



# Survey On Microplastics.

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**ABSTRACT:** Microbeads are small, solid, manufactured plastic particles that are less than 5 mm and don't degrade or dissolve in water. They may be added into a range of products, including rinse-off cosmetics, personal care and cleaning products. Microbeads are used as ingredients in these products for a variety of purposes. This includes an abrasive or exfoliant, a bulking agent, for controlled timed release of active ingredients, and to prolong shelf life. They are also a relatively cheap ingredient.

The main objective of this survey was to know the awareness of microplastics/microbeads among the people and to know the usage of microbead products among them.

**INTRODUCTION:** Microbeads are a kind of microplastic with specific function for scrubbing or exfoliating. In cosmetics, "microplastic" refers to all types of tiny plastic particles (smaller than 5mm) that are intentionally added to cosmetics and personal care products. They are often used as emulsifying agents or just as cheap fillers. Common microbead ingredients include polyethylene (PE), polyethylene terephthalate (PET) and polyacrylates. Microbeads may be small in size, hence are not captured by most wastewater treatment systems. If they are washed down drains after use, they can end up in rivers, lakes and oceans. Once in the water, microbeads can have damaging effects on marine life, the environment and human health. These microbeads absorb organic pollutants like long lasting toxic chemicals like pesticides, flame retardants, motor oil and more and other industrial pollutants that move up the food chain when the toxic coated beads are consumed by fish and other marine organisms. These microbeads that end up sitting in the stomach of fish, attract toxic chemicals including polybrominated diphenyl ethers (PBDES) which are known to cause neurological problems, decreased immune function and even fertility problems. These tiny plastics persist in the environment as they are almost impossible to remove. The best way to reduce their impact is to prevent them from entering the environment.

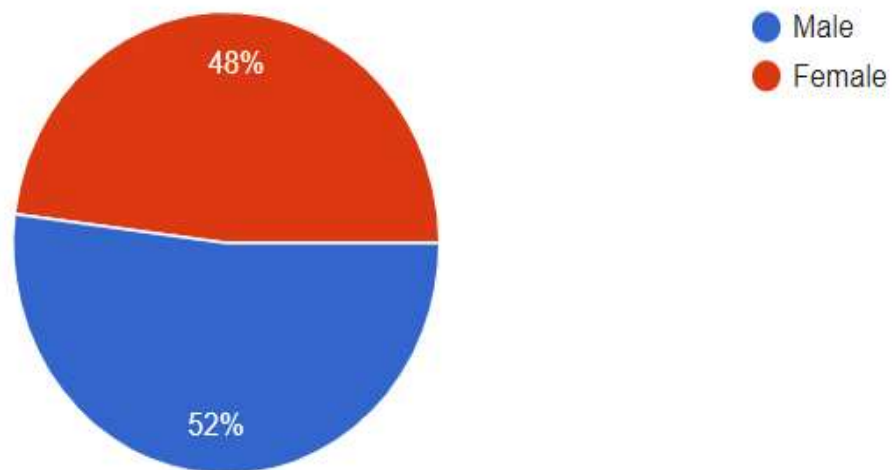
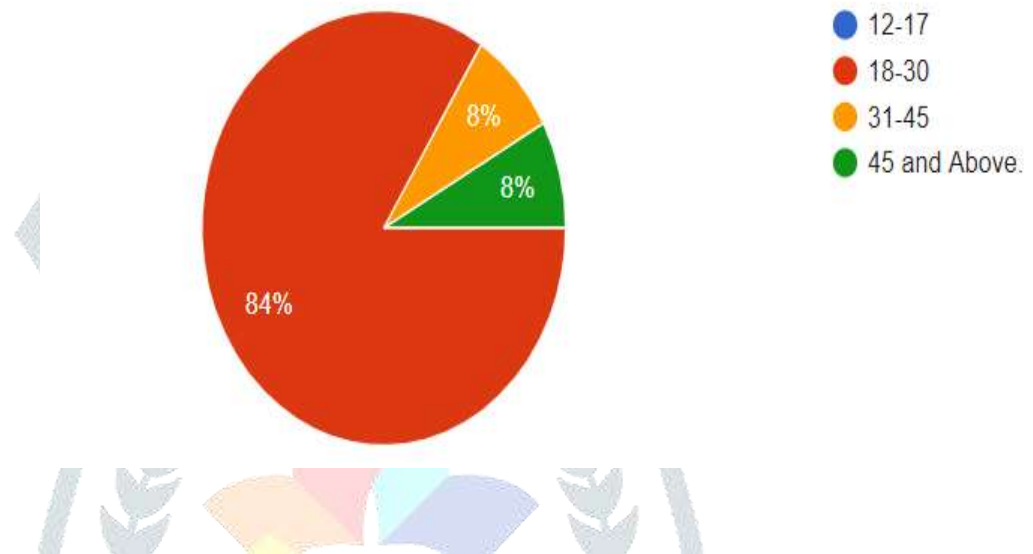
**MATERIAL AND METHOD:** A survey was done using an open questionnaire with a set of 10 questions. The type of questions were multiple choice questions. This survey was open for age groups above 12. In this survey, a list of products were enlisted for people to choose, based on their preferences or choice of the products they use. The brands of the products were selected by reading the ingredients of the products. The brand of products

enlisted were those with microbeads and those without microbeads. The sample size was 25. The parameters considered while interpreting the results were :

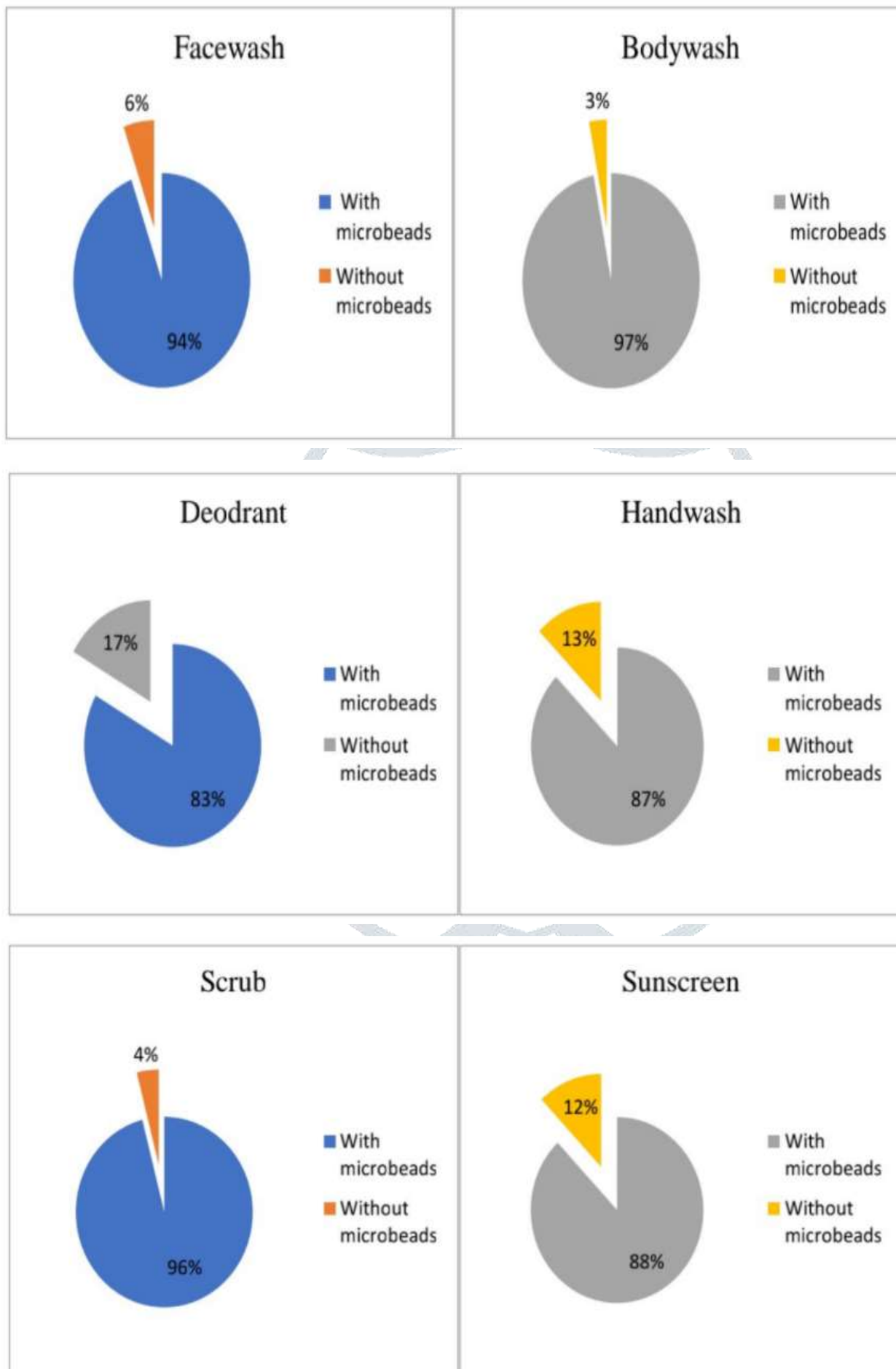
- Age
- Gender
- Number of people using products with or without Microplastics(Microbeads).

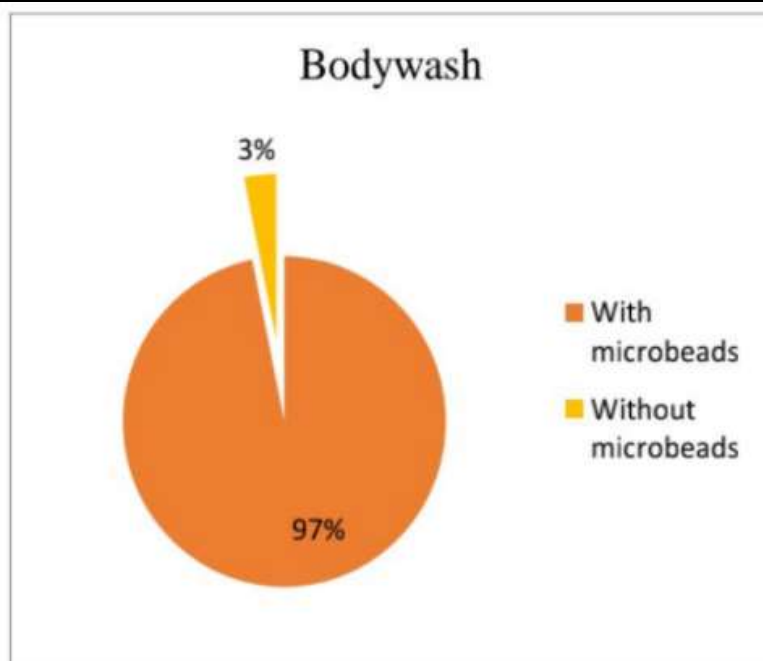
### **RESULTS:**

- ***Age:***



- ***Gender:***
- ***Number of people using products with or without Microplastics(Microbeads).***





**CONCLUSION:** With the help of this survey we can clearly say the majority of people use products with microbeads. There are few people who use those which do not contain microbeads. Microbeads are little plastic beads which are present in almost all the cosmetic products. But they have an awful effect on the environment and most of the people are unaware of this. There are many who don't know the concept of microbeads and their harmful effect on the environment. If awareness is raised among the people then elimination of microbeads from cosmetic products is possible. There are loads of natural alternatives to microbeads such as:

- Whole oats
- Jojoba beads
- Salt
- Coffee
- Sugar, etc.

These alternatives are now used in countries which have banned microbeads. But still in India many products contain microbeads. These same products manufactured by the same brand in other countries like Canada, U.S., etc. are free of microbeads. In India, The Bureau of Indian Standard banned the use of microbeads in cosmetics in 2017 but it will only be implemented from 2020. This year marks the start of micro plastic ban in India. The implementation of this is up to The Central Drugs and Standards Control Organisation which is responsible for monitoring creams and cosmetics.

The Bead the Microbeads campaign was initiated by the Plastic Soup Foundation in 2012 to address the issue of microbeads pollution through personal care products. They are one of the largest organisations trying to raise awareness about microbeads. Today with the restriction proposal by European Chemical Agency and the reports by UNEP and Taur they have made a list of more than 500 micro plastic ingredients that are widely used in cosmetics. In India there are not many organisations and NGOs working towards it. Toxic Links NGO is the one that conducted a survey of microbeads containing products in India and stimulated the ban on microbeads in India. According to the survey conducted by the Toxic Link, it was found that 28% products in India still used

microbeads. Toxic Links is a Delhi based environmental NGO, dedicated to bringing toxics related information into the Public Domain. Thus we can say that public participation will play a very important role in making this micro plastics ban in India effective and for this raising awareness among the people about the harmful effects of microbeads on environment is the most important and primary step.

#### **REFERENCES:**

- <https://www.beatthemicrobead.org/>
- <https://www.environment.gov.au/search/site/microbeads>
- <https://www.beatthemicrobead.org/product-lists/>

