

Comparison of knowledge of plagiarism among Dental Students-A cross sectional study

Running Title - A survey on awareness of plagiarism

Dharaneesh N

Department of Anatomy

Saveetha Dental College and Hospitals,

Saveetha Institute of Medical and Technical Sciences, Saveetha University, Chennai-600077

Email id: 152001049.sdc@saveetha.com

Yuvaraj Babu.K

Department of Anatomy,

Saveetha Dental College & Hospitals,

Saveetha Institute of Medical and Technical Sciences, Saveetha University, Chennai-600077

Email id: yuvarajbabu@saveetha.com

Corresponding Author,

K.Yuvaraj Babu

Department of Anatomy,

Saveetha Dental College and Hospitals,

Saveetha Institute of Medical and Technical Sciences, Saveetha University,

Chennai - 600077,

Tamilnadu, India.

Phone: +91-9840210597

E-mail id: yuvarajbabu@saveetha.com

Abstract

Aim : To create awareness of plagiarism among dental students.

Background : Plagiarism is defined as an unauthorized appropriation of another's work, ideas, methods, results or words without acknowledging the source and original author. Plagiarism seems to have increased with the availability of internet access, simply because so much matter is readily available, and it is so easy to copy. Despite an increased awareness of the dangers of plagiarism in academic circles and the media, plagiarism is present in scientific writing.

Materials and methods : Self administered questionnaire was based on the awareness of plagiarism . The questionnaire was distributed through an online survey google form. The study population included 127 college students. The questionnaire was carefully studied and corresponding answers were marked by the participants. The data was collected and statistically analysed using SPSS software.

Result : 80.31% of the participants were aware about plagiarism. When asked if plagiarism is an act of malpractice in academics 77.95% responded yes. When asked if they practised plagiarism 48.82% responded yes and 49.61% responded no.

Conclusion : This study shows us the knowledge and awareness of plagiarism among dental students. More awareness has to be spread in order to restrict the practice of plagiarism in the upcoming years.

Keywords : Plagiarism; Scientific writing; Academic misconduct; innovative dental survey

Introduction

Plagiarism is derived from latin and it is also called hijacking or kidnapping. The word plagiarism comes from the latin word and it means “plagiarius”. Due to the availability of internet access plagiarism has seemed to be increased because already so much matter is readily available then we can copy that very easily (1). It is defined as an act of stealing or as an unauthorised copying of another's work, methods, ideology results or words without the actual person's permission or knowledge (2). Even after increasing the awareness of the effects and dangers and misconduct of plagiarism in the academic field and the media, it is present in scientific writing. Scientific misconduct has been the major focus of interest in recent years. Misconduct of research usually includes plagiarism, fabrication and other unethical behaviour in professional and scientific research. Out of all this plagiarism is the most frequent and first and foremost type of misconduct.

The most common type of misconduct of research that leads to an increase in the number of published papers without adding any scientific value is due to plagiarism(2). When we summarise as nothing but copying others' work without giving the credit to the authors who have actually written it and showcasing it as their own work by the plagiarist (3). Plagiarism is not only copying the text but also includes using published pictures and tables without enough work or written permission. Most cases were reported in the regions of Africa, Asia, America and Australia (3,4). Reasons for plagiarising can be work pressure, no training in scientific writing, forced educational requirements to publish articles, less awareness about the future consequences of detecting plagiarism. Plagiarism comes early during education. Most of the work submitted by dental students would have been copied from the previously published literature (3–5).

Dental students being the budding or upcoming practitioners as new students doing research, they will fall tap into practising plagiarism. But literature shows that awareness regarding plagiarism among dental students is extremely low and therefore the healthcare students also and most of them would have plagiarised a minimum of once (6). So given the limited and fewer number of research studies on dental students in India to observe plagiarism. This paper is an attempt to assess and compare the attitude and awareness of plagiarism among dental students in India. Our team has extensive knowledge and research experience that has translate into high quality publications(7–21) Hence, this present study was conducted among dental students present in Saveetha dental College Chennai to understand the knowledge and awareness levels regarding plagiarism.

Materials and methods

A question from a survey was done and it consisted of 15 questions and it was done using Google forms. This questionnaire was circulated among dental students present in Saveetha dental College and 126 students participated in the survey and attempted these questions carefully this study was approved by SRB of Saveetha dental College and Hospital. All the results were tabulated, verified and statistically analysed using SPSS software.

Result

In table 1 the percentage of responses received for various questions are presented, Figures 1 and 2 presents pie charts for few important responses and figure 3 and 4 represents a bar graph of chi square analysis done. From our study a lot of participants know about plagiarism and accept its a malpractice and punishable offence.

Table 1 - Percentage of responses for various questions

Question	Response 1	Response 2	Response 3	Response 4
1. Age	18 28.57%	19 24.60%	20 30.16%	21 16.67%
2. Gender	Male 47.24%	Female 51.97%		
3. Do you know what plagiarism is?	Yes 80.31%	No 17.32%		
4. Plagiarism is an act of malpractice in academics ?	Yes 77.95%	No 20.47%		
5. Plagiarism is a punishable offence ?	Yes 70.8%	No 27.56%		
6. Practise plagiarism?	Yes 48.82%	No 49.61%		
7. Staff encourage plagiarism?	Yes 17.32%	No 41.73%	Sometimes 37.80%	
8. Software's available to check plagiarism	Yes 70.08%	No 25.20%		
9. Short deadlines give me a right to plagiarise a bit	Yes 45.67%	No 50.39%		
10. If a colleague of mine allows me to copy his/her paper I'm not doing anything bad because i have his permission	Yes 59.06%	No 39.3%		
11. I work (study) In a plagiarism free environment	Agree 22.83%	Disagree 33.83%	Strongly Agree 24.41%	Strongly disagree 11.02%

12. Sometimes it is necessary to plagiarise	Yes 59.06%	No 39.37%		
13. Self plagiarism should not be punishable In the same way as plagiarism	Yes 66.14%	No 31.50%		
14. Regulations should be laid down against plagiarism	Yes 70.87%	No 27.56%		
15. I keep plagiarising because I haven't been caught yet	Yes 40.16%	No 57.48%		
16. Those who say they've never plagiarised are lying	Yes 67.72%	No 29.92%		
17. In times of moral and ethical it is important to discuss about issues Like plagiarism and self plagiarism	Yes 76.38%	No 20.47%		

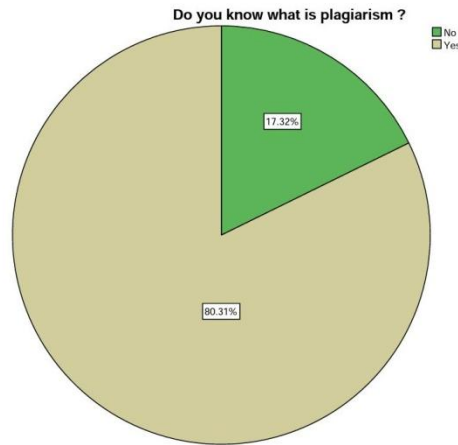


Figure 1 : Pie chart showing the percentage distribution about awareness of plagiarism. Beige colour represents Yes (80.31%) and green colour represents No (17.32%).

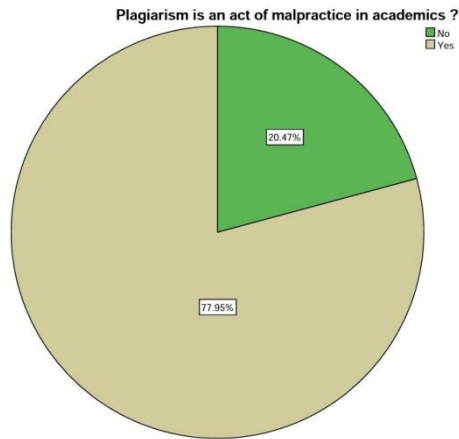


Figure 2 : Pie chart showing the percentage distribution on whether plagiarism is an act of malpractice. Beige colour represents Yes (77.95%) and green colour represents No (20.47%).

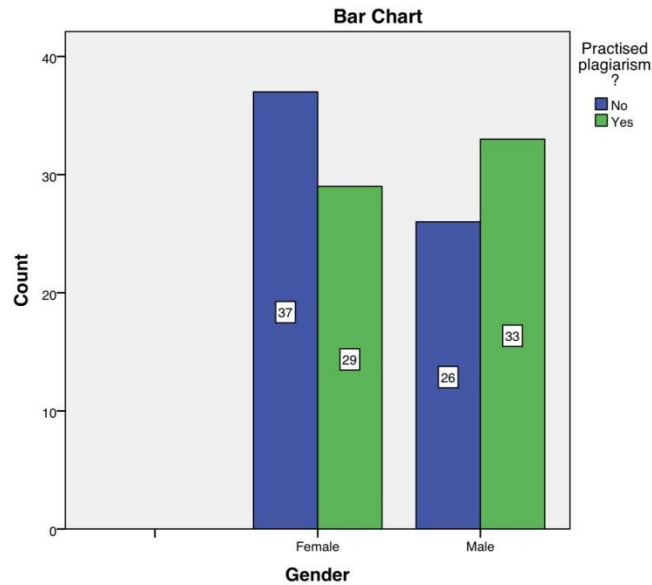


Figure 3 : Bar graph showing association between gender and practised plagiarism . X-axis represents gender and the Y axis represents the number of responses. Green colour represents Yes, and blue colour represents No. Chi square analysis between gender and practised plagiarism was done Pearson chi square value 0.000 ($P < .05$), hence statistically signified.

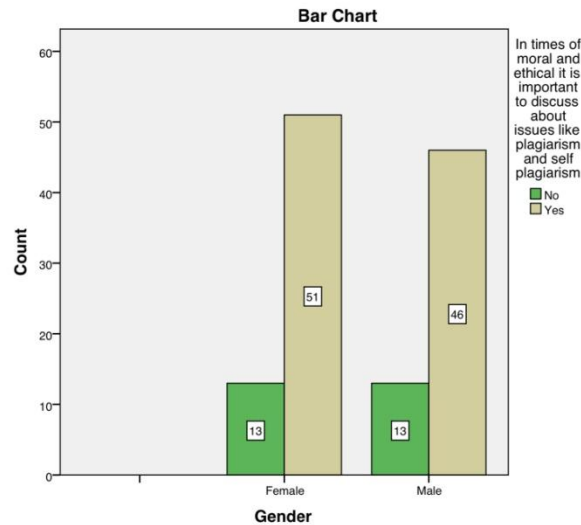


Figure 4 : Bar graph showing association between gender and In times of moral and ethical it is important to discuss issues like plagiarism and self plagiarism. The X-axis represents gender and Y axis represents the number of responses. Beige colour represents Yes, and green colour represents No. Chi square analysis between gender and practised plagiarism was done Pearson chi square value 0.000 ($P < .05$), hence statistically signified.

Discussion

In our study, 80.31% of the participants were aware of plagiarism. When asked if plagiarism is an act of malpractice in academics 77.95% responded yes. When asked if they practised plagiarism 48.82% responded yes and 49.61% responded no. In the previous study by Deshmukh about awareness of plagiarism 82.10% said yes and 17.90% said no, which was similar to our study in which 80.31% said yes and 17.32% said no. the responses for if Plagiarism was an act of malpractice 95.10% told yes and 4.90% no in the same study but in our study 77.95% said yes 24.41% told no (22).

In the previous study by Gomez when asked about short deadlines give me the right to plagiarise a bit in 31.4 percent agree and 25.4% disagree in postage graduate category and in our article 45.67% graduates agree and 50.39% disagree (2). In the previous study by Deshmukh, Dey and Abdus Sobhan about whether plagiarism is a punishable offence 100% are aware of punishable offence and in our study 70.8% agree on 27.57% disagree (22,23). In the previous article of Hassan, Sharma and Singh when asked whether it is important to discuss addressing plagiarism 47% agree and 33% disagree and in our article 76.38% and 20.47% disagree (24) (25).

Limitation :

The study sample was limited to only 100 participants and in the future more number of participants can be included.

Conclusion:

This study shows us the knowledge and awareness of plagiarism among dental students. More awareness has to be spread in order to restrict the practice of plagiarism in the upcoming years.

Author Contributions

Dharaneesh N: Study Design, Data collection, Data Analysis, manuscript writing

Yuvaraj Babu K: Study Concept, Data verification, Data Analysis, manuscript drafting and correction

Acknowledgement

We acknowledge and thank all the participants for their cooperation in the study

Conflict Of Interest

The authors reported the conflict of interest while performing this study to be nil

Funding Agency

The present project is supported/funded/sponsored by

- Saveetha Institute of Medical and Technical Sciences
- SaveethaDental College and Hospitals,
- Saveetha University and
- Society for women integrated family development.

References :

1. Sriganesh V, Iyer P. Plagiarism and medical writing [Internet]. Vol. 17, Indian Journal of Radiology and Imaging. 2007. p. 146. Available from: <http://dx.doi.org/10.4103/0971-3026.34716>
2. Gomez DMSS, Gomez MSS, L. N, Sujatha BK. Assessment of the attitude towards Plagiarism among dental postgraduate students and faculty members in Bapuji Dental College and Hospital, Davangere – A cross sectional survey [Internet]. Vol. 13, IOSR Journal of Dental and Medical Sciences. 2014. p. 01–6. Available from: <http://dx.doi.org/10.9790/0853-13540106>
3. Masic I. Plagiarism in Scientific Publishing [Internet]. Vol. 20, Acta Informatica Medica. 2012. p. 208. Available from: <http://dx.doi.org/10.5455/aim.2012.20.208-213>
4. Barbour V. Perverse incentives and perverse publishing practices [Internet]. Vol. 60, Science Bulletin. 2015. p. 1225–6. Available from: <http://dx.doi.org/10.1007/s11434-015-0846-4>
5. Das N, Panjabi M. Plagiarism: Why is it such a big issue for medical writers? *Perspect Clin Res.* 2011 Apr;2(2):67–71.
6. Knowledge, Attitude and Practice of Postgraduate Dental Students Towards Plagiarism in Maharashtra State, India: A Cross-Sectional Survey [Internet]. Vol. 2, ARC Journal of Dental Science. 2017. Available from: <http://dx.doi.org/10.20431/2456-0030.0203001>
7. Govindaraju L, Neelakantan P, Gutmann JL. Effect of root canal irrigating solutions on the compressive strength of tricalcium silicate cements. *Clin Oral Investig.* 2017 Mar;21(2):567–71.
8. Neelakantan P, Varughese AA, Sharma S, Subbarao CV, Zehnder M, De-Deus G. Continuous chelation

- irrigation improves the adhesion of epoxy resin-based root canal sealer to root dentine. *Int Endod J.* 2012 Dec;45(12):1097–102.
9. Panda S, Doraiswamy J, Malaiappan S, Varghese SS, Del Fabbro M. Additive effect of autologous platelet concentrates in treatment of intrabony defects: a systematic review and meta-analysis. *J Investig Clin Dent.* 2016 Feb;7(1):13–26.
 10. Sathivel A, Raghavendran HRB, Srinivasan P, Devaki T. Anti-peroxidative and anti-hyperlipidemic nature of *Ulva lactuca* crude polysaccharide on D-galactosamine induced hepatitis in rats. *Food Chem Toxicol.* 2008 Oct;46(10):3262–7.
 11. Ramadurai N, Gurunathan D, Samuel AV, Subramanian E, Rodrigues SJL. Effectiveness of 2% Articaine as an anesthetic agent in children: randomized controlled trial. *Clin Oral Investig.* 2019 Sep;23(9):3543–50.
 12. Danda AK, Tatiparthi MK, Narayanan V, Siddareddi A. Influence of Primary and Secondary Closure of Surgical Wound After Impacted Mandibular Third Molar Removal on Postoperative Pain and Swelling—A Comparative and Split Mouth Study [Internet]. Vol. 68, *Journal of Oral and Maxillofacial Surgery.* 2010. p. 309–12. Available from: <http://dx.doi.org/10.1016/j.joms.2009.04.060>
 13. Ezhilarasan D, Apoorva VS, Ashok Vardhan N. *Syzygium cumini* extract induced reactive oxygen species-mediated apoptosis in human oral squamous carcinoma cells. *J Oral Pathol Med.* 2019 Feb;48(2):115–21.
 14. Sajjan D, Udaya Lakshmi K, Erdogdu Y, Hubert Joe I. Molecular structure and vibrational spectra of 2,6-bis(benzylidene)cyclohexanone: A density functional theoretical study [Internet]. Vol. 78, *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy.* 2011. p. 113–21. Available from: <http://dx.doi.org/10.1016/j.saa.2010.09.007>
 15. Danda AK, Muthusekhar MR, Narayanan V, Baig MF, Siddareddi A. Open versus closed treatment of unilateral subcondylar and condylar neck fractures: a prospective, randomized clinical study. *J Oral Maxillofac Surg.* 2010 Jun;68(6):1238–41.
 16. Gopalakannan S, Senthilvelan T, Ranganathan S. Modeling and Optimization of EDM Process Parameters on Machining of Al 7075-B4C MMC Using RSM. *Procedia Engineering.* 2012 Jan 1;38:685–90.
 17. Kumar MS, Vamsi G, Sripriya R, Sehgal PK. Expression of matrix metalloproteinases (MMP-8 and -9) in chronic periodontitis patients with and without diabetes mellitus. *J Periodontol.* 2006 Nov;77(11):1803–8.
 18. Mehta M, Deeksha, Tewari D, Gupta G, Awasthi R, Singh H, et al. Oligonucleotide therapy: An emerging focus area for drug delivery in chronic inflammatory respiratory diseases. *Chem Biol Interact.* 2019 Aug 1;308:206–15.
 19. Neelakantan P, Subbarao C, Subbarao CV, De-Deus G, Zehnder M. The impact of root dentine conditioning on sealing ability and push-out bond strength of an epoxy resin root canal sealer. *Int Endod J.* 2011 Jun;44(6):491–8.
 20. Praveen K, Narayanan V, Muthusekhar MR, Baig MF. Hypotensive anaesthesia and blood loss in orthognathic surgery: a clinical study. *Br J Oral Maxillofac Surg.* 2001 Apr;39(2):138–40.

21. Samuel SR, Acharya S, Rao JC. School Interventions-based Prevention of Early-Childhood Caries among 3-5-year-old children from very low socioeconomic status: Two-year randomized trial. *J Public Health Dent.* 2020 Jan;80(1):51–60.
22. Deshmukh MA, Dodamani AS, Khairnar MR, Naik RG. Research misconduct: A neglected plague. *Indian J Public Health.* 2017 Jan;61(1):33–6.
23. Dey SK, Abdus Sobhan M. Impact of Unethical Practices of Plagiarism on Learning, Teaching and Research in Higher Education: Some Combating Strategies [Internet]. 2006 7th International Conference on Information Technology Based Higher Education and Training. 2006. Available from: <http://dx.doi.org/10.1109/ithet.2006.339791>
24. Hassan DDDD, D Hassan Dr, Professor A, Department of Education, Ongole AN, Ongole, et al. A Study Of Relationship Between Environmental Awareness And Scientific Attitudes Among Higher Secondary Students [Internet]. Vol. 1, *Indian Journal of Applied Research.* 2011. p. 57–61. Available from: <http://dx.doi.org/10.15373/2249555x/sep2012/20>
25. Sharma BB, Singh V. Ethics in writing: Learning to stay away from plagiarism and scientific misconduct. *Lung India.* 2011 Apr;28(2):148–50.