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AWARENESS OF PLASTIC POLLUTION AMONG DENTAL STUDENTS

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Abstract

The increased production and widespread utilization of plastics, however, has its own negative impacts on the globe because a lot of disposed plastic products end up becoming litter, waste, and pollution. Human misuse of plastic is one of the major challenges faced today. The aim of the study was to assess the awareness about plastic pollution of the environment among dental students.t has been discovered that every one of the plastic classes has an alternate piece and in this manner conveys its own damages on human life A cross sectional study was done with a self-administered questionnaire with 10 questions circulated among 100 dental students aged between 19-25 years. The questionnaire involved information on the individual and socio demographic characteristics. Questions relating to the awareness of plastic pollutions, its causes and effects and preventive measures were provided for answering. The responses were recorded and analysed. 89% of the respondents were aware of the harmful effects plastic pollution. 72 % said plastic pollution is because of industrial waste, 28% said because of domestic waste. 84 % were aware of damage to marine environment. 92 % were aware of damage to soil environment. 65% are aware of reusable plastics. The awareness levels with regards to the plastic pollution is high among dental students. However more rigorous educational and awareness programs should be undertaken to educate the other students and general public.

Keywords*: Awareness. plastic pollution, dental students*

Introduction

The expanded creation and boundless usage of plastics, be that as it may, has its own negative effects on the globe in light of the fact that a great deal of arranged plastic items wind up getting litter, waste, and contamination. Human abuse of plastic is one of the significant difficulties confronted today(Sharma & Sharma, 2014). It has been discovered that every one of the plastic classes has an alternate piece and in this manner conveys its own damages on human life (Salem et al. , 2018).

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It is accepted that some plastic items are impervious to corruption under the impact of sun as well as microorganisms and can persevere in nature for a great many years, encouraging ceaseless introduction to fixings in plastics and expanding the danger of their gathering, which gives the opportunity for their unsafe impacts to show up. These impacts incorporate pulverization of the living space's normal excellence , injury and demise of wild and ocean creatures , and blockage of sewerage frameworks which helps the spread of numerous irresistible sicknesses. What's more, the procedure of plastic creation adds to the a dangerous atmospheric deviation and air contamination (Lewis et al. , 2010)

Plastic wastes were recorded as an issue in the marine condition since the 1970s. Recently, be that as it may, has it been distinguished as a worldwide danger (Adkins, 2018). Oil based plastics have stable carbon-hydrogen bonds, which represents its sturdiness and protection from natural corruption. Because of its solid nature, plastic wastes collect in waterways, lakes, and seas making a wide range of issues the marine life. Microplastics are a prominent source of marine plastic contamination in the ongoing years (Wu et al. , 2017). The aim of this study is to assess the awareness about plastic pollution of the environment among dental students.

Materials and method

A cross sectional study was done with a self-administered questionnaire with 10 questions circulated among 100 dental students aged between 19-25 years. The questionnaire involved information on the individual and socio demographic characteristics. Questions relating to the awareness of plastic pollutions, its causes and effects and preventive measures were provided for answering. The responses were recorded and analysed.

Results

89% of the respondents were aware of the harmful effects plastic pollution (Fig. 1). 72 % said plastic pollution is because of industrial waste, 28% said because of domestic waste. (Fig. 2). 84 % were aware of damage to marine environment (Fig. 3). 92 % were aware of damage to soil environment (Fig. 4). 65% are aware of reusable plastics(Fig. 5).

Fig 1: Awareness of harmful effects of plastic pollution

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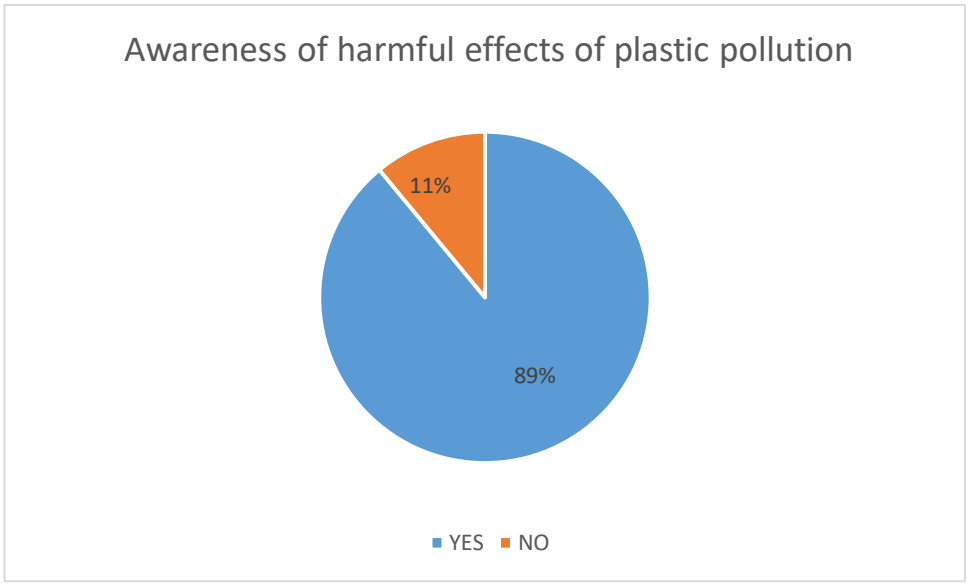

Fig 2: Causes of plastic pollution

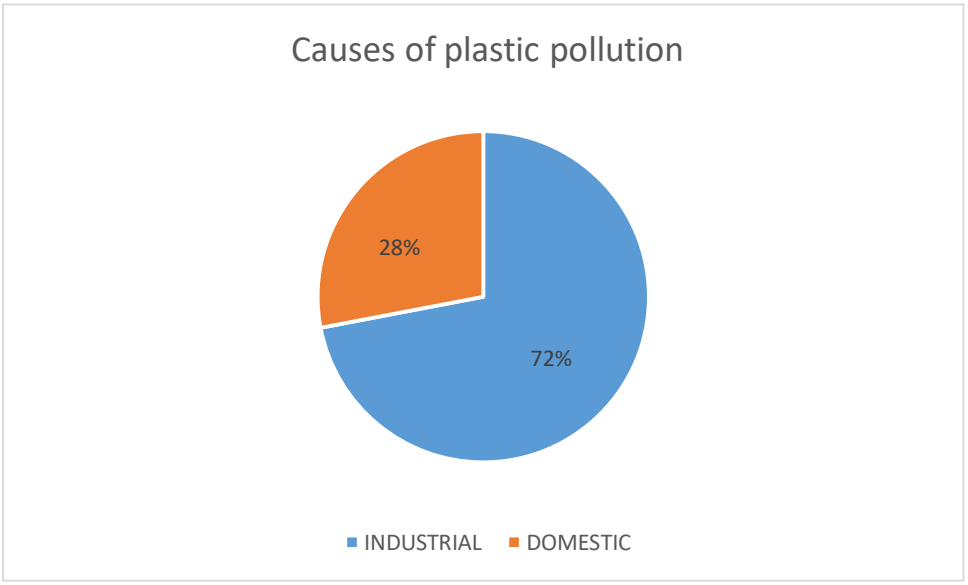

Fig 3: Awareness of damage to marine environment

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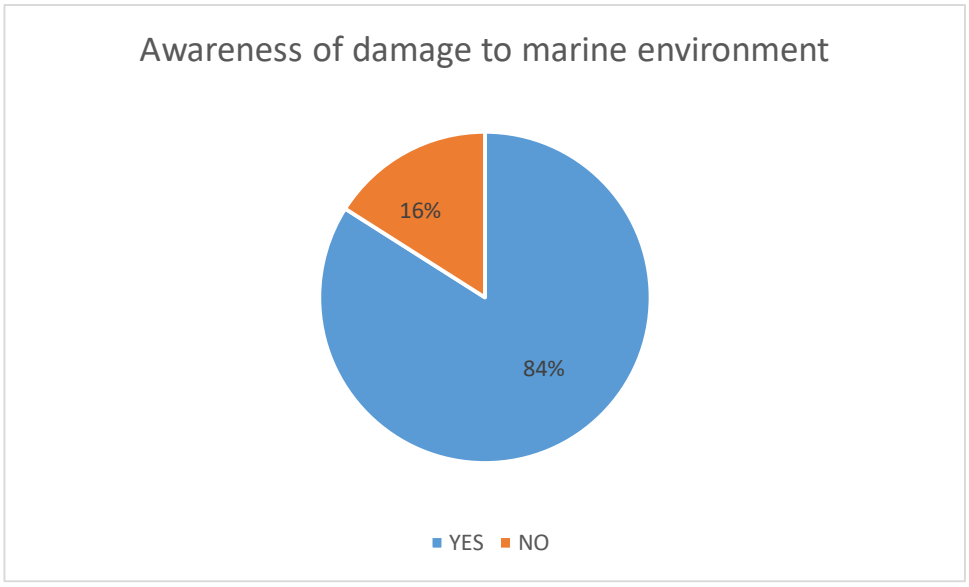


Fig 4: Awareness of damage to soil environment

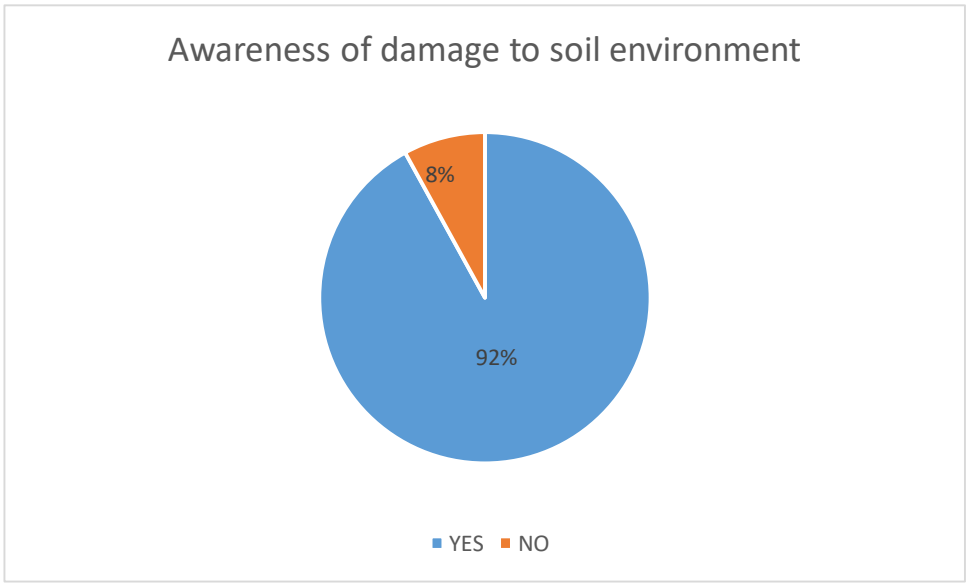
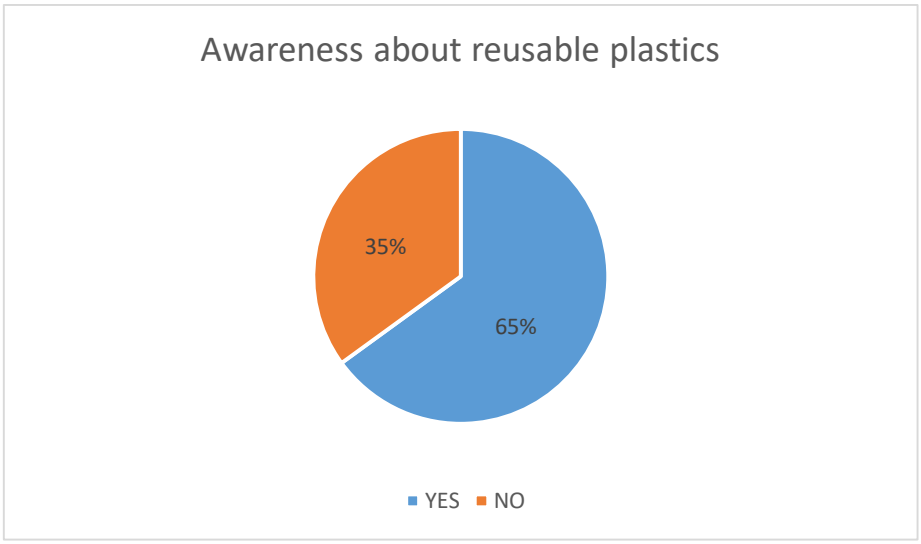


Fig 5: Awareness about reusable plastics



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Disccussion

A few measures are being utilized to decrease the negative effects of plastic items, including reusing, boycott of dissemination of these items, and utilization of charges or expenses (Golghate & Pawar, 2014). Extra strategies incorporate landfilling, cremation, and biodegradation (North & Halden, 2013). However, in spite of the considerable number of endeavors to decrease the issue of plastic contamination, plastic items are still generally utilized by the network, particularly plastic sacks, primarily because of their efficiency (Damena et al. , 2011). Expanded information and mindfulness about ecological situations are expected to change ecological mentalities, and all thus are attempting to firmly impact natural conduct and lessening unreliable human practices towards nature (Kollmuss & Agyeman, 2002). Ecological mindfulness doesn't just allude to the negligible shortsighted data about condition. Mindfulnessincorporates examining reasons for the natural issues, donors, impacts, and long haul impacts. (Bradley et al. , 1999)

Expanding the degree of awareness about such a common issue is a significant advance to change individuals' conduct, since the members' mindfulness unmistakably influenced their perspectives and ability to begin a change.(Ergen et al. , 2015) The mindfulness about plastic contamination is high among the members in this investigation. Comparable discoveries were seen in contemplates done in Texas , Malaysia , and Istanbul (Ahluwalia, 2006; Corcoran & Wals, 2007). Members with more mindfulness wanted to take an interest and have any kind of effect either by assisting with making the individuals around increasingly mindful or without anyone else inclusion paying little heed to the way that they believed the district to be the side of the fundamental obligation to restrain this spreading contamination. By and by, it is as yet the job of city specialists to allow the populace to change over this mentality into a positive conduct by giving better reusing conditions, more crusades, and severe guidelines to stop the infringement of numerous processing plants and workshops.

The investigation exhibited that mindfulness crusades are a significant measure to bring issues to light against plastic contamination. This can be clarified by the way that battles speak to a progressively intelligent and connecting with strategy for instructing as opposed to the customary outdated lectures. The significant job of school-based training not exclusively can expand the consciousness of understudies yet additionally in changing their practices and that of their families and accomplishing a progressively economical administration technique for this expanding contamination (Maddox et al. , 2011).

In spite of the way that most members realized that reusing is the most ideal approach to arrange plastic items, the vast majority of them discard it in the dustbin. One purpose for this can be the low accessibility of reusing canisters in the network. This reveals the insight into another difficulty that can be handily remedied and with less costs contrasted with different arrangements that intend to diminish this developing concern. Giving additional reusing containers and presenting removal candy machines—which give coins in return for plastic—would be extremely promising for the general public to get increasingly required into the reusing process(Sa'di, 2019).

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The degrees of awareness about plastic contamination and its results can be affected by different elements of evaluation, sex, and instructive level. Numerous moves can be made to give the ideal condition, including the association of progressively intuitive talks and exercises about this issue inside the instructive framework and empowering its coherence for the duration of training life. This procedure of dynamic learning ought not be constrained to schools and should begin as right on time as essential and grade schools. Open specialists and private areas ought to be urged to include this sort of training inside other extracurricular educational sources like informal communities and web based games. District ought to also give a superior reusing condition and firm guidelines to decrease this ever-developing issue.

Conclusion

The awareness levels with regards to the plastic pollution is high among dental students. However more rigorous educational and awareness programs should be undertaken to educate the other students and general public.Collective initiatives fom the public ,private and student enterprises should be encouraged for prevention against the harmful effects of plastic polution.

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Conflict of Interest

The authors declare that they have no conflict of interest.

References

1. Adkins, S. (2018). *From Disposable Culture to Disposable People: The Unintended Consequences of Plastics*. Wipf and Stock Publishers.
2. Ahluwalia, V. K. (2006). *Green Chemistry: Environmentally Benign Reaction*. Ane Books Pvt Ltd.
3. Bradley, J. C. , Waliczek, T. M. , & Zajicek, J. M. (1999). Relationship Between Environmental Knowledge and Environmental Attitude of High School Students. In *The Journal of Environmental Education* (Vol. 30, Issue 3, pp. 17–21). https://doi. org/10. 1080/00958969909601873
4. Corcoran, P. B. , & Wals, A. E. J. (2007). *Higher Education and the Challenge of Sustainability: Problematics, Promise, and Practice*. Springer Science & Business Media.
5. Damena, T. , Mossie, A. , & Tesfaye, M. (2011). Khat Chewing and Mental Distress: A Community Based Study, in Jimma City, Southwestern Ethiopia. In *Ethiopian Journal of Health Sciences* (Vol. 21, Issue 1). https://doi. org/10. 4314/ejhs. v21i1. 69042

Received: Sep 2019 | Revised: Oct 2019 | Accepted: Nov 2019

6. Ergen, A. , Baykan, B. G. , & Turan, S. G. (2015). Effect of materialism and environmental knowledge on environmental consciousness among high school students: A study conducted in Istanbul province. In *International Journal of Human Sciences* (Vol. 12, Issue 1, p. 511). https://doi. org/10. 14687/ijhs. v12i1. 3130
7. Golghate, C. D. , & Pawar, M. S. (2014). Challenges in the development of green supply chain for plastic films: a review analysis. In *International Journal of Logistics Systems and Management* (Vol. 19, Issue 4, p. 393). https://doi. org/10. 1504/ijlsm. 2014. 065663
8. Kollmuss, A. , & Agyeman, J. (2002). Mind the Gap: Why do people act environmentally and what are the barriers to pro-environmental behavior? In *Environmental Education Research* (Vol. 8, Issue 3, pp. 239–260). https://doi. org/10. 1080/13504620220145401
9. Lewis, H. , Verghese, K. , & Fitzpatrick, L. (2010). Evaluating the sustainability impacts of packaging: the plastic carry bag dilemma. In *Packaging Technology and Science*. https://doi. org/10. 1002/pts. 886
10. Maddox, P. , Doran, C. , Williams, I. D. , & Kus, M. (2011). The role of intergenerational influence in waste education programmes: The THAW project. In *Waste Management* (Vol. 31, Issue 12, pp. 2590–2600). https://doi. org/10. 1016/j. wasman. 2011. 07. 023
11. North, E. J. , & Halden, R. U. (2013). Plastics and environmental health: the road ahead. In *Reviews on Environmental Health* (Vol. 28, Issue 1, pp. 1–8). https://doi. org/10. 1515/reveh-2012-0030
12. Sa'di, I. T. (2019). Identifying Differences in the Level of Environmental Awareness among Male Students: A Case of Lower Elementary Grades. In *International Journal of Learning, Teaching and Educational Research* (Vol. 18, Issue 8, pp. 1–16). https://doi. org/10. 26803/ijlter. 18. 8. 1
13. Salem, D. , Bakr, A. , & El Sayad, Z. (2018). Post-construction stages cost management: Sustainable design approach. In *Alexandria Engineering Journal* (Vol. 57, Issue 4, pp. 3429–3435). https://doi. org/10. 1016/j. aej. 2018. 07. 014
14. Sharma, V. K. R. , & Sharma, M. (2014). Plastics: Issues Challenges and Remediation. In *International Journal of Waste Resources* (Vol. 04, Issue 01). https://doi. org/10. 4172/2252-5211. 1000134
15. Wu, W. -M. , Yang, J. , & Criddle, C. S. (2017). Microplastics pollution and reduction strategies. In *Frontiers of Environmental Science & Engineering* (Vol. 11, Issue 1). https://doi. org/10. 1007/s11783-017-0897-7

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