

Investigations on the water contamination in Bandup Village, Mumbai

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Abstract: The unhygienic/unhealthy water practices have potential impacts on the quality of life throughout the planet. The third world countries including India are the major sufferers of water crisis in which the transformation towards healthy water practices warrants to begin from the root level. Based on this we hypothesize that understanding of the root cause of water pollution, the environmental and social impact and the assessment of awareness of common people regarding healthy water practices are ideal to design promising water management strategies. To test our hypothesis, we chose Bhandup, a semi-urban province of Mumbai as the area for our investigations. The area chosen for the study (Bhandup province) was divided into four zones (A, B, C, D), and the water from each zone were collected in a standard manner for the studies. The results revealed the lack of proper understanding of the people and the need of awareness/educational programs to improve their basic knowledge on water quality. The water specimen was examined for their ability to support life using zebrafish model, and particulate and microbial contamination using appropriate reference standards. All the water specimen except from Zone D failed to sustain the viability of zebra fish, exhibited increased particulate content and contained significantly higher microbial load. Based on the findings derived from the study, a mission of educating the Bhandup community was formulated which includes awareness programs, lectures and pledge to follow healthy water practices and the response from the public was promising and encouraging. To conclude, the study succeeded in addressing very common but serious health and hygienic concerns sourced out of unhealthy drinking practices. The findings from this study may open several avenues to address the present challenges associated with water management and pave the ways to healthy water availability locally and nationwide.

References.

1. Finosh, et al. (2021). Translational Research, (doi.org/10.1016/j.trsl.2022.10.004).
2. <https://link.springer.com/article/10.1007/s40204-022-00199-2>

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The unhygienic/unhealthy water practices have potential impacts on the quality of life throughout the planet. The third world countries including India are the major sufferers of water crisis in which the transformation towards healthy water practices warrants to begin from the root level. Based on this we hypothesize that understanding of the root cause of water pollution, the environmental and social impact and the assessment of awareness of common people regarding healthy water practices are ideal to design promising water management strategies. To test our hypothesis, we chose Bhandup, a semi-urban province of Mumbai as the area for our investigations. The area chosen for the study (Bhandup province) was divided into four zones (A, B, C, D), and the water from each zone were collected in a standard manner for the studies. The results revealed the lack of proper understanding of the people and the need of awareness/educational programs to improve their basic knowledge on water quality. The water specimen was examined for their ability to support life using zebrafish model, and particulate and microbial contamination using appropriate reference standards. All the water specimen except from Zone D failed to sustain the viability of zebra fish, exhibited increased particulate content and contained significantly higher microbial load. Based on the findings derived from the study, a mission of educating the Bhandup community was formulated which includes awareness programs, lectures and pledge to follow healthy water practices and the response from the public was promising and encouraging. To conclude, the study succeeded in addressing very common but serious health and hygienic concerns sourced out of unhealthy drinking practices. The findings from this study may open several avenues to address the present challenges associated with water management and pave the ways to healthy water availability locally and nationwide.