

WATER USE PATTERNS AMONG RURAL YOUTH OF PUNJAB: AN INDICATIVE STUDY FOR MAKING LIFESTYLE CHANGES TO SAVE THE ENVIRONMENT

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Abstract -The worldwide concern on water has had populations facing severe water shortages on the one hand and destructive floods on the other. The management of water resources is rooted in the perspectives and attitudes of a people towards these very available water resources. The objective of this paper is to estimate how the youth of Punjab see the utilization of water vis-à-vis its abundance or scarcity in that particular region.

While the older population has lived through strife and unequal distribution of water resources, it is the younger people who will determine the future of the water quantum to be left for their progeny. This is a variable dependent upon the water usage practices prevalent among the young men and women of Punjab. The methodology used was to conduct a survey was conducted to quantify these perceptions. The youth were administered a questionnaire that had open ended and close ended questions on how they used water and what they thought of the availability of water in their homes and surrounding environment.

The findings of the paper would promote an understanding of the thought process of the youth that govern their understanding of water use and conservation.

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Introduction

Water scarcity is the drastic result of consumption patterns caused by extensive use of water. The water used for agriculture, taking care of livestock breeding and also a thriving industry have taken their toll. If it is any consolation people in developed countries use 10 times more water daily than those living in the developing countries. It is a known fact that because production chains are globalised, most of the water in the developing countries is largely polluted in the effort to produce consumption goods destined for developed countries.

The last century has seen more than half the Earth's natural resources being destroyed. Several of them have even disappeared. It is almost like the vital lungs of the Earth have been damaged. Along with their deterioration a number of species of flora and fauna have also suffered because these wetlands were the habitats of mammals, birds, fish, amphibians, and invertebrates. The wetlands also provide continued support to the cultivation of various food crops.

Ancient scriptures have stipulated the priceless treasures of Nature to be inexhaustible. They have, however, warned about their conservative use and warned against wanton waste. The world today has become aware that its exploitation of the environment can result in turning man's habitat into a hostile terrain. Living without water, trees, rain forests seems unthinkable and yet the concrete jungles are engulfing large surface areas. While the Earth has large resources of water because of which it gained the name of 'Blue Planet', there is very little fresh water that can be used for drinking. Less than one percent of the available water on earth is drinkable. It is a crucial issue for human survival if this small fragment of water is endangered in anyway.

Reports from all over the world are coming in where certain cities are being declared as crisis cities because of the acute threat they are facing of becoming totally waterless. The huge realty rates will crash once the water scarcity becomes a reality.

The focus of this paper is to ascertain how rural populations consider this as world water scarcity crises. Are they aware? Do they exercise conservative measures? How tuned in are they to the water crisis of the world? What measures are they taking to conserve weather? A study was conducted among rural populations around Garshankar block of Hoshiarpur district among 540 respondents to ascertain their views on the issues. The study findings were shared on World Water Day among the Faculty and students of BAM Khalsa College, Garshankar, Punjab, India.

Salient Impact of the World Water Crisis

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| <ul style="list-style-type: none"> (i) Access to safe drinking denied to over 884 million people of the world. (ii) Inadequate sanitation for 2.5 billion people (iii) Open defecation leading to severe water pollution (iv) Excessive groundwater use gradually pushing diminished agricultural yields (v) Overuse of precious water resources. (vi) Seriously harming biodiversity (vii) Regional conflicts over water resources resulting in war and strife among population (viii) Population at threat due to mismanagement of water resources |
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Scarcity of water is vitally impacting upon the life and produce of several nations. Some countries have significant volumes of populations undergoing a drastic drinking water crisis. They are having subject largely on the consumption of contaminated water. A depiction of these nations and their population afflicted with the crises of water is given in Table No. 1

Table No. 1

Sr. No.	Country	Population Impacted upon
1	Sudan	12.3 million
2	Venezuela	5.0 million
3	Ethiopia	2.7 million
4	Tunisia	2.1 million
5	Cuba	1.3 million

Source: Secondary services

Wasting of Water: The Rural Youth Perspective

Wasting of water means willfully permitting wasteful discharge of water without its serving any practical purpose. There are several water management agencies which are generally reluctant to give any conclusive or concrete definition of what connotes water waste. However, the act of permitting water to leak, any unchecked discharge of water allowing water to run to waste into gutters, sanitary sewers, or storm drains, from a tap, hose, faucet, pipe, sprinkler, pond, pool, waterway, fountain or pump all constitutes the act of rampant wastage of water. Several city and Municipal rules and regulations have ensured that water in excess of what is considered necessary to wash, or clean any dirty object like an automobile, sidewalk, or parking area is taken to be flowing to waste. Stringent monitoring and levying of heavy fines is the method by which Municipal Corporations exercise checks and measurers.

According to an UN climate report, the Himalayan glaciers that have been the magnanimous sources of Asia’s biggest rivers namely the Ganga, Indus, Brahmaputra, Yangtze, Mekong, Salween and Yellow river for centuries are now under threat of totally disappearing in a few more centuries. This has been largely because of the astronomical temperature rise and unprecedented climate changes. About 3 billion people live in the drainage basins of these Himalayan Rivers. There are the developing nations like India, China, Pakistan, Bangladesh, Nepal and Myanmar which have had to annually experience floods followed by droughts in the recent decades.

Water Conservation: The Indian Responsibility

Among the main factors contributing to the vital issue of water scarcity includes the scanty management of resources, lack of government regulations, and gigantic proportions of ever growing man made waste. It is a major concern that 18 percent of the world’s population residing in India has access to only 4 percent of its water sources.

Water conservation programs cannot be successful without community participation, involvement and the social solutions that are initiated at the local level.

Some of the adaptable strategies include:

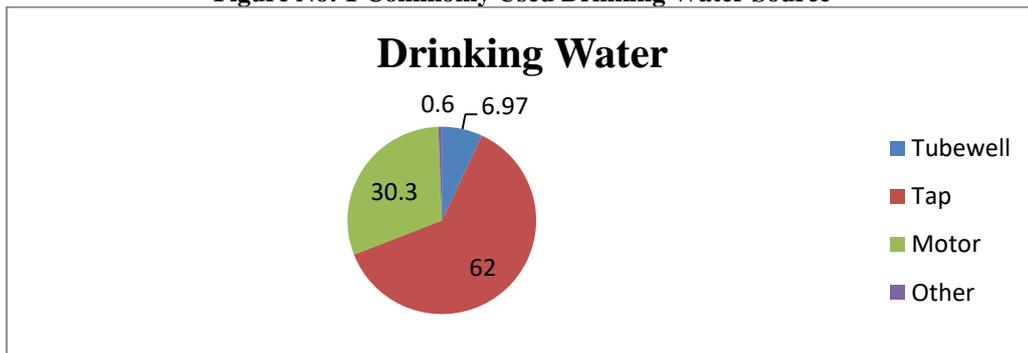
- (i) Restriction on outdoor use of drinking water for lawn watering and car washing etc.
- (ii) Public outreach campaigns.
- (iii) Advocacy through organizing walks.
- (iv) Tiered water rates, that is, charging progressively higher rates as the use of water increases as well.

A major lacuna in water management is not apprising the farming community of the random wastage of water. Field researchers suggested that water conservation efforts should be directed at farmers, because crop irrigation accounts for 70% of the world's fresh water use. The current study findings indicate that most parts of rural areas have inhabitants who are totally unaware of the fast increasing crisis conditions threatening the world with a shortage of water.

Perceptions on Water Use and Wastage

In an innovative initiative the BAM Khalsa College, Garhshankar’s Science Department, faculty and students conducted a rapid survey on the issue of water and its usage among rural populations. The geographical area selected for the survey was the rural areas of Garhshankar development block of Hoshiarpur district in Punjab. The survey was conducted by the undergraduate students of the Science Faculty. The survey was coordinated and managed by the Professor, Department of Environment Conservation and Department of Zoology. The students prepared the questionnaire and administered it on a pilot sample

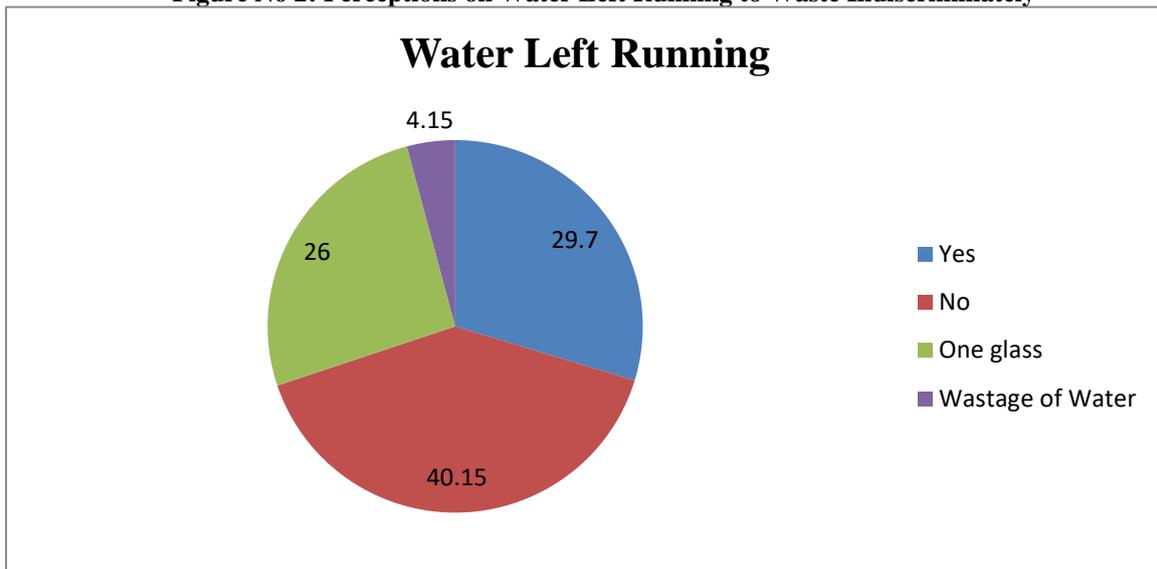
Figure No: 1 Commonly Used Drinking Water Source



The rural population enumerated the commonly accessed water sources. These are shown in Figure 1. The maximum response for a common source of water was reported to be tap water with over 62 per cent of the population reporting that it was used by them. About 40 per cent reported that they were using underground water. This was drawn up with the help of tubewells and

Tullu motors. Less than one per cent were using other sources but they did not elaborate which ones. It was interesting to note that the largest number of respondentssaid that their drinking water was provided by the Municipal Corporation. Almost all the youth reported that they did not think much about this water resource. In fact they took it for granted largely.

Figure No 2: Perceptions on Water Left Running to Waste Indiscriminately

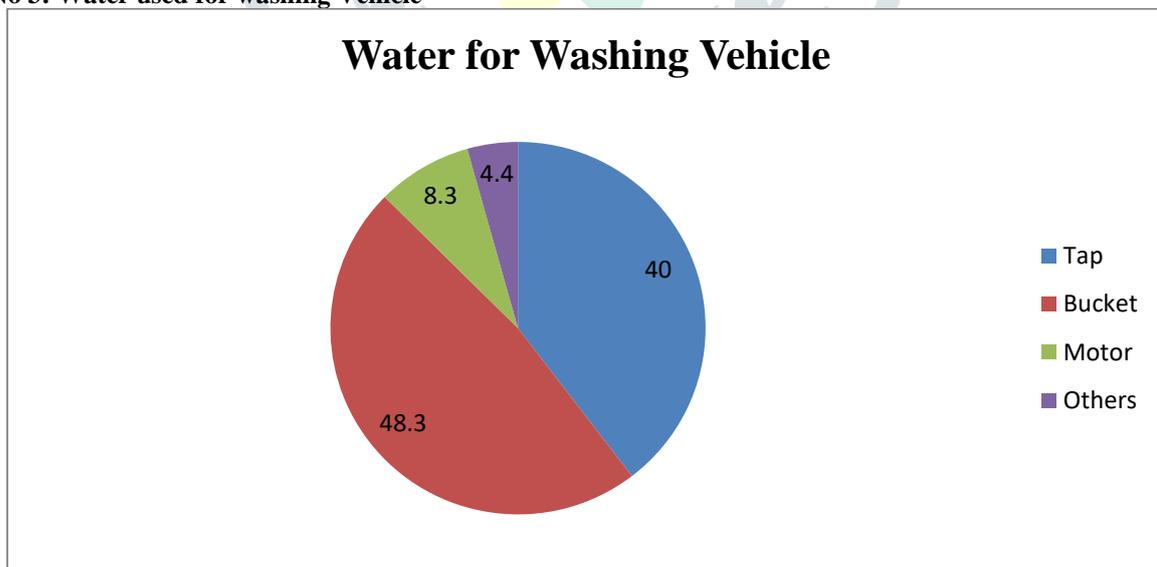


When queried if they let the water run indiscriminately during their daily use of the water, there were about 30 per cent responses in the affirmative. Giving examples they said that:

- (i) While they brushed their teeth they allowed the tap water to run unchecked in the wash basin.
- (ii) While washing their hands and face they left the water run on full force.
- (iii) When they wanted to fill a bucket for bathing, the water was allowed to overflow. The wastage did not bother them.
- (iv) They let the water run while shaving.
- (v) Water was allowed to flow as the clothes were being washed.

There were 4 per cent who were totally indifferent to the water going waste in this manner. However, 40 percent reported that they were aware and did not want to waste the water at all. Another 26 per cent said that they brushed their teeth using one glass of water only. This shows that while some people are hugely concerned about water conservation a large proportion of the population was insensitive to the issue.

Figure No 3: Water used for washing Vehicle



Most of the respondents had motorbikes or cars at home and were diligently maintaining them. Many of the men spent hours washing them to keep them in shiny new condition. For this they often spent hours washing and cleaning their vehicles. When they were asked about their usage of water for this activity 48 percent reported that they used a bucket to fill and use the water while 40 percent used the tap by attaching a hose to it. They rubbed and scrubbed the vehicle from the wind shield to the wheels and all through this time they allowed the water to flow unchecked. Only 8 percent reported that they used the water from the motor while

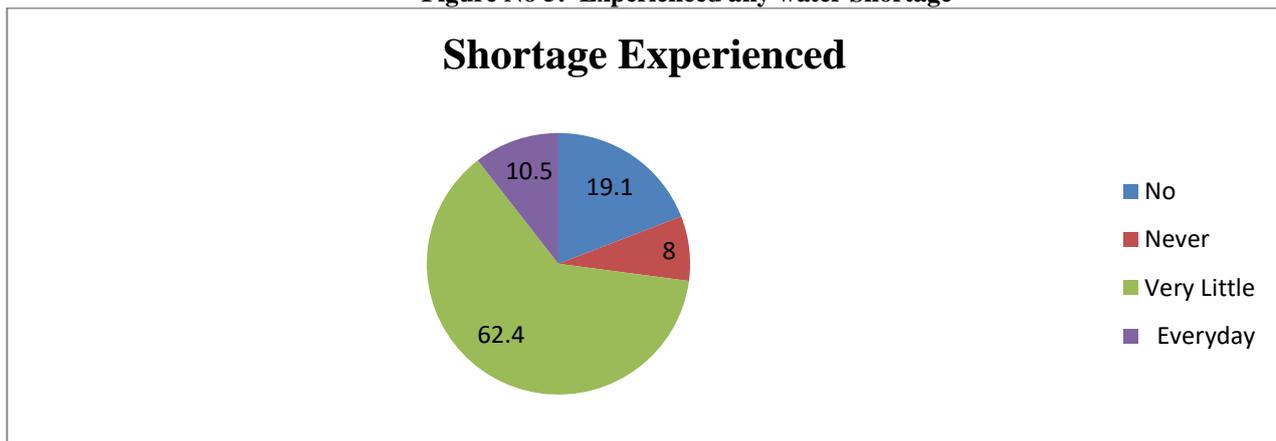
4 per cent reported that they were using other means. This activity also shows the indiscriminate waste of water and an insensitive attitude towards taking any steps for the conservation of this precious resource.

These young people were divided on the issue of conserving water. Their opinion varied on the usage of water. Their different reactions were:

- (i) Water is always there- just open the tap.
- (ii) Overflowing water is going back into the Earth then where is the wastage?
- (iii) These habits are ingrained since childhood. They had seen everybody do just that.
- (iv) Before taps, our grandparents tell us that they had to fetch water from long distances but now that problem is not there.
- (v) My grandmother carried three large pots of water on her head from the river. Now there is plenty of water.
- (vi) There is plenty of water all around. Where is the shortage? We live in the 'Doab' or land between two water bodies.
- (vii) Nobody is bothered about saving water, then why should we.
- (viii) It is all dependent upon the location. We live here we have plenty of water. How can there be water in desert? In Rajasthan there will be paucity of water. Punjab has the Bhakhra (Dam), how can there be shortages of water?

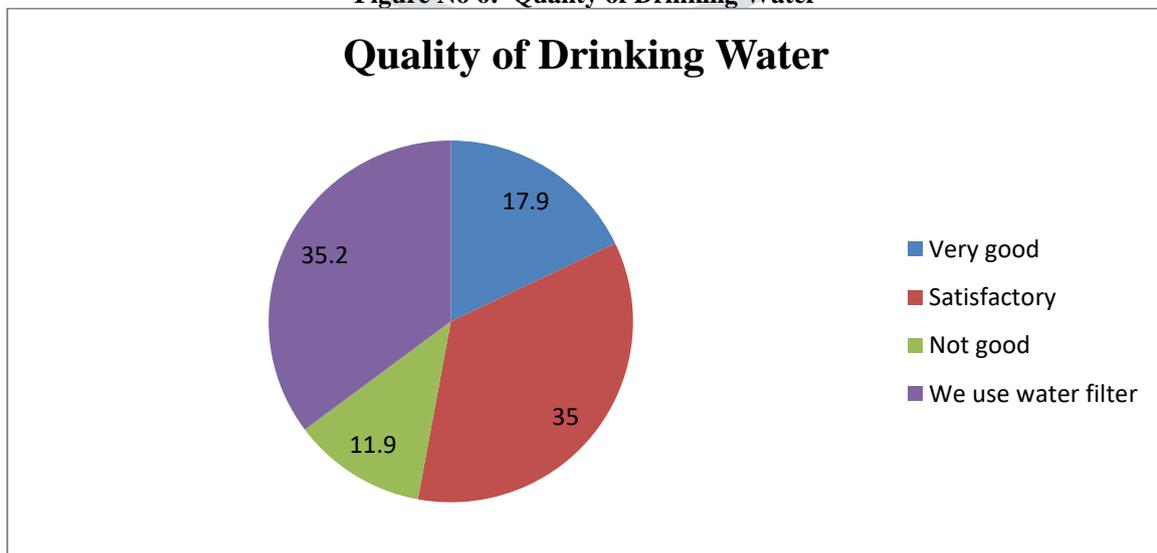
After seeing the reactions of the youth on the issues of judicious use of water and conservation of natural resources it was essential to know if they had ever faced any shortages of water. They were asked this question of whether they had personally experienced any water shortage and the responses are depicted in the Figure No. 5

Figure No 5: Experienced any water Shortage



The answer to this query was highly illustrative because when asked if they had experienced any water shortages there were 29 per cent of the respondents who said that they had not experienced any shortages of water at any time. However, there was a large majority of 62 per cent who reported that they had experienced some shortages during peak summers while a significant 18 per cent reported that they were experiencing some form of water shortages everyday virtually. This was a glaring fact showing how the same region could present such contrasting pictures of water availability. Thus, it was derived that the youth who were nonchalant about wasting water were aware also of the hardships faced when this precious commodity was not available. The only point of variance here could be that these youth had not faced the responsibility of having to provide for the family. This probably gave them the confidence that they would not suffer any great disadvantage if they had to live with less supplies of water for a few days.

Figure No 6: Quality of Drinking Water



Another significant aspect that was considered close to the youth was the quality of drinking water. On enquiry about the quality of drinking water in the region these were about 18 per cent who reported the quality of drinking water was very good. There were

also 35 per cent who reported that the quality of the drinking water was satisfactory. However, about 12 per cent confessed that the water quality was not good at all while 35 per cent reported that they consistently used filtered water as the water quality originally was not good at all.

This was probably indicative of the fact that pollution had had its impact on the ground water as well as there was a hint towards contamination of the choes and rivers also. And yet the most significant aspect of the study was that none of the respondents were aware or informed about the debilitating impact of pollution on the drinking water resources of the region. Those who could afford water filters were using them with impunity but those who could not afford the water filters were utilizing local, indigenous methods of purifying their drinking water. On the whole the water situation of the region was far from being satisfactory.

Table No 1: Use of Water Filters

S. No	Water Filters	Percentage
1	Yes	20%
2	No	60.30%
3	Very less	16.40%
4	Always	3.30%

The rural population was asked if they used any water filter there were 23 per cent who were habituated to the use of filters while 60 per cent said that they did not use filters at all. There were 16 per cent who said that they did use water filters but only sometimes when there was a health warning or the water was visibly of a poor quality. Thus, it was apparent the population was aware of the fact that water could be purified using water filters. Among those who reported that they used water filters only sometimes the reason could be that they had relatives visiting from abroad. This area falls in the Doaba region which has a large number of its population working and settled abroad especially in countries like Canada and Europe. It is probably when they come around that the water filters are used as these people have much greater awareness of health issues.

Table No 2: Use of bottled mineral water

S. No	Bottled Water Used	Percentage
1	Yes	17%
2	No	45.75%
3	Some bottles in a week	3%
4	While Travelling	34.25%

The knowledge about use of filters was supplemented by the use of bottled water or mineral water. The response to the query on the use of bottled water was very interesting because more than 34 per cent said that they used bottled water only while travelling. About 46 per cent said that they were adverse to the use of bottled water in their day to day lives. This was largely because they were against the idea of having to pay for water which they took for granted. They felt that the availability of drinking water was their birth right. There were however, 17 per cent who used bottle water regularly. They reported that they had been advised by their NRI relatives that if they wanted health and longevity they should only drink bottled water otherwise they will succumb to diseases and subsequent death.

Conclusion

The survey brought up some stark facts about the perceptions and level of understanding of the youth of Punjab on aspects of water, its judicious utilization and its conservation. While there are many facets to the water issue from a global perspective the responses obtained from the survey showed that the youth was quite unaware of the gravity of the situation.

A focus group discussion held after the filling up of the questionnaires brought out the following facts:

- (i) Awareness levels on the global water situation were low.
- (ii) Some of youth were having some information about conservation of natural resources but they had not made the connect with the severity of the water problem.
- (iii) Most youth were suffering from the pigeon eye shut syndrome. They hoped that if they remained ignorant and uninvolved, the situation would take care of itself.

Being from a rural environment and an agricultural background, these youth were very aware of the pollution and contamination of the ground water table because of the pesticides and chemicals being used in agriculture and being drained underground by irrigation and rain water run off. However, they still were unable to arrive at the conclusion that they were already compromised. None of the youth acknowledged that they were under threat because of water scarcity or large scale water contamination.

This is a situation that demands grassroots level awareness generation programmes for rural youth. These programmes could be focused, area- specific and totally oriented towards youth. This is the only way to turn the youth into a focused movement for conserving the precious, life sustaining activity - water.

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