of chief editors about plagiarism are in a better status comparing to similar studies. However, it is expected that the editors in chief achieve a more favorable level in this regard.

**Key Words:** plagiarism; scholarly journals; knowledge; attitude; practice

**INTRODUCTION**

Observing ethics in research and writing is like observing ethical standards in any fields. Research misconduct can be of different kinds and different research and experts have considered various classifications [1–6]. Based on various literatures, the following three segments can be considered for different kinds of research misconduct in a general classification:

1. Citation violations
2. Authorship violations

3. Fraud including Fabrication, Falsification, and plagiarism

Plagiarism is one of the most common research misconducts and which means the intentional or unintentional use of words, ideas, statements, claims, or others' citations without acknowledging and explaining proper citations to the work, the author of the work or the presentation of an idea [7,8]. The research and writings representing the knowledge of each country should be pure, original, and based on rules determined for writing scientific ideas. Especially it is more important in medical

sciences' publications that involve modifications as well as creation of new methods and hypotheses and new tests. Due to the risk of plagiarism by the authors of articles, publications should pay more attention to plagiarism in addition to quality and structure [9]. Following the COPE (Committee on Publication Ethics) guidelines could help journals to prevent the violations of plagiarism. The editors in chief and reviewers have an effective monitoring role in journals. In fact, they are the first filter for the publication of articles. For this reason, it is essential that they pay more attention to rules about plagiarism and academic misconducts [10]. Hence, their knowledge, attitude, and practice can have a significant effect on reducing or increasing plagiarism. On the one hand, in a study conducted by Wager et al. the chief editors' concern about research violations was evaluated low while their knowledge of rules and regulations was not reported at a favorable level [7]. On the other hand, Rajabzadeh Assarha et al. stated that the probability of committing research misconducts unconsciously is high among Iranians [11]. Ghajarzadeh et al. believe that the knowledge of faculty members of plagiarism is low [12]. However, Eret & Gokmenoglu found that there is a negative attitude towards plagiarism in communities but the authors' lack of knowledge is a reason leading to plagiarism [13]. The studies by the other researchers also consider the lack of knowledge and lack of education in this domain as important and effective factors in conducting plagiarism [14–17]. Rathore et al. reported that medical students and faculty members received an average score in attitude toward plagiarism. They recommended training in research ethics [18] and Babaii & Nejadghanbar (2016) believed that "Iranian M.A. students of applied linguistics are reasonably familiar with the basic concepts and ethical issues related to plagiarism. However, these basic understandings are insufficient to prevent acts of plagiarism" [19].

In recent years, violations and frauds are increased in academic and research environments [20,21]. As chief editors are responsible for monitoring and preventing plagiarism and other research misconducts, this question is raised: Do chief editors of journals have sufficient knowledge in this field? How is their attitude

towards research violations? As the Knowledge Attitude Practice (KAP) Survey studies a specific population to collect related data, the present study aims to investigate the knowledge, attitude, and practice of chief editors of scholarly journals of the Universities of Medical Sciences in Tehran about plagiarism. This is the first study on the knowledge, attitude and practice of plagiarism in chief editors in Iran.

## MATERIAL AND METHODS

This study is a descriptive study and was conducted with KAP survey, a representative study of a specific population to collect information on what is known, believed and done in relation to a particular topic" [22]. The participants include the chief editors of scholarly journals published by the Universities of Medical Sciences in Tehran (Shahid Beheshti, Social Welfare and Rehabilitation Sciences, Baqiyatallah, Azad, Shahed, Aja, Tarbiat-Modares). The participants were comprised of 117 chief editors.

The present study utilized a researcher-made questionnaire supervised by the experts and professors who studied the available literature and records carefully and also the questionnaires used in similar studies. The questionnaire is created based on the population and the Committee on Publication Ethics (COPE). The validity of the questionnaire was confirmed by 10 professors and experts in the field of Library and Information Science as well as chief editors of medical journals and researchers in the field of plagiarism. The reliability of the questionnaire was approved by calculating Cronbach's alpha (0.621). The questionnaires were distributed by Email and in person. The data were analyzed through descriptive statistics including mean and frequency distribution using SPSS and Excel.

The questionnaire was divided to three sections. The first section had 9 questions on participants' knowledge, the second section had 10 questions or statement on participants' attitude and last section had 5 close-ended and 2 open-ended questions about the practice of chief editors.

The answers to the section of "Knowledge" were "Yes, No, I have no ideas". The scores used for the responses are as follows: 2= correct answers, 0= incorrect answers, 1= I have no idea.

According to these scores, score range is 0.66-2. So the obtained scores in the knowledge section were divided into three equal intervals: [(0.66) = low-level knowledge; (0.66- 1.33) = mid-level; (1.33-2) = high-level knowledge]. Ten statements in the form of a 5-point Likert scale were used to measure the chief editors' attitude about plagiarism. The scores used for the responses are as follows: 1= strongly agree, 2= agree, 3= neutral, 4= disagree, 5= strongly disagree. The chief editors' attitude was divided into three intervals based on the range and the classification of their score. So the ranges are [(1-2.33) = low level attitude; (2.33-3.66) = mid-level attitude; (3.67-5) = high level attitude]. The answers to the closed-end questions of "Practice" were "yes", "no", "I have no ideas, somehow, or sometimes". The score for the responses is as follows: 2 = correct answer, 0 = incorrect answer, 1 = have no ideas, somehow or sometimes. The correct answers may be "Yes" or "No". According to

these scores, the score range is 0-2. So the obtained scores in knowledge section were divided into three equal intervals, just like the knowledge section.

## FINDINGS

The first section had 9 questions or items to measure the level of the chief editors' knowledge. Table 1 shows the mean scores of these items and the total score of editors-in-chief knowledge of plagiarism. If the mean score is closer to 2, it is more acceptable. The highest score is related to question 1 indicating that most of the chief editors know that plagiarism can also occur about images and graphs. The lowest score is related to question 6 which is about using others' exact sentences and quotes. The total mean of all chief editors' knowledge is 1.58 out of 2, which indicates a high level.

**Table 1.** The Mean scores for the chief editors' Knowledge of plagiarism

Question number	Questions of knowledge section	Score
1	Plagiarism can occur about images and graphs.	1.93
2	Is it necessary to mention the name of the person when we use his ideas without their exact words?	1.68
3	If a person, who has published his own article in English, publishes the same article in another English journal with the aim of knowledge expansion, is he/she a plagiarist?	1.54
4	Is the number of the words of another person or other people used (with the reference) important?	1.49
5	Is it the right of every person to quote his/her previously published ideas and writings in another language in a new text (even with the reference to the primary text)?	1.43
6	Is the following statement true? Others' exact sentences and quotes can be used if the reference is provided.	1.14
7	7. Is the person using others' citations in the production of his work unintentionally and unknowingly without referring to the original source guilty of plagiarism?	1.61
8	Have electronic and virtual environments led to an increase in committing plagiarism?	1.79
9	Are the two concepts of "plagiarism" and "scientific fraud" equivalent?	1.65
10	Total	1.58

Table 2 shows the mean for each item in attitude section. As mentioned in the methodology section, the means range is 1-5. If the mean is closer to 5, it is more acceptable and shows a

favorable attitude toward plagiarism. As you see in Table 3, the item 7 has the highest mean. The total mean for attitude toward plagiarism is 2.61 out of 5 which shows a mid-level

**Table 2.** The Mean scores for each statement in the attitude of the chief editors about plagiarism

Question number	Statements of attitude about plagiarism	Score
1	There is a low possibility of unintentional plagiarism in researchers' works.	3.78
2	Incorrect references in a highly valuable scientific article are not important.	4.01
3	The great number of articles sent to the journal makes it impossible to check them to prevent	3.88

	plagiarism.	
4	Publishing others' ideas which are not published by owners is useful for knowledge.	3.75
5	There are no rules and regulations in connection with plagiarism, research violations, and publication ethics.	3.81
6	I agree that plagiarism is unethical but if it does not hurt the owner of idea, it is not problematic.	4.31
7	In a society where all resort to plagiarism for promoting their position, others have also the right to do it.	4.4
8	The name of the person committing plagiarism must be disclosed in the scientific community.	2.75
9	Articles containing unintentional incorrect citations are not worth reviewing.	2.7
10	Checking the scientific content of an article is much more valuable than checking its originality.	3.79
11	Total	3.83

Table 3 represents the scores of chief editors' practice. The range of score is 0-2. If it is closer to 2, it will be more acceptable. The lowest score is related to item 3, which indicates that chief

editors do not pay enough attention to article retraction and the highest score is item 2 which is related to publishing or submitting article to other journals.

**Table 3.** The Mean scores of each question in the section of the chief editors' practice about plagiarism

Question number	questions	Score
1	Do you ask the author to give a commitment to show the originality of the work?	1.45
2	Do you ask the author to give a commitment to show that the article has not been published or submitted in any other journals?	1.5
3	Is this sentence true? If I notice that the article is published in another journal or if it contains plagiarism, I report the author's violation to databases to retract the article.	1.15
4	If the published article of an author in your journal is submitted or sent to another journal, He does not have the right to publish another article in your journal.	1.2
5	Do the executive staffs of the journal receive training in detecting and preventing plagiarism?	1.262
	total	1.31

In the practice section, there were two questions without any score. The first question asked the chief editors if they have used any detection software, and to mention the name of plagiarism detection software they have used. Among 80 chief editors, just 39 people (48.8%) responded to this question. Besides, only 27.5 % of chief editors mentioned a regular use of software and 10% mentioned that they sometimes use software or use Google search engine to detect plagiarized parts. Another question in this section was about COPE (Committee of publication ethics). The question was "Is your journal membership in COPE or not?". Only 59 chief editors (73.8%) responded to this question, and 37 participants (46.3%) indicated a positive answer.

## DISCUSSION

The findings of this study indicated that, in general, the knowledge of chief editors is in high

and favorable level (1.58 out of 2). The chief editors' weaknesses were mostly related to the details of citations such as using quotation marks, indentation, avoiding frequent quotations, as well as the rules of publishing the work in other sources. In the section of knowledge, the items related to citation received lower scores and this challenge is due to the existence of different errors in citations and the lack of specific laws in this context. Generally, these findings are in line with the study of Eret & Gokmenoglu; Rajabzadeh Assarha et al.; Poorolajal et al. which studied the knowledge of professors and researchers [11,13,23]. However, the results of the present study are not in line with the study of Gharedaghi et al.; Razera et al.; and Rennie & Crosby which studied the level of students' knowledge and awareness, [17,24,25]. The results of present study conformed to what we expected from the scientific communities with higher

education. While students are less involved in research, professors, researchers, and editors in chief must be more familiar with such concepts and must have the adequate awareness about plagiarism.

The mean score of participants' attitude is 3.83 out of 5. It shows that the chief editors' attitude towards plagiarism is in high level. The lowest scores in this section belong to the items related to publishing the idea of others, disclosing names, rules and regulations in this field, and the controversial issue of citation. Avoiding plagiarism is very important but considering the COPE flowcharts, it is advised not to disclose the names of plagiarizing individuals in the society. It is recommended to inform their institutions to inspect and treat them in a logical and legal way. The results of the study in attitude section are in line with the study of Rathore et al.; Eret & Gokmenoglu; Gururajan & Roberts; Poorolajal et al.; and Nakhaee & Nikpour [13,18,23,26,27]. There is a negative attitude towards plagiarism among research communities in the present study and the above-mentioned research. The results of the studies of Rennie & Crosby; Ghajarzadeh et al.; Westerling et al.; Fealy, Bighlari, & Pezeshki Rad; and Wager et al. are not in line with the results of the present study in this section [7,12,17,28,29].

The results of the practice of the chief editors indicated that their practice was acceptable in general. In this context, Poorolajal et al. have measured the practice of faculty members and students on committing plagiarism [23]. The results indicated that the participant has conducted research at least once and %38 of them had the chance of committing plagiarism. However, the purpose of the study of Poorolajal et al. in the section of practice is different from the purpose of this study [23]. The last two questions of this section were about plagiarism detection software and membership in COPE. Unfortunately some chief editors did not provide a response to these questions. During data collection, it was observed that some chief editors did not have information and awareness about software and membership in COPE and it was something mostly done by editorial boards and executive managers. Some chief editors asked

certain companies to check plagiarism and other misconducts via detection software.

## CONCLUSION

Although in general, statistics show a relatively high level of knowledge, attitude and practice of chief editors about plagiarism, but, basic understanding and awareness of chief editors are insufficient due to their important role and liability in publishing. It is suggested that the Ministry of Health and Universities of Medical Sciences hold some workshops and brainstorming sessions to improve the knowledge, attitude, and practice of chief editors of journals. Some of the questions were not answered correctly which indicate that a percentage of the chief editors do not have the required knowledge, the favorable attitude, and the appropriate practice. Furthermore, setting certain criteria such as passing courses or workshops related to research ethics before selecting chief editors as well as considering other criteria set by the Ministries and universities can help preventing plagiarism in journals. In addition, since some chief editors may not have time to participate in workshops, sending brochures, newsletters or pamphlets and holding online meetings about the common research violations as well as passing laws set by institutes and active centers in this field are suggested to prevent research violations. It is noted that some workshops and training programs should be related to plagiarism detection software for editorial boards of journals. This can help improving the practice of chief editors and editorial team. Conducting research through using questionnaires having open-ended questions and qualitative methods is also suggested since these kinds of study can lead to comprehensive responses provided by the individuals' responses, particularly in the practice section.

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**REFERENCES**

1. Wager E. Defining and responding to plagiarism. *Learn Publ.* 2014;27(1):33–42.
2. Enjoo A. Assessing Intellectual Property, Publication Ethics, and Related Legal provisions in the Islamic Republic of Iran. *Interdiscip J Virtual Learn Med Sci.* 2011;2(2):36–44.
3. COPE: Committee on Publication Ethics. *Br J Surg.* 2000;87(1):6–7.
4. Childers D, Bruton S. “Should It Be Considered Plagiarism?” Student Perceptions of Complex Citation Issues. *J Acad Ethics.* 2016;14(1):1–17.
5. Tavakol M, Naseri Rad M. Plagiarism, fabrication and fraud as research misconducts: with an explanation from sociology of science. *Iranian Journal of Ethics in Science and Technology.* 2009-2010; (3,4):1-16.
6. Committee on Publication Ethics (COPE). Guidelines on good publication practice [Internet]. 1999 [cited 2017 Jul 4]. Available from: <http://publicationethics.org/files/u7141/1999pdf13.pdf>
7. Wager E, Fiack S, Graf C, Robinson A, Rowlands I. Science journal editors’ views on publication ethics: results of an international survey. *J Med Ethics.* 2009;35(6):348–53.
8. Bakhtiyari K, Salehi H, Embi MA, Shakiba M, Zavvari A, Shahbazi-Moghadam M, et al. Ethical and Unethical Methods of Plagiarism Prevention in Academic Writing. *Int Educ Stud.* 2014;7(7).
9. karimi R. Ethical Considerations in Reporting Research Findings. *Natl Stud Librariansh Inf Organ.* 2010; 21(2):6–21.
10. Mustaine EE, Tewksbury R. A Survey of Social Science Journal Editors for Behind-the-Scenes Data on the Publication Process. *J Sch Publ J Sch Publ.* 2016;47(3):231–49.
11. Rajabzadeh Assarha A, Naghshinneh N, Saboury AA. Familiarity of UT Researchers With the Issue of Research Misconducts. *J Acad Librariansh Inf Res.* 2013;47(4):375–96.
12. Ghajarzadeh M, Norouzi-Javidan A, Hassanpour K, Aramesh K, Emami-Razavi SH. Attitude toward plagiarism among iranian medical faculty members. *Acta Med Iran.* 2012;50(11):778–81.
13. Eret E, Gokmenoglu T. Plagiarism in higher education: A case study with prospective academicians. *Procedia-Social and Behavioral Sciences.* 2010 ; 2(2):3303-7.
14. Varghese J, Jacob M. Do medical students require education on issues related to plagiarism? *Indian J Med Ethics.* 2015;12(2):82–7.
15. Zamani BE, Azimi SA, Soleymani N. Identifying and prioritizing the effective factors affecting the students’ plagiarism in Isfahan University. *Q J Res Plan High Educ.* 2013;19(1):91–110.
16. Keyvan-Ara M, Ojaghi R, Cheshmeh-Sohrabi M, Papi A. Typology of Plagiarism Using the Experiences of Experts in Isfahan University of Medical Sciences, Iran. *Heal Inf Manag.* 2013;10(3): 449 -60.
17. Rennie SC, Crosby JR. Are “tomorrow’s doctors” honest? Questionnaire study exploring medical students’ attitudes and reported behaviour on academic misconduct. *BMJ.* 2001;322(7281):274–5.
18. Rathore FA, Waqas A, Zia AM, Mavrinac M, Farooq F. Exploring the attitudes of medical faculty members and students in Pakistan towards plagiarism: a cross sectional survey. *PeerJ.* 2015 Jun;3:e1031.
19. Babaii E, Nejadghanbar H. Plagiarism Among Iranian Graduate Students of Language Studies: Perspectives and Causes. *Ethics Behav.* 2017; 27(3): 240-58.
20. McLoughlin. A journal editor’s heartfelt thoughts on mass retraction and unethical publication practices. *Ed Insights.* [Internet]. 2017; [cited 2017 Jul 4]. Available from: <https://www.editage.com/insights/a-journal-editors-heartfelt-thoughts-on-mass-retraction-and-unethical-publication-practices>
21. Al-Lamki L. Plagiarism and other Types of Publication Misconduct: A case for teaching publication ethics in medical schools. *Sultan Qaboos Univ Med J.* 2009;9(1):1–4.
22. World Health Organization. Advocacy, communication and social mobilization for TB control: A guide to developing knowledge , attitude and practice surveys. WHO [Internet]. 2008; Available from: <http://apps.who.int/iris/bitstream/handle/10665/43>

790/9789241596176\_eng.pdf?sequence=1

23. Poorolajal J, Cheraghi P, Irani AD, Cheraghi Z, Mirfakhraei M. Construction of knowledge, attitude and practice questionnaire for assessing plagiarism. *Iran J Public Heal.* 2012;41(11):54–8.

24. Gharedaghi MH, Nourijelyani K, Sadaghiani MS, Yousefzadeh-Fard Y, Gharedaghi A, Javadian P, et al. Knowledge of medical students of Tehran University of Medical Sciences regarding plagiarism. *Acta Med Iran.* 2013;51(6):418–24.

25. Razera D, Verhagen H, Pargman TC, Ramberg R. Plagiarism awareness, perception, and attitudes among students and teachers in Swedish higher education—a case study. In 4th International Plagiarism Conference—Towards an authentic future. Northumbria University in Newcastle Upon Tyne-UK 2010 Jun 21. [cited 2017 Jul 4] [https://www.researchgate.net/profile/Harko\\_Verhagen/publication/242738794\\_Plagiarism\\_awareness\\_perception\\_and\\_attitudes\\_among\\_students\\_an](https://www.researchgate.net/profile/Harko_Verhagen/publication/242738794_Plagiarism_awareness_perception_and_attitudes_among_students_an)

d\_teachers\_in\_Swedish\_higher\_education\_-\_a\_case\_study/links/0c96053193ee794bee000000.pdf

26. Gururajan R, Roberts D. Attitude towards plagiarism in information systems in Australian universities. 9th Pacific Asia Conf Inf Syst (PACIS 2005). 2005;1568–80.

27. Nakhaee N, Nikpour H. Investigation of medical students' opinions on research fraud in thesis and its frequency. *Strides Dev Med Educ.* 2005;2(1):10–7.

28. Westerling AM, Haikala VE, Simon Bell J, Airaksinen MS. Logistics or patient care: Which features do independent Finnish pharmacy owners prioritize in a strategic plan for future information technology systems? *J Am Pharm Assoc.* 2010;50(1):24–31.

29. Fealy S, Bighlari N, Pezeshki Rad G. Agricultural Students' Attitude and Behavior on Plagiarism in Tarbiat Modares University. *Q J Res Plan High Educ.* 2012;18(3):133–51.