



**Center for Nutrition,
Diet and Health**



District of Columbia Drinking Water Blind Taste Testing Research Project

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ABSTRACT

Two hundred and eighteen (218) participants who lived in and/or worked in the District of Columbia volunteered for the study. Each participant tasted four samples of water in a double blind experiment. They ranked the water in order of preference and answered a survey regarding water preference and consumption of drinking water; specifically the District of Columbia's tap water. Findings of the study suggest that spring water is the most common type of water consumed and preferred. The majority of the participants in the study consumed the recommended dietary fluid intakes. However, 44.8% of the participants did not. Recommendations for increased consumption of drinking water can be made as a result of the study.

Background

Jobson and Associates of the U.S. Environmental Protection Agency (2002) reported that one in eight Americans is exposed to potentially harmful microbes, lead, pesticides, or radioactive radon whenever they drink tap water or take a shower. According to DC Commission of Public Health and the Centers for Disease Control (MMWR, 1993), the risk of water-borne infectious diseases increases when filtration and other standard water treatment measures fail. Consumers use many different filtering processes to affect water taste and make the water safe for use. However, taste is most often used as a determinant of drinking water preference, where DC tap water is assumed to be the least favorable.

Purpose

To gather information on consumers' preferences and consumption of drinking water; specifically, in relation to the District of Columbia's tap water.

Significance of the Study

Implications of the study will allow researchers to make recommendations for increased consumption of water by individuals who live and/or work in the District of Columbia.

Objectives

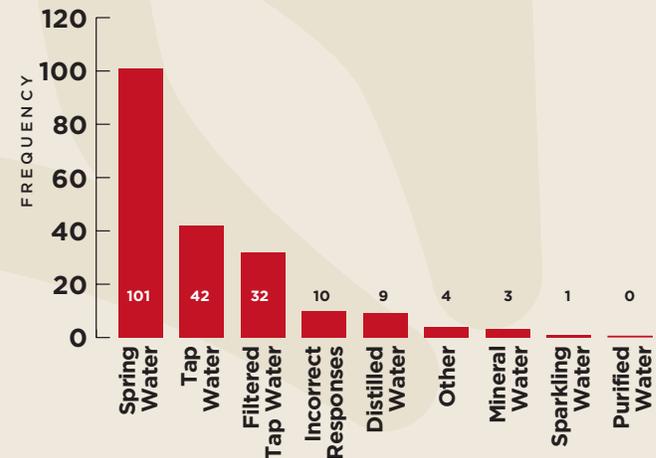
1. To conduct drinking water Blind Taste Testing to a cross-sectional sample of 100 individuals who live and/or work in the District of Columbia.
2. To determine consumers' preferences for the different types of drinking water: DC tap water, spring water, distilled water, and mineral water.
3. To determine the types of drinking water being consumed by individuals who live and/or work in the District of Columbia.



4. To determine factors related to the selection of drinking water by individuals who live and/or work in the District of Columbia.
5. To develop recommendations for the increased consumption of District of Columbia tap water.

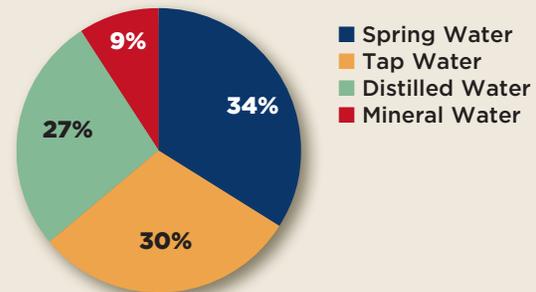
PARTICIPANT PRIMARY SOURCE OF DRINKING WATER

Prior to the Study



TASTE TESTING PROJECT

Participant Order of Preference for Water



(continued on back)



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PARTICIPANT PREFERRED TYPE OF WATER

Despite Actual Consumption

Type of Water	Frequency	Percentage
Deer Park Spring Water	83	41.9
Aquafina	19	9.6
Tap Water	17	8.6
Evian Spring Water	15	7.6
Dasani	13	6.6
Other Types Not Mentioned	13	6.6
Dannon Spring Water	7	3.5
Poland Spring Water	6	3.0
Acadia	3	1.5
Canadian Naturalle	3	1.5
Crystal Geyser Spring Water	3	1.5
S. Pellegrino Sparkling Natural Spring Water	3	1.5
Amelia Sparkling Water	2	1.0
Amelia Springs	1	0.5
Strathmore Carbonated Low Mineral Water	1	0.5
Incorrect Response	9	4.5
Total	198	100

Methods and Procedures

1. Two hundred eighteen (218) individuals who live and/or work in the District of Columbia participated.
2. Participants were obtained at various facilities including faith-based organizations, University of the District of Columbia campus activities and during peak gym hours at the Gold's Gym workout chain. Facilities included: The Center for Nutrition, Diet and Health located in Building 52, B04 of the University of the District of Columbia; New Commandment Baptist Church, Miles Memorial CME Church, Greater Mount Calvary Holy Church, Shiloh Baptist Church, Coalition for the Homeless, Gold's Gym, and the UDC FireBird Inn.
3. Participants tasted the four samples of water and completed all documents needed by the project.
4. Each sample was ranked according to preference order, with 1 being the most favorable and 4 being the least favorable.
5. A double blind number identified each sample of water the participant tasted.
6. Educational materials were provided to the participants.

After participants completed the taste test of four different types of water, they completed a survey which involved ranking each cup of water in order of preference. However, each participant was unaware of what type of water they were choosing. The most preferred water was spring water and the least preferred was mineral water. It is interesting to note that tap water was the second most preferred type of water.

Results of the survey demonstrate that the type of water most often consumed by the participants was spring water followed by tap water. The influence of the media on drinking tap water in the District of Columbia created an uncontrollable variable and thus, a limitation to the study.

Conclusion

Participants have demonstrated that the preferred source of drinking water is spring water. However, tap water is often consumed and was preferred almost as much as the spring water in the blind taste testing portion of the study. The findings of this study also indicate that at least half of the participants meet the dietary recommendations for water consumption. Factors related to the selection of drinking water may include the influence of the media and the participant's perception of the quality and safety of the water they will consume. Although a majority of the participants consume the minimum amount of water, more recommendations and resources can be created to motivate others to do the same. Limitations to the study include the time of year participants are filling out the survey (there is typically more consumption of water during the summer months) and the reliability of the participant responses.

Acknowledgements

The authors wish to especially thank student intern, Ms. Latasha Peace, for her contributions to the implementation and development of this project. The authors would also like to thank the following student interns: Eugene Williams III, Amy Busia, Paul Brown, Jr., LaShontae Trainor and Daniel VanKannel for their support.

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**Funding was provided in part by WRRRI/USGS.
Project Number 99-41560-0795**

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