

An Ethnobotanical Survey of Medicinal Plant Usage in Salvador de Bahia, Brazil

Ashli Cumberbatch and Mentewab Ayalew, Ph.D
Biology Department, Spelman College Atlanta, GA

Introduction:

Ethnobotanical research aims to document the use of plants, especially associated with medicinal use in various cultures. It explains the connection between medicinal plant use and culture. This research attempts to document which medicinal plants were used for which specific conditions and how the practice is viewed by that particular culture.

Brazil is a country with a high amount of biodiversity, accounting for 10% of all species existing on the planet. Mention the Amazon (Figure1) (1). It has approximately 55,000 species spread over six different biomes (2). Ethnobotanical research is necessary in Brazil in order to document and conserve the various plants present. Efforts have been initiated in order to preserve the medicinal plants located in Brazil because globalization has lead to the destruction of the plants habitat and a change in cultural setting. **This research focuses on an Ethnobotanical study specifically in Salvador de Bahia, Brazil to analyze the use of medicinal plants by individuals ranging from ages 18 to 65.**



Figure 1: Amazon in Brazil, which illustrates the vast amount of biodiversity.

Method and Materials:

This research study was conducted along the coast of Salvador de Bahia, Brazil. In particular questionnaires were distributed in cities, such as Amaralina, Pelourinho, Brotas, and Rio Vermelho. This area ranged in economic status from upper class to lower class. However, many questionnaires were distributed at local colleges and at Steve Biko Institute, which is a program that helps Afro-Brazilians get into college. As shown in Figure 2 below, Salvador is located in the northeastern region of Brazil. This is located along the coast of the Atlantic Ocean, exposing it to a vast variety of vegetation and plants

References:

1. Inoue, Shunsuke.; Hashimoto, Goro. (2004) Utilization of Medicinal and Edible Plants in Brazil. *Food Food Ingredients Journal of Japan* 209.5 74-80



Figure 2: The ethnobotanical study was conducted in Salvador de Bahia, Brazil (arrow), in the northeastern region, along the coast of the Atlantic Ocean

Results:

The surveyed population consisted of mainly lower class citizens. The gender distribution was fairly even, with 56% women participants and 44% men (Figure 3). Also, Figure 5 shows the amount of people that used medicinal plants on a consistent basis. The results indicated that 92% of the individuals answered yes to using medicinal plants on a regular basis and 8% answered no (Figure 4).

The most commonly used medicinal plant in Salvador de Bahia was the **Boldo Leaf** (Figure 5) and its major use is for digestive issues (Table 1). The next common medicinal plants were various teas, such as green tea and lemon grass tea. They can be used for insomnia and to lower cholesterol levels. Knowledge about many of these medicinal plant remedies were acquired from older family members, such as a grandmother or parent. Few survey participants indicated that they gained their knowledge of the plants from books or conducting personal research. However, this response was very uncommon. Even the 8% of the individuals that reported no use of medicinal plants were aware of their uses.



Figure 5: Boldo Leaf, which was listed as the most commonly used medicinal plant by our 25 participants



Figure 3: Gender Distribution survey of the 25 participants



Figure 4: Percentage of survey participants that use medicinal plants consistently.

Table 1: Description of medicinal plants identified by 25 survey participants. Uses are based on how often they appeared on the questionnaires.

Name of Plant	Frequency	Uses	Scientific Name	Where is it Found?
Boldo Leaf	15	Digestion, protects liver, constipation, debilitation, dizziness, gastritis, gonorrhea, hepatitis, insomnia,	<i>Peumus, boldus</i>	Brazil, Chile, Asia, Mexico, Europe, United States
Cha Verde (Green Tea)	12	Inhibit cancer growth, lowers cholesterol levels, artherosclerosis	<i>Camellia sinensis</i>	China, France, Brazil, United States, India
Aurora Plant	10	Pain reliever, relaxation	<i>Kalanchoe, fedtschenkoi</i>	Brazil
Mastruz Tea Powder	8	Rid of intestinal parasites, worms and amoeba, coughs, asthma, bruises and bronchitis	<i>Chenopodium mbrosioides</i>	Brazil, Central South America
Erva Cidreira (Lemon Grass Tea)	8	Sedative properties, insomnia and anxiety, normalize menstrual, intestinal constipation	<i>Melissa officinalis</i>	Brazil, South Asia, Thailand, Cambodia
Chamomile	7	Insomnia, nervous conditions, anti-inflammatory, arthritis	<i>Matricaria chamomile</i>	Brazil, Germany

based on our results, the majority of the participants were aware of medicinal plants and their uses. This conclusion can be drawn because 92% of the individuals surveyed indicated that they use medicinal plants on a consistent basis. Those that don't use medicinal plants were still knowledgeable of various types and their uses. This is likely related to their culture and their environment. The environment of Brazil is full of diverse plants and herbs. This may have a correlation with medicinal plant familiarity because the biodiversity allows them to have greater access to a variety of plants. Several questions remained unanswered in this study. For example, it was not clear whether these medicinal plants are more effective than modern medicine. Modern medicine is becoming more and more popular in developed nations. However, in Brazil medicinal plants are frequently used in place of modern medicines to relieve common diseases, such as cold, arthritis or injuries. In 2007 Brazil herbal medicine revenue was equivalent to 160 million US dollars (3).

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