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# Knowledge and practices of plagiarism among journal editors of Nepal

Krishna Subedi[1]*, Nuwadatta Subedi[2] and Rebicca Ranjit[3]

## Abstract

**Background**  This study was conducted to assess the knowledge and ongoing practices of plagiarism among the journal editors of Nepal.

**Methods**  This web-based questionnaire analytical cross-sectional was conducted among journal editors working across various journals in Nepal. All journal editors from NepJOL-indexed journals in Nepal who provided e-consent were included in the study using a convenience sampling technique.

A final set of questionnaires was prepared using Google Forms, including six knowledge questions, three practice questions (with subsets) for authors, and four (with subsets) for editors. These were distributed to journal editors in Nepal via email, Facebook Messenger, Viber, and WhatsApp. Reminders were sent weekly, up to three times.

Data analysis was done in R software. Frequencies and percentages were calculated for the demographic variables, correct responses regarding knowledge, and practices related to plagiarism. Independent t-test and one-way ANOVA were used to compare mean knowledge with demographic variables. For all tests, statistical significance was set at $p < 0.05$.

**Results**  A total of 147 participants completed the survey.The mean age of the participants was found to be $43.61 \pm 8.91$ years. Nearly all participants were aware of plagiarism, and most had heard of both Turnitin and iThenticate. Slightly more than three-fourths correctly identified that citation and referencing can avoid plagiarism. The overall mean knowledge score was $5.32 \pm 0.99$, with no significant differences across demographic variables.

As authors, 4% admitted to copying sections of others' work without acknowledgment and reusing their own published work without proper citations. Just over one-fifth did not use plagiarism detection software when writing research articles. Fewer than half reported that their journals used authentic plagiarism detection software.

Four-fifths of them suspected plagiarism in the manuscripts assigned through their journal. Three out of every five participants reported the plagiarism used in the manuscript to the respective authors. Nearly all participants believe every journal must have plagiarism-detection software.

**Conclusions**  Although journal editors' knowledge and practices regarding plagiarism appear to be high, they are still not satisfactory. It is strongly recommended to use authentic plagiarism detection software by the journals and editors should be adequately trained and update their knowledge about it.

**Keywords**  Journal editors, Knowledge and practices, Misconduct, Plagiarism

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*Correspondence:
Krishna Subedi
drkrishnasubedimdsphd@gmail.com
Full list of author information is available at the end of the article

## Introduction

With the rise in the number of publications, misconduct in research is increasing which is a global threat to evidence-based research [1]. The National Academy of Sciences in the United States (US) in 1992 defined misconduct in science as "fabrication, falsification, or plagiarism, in proposing, performing, or reporting research" [2]. Plagiarism is possibly the most serious and widely recognized violations of ethical standards [3].

World Association of Medical Editors has defined plagiarism as the "use of others' published and unpublished ideas or words (or other intellectual property) without attribution or permission, and presenting them as new and original rather than derived from an existing source" [4]. The US Office of Research Integrity (ORI) defined plagiarism as "both the theft or misappropriation of intellectual property and the substantial unattributed textual copying of another's work. This does not pertain to authorship or credit disputes " [5]. Self-plagiarism occurs when an author reuses sections of their previous writings on the same subject in another publication without providing proper citation using quotation marks [4].

Poor quality of the journal and lack of education regarding plagiarism are the two reasons besides many other reasons for plagiarism [6]. To overcome this problem, software (iThenticate, Turnitin, Grammarly, PlagScan, Plagiarism Scanner, etc.) has been developed to detect plagiarism [7, 8].

Though the exact prevalence of plagiarism in Nepal is not known, several incidents related to plagiarism across universities have been reported [9]. Seven researchers, including professors and PhD students, were penalized after plagiarism was detected in Nepal [10].

Till date, there are no any published literature available regarding the knowledge and practices of editors regarding plagiarism in Nepal. Therefore, this study was conducted to assess the knowledge and ongoing practices of plagiarism among the journal editors of Nepal.

## Methods
### Study design, setting, and participants
This was a web-based analytical cross-sectional questionnaire-based study conducted among journal editors working across various journals in Nepal. The data collection was done from 1st December 2023 to 30th April 2024.

All Nepali journals listed in Nepal Journal Online (NepJOL) with available Email IDs of the editorial team on their website and journals that have updated their website after 2020 were included. All journal editors from NepJOL-indexed journals in Nepal who provided e-consent were included in the study using a convenience sampling technique.

### Data collection technique
Demographic characteristics including age, sex, education, province, duration of working in the journal, and number of publications were recorded.

The questionnaires included the knowledge and self-reported practice components. Knowledge components include ten items that were taken from previous research [11] as well as prepared by the authors. Self-reported practice components included practice as an author and practice as a journal editor. Self-reported practice as an author includes six items and as an editor includes four items. The content validity of the questionnaire was done by sending questions to five experts. Lynn indicated that at least three experts are required and five experts will provide a sufficient level of agreement whereas using more than 10 experts will be of no use in calculating the content validity [12]. Each member of the panel was asked to respond to the following question for each of the items: Is the skill (or knowledge) measured by this item for the essential scale to measure knowledge and practice of plagiarism among journal editors as 1 = Not essential; 2 = Useful but not essential; 3 = Essential, relevant scale as: 1 = Not relevant; 2 = Somewhat relevant (need some revision); 3 = Quite relevant (need minor revision); 4 = Very relevant and clarity scale as: 1 = Not clear; 2 = Item needs some revision; 3 = Very clear [13].

Content validity Index (CVI): CVI is the most widely reported approach for content validity in instrument development and can be computed using the Item-CVI (I-CVI). I-CVI is computed as the number of experts giving a rating of "very relevant" for each item divided by the total number of experts. Values range from 0 to 1 where the item is relevant if I-CVI > 0.79, the item needs revision if it is between 0.70 and 0.79, and if the value is below 0.70, the item is eliminated [14, 15]. A I-CVIs ≥ 0.78 have excellent content validity [15, 16].

Questions were distributed to five experts for content validation through email. Experts chosen were highly knowledgeable in research and plagiarism, and have experience working as editors for both national and international journals. Experts provided their opinions via email, and their responses were analyzed for the I-CVI. Two questions from the knowledge section and three questions from the practice as an author section were removed as the I-CVI score was less than 1.0. Therefore final set of questionnaire included eight questions for knowledge, three questions (with subsets) for practice as an author and four questions (with subsets) as an editor. Two questions from the knowledge Sect. (1. Are you aware of plagiarism? 2. Have you heard

about any plagiarism detection software?) were put in the demographic sections as these questions could not measure the knowledge. Therefore a total of six questions were for the knowledge section. Each of the six questions had a single correct answer with a binary outcome coded as one for correct and zero for incorrect. Every correct answer was scored as one, while incorrect answers were scored as zero. An overall composite score was then calculated by summing the individual scores for each question. The highest possible knowledge score for each individual was six.

The prepared questionnaires underwent pilot testing among journal editors of a medical journal to assess readability and comprehension. Items in the questionnaire that were found to be confusing to the editors were subsequently revised.

The final questionnaires were prepared using Google Forms and sent via email, Facebook Messenger, Viber, and Whats app to the various journal editors in Nepal. There were a total of 396 journals listed in NepJOL. Out of which 16 were no longer being published, 12 had not updated their journal since 2020, two had changed their name, 60 had no contact lists on their website on the date of March 15, 2024. Therefore a total of 306 journals were selected and 497 editors were contacted using their Email-Ids. In some journals, only the Email IDs of the Editor-in-Chief and/or managing editors were available, but not for all editorial teams. In such cases, an Email was sent to the designated address with a request to circulate the link to their editorial team members. NepJOL is a comprehensive database that features journals published in Nepal across various academic disciplines. All materials on NepJOL are freely available for viewing, searching, and browsing. However, the copyright of all content is retained by the journals or authors. This resource is managed by the Tribhuvan University Central Library and hosted by Ubiquity Press [17].

A set of questionnaire was sent a maximum of three times, once a week as a reminder. Questionnaires that were not responded to even after a reminder of three times were not considered in the analysis.

### Variables
Dependent Variables: Knowledge and practice of journal editors.

Independent Variables: Sex, role in a journal, working province, working experience in journal (in years), and number of publications.

### Ethical consideration and informed consent
Ethical clearance was obtained from Gandaki Medical College -Institutional Review Committee (ref no: 08/080/081-F). Electronic informed consent was taken from all participants before starting the survey. The survey was anonymous, and confidentiality was ensured.

### Statistical analysis
All data in the Microsoft Excel spreadsheet linked to the online survey Google form was imported into R. The frequencies and percentages were calculated for background characteristics, knowledge, and practice scores of plagiarism. Independent t-test and one-way ANOVA were used to compare mean knowledge with demographic variables. For all tests, statistical significance was set at $p < 0.05$.

The reliability of the factors and scales was based on I-CVI value.

### Results
A total of 147 participants completed the survey with a response rate of 29.58% (147/497). The mean age of the participants was found to be $43.61 \pm 8.91$ (ranging from 22.0 to 67.0) years. More than two-thirds of the participants were male. Bagmati province accounted for over half of the participants, while Madhesh province represented less than 3%. Just over half of the participants had completed master's level education. Approximately half comprised the editorial team members. Slightly more than half of the participants were affiliated with biomedical journals. More than six out of every ten participants had published 10 or more research articles. Nearly all participants were aware of plagiarism, and the majority had heard of both plagiarism software: Turnitin and iThenticate (Table 1).

The majority of participants correctly answered questions about plagiarism, with almost everyone agreeing that plagiarism can be a severe form of ethical misconduct. Additionally, slightly more than three-fourths of participants correctly identified that citation and referencing can be used to avoid plagiarism (Table 2).

As an author, 4% had ever copied and pasted a section of someone's else work without acknowledgment and quotation as well as reused their published work without proper citations and references. Just over one-fifth of the participants did not use plagiarism detection software when writing research articles. Among those who did use such software, two-fifths utilized freely available online tools, while nearly a quarter used Turnitin, and another quarter used iThenticate (Table 3).

Fewer than half of the participants indicated that the journals they worked for used authentic plagiarism detection software. Among them almost half of the journal used iThenticate as a plagiarism detection software. Almost 18% didn't mentioned the name of software their journal were using.

**Table 1** Demographic details of the participants (N = 147)

| Variable | Frequency (n) | Percentage (%) |
|---|---|---|
| **Sex** | | |
| Male | 112 | 76.19% |
| Female | 35 | 23.81% |
| **Working Province** | | |
| Koshi | 12 | 8.16% |
| Madhesh | 4 | 2.72% |
| Bagmati | 85 | 57.82% |
| Gandaki | 28 | 19.05% |
| Lumbini | 8 | 5.44% |
| Karnali | 5 | 3.40% |
| Sudurpashchim | 5 | 3.40% |
| **Highest level of Education** | | |
| Bachelor | 5 | 3.40% |
| Master | 83 | 56.46% |
| Ph.D | 53 | 36.05% |
| Other | 6 | 4.08% |
| **Role in Journal** | | |
| Editor in Chief | 39 | 26.53% |
| Managing editor | 23 | 15.65% |
| Editorial team member | 73 | 49.66% |
| Any other | 12 | 8.16% |
| **Work experience in journal** | | |
| ≤ 1 year | 16 | 10.88% |
| 2–5 years | 66 | 44.90% |
| 6–10 years | 39 | 26.53% |
| > 10 years | 22 | 14.97% |
| Not mentioned | 4 | 2.72% |
| **Type of working journal** | | |
| Biomedical | 75 | 51.02% |
| Others | 72 | 48.98% |
| **Number of publications** | | |
| No publication | 3 | 2.04% |
| 1 | 6 | 4.08% |
| 2–5 | 18 | 12.24% |
| 6–10 | 26 | 17.69% |
| > 10 | 92 | 62.59% |
| No mentioned | 2 | 1.36% |
| **Are you aware of plagiarism?** | | |
| Yes | 144 | 97.96% |
| No | 3 | 2.04% |
| **Have you heard of any plagiarism detection software?** | | |
| Not heard | 13 | 8.84% |
| Turnitin | 19 | 12.93% |
| iThenticate | 13 | 8.84% |
| Both Turnitin and iThenticate | 79 | 53.74% |
| Any other | 8 | 5.44% |
| Both and other | 12 | 8.16% |
| iThenticate and other | 3 | 2.04% |

Four-fifths of them suspected plagiarism in the manuscripts assigned through their journal. Three out of every five participants reported the plagiarism used in the manuscript to the respective authors. Nearly all participants believe it is necessary for every journal to have plagiarism detection software (Table 4).

The overall mean knowledge score of the participants was $5.32 \pm 0.99$. No significant difference was found in mean knowledge across various demographic variables (Table 5).

## Discussion

This study is unique compared to others on similar topics because it exclusively involves journal editors, whereas previous studies have not focused specifically on this group.

The reason for not conducting similar studies on journal editors might be the assumption that editors are already well aware of plagiarism, making it seem unnecessary to study their knowledge on the topic.

However, the authors of this study believe that not all editors and journals may be fully informed about plagiarism, and even if they are aware, they may not be practicing proper plagiarism control. It is crucial for those in central roles to thoroughly understand and implement anti-plagiarism measures. This ensures they can identify and minimize plagiarism in manuscripts submitted to their journals.

Due to a lack of similar studies, comparisons are made with the few available studies. A study conducted by Smart et al. among journal editors found that 2–5% of submitted manuscripts were plagiarized [18].

The results of the study showed that overall knowledge and practice related to plagiarism seem to be higher.

Bagmati province accounted for over half of the participants, while Madhesh province had less than 3%. Bagmati Province is the most populous in Nepal, and most developmental and research activities are highly centralized there compared to other provinces. Additionally, Kathmandu, the capital city of Nepal, is located in Bagmati Province, where a larger number of journals and editors are based. This could explain the higher number of participants from this province. Additionally, the lack of personal communication with the editors form other provinces might be another contributing factor.

### Knowledge

Nearly one in seven participants disagreed that using other's image or video without receiving proper permission or providing appropriate citations is plagiarism. While this number may seem low in general, it is relatively high for journal editors. Journal editors should be well-trained and regularly updated on issues of plagiarism.

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**Table 2** Correct response of knowledge about plagiarism (*N* = 147)

| Questions | Correct responses | Frequency (n) | Percentage (%) |
|---|---|---|---|
| 1. Using other's image or video without receiving proper permission or providing appropriate citations is not plagiarism | False | 125 | 85.03% |
| 2. Paraphrasing or quoting can be used to avoid plagiarism | True | 124 | 84.35% |
| 3. Citation and referencing can be used to avoid plagiarism | True | 115 | 78.23% |
| 4. Plagiarism detection software can be used to avoid or detect plagiarism | True | 135 | 91.84% |
| 5. Authors reusing their previously written work or data in a 'new' written article without citation and referencing is plagiarism | True | 139 | 94.56% |
| 6. Plagiarism can be a very serious form of ethical misconduct | True | 144 | 97.96% |

**Table 3** Self-reported plagiarism practices as an author (*N* = 147)

| Questions | Responses | | |
|---|---|---|---|
| Self-reported plagiarism practices as an Author | Yes n (%) | No n (%) | I don't know n (%) |
| 1. In your research paper, have you ever copied and pasted a section of someone else's work without acknowledgment and quotation? | 6 (4.08%) | 138 (93.88%) | 3 (2.04%) |
| 2. Have you ever reused your work that has been published in one journal without proper citations and references? | 6 (4.08%) | 136 (92.52%) | 5 (3.40%) |
| 3. Have you ever used plagiarism detection software for your research paper? | 116 (78.91%) | 31 (21.09%) | |
| 3.1 If yes please specify | | | |
| | Responses | *n* = 116 (%) | |
| | 1. Turnitin | 30 (25.86%) | |
| | 2. IThenticate | 33 (28.44%) | |
| | 3. Online freely available | 47 (40.52%) | |
| | 4. Any other (Plagiarism checker, PlagScan,SafeAssign, smalltools, Drilbit) | 6 (5.17%) | |

**Table 4** Self-reported plagiarism practices as an editor (*N* = 147)

| Questions | Responses | | |
|---|---|---|---|
| Self-reported plagiarism practices as an editor | Yes n (%) | No n(%) | I don't known(%) |
| 1. In the journal that you work in, do you use any authentic plagiarism detection software? | 67 (45.58%) | 58 (39.46%) | 22 (14.97%) |
| 1.1 If yes, please specify | | | |
| | Responses | *n* = 67(%) | |
| | iThenticate | 33 (49.25%) | |
| | Turnitin | 14 (20.90%) | |
| | Online freely available | 5 (7.46%) | |
| | Quiltbolt | 1 (1.49%) | |
| | Duplichecker | 1 (1.49%) | |
| | Safeassign | 1 (1.49%) | |
| | Not mentioned | 12 (17.91%) | |
| 2. Have you ever suspected plagiarism in the manuscript that you were assigned? | 119 (80.95%) | 23 (15.65%) | 5 (3.40%) |
| 3. Have you reported the plagiarism of a manuscript to the authors of an article that you had reviewed? | 112 (76.19%) | 35 (23.81%) | 0 |
| 4. Do you think it is necessary to have plagiarism detection software for every journal? | 143 (97.28%) | 4 (2.72%) | 0 |

**Table 5** Association of independent variables with mean knowledge score (*N* = 147)

| Variables | Knowledge score | | CI | |
| --- | --- | --- | --- | --- |
| | | *p*-value | Lower limit | Upper limit |
| Total score | 5.32 ± 0.99 | | | |
| **Sex[a]** | | | | |
| Male | 5.31 ± 1.01 | 0.93 | -0.411 | 0.351 |
| Female | 5.34 ± 0.93 | | | |
| **Highest level of Education[b]** | | | | |
| Bachelor | 5.40 ± 0.54 | 0.372 | 4.72 | 6.08 |
| Master | 5.31 ± 1.06 | | 5.08 | 5.54 |
| Ph.D | 5.24 ± 0.93 | | 4.98 | 5.50 |
| other | 6.00 ± 0.000 | | 6.00 | 6.00 |
| **Role in Journal[b]** | | | | |
| Editor in Chief | 5.38 ± 0.81 | 0.240 | 5.12 | 5.64 |
| Managing editor | 5.08 ± 1.08 | | 4.61 | 5.55 |
| Editorial team member | 5.42 ± 0.88 | | 5.21 | 5.63 |
| Any other | 4.91 ± 1.72 | | 3.81 | 6.01 |
| **Work experience in journal[b]** | | | | |
| ≤ 1 year | 5.25 ± 1.52 | 0.272 | 4.43 | 6.06 |
| 2–5 years | 5.37 ± 0.83 | | 5.17 | 5.58 |
| 6–10 years | 5.38 ± 0.81 | | 5.12 | 5.64 |
| > 10 years | 5.27 ± 0.98 | | 4.83 | 5.70 |
| Not mentioned | 4.25 ± 2.06 | | 0.97 | 7.53 |
| **Type of working journal[a]** | | | | |
| Biomedical | 5.42 ± 0.87 | | -0.10 | 0.54 |
| Others | 5.20 ± 1.09 | | | |
| **Number of publications[b]** | | | | |
| No publication | 4.00 ± 3.46 | 0.05 | -4.60 | 12.60 |
| 1 | 5.00 ± 1.09 | | 3.85 | 6.15 |
| 2–5 | 5.22 ± 1.00 | | 4.72 | 5.72 |
| 6–10 | 5.50 ± 0.70 | | 5.21 | 5.78 |
| > 10 | 5.38 ± 0.88 | | 5.19 | 5.56 |
| Not mentioned | 4.00 ± 1.41 | | -8.70 | 16.70 |

*CI* Confidence interval

[a] Independent t test

[b] One way ANOVA

Almost 15% of the participants disagreed that paraphrasing or quoting can be used to avoid plagiarism which is higher as compared to a study done by Phyo et al. [11]. The reason may be due to the fact that most of the editors have completed master or Ph.D. courses and already have done research whereas in the study done by Phyo et al. involved postgraduate students.

More than one-fifth of the participants disagreed that citation and referencing can be used to avoid plagiarism which is lower as compared to a study done by Phyo et al. [11].

Around one in eleven disagreed that plagiarism detection software can be used to avoid or detect plagiarism which is lower as compared to a study done by Phyo et al. [11]. This supports the authors' opinion that not all editors are fully aware of or trained in handling plagiarism. Therefore, it's crucial for all journal editors to receive training and updates on plagiarism to effectively manage manuscripts and check for plagiarism. The other reason may be the accuracy of the software detection. Some software may not accurately detect plagiarism. It can incorrectly flag properly cited and referenced material as non-original content [19].

Almost 5% disagreed that authors reusing their previously written work or data in a 'new' written article without citation and referencing is plagiarism. This

percentage is lower compared to university students, where one-quarter of the participants did not know that self-plagiarism is considered plagiarism [20].

Almost all agreed that plagiarism can be a very serious form of ethical misconduct. It is universally acknowledged that plagiarism is a serious ethical misconduct. Authors should be fully aware of this before writing a research manuscript to minimize or avoid instances of plagiarism.

### Practice as an author
Almost 4% ever copied and pasted a section of someone else's work without acknowledgment and quotation and a similar proportion reused their work that has been published in one journal without proper citations and references. There are no directly comparable studies. However, a study by Gupta et al. [21] reported that slightly less than one-fifth of the participants, who were editors and researchers, had published articles containing copied parts.

Just over one-fifth of the participants did not use plagiarism detection software when writing research articles which is almost similar to a study done by Gupta et al. [21] where one-fourth of the participants did not use any form of plagiarism detection software.

### Practice as an editor
Fewer than half of the participants indicated that the journals they worked for used authentic plagiarism detection software. It is crucial for every journal to use authentic plagiarism detection software, as freely available online tools may not accurately detect all instances of plagiarism [22]. Cost may be a factor in choosing plagiarism detection software. Individuals can use freely available tools cautiously, but it is always recommended that journals or institutions use authentic, reliable software.

Four-fifths of them suspected plagiarism in the manuscripts assigned to them, which is higher than the findings of Smart et al., where just under two-thirds reported experiencing some plagiarized submissions. The larger percentage in this study may be because participants only suspected plagiarism, while in the study by Smart et al., they reported confirmed cases of plagiarism [18]. This indicates that a significant number of manuscripts were suspected of plagiarism. To confirm these suspicions, reliable software should be used before corresponding with the authors.

Three out of every five participants reported the plagiarism used in the manuscript to the respective authors. It is recommended to report detected plagiarism to both the author and the journal. Failure to do so can harm the author's career and damage the journal's reputation.

The primary reason that not all editors were well-informed about plagiarism may be that they were trained in editorial processing but did not receive specific training on plagiarism.

### Limitations
Due to the use of convenience sampling and social media for data collection, the survey may have primarily attracted participants who were genuinely interested and had better knowledge. Those with less knowledge might not have participated, potentially leading to over-reporting. Social desirability bias could have occurred. This may lead to more positive responses in knowledge as well as in practice-based questionnaires. Since this study includes only journal editors from Nepal, its findings cannot be generalized beyond the country. However, the study participants include editors working in various areas of Nepal, covering a wide range of disciplines, the results could be generalized to the Nepalese population.

### Conclusions
Although journal editors' knowledge and practices regarding plagiarism appear to be high, they are still not satisfactory. It is strongly recommended to use authentic plagiarism detection software by the journals and editors should be adequately trained and update their knowledge about it. Authors should also be aware of plagiarism and its consequences when writing and submitting a research manuscript to a journal.

### Declarations

**Ethics approval and consent to participate**
Ethical clearance was obtained from Gandaki Medical College -Institutional Review Committee (ref no: 08/080/081-F). Electronic informed consent was taken from all participants before starting the survey. The survey was anonymous, and confidentiality was ensured.

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**Author details**
[1]Department of Community Dentistry, Gandaki Medical College Teaching Hospital and Research Centre, Pokhara, Nepal. [2]Department of Forensic Medicine, Gandaki Medical College Teaching Hospital and Research Centre, Pokhara, Nepal. [3]Department of Periodontics, Gandaki Medical College Teaching Hospital and Research Centre, Pokhara, Nepal.

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