

District of Columbia Drinking Water Blind Taste Testing



Lillie Monroe-Lord* and Dawanna James

Center for Nutrition, Diet and Health, Cooperative Extension Service, University of the District of Columbia, 4200 Connecticut Avenue NW, Washington DC 20008, *E-mail: lmonroelord@udc.edu

OBJECTIVES

The main goal of this project was to determine the consumers' preferences and level of consumption of drinking water; specifically, District of Columbia tap water and to make recommendations to increase consumption of D.C tap water by means of a blind taste testing project. The objectives of the study include:

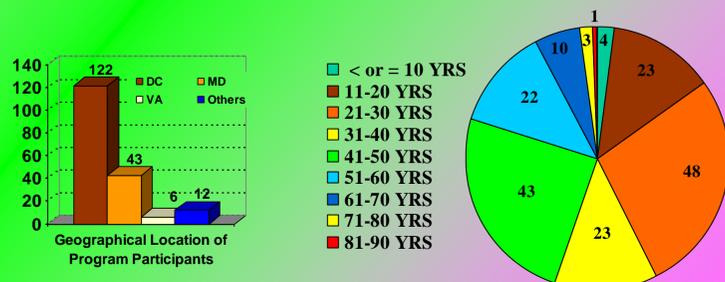
1. To conduct drinking water Blind Taste Testing to a cross-sectional sample of individuals who live and/or work in the District of Columbia;
2. Determine customers' preference for different types of drinking water and factors related the preference: DC tap water, spring water, distilled water, and mineral water; and
3. Determine factors related to the selection of drinking water by individuals who live and/or work in the District of Columbia.

MATERIALS AND METHODS

214 randomly selected individuals living and/or working in the District taste tested and ranked four different types of drinking water (DC tap water, Spring Water, Mineral Water, and Distilled Water) ranking each in order of preference from 1st to 4th choice. Various questions were developed to solicit information regarding the amount and types of drinking water consumed by individuals living in the district as well as preference.



Figure 1. Illustration of participant locations and ages



RESULTS

Based on blind taste, consumers' preferences for the different types of drinking water by type with frequency and percentage (Sample number 210):

Table 1. Illustration of consumers' preferences by water type (N:210):

TYPE	FREQUENCY	PERCENTAGE
Spring water	72	34.29
Tap water	63	30.00
Distilled water	57	27.14
Mineral water	18	8.57
TOTAL	210	100.00

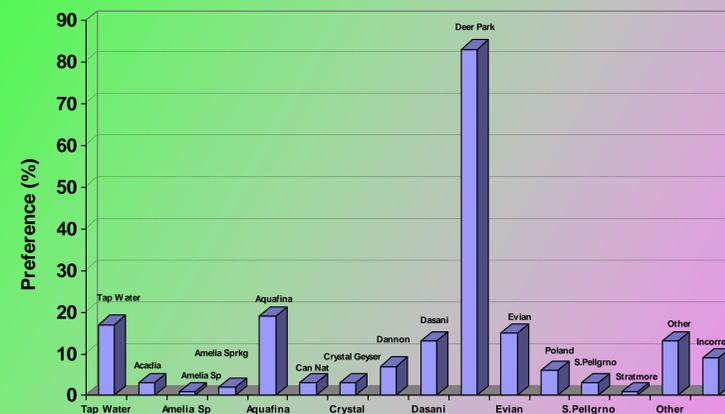


Figure 2. Illustration of consumers' preferences prior to blind taste by water type (N=210):

Table 2. Illustration of responses to participant sole source of drinking water:

TYPE	FREQUENCY	PERCENTAGE
Tap water	42	20.79
Tap water with filter or water treatment system	32	15.84
Spring water	101	50.00
Mineral water	3	1.49
Distilled water	9	4.46
Purified water	0	.00
Sparkling water	1	.49
Other	4	1.98
Incorrect Response	10	4.95
TOTAL	201	100.00

DISCUSSION

• **Figure 1.** shows the distribution of program participants who live or work in the District of Columbia metropolitan area; which includes the District of Columbia, Maryland, Northern Virginia (66.70%, 23.50% and 3.20%) and those from other states outside of the metropolitan area (6.60%). The majority of the participants who consented to mailing addresses on the study survey showed they were from the District of Columbia;

• **Table 1.** indicates that 34% of consumers' sampled preferred Spring Water by blind tasting followed by Tap water at 30%;

• **Figure 2** illustrates the results of the responses from participants on the question that asked, what single type of water is preferred regardless of actual type of water ordinarily consumed. This question gives us a perspective on individual preferences for water brands and sources regardless of the circumstances that may influence someone to drink a specific type of water. Influences for selecting water types can be economical, geographical, or convenience. However, the majority of the participants chose the most expensive water, Deer Park Spring Water (41.92%) followed by Aquafina Spring Water (9.60%), Tap Water (8.59%), Evian Spring Water (7.58%), Dasani (6.57%), and another choice not mentioned was equally preferred as the Dasani (6.57%) type; and

• **Table 2** shows the results of the responses from participants on the question that asked, what single type of water source do the participants drink most frequently. There were 10 persons who did not answer the question correctly, while the majority drank spring water most frequently (101) followed by tap water (42), tap water with a filter system (32), and distilled water (9).

TAKE HOME MESSAGE

Prior to the blind taste test, the majority of the participants chose Deer Park Spring Water (41.92%) followed by Aquafina Spring Water (9.60%), Tap Water (8.59%), Evian Spring Water (7.58%), Dasani (6.57%), and another choice not mentioned was equally preferred as the Dasani (6.57%) type. There were nine individuals who did not answer the question correctly (4.55%).

The blind taste test indicated that tap water is selected or preferred by taste as the second choice to the spring water as an unknown drinking water source.

ACKNOWLEDGEMENTS

The authors acknowledge the DC Water Resources Research Institute for the financial support provided to complete the project and the program student interns (Deshawn Williams, Rebecca Gill, Paul Brown Jr., Eugene Williams III, Latasha Peace, Erin Crawford and Amy Busia) for their assistance.