

The Impact of Water Pollution on Society: A Study Conducted in Mysore

Author Name¹: **Manoj.M,**

Second Author Name²: Third Author Full Name³, Fourth Author Full Name⁴ **Madhunayaka**

MBA Student, Vidya Vikas Institute of Engineering and Technology, Mysuru

Assistant Professor, Vidya Vikas Institute of Engineering and Technology, Mysuru.

ABSTRACT

Water pollution is a problem. It is bad for our health it is bad for the economy. It is bad for the environment. Many cities in India including Mysuru have water quality. This is happening because of urbanization, industrial growth and people not throwing away waste. I want to understand how water pollution affects people in Mysuru city. I want to know where the pollution is coming from how it is affecting our health and the environment and what people think about water pollution. Primary data were collected through a structured questionnaire from 59 respondents selected using convenience sampling. We also read some books, research papers and government reports. We found out that most people are really worried about water pollution. They think it is making people sick. They have to spend more money on medical bills. Water pollution is also bad for farming, tourism and the local economy in Mysuru. Many people think we need to make some rules to reduce water pollution. People think water pollution is an environmental issue but it is not. Water pollution is a problem. We need to do something about it. We must make sure we control pollution improve the way we treat wastewater and tell people about water pollution. This will help us have water and a better life, in Mysuru. We need to solve the water pollution problem to improve life quality in Mysuru and to protect water resources in Mysuru

INTRODUCTION :

Water is important for our planet. We need water to stay healthy you know. Water is also really necessary for farming and for factories to work properly. Everything in nature, like plants and animals needs water to survive. We use water for drinking, washing and growing our food and stuff.. We also need water to keep ourselves and our homes clean. Factories use water to make things.. Over time our water is getting polluted. This is happening because of things like waste from factories, chemicals, sewage and plastic that are getting into our water. Water is getting hurt by all these pollutants. Water pollution is a problem because water is essential, for our lives. We need to protect our water from wastes, chemicals, sewage and plastics. This environmental issue has been identified as a great threat since it has several negative consequences on human lives, economy and wildlife. The environment in Mysore city has become really bad over the few decades. This is because cities have grown factories have been. People have changed their way of living. As a result rivers, lakes and underground water in Mysore city are more likely to get contaminated and polluted. Pollution of water resources has become a critical environmental problem due to its far reaching impacts on human life, health, economic activities and quality of environment. Clean and potable water can be referred to as a human right; yet, water pollution continues to deny this basic human right to many people all over the world. Mysore is known to be among India's oldest cultural heritage centers and fast growing urban areas in Karnataka. As Mysore city grows it faces problems with waste and water. The water bodies around the city are getting dirty from wastewater, sewage and industrial waste. This is a concern. People in Mysore city are not throwing away their trash properly which makes the problem worse. All these factors are raising alarms about the water quality in Mysore city. The impact of water pollution on Mysore city is huge. It affects the health of people in Mysore city by increasing the risk of diseases like cholera, typhoid and hepatitis. Dirty water can also contain chemicals that may lead to long-term health problems for people in Mysore city. In Mysore city it's often kids, adults and people who are already struggling that get hit the hardest by health problems caused by polluted water. In Mysore city families and the government face a problem because of polluted water. It leads to higher healthcare costs due to water pollution, which is a huge burden on them. Water pollution affects people of Mysore city and the economy of Mysore city. Mysore city's water pollution affects people and the economy in ways. Farmers in Mysore city need clean water to grow crops. Polluted water can hurt the soil of Mysore city making it harder to grow things. People of Mysore city who fish or depend on water for their livelihood can lose money if the water is polluted and there are no fish in Mysore city. Many people get diseases like cholera, typhoid and hepatitis because of water pollution in Mysore city. The people of Mysore city are suffering due,

to water pollution. When water gets polluted it disrupts the balance of Mysore city's ecosystem making it tough for the city and the planet to stay healthy. We need water to keep our air fresh our weather stable and our animals happy and thriving in Mysore city. Water is really important for Mysore city. Without water everything falls out of whack. So it is really important that we take care of Mysore city's water bodies and keep them clean. This study is about understanding the impact of water pollution on the people who live in Mysore city. The main thing this study does is look at what's causing water pollution, in Mysore city and how water pollution is impacting the people who live in Mysore city. It wants to understand the reasons behind the pollution. What happens as a result. By doing this it hopes to shed light on how water pollution's affecting the daily lives of Mysore city residents. The study also seeks to explore awareness regarding water pollution in Mysore city and identify measures for prevention and control of water pollution in Mysore city.

Review of literature

Abhilash and Mahadevaswamy (2021) evaluated the spatial and temporal variations in water quality parameters and aquatic insect communities in lentic ecosystems, focusing on Dalvoy Lake in the Mysore district. Their assessment of water quality parameters study showed that high Chemical Oxygen Demand (51.4 mg/L) during monsoons poses a serious threat to local biodiversity. **Kumar et al. (2022)** analyzed seasonal variations in the Water Quality Index (WQI) across various well water systems used for drinking and farming in the Mysore region. Their findings from the Springer Link analysis indicated that while some areas maintained good water standards, pre-monsoon extraction points showed worrying degradation. **Smitha and Raghavendra (2022)** investigated how industrial runoff changes the physicochemical properties of groundwater in suburban Mysuru. Their *CWE Journal hydrogeochemical analysis* noted that unsafe levels of dissolved minerals create long-term risks for farming communities. **Mahesh and Sushmitha (2023)** reviewed human impacts on the declining conditions of urban lakes, focusing specifically on Hebbal Lake. Their *Research Gate review* documented that sewage disposal has made urban water bodies more unsuitable for aquatic life and recreation. **Deepa and Ananda (2023)** assessed the ecological decline of major water bodies in Mysuru, including Karanji and Dalvoy Lakes. Their *Journal of Geography and Environment* evaluation highlighted that rapid industrial growth and residential expansion contribute directly to fast eutrophication. **Sharma et al. (2023)** researched the biological magnification of toxic elements found in stormwater drains across the heritage city. Their paper on *Science Direct Current Scenario* concluded that the lack of centralized wastewater treatment infrastructure is the main threat to regional sustainability. **Venkatesh and Gowda (2024)** conducted a full assessment of public health risks from tap water contamination in Mysuru layouts. Their *International Journal of Scientific Research* paper revealed a high rate of gastrointestinal diseases among people using untreated groundwater. **Patil et al. (2024)** focused on heavy metal buildup in local water basins, warning about heavy metal toxicity. The study they did on *PMC Health Risks* showed that not getting rid of waste hurts our kidneys and nervous system. A paper by **Kumar and Sharma in 2024** talked about plastics and new pollutants in city lakes. They also wrote another paper in the *Journal of Applied Bioanalysis*. In it they found out that when it's dry there are microplastic particles because there's less water to mix with them. This is bad news because it can be very toxic. Another paper by **Joshi and others in 2025** looked at the bacteria in Kukkarahalli, Karanji and Dalvoy Lakes. A study they published in *IJERT* found a lot of coliform bacteria. More than 2800 MPN, per 100 mL.

STATEMENT OF THE PROBLEM

Water pollution is a problem in Mysore. The city is getting bigger fast and that is making things worse. Factories and homes are throwing away trash and waste in the way. This is causing a lot of trouble for our rivers and lakes. The water in these places is not clean anymore. People Mysore used to get water from lakes and streams. Now these people are getting polluted. That means people do not have clean water drink. Water pollution is affecting the lakes and streams in Mysore. The water in these places is not good to use. This issue, for the people who live in Mysore. They need water to drink and use every day. Water pollution is making it hard for them to get water. Contaminated water causes problem for people. These problem include health issue, no drinking water, harm to the environment and bad effects on people lives that rely on water. Many people have to pay extra for water cleaning and medical care for diseases caused by water. With government actions and rules to protect the environment water pollution is still a worry in many areas of Mysore. This study tries to understand if people know about water pollution. It suggests ways to make water cleaner and protect people health. By looking into these issue the research hopes to help manage the environment and make sustainable development in Mysore.

NEED FOR THE STUDY

Water pollution is a problem in Mysore. It is hurting the health of the people living there. This is also affecting now money they have and their daily lives. The city is growing fast. There are more people now. This means there is a lot of waste water that is not being treated properly. Industries are releasing things into the water. People in Mysore are not managing their waste well. All these things are putting a lot of pressure on the water in Mysore. We need water to drink for farming for businesses and for the environment. If the water is not clean it can cause problems. The study hopes to teach people about using water and taking care of the environment. It also wants to give ideas to the people in charge. This will help them make rules to stop water pollution in Mysore. The main goal of the study is to make sure that people in the future have water to drink. Water pollution in Mysore is an issue. The study will help us understand water pollution is a challenge in Mysore. We need to do something about Water pollution Mysore. The study will help the people who live in Mysore and the people who make decisions, about water pollution in Mysore,.

Objectives of the Study

- To Analyse the major sources of water pollution in Mysore.
- To examine the impact of water pollution on public health.
- To evaluate the environmental consequences of water pollution.

Hypothesis

Null Hypothesis (H_0):

There is no significant impact of water pollution on the environmental quality and public health in Mysuru. The null hypothesis assumes that water pollution does not have any measurable effect on the environment or the health of people in Mysuru. Any observed changes are considered to be due to chance and not because of water pollution.

Alternative Hypothesis (H_1):

There is a significant impact of water pollution on the environmental quality and public health in Mysuru. The alternative hypothesis states that water pollution has a measurable and significant effect on the environment and the health of people in Mysuru. If research data supports this hypothesis, it indicates that water pollution is an important factor affecting the city's environmental quality and public well-being.

RESEARCH METHODOLOGY

Research methodology is the systematic process used to conduct a research study. It explains the methods and procedures adopted for collecting, analyzing, and interpreting data to achieve the research objectives and test the hypothesis.

1. Research Design

This study uses a research design because it wants to find out and describe how water pollution affects Mysuru. It helps us collect information about what people think and know about water pollution. We can also find out what is causing water pollution and how it is affecting the health of people and the environment. We can see what is being done to stop water pollution. Since we are just looking at things the way they're without trying to change anything a descriptive research design is the best choice.

2. Research Approach

Quantitative Research Approach

Explanation: The study uses a research approach. This means we are collecting numbers and information using a set of questions that everyone answers the way. Then we look at the numbers. Use statistics like percentages and charts to understand what the information means. This helps us get results from the research design about water pollution, in Mysuru

SOURCES OF DATA

● Primary Data

The researcher gets data from the respondents by asking them questions about water pollution through a survey. Primary data provides the researcher with recent information about water pollution.

● Secondary Data

The researcher also gets data from books, journal articles, government materials, environmental reports, newspapers, magazines and internet sources. The researcher uses data from these sources to learn more, about water pollution.

● Sample size

The research is using a sample size of 59 respondents from areas in Mysuru. The responses from the participants help researcher understand what people think about water pollution.

● Sampling technique

Convenience sampling is used to collect data from residents of Mysuru who are easily accessible to the researcher.

LIMITATION OF THE STUDY

- The study was done with 50 people. So the results do not really show what the whole population of Mysuru thinks.
- This study only looked at Mysuru. So we cannot say that the results apply to places outside of Mysuru.
- The study was finished in a time. This meant that we did not get much information as we would have liked.
- We did not have a lot of money or access to the technology so these limits affected the study, on water pollution in Mysuru.

DATA ANALYSIS AND INTERPRITATION

PART-A Demographic Variables

1.Age and Gender

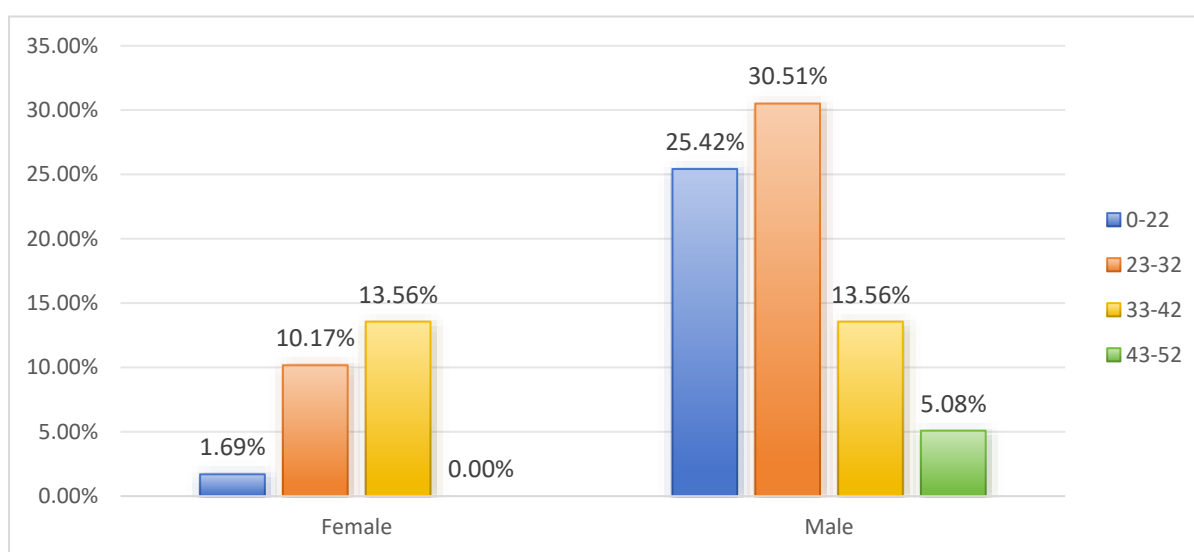
Age					
Gender	0-22	23-32	33-42	43-52	Grand Total
Female	1.69%	10.17%	13.56%	0.00%	25.42%
Male	25.42%	30.51%	13.56%	5.08%	74.58%
Grand Total	27.12%	40.68%	27.12%	5.08%	100.00%

Interpretation:

Interpretation The data shows that most of the people who took part in the study were men, those between 23 and 32 years old. This age group made up 30.51% of the total. There were women who took part with the most being from the 33–42 years age group, which was 13.56%. The study on water pollution in Mysore found that young and middle-aged people were the ones who contributed the most. The data clearly shows that men and young people were more likely to participate.

Analysis:

The dataset shows that most people are men (74.58%). The age group of 23-32 has the people (40.68%). This is mainly because among people (0-22) there are many more young men than young women. Nearly 15 men for every 1 woman. The 33-42 age group has a number of men and women with 13.56% each. However as people get older than 42 they do not engage much. The oldest age group (43-52) has few men (5.08%) and no women at all. Men are still the majority, in this group

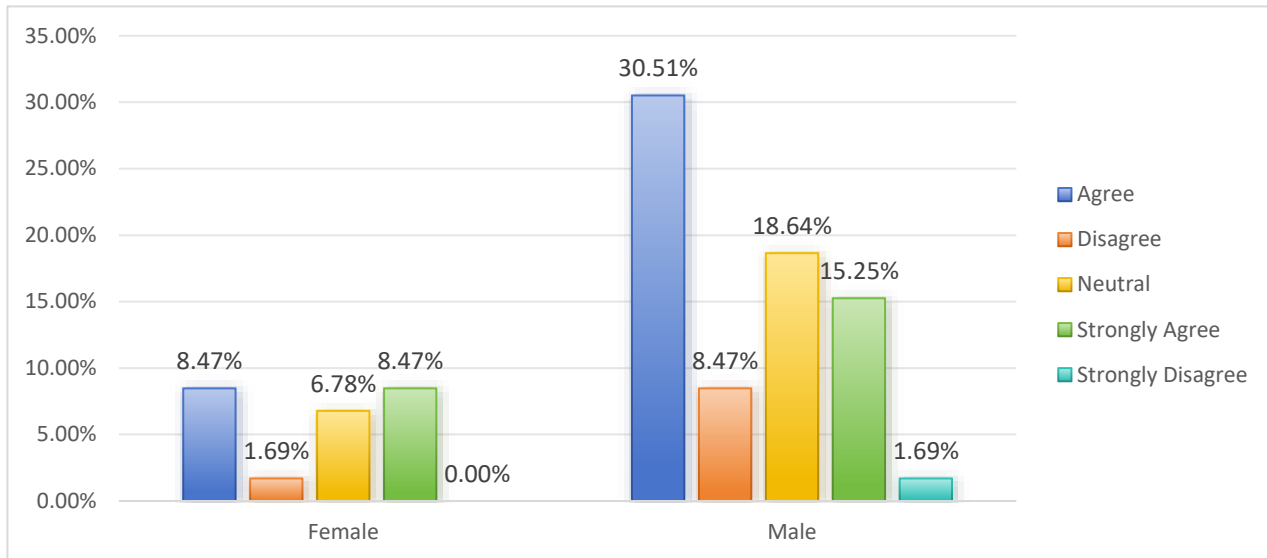


PART-B

Independent variable

2. Am concerned about the visible contamination (e.g., discoloration, odor, or plastic waste) in the local water bodies.

1. Gender	Agree	Disagree	Neutral	Strongly Agree	Strongly Disagree	Grand Total
Female	8.47%	1.69%	6.78%	8.47%	0.00%	25.42%
Male	30.51%	8.47%	18.64%	15.25%	1.69%	74.58%
Grand Total	38.98%	10.17%	25.42%	23.73%	1.69%	100.00%



Interpretation:

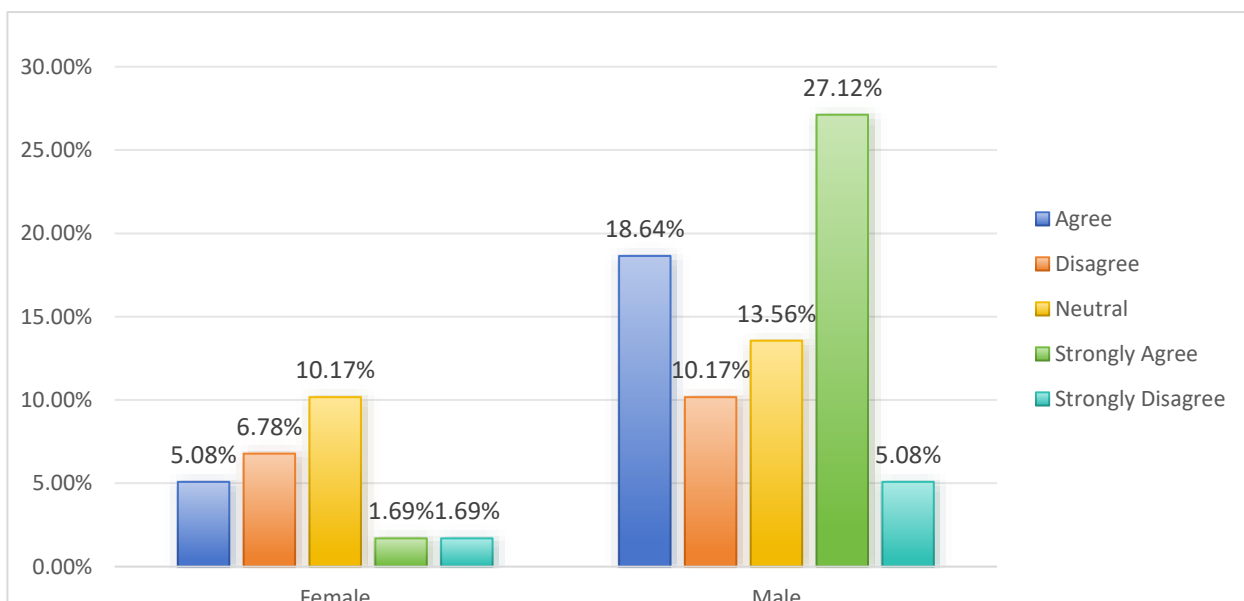
What we found out is that most people who answered think that visible contamination is a problem with the water in Mysore. The fact that many people agree means that people are becoming more aware of the pollution in the water around Mysore. The small number of people who do not agree means that a few people do not think that visible contamination is a big deal. Visible water pollution in Mysore is what most people are worried, about.

Analysis:

I think about water pollution in Mysore and I am not sure what to think. A lot of people twenty five point four two percent of people do not know what to think about water pollution in Mysore. Some people, ten point one seven percent of people said they do not think water pollution in Mysore is a problem. A few people, one point six nine percent of people really do not think water pollution in Mysore is a problem and they really do not agree that water pollution in Mysore is a problem. This means that most people who answered the question about water pollution in Mysore are worried about water pollution, in Mysore.

3. I believe the authorities do not enforce strict penalties on industries polluting local water sources

1.Gender	Agree	Disagree	Neutral	Strongly Agree	Strongly Disagree	Grand Total
Female	5.08%	6.78%	10.17%	1.69%	1.69%	25.42%
Male	18.64%	10.17%	13.56%	27.12%	5.08%	74.58%
Grand Total	23.73 %	16.95%	23.73%	28.81%	6.78%	100.00%



Interpretation:

We asked people some questions and what we found out is that most people think the authorities are not doing their job when it comes to enforcing the laws that are supposed to protect the environment. The people we talked to think that the authorities are not doing enough to protect the environment. A lot of people in Mysore think that the reason our water is polluted is because the authorities are not punishing industries that pollute enough. The water, in Mysore is very important. We need to make sure we are doing everything we can to protect it.

Analysis:

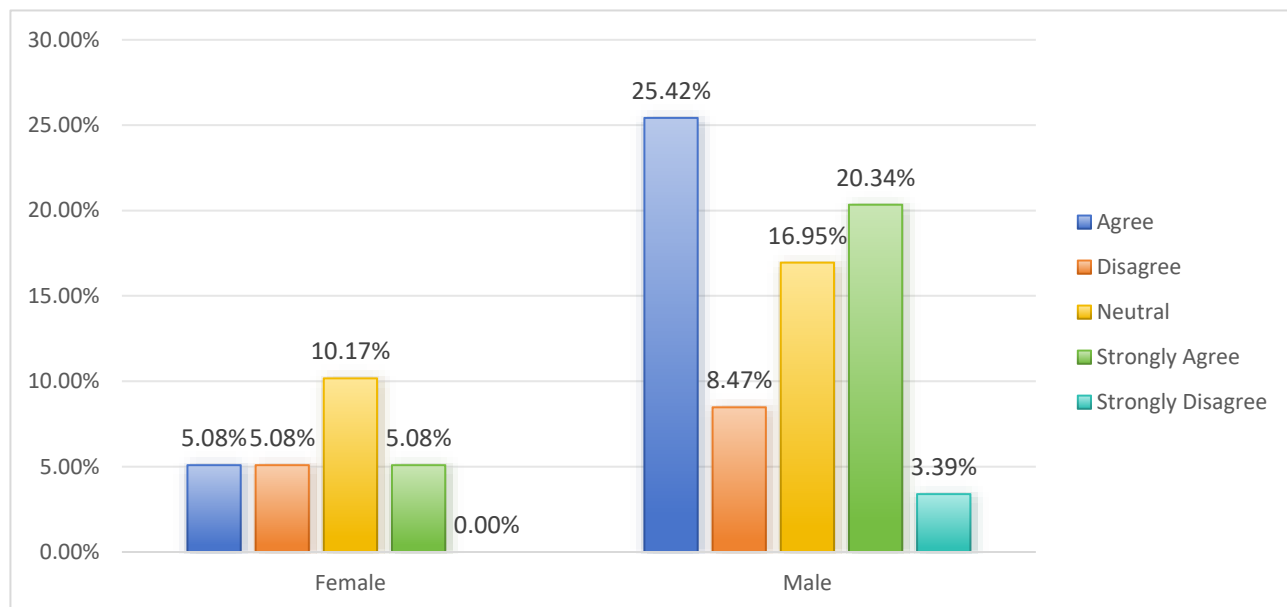
The table shows that a lot of people think the authorities are not doing a job of punishing industries that pollute our local water. In fact 28.81 percent of the people asked agree with this and 23.73 percent agree. So when you add these two numbers together you get 52.54 percent of people who think the authorities should be doing more. On the hand 23.73 percent of the people asked do not have a strong opinion about this. Then there are the people who do not agree. 16.95 Percent disagree and 6.78 percent strongly disagree.

PART-C

Dependent Variable:

4.My household has experienced increased medical expenses due to waterborne diseases in the past year

1.Gender	Agree	Disagree	Neutral	Strongly Agree	Strongly Disagree	Grand Total
Female	5.08%	5.08%	10.17%	5.08%	0.00%	25.42%
Male	25.42%	8.47%	16.95%	20.34%	3.39%	74.58%
Grand Total	30.51%	13.56%	27.12%	25.42%	3.39%	100.00%



Interpretation:

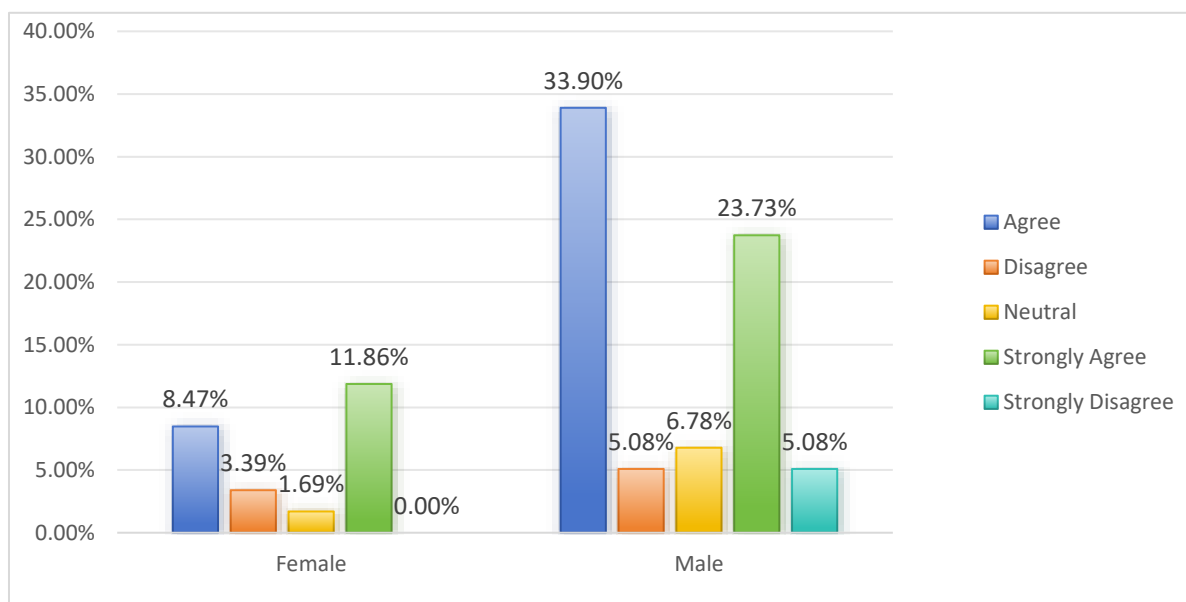
Water pollution is a problem in Mysore. It is making people spend a lot of money on bills because of diseases they get from dirty water. Most people who live there know this is happening. They want clean water to drink, better toilets and a way to stop the pollution. The main thing we learn from this is that if we can make the water cleaner people will be healthier and they will not have to pay much for healthcare. Water pollution is really bad for people in Mysore. We need to do something about it. Reducing water pollution can help people in Mysore have health and lower medical expenses, for water pollution is a big deal.

Analysis:

The results are that thirty point five one percent of the people asked agree and twenty five point four two percent strongly agree that the people in their homes have had to pay more for care because of waterborne diseases in the last year. Thirty point five one percent of people and twenty five point four two percent of people say that. So a total of fifty five point nine three percent of people think their homes have to pay more for care. This is because of illnesses related to water pollution. People say their homes have to pay more for care because of water pollution-related illnesses.

5. Water pollution has negatively impacted the local fishing, agricultural, or tourism-based economy.

1. Gender	Agree	Disagree	Neutral	Strongly Agree	Strongly Disagree	Grand Total
Female	8.47%	3.39%	1.69%	11.86%	0.00%	25.42%
Male	33.90%	5.08%	6.78%	23.73%	5.08%	74.58%
Grand Total	42.37%	8.47%	8.47%	35.59%	5.08%	100.00%



Interpretation:

What we learned from asking people these questions is that most of them think the authorities are not doing a job of enforcing the laws that are supposed to protect our environment. Overall we need to do a job of monitoring what industries are doing and making sure they follow the rules to keep our water clean and safe for everyone in Mysore. The water, in Mysore is very important. We need to make sure we are doing everything we can to protect it.

Analysis:

The table shows that 42.37 percent of the people asked agree and 35.59 percent strongly agree that water pollution is bad for the fishing, farming and tourism businesses in the area. When you put these two groups together 77.96 percent of the people asked think that water pollution is a problem. On the hand 8.47 percent of the people asked do not have an opinion and 8.47 percent do not think water pollution is a problem and 5.08 percent strongly think it is not a problem. These results show that most people think water pollution is a threat to the local economy in Mysore.

SPSS TEST

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
11	The categories of 11. My household has experienced increased medical expenses due to waterborne diseases in the past year occur with equal probabilities.	One-Sample Chi-Square Test	.005	Reject the null hypothesis.
12	The categories of 12. Water pollution has negatively affected my mental health and overall life satisfaction. occur with equal probabilities.	One-Sample Chi-Square Test	.001	Reject the null hypothesis.
13	The categories of 13. I frequently spend money on bottled water or filtration systems because I do not trust the tap water. occur with equal probabilities.	One-Sample Chi-Square Test	.001	Reject the null hypothesis.
14	The categories of 14. The degradation of local water bodies has restricted the community's recreational activities and social gatherings. occur with equal probabilities.	One-Sample Chi-Square Test	.003	Reject the null hypothesis.
15	The categories of 15. Water pollution has negatively impacted the local fishing, agricultural, or tourism-based economy. occur with equal probabilities.	One-Sample Chi-Square Test	.000	Reject the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

Chi-Square Test

7. Industrial and agricultural runoffs are the primary causes of water degradation in my community.			
	Observed N	Expected N	Residual
1	1	11.8	-10.8
2	6	11.8	-5.8
3	13	11.8	1.2
4	33	11.8	21.2
5	6	11.8	-5.8
Total	59		

12. Water pollution has negatively affected my mental health and overall life satisfaction.

	Observed N	Expected N	Residual
1	1	11.8	-10.8
2	8	11.8	-3.8
3	17	11.8	5.2
4	20	11.8	8.2
5	13	11.8	1.2
Total	59		

N Par Tests
Descriptive Statistics

Descriptive Statistics								
	N	Mean	Std. Deviation	Minimum	Maximum	Percentiles		
						25th	50th (Median)	75th
7. Industrial and agricultural runoffs are the primary causes of water degradation in my community.	59	3.63	.869	1	5	3.00	4.00	4.00
12. Water pollution has negatively affected my mental health and overall life satisfaction.	59	3.61	1.034	1	5	3.00	4.00	4.00

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9.424	5	1.885	1.899	.110 ^b
	Residual	52.610	53	.993		
	Total	62.034	58			

a. Dependent Variable: 12. Water pollution has negatively affected my mental health and overall life satisfaction.

b. Predictors: (Constant), 10. There is a lack of adequate waste management systems in my area, leading to water pollution., 9. I believe the authorities do not enforce strict penalties on industries polluting local water sources, 7. Industrial and agricultural runoffs are the primary causes of water degradation in my community., 8. The local drinking water supply often tastes or smells strange, indicating poor quality., 6. Am concerned about the visible contamination (e.g., discoloration, odor, or plastic waste) in the local water bodies.

Test Statistics

Test Statistics		
	7. Industrial and agricultural runoffs are the primary causes of water degradation in my community.	12. Water pollution has negatively affected my mental health and overall life satisfaction.
Chi-Square	53.797 ^a	19.220 ^a
df	4	4
Asymp. Sig.	.000	.001
a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 11.8.		

Findings

1. The people of Mysore are dealing with an issue and that is water pollution.
2. Untreated sewage and industrial waste and also the wrong way of throwing away waste are the reasons for water pollution, in Mysore.
3. Most people said that water pollution is making people sick and they have to spend money on doctors because of diseases that come from water.
4. Water pollution is affecting agriculture and tourism and the local economy in a bad way.
5. Many people think that the government of Mysore should do more to stop water pollution and keep the water clean.

Conclusion

The study shows that sewage, industrial waste and wrong disposal of waste are the reasons for water pollution.

When water gets polluted it makes people sick with diseases and makes life uncomfortable for residents, in Mysore. The study's results tell us that we need rules to control pollution and more education for the public about water pollution. Protecting our water resources is a team effort. The government, industries and we, the public must work together to ensure development and make Mysore a healthier place. We all need to take care of our water as Mysore's water pollution is an issue.

SUGGESTIONS

1. We need to make sure that the people and companies that are polluting our water bodies are held responsible and have to pay fines for what they are doing to the environment.
2. The sewage treatment facilities need to be improved so that only clean water is put back into the rivers, lakes and other water sources.
3. We should have programs to teach people about how to save water throw away trash properly and what happens when we pollute the water.
4. Companies and farmers should be encouraged to use methods that're friendly to the environment, such as using fewer bad chemicals and cleaning up their waste before getting rid of it.
5. The government should check the quality of the water, in our rivers, lakes and regularly and take action right away if the water is too polluted.

Bibliography

1. Central Pollution Control Board. (2023). Annual report 2022–2023. Government of India.
1. Karnataka State Pollution Control Board. (2023). Annual report on water quality in Karnataka. Government of Karnataka.
2. Ministry of Jal Shakti. (2023). National Water Mission. Government of India.
3. NITI Aayog made a report in 2018 about the Composite Water Management Index. This is a tool for water management in India. It was made by the Government of India.
4. The United Nations wrote a report in 2023. The report is called The United Nations World Water Development Report 2023. It is about partnerships. Working together for water. The report was made by UNESCO.
5. The United Nations Environment Programme made a report in 2021. The report is called From Pollution To Solution. It is about a study of trash and plastic pollution, in our oceans. The report was made by UNEP.
6. World Bank. (2019). Quality Unknown: The Invisible Water Crisis. World Bank.
7. World Health Organization. (2022). Guidelines for drinking-water quality (4th ed., incorporating updates). WHO.
8. Abhilash, K., & Mahadevaswamy, M. (2021). Assessment of water quality parameters and aquatic insect communities in Dalvoy Lake, Mysuru.
9. Kumar, R., Sharma, P., & Ramesh, S. (2022). Seasonal variation in water quality index of drinking water sources in Mysuru region.
10. Venkatesh, R., & Gowda, N. (2024). Public health risks associated with contaminated drinking water in Mysuru. International Journal of Scientific Research.