ORIGINAL RESEARCH

Drinking seawater: Users' perspectives in La Ceja, Colombia

María Mercedes Arias Valencia, DPH; Wilmer Soler Terranova, MBiochem; Gustavo Arango Tamayo, MSocSc

Abstract

Objective: Describe the use of seawater in the municipality of La Ceja, Colombia.

Methodology: Fieldwork using ethnographic tools.

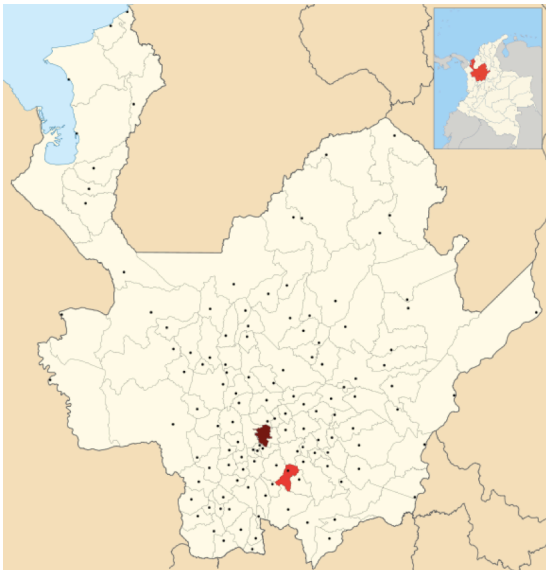
Results: Thirty seawater dispensaries were visited and 76 interviews were conducted. The participants came from both genders, all ages, diverse marital statuses, and occupations. The effects of drinking seawater range from the positive (healing of diseases) to the neutral (doubtful or no efficacy) to the negative. Some users think seawater benefits illnesses such as chronic gastrointestinal and respiratory problems, migraine headache, skin problems, varicose veins, and ulcers. Some thought of seawater as a panacea or a miracle; the sea is related to the origin of life and its salt is associated with healing.

Conclusions: Users of seawater employ it as health complement and an alternative to Western medicine. The use of saltwater is related to physical needs and also to faith. We urge healthcare institutions to consider the health implications of self-care practices such as the drinking of saltwater.

Statement of the problem

Since ancient times, people have explored a variety of self-care resources as a way of addressing their health problems. Menendez[1] considers this a health model "based on self-care." Therapies emerge and reemerge as people search for options that are less aggressive or invasive, less toxic, and cheaper. This search is reflected in self-care practices which are used either before seeking medical care or as complements to traditional medical therapies. These efforts can also be interpreted as evidence of unmet needs. Some of the barriers to formal healthcare include its high cost, often dehumanizing nature, the lack of accessible facilities, treatments of (sometimes) limited benefit in terms of cure, and the toxicity of some treatments.

The origin and decline of seawater therapy is related to the "mono-causal theory of disease," which states that microorganisms cause disease or infection, and by extension, that every disease, even



Map of Antioquia Colombia. The capital Medellín is in brown. La Ceja is in red.
Source: http://es.wikipedia.org/wiki/La_Ceja

Maria Mercedes Ariad Valencia, DPH
School of Nursing
Universidad de Antioquia, Colombia.
Email: mariamav@tone.udea.edu.co

Wilmer Soler Terranova, MBiochem
Universidad de Antioquia, Colombia.
Email: wsoler@tone.udea.edu.co

Gustavo Arango Tamayo, MSocSc
Universidad de Antioquia, Colombia.
Email: garango@tone.udea.edu.co

when chronic or nontransmissible, has an identifiable single cause.[2] Despite the leap of logic represented by this theory, it was widely accepted during the 19th century, leading Luz to comment that

> *nothing will be invisible to the human body, all diseases will be explained by its proximate cause, but the very essence of life, along with the sick individual, were left out.*[3, p. 124]

Undoubtedly the slow evolution of alternative practices is also related to the immense development of the mechanical view of the human body and of medical technology in modern Western culture.[2]

On the other hand, from the individual's point of view, disease is not simply a biological process; it is an experience that, according to Sigerist, can significantly impact the individual's entire being.[4]

From a collective point of view, we do not fully understand the logic and rationality that society uses to obtain and protect health, to defend against and combat disease. This difficulty poses the need for reflection when we examine complex phenomena such as health and disease. Valla considers that mediators – such as professionals, educators, and politicians – know their profession but do not really understand how their profession impacts the population; thus, it is very difficult for them to interpret the ideas of popular classes.[5] He believes that although mediators may strive to be more attentive and respectful, many years of biased and classist education inevitably lead them to adopt the role of "instructor" when dealing with both patients and other people.

Saltwater therapy

The Aqua Maris Foundation in Spain has promoted the use of natural marine water, claiming it has medicinal and nutritional purposes, and creating distribution sites named "sea dispensaries."[6] The reemergence of seawater therapy in Colombia sparked a program of biomedical research at the University of Antioquia.[7-9] This study grew out a need to understand the perspective of seawater users.

The promoters and advocates of seawater offer it as a complementary therapy that addresses a variety of health problems. They present seawater as a source of minerals and micronutrients, emphasizing how it strengthens the internal environment surrounding cells. Seawater promoters base their claims of therapeutic and nutritional uses on the research of the French physiologist René Quinton in the early 20th century.[10]

Interest in seawater reemerged in the past 10 years in Japan, Europe, and America. Various studies have emphasized the role of seawater in the treatment of gastrointestinal disorders, chronic respiratory disease, and dermatologic conditions, as well as for eliminating toxins.[10-14] Seawater has been marketed in developed countries as a nutritional supplement for both humans and animals in different formulations: ampules, bottles, and sprays.[15,16]

Seawater is 96.5% water by weight. The remaining 3.5% is composed of salts; there are small amounts of organic material and microorganisms. It could be classified as a medicinal mineral water due to its content of mineral ions such as Na^{+}, Cl^{-}, Mg^{++}, $Ca^{++,}$ and K^{+}, which are present as salts and attached to organic molecules. With current technology a total of 95 elements have been found in seawater, including trace elements such as I, Fe, Cu, and Zn.[17] About a third of these elements have also been detected in the human body; regardless of the amount, most of them are essential elements.

The use of medicinal seawater emerged in the municipality of La Ceja, Antioquia independent of the local healthcare system and municipal government. At the beginning of this study, we did not know how the use of seawater started in the town or what meaning it held for its users (La Ceja residents). In addition, we did not know if seawater was seen as having adverse or beneficial effects. How did residents obtain seawater, how was it formulated, and what was it used for? How much was needed and for how long? Was seawater modified or adapted? Why had some residents been forced to stop using seawater? These questions guided our study.

In summary, this research program was designed to examine the needs of seawater users and seawater's potential effects, both positive and negative. This work is original in that it describes – within the context of medical anthropology – the experiences of seawater users, their internal representations, and the cultural meaning of the practice.

From a public health perspective, this research is offered as a study of popular self-care practices that are used to protect health, alleviate suffering, and assist in the fight against the disease. In that sense, we undertook this study to provide a general description of the use of seawater in the municipality of La Ceja, Colombia.

Methodology

Considering seawater use as a social and cultural experience, we applied two traditional methods of qualitative research: ethnography and grounded theory. From ethnography, we employed field work canons and non-participant observation, defined as observation in which researcher does not play an active role in the phenomenon under study;[18] grounded theory techniques were used for the qualitative analysis. We used the following techniques for analysis: microscopic analysis and open, axial, and selective coding.[19] From social science we took the development of category structure and indexing to study the weight of emerging categories. From these various perspectives we drew relationship maps.

Interviewers approached the "inner perspective of the subjects of study," with whom we developed a high "ability to interact."[20, p.158] It is important to highlight that, in addition the aforementioned approaches, one of the researchers had conducted several studies on the biochemical properties of seawater, specifically its use in the treatment of gastritis, one of the nosological entities which has been reported most frequently to benefit from the use of seawater.[8]

We conducted a total of 76 interviews. Fifty formal interviews were conducted with seawater users. Three of them reported to have experienced adverse effects and were classified as negative cases. An additional eighteen informal interviews were conducted, as well as three focus groups, and five interviews with seawater practitioners. To ensure a representative sample we did the following: We visited all 30 seawater dispensaries and used them to recruit users who visited the center of town. We distributed our fieldwork from April 2007 until May 2008 in order to cover all seasons. The sample attempted to capture the phenomena of seawater use itself within the temporal and geographical extension of the town.

Setting

La Ceja was chosen to study seawater use because is it the headquarters for the Colombian Aquamaris Foundation. It is also the town where the use of medicinal seawater first emerged in Colombia; currently, the town imports 10,000 liters of seawater every three months. Although some of this water is shared with neighboring towns, La Ceja consumes most of it. Seawater is supplied through a network of dispensaries located in different public venues. The most common sites are bakeries, cafes, cafeterias, bars, and shops.

Participants

Selection criteria were designed to assure a representative sample (see above). The final sample included both genders (43% male) and all age ranges. Thirty-two percent of subjects were single, 50% married, 1.3% divorced, 12% widows or widowers, and 4.7% celibate.

Occupations were distributed as follows: athletes (1%), housewives (16%), unemployed (15%), salespeople (38%), and business owners (30%).

The highest proportion of interviewees was between 50 to 59 years of age (26%). Other age groups were: under 20 (1%); 20 to 29 (13%); 30 to 39 (21%); 40 to 49 (24%); and over 60 (15%). Despite a deliberate effort to recruit people under the age of 20, it was impossible to get the desired number. The only subjects under the age of 20 were athletes who used seawater for rehydration. To better sample younger users, we approached youth organizations and sports trainers. Focus groups were conducted at retirement homes. One of these was carried out at an assisted living home for elderly religious women.

For analytic purposes, participants were classified into consumers (C), ex-consumers (EX), negative cases (NC), non-users (NU), and therapists (T). Male gender is indicated by M and female gender by F. Citations from interviews are indicated by I. Codes and emerging categories from participants or authors are also listed. Field notes are indicated by FN.

Categories

The emergence of categories began with a traditional microscopic analysis of data, line-by-line and word-by-word. Codes were assigned to these data and a code bank was constructed with more than 400 categories. These were then grouped and categories were established after their emergence. This was done using the tools of grounded theory. Grounded theory differs from traditional sociological methods in that it does not begin with an *a priori* conceptual map. Categories emerge from the systematic analysis of the data and are expected to be exact.

Categorization is a theoretical and methodological technique, a procedure consistent with Araya's approach of

> *...including emerging categories, grouping some, disaggregating others; revising initial categories that remain accurate; and considering the removal of categories that no longer seem relevant as the research develops.*[21, p.164]

The following categories emerged as elements of the cultural pattern under investigation: local context; religion; promotion and diffusion (of seawater use); procurement, transportation, and storage; user profile; applications and preparations; effects attributed to seawater use; and relationship with disease, medicine, and Western therapy. These categories resulted from grouping, disaggregating, and modifying categories so that the final categorization had meaning for the participants in the study. Once the search for categories had been "saturated," those that remained provided the body of results section.

In summary, open and axial coding procedures were performed. The original aim remained to document the phenomenon of seawater usage and understand the reasons why the seawater first appeared, then became established, and now persists in La Ceja.

Saturation

The criteria used to terminate the field phase was based on theoretical sampling and theoretical saturation, as defined by Bertaux.[22] Theoretical saturation occurs when no significant new themes, categories, and subcategories are identified. Before the last phase of fieldwork, emerging categories were classified as *saturated*, *moderately saturated*, and *less developed* in order to target, select, and complete missing categories.

As an additional methodological element (besides the saturation at various levels) negative cases were systematically searched. In other words, the interviews of informants who reported adverse effects were included in the analysis.

Ethical issues

The interviews were conducted after obtaining informed and voluntary consent of participants. Testimonies were recorded. In cases where participants did not want to be taped, notes were taken. We applied the principles of beneficence and no harm. At the time of this research, there was clear evidence from both *in vitro* and *in vivo* studies in humans and animals that seawater was innocuous both in terms of both cyto- and genotoxicity.[11-14] An understanding that seawater was non-toxic and harmless, and a careful review of its composition, collection, and use was important to members of the team from an ethical point of view.

All participants had access to Western medical care in La Ceja's hospital and assured the investigators that they would continue their usual treatments. There was no need to study clinical cases or consult medical records. Confidentiality was assured in data management; researchers only used information for purposes of this study; real names were removed from reports and databases when fieldwork was concluded.

Results

Context

The town of La Ceja is located in a valley in eastern Antioquia province, 41 km (25 miles) from the city of Medellín, at 2,200 meters above sea level. It has 46,366 inhabitants, and an average temperature of 18º C (64º F). According to the SISBEN (*Sistema de Identificación de Potenciales Beneficiarios de Programas Sociales,* System to Identify Potential Social Program Beneficiaries) 39,162 people have been part of the health census.[23]

The town is laid out on a grid and its physical structure is that of a typical Antioquian town; the

main square is the center of social activity and a symbolic reference. Inhabitants refer to it as "the park" to distinguish it from "the square" which is the marketplace. Homes are spacious and some have room for bicycles, whose presence is ubiquitous. Other reference points are religious: the church, considered a basilica, and the cemetery, which is predominantly white from lime and refreshed by the natural flowers placed on the graves. There are many religious institutions in La Ceja. According to the Basic Territorial Plan, it has five parishes and 20 chapels,[24] along with multiple convents and seminaries. The economy is marked by monoculture; floriculture is the largest employer. The municipality is the second largest employer, followed by trade and carpentry. This is the employment context for the local use of seawater.

Seawater is obtained from the Caribbean Sea, where it is extracted with pumps. Trucks transport the water 500 km to La Ceja in 1,100 liter polyethylene containers. Multiple sources (interviews, observations, statements by those involved in the business) concur that 10,000 liters are consumed every three months.

When seawater arrives, it is stored in a small shed about the size of a one-car garage, measuring 10m x 7m x 4m. Six tanks each with a capacity of 1,100 liters each fit in this space. There are also eight cylindrical plastic containers each with a capacity of between 200 and 300L. Each of these containers is securely covered. (DC030607: 3) The process of "decantation" takes place here. During storage, suspended particles settle on the bottom of the tanks. Seawater is then removed from the top of the tanks with specially designed hoses and then distributed to dispensaries in carafes, bottles, and cups. There are containers of various sizes: small containers for personal use (1-5 liters) and larger ones (20 liters) that are used for transport to dispensaries; all containers are made of plastic.

Strategy of promotion/dissemination

An advertising campaign on the part of seawater's sponsor was responsible for the widespread use of seawater in La Ceja. The campaign involved local and regional broadcasters and news reports. Advertising was placed in newsletters, videos, television programs, and newspapers. Annual academic meetings also played an important role.

The personal characteristics of the sponsor were important both for the introduction of seawater as well as for the generalization of its use. He is a middle-aged journalist, Cejeño (local citizen) and convinced of seawater's benefits. Everyone in La Ceja knows each other; you might say that people have known him and his family "for their entire lives." In the interviews, he is depicted sometimes as "quixotic" (DC030607: 4) suggesting he is a person who undertakes difficult projects or lost causes and perseveres despite all obstacles. This image of a "Don Quixote" was integrated into the storyline of an advertising video.

After the initial diffusion and expansion of seawater use, there was an ongoing strategy – involving annual events, the written press and television – to legitimate and sustain the dissemination of seawater.

Users

User profiles were built around the following variables: age; special groups (see below); health/disease problem; duration, form, and route of use. With regard to age, participants were categorized as elderly, family members, or youths; children are excluded from using seawater. Special groups included: athletes, gamblers, homeless people, clergy, doctors, and people from other municipalities. We identified the following chronic health/disease issues: gastritis, constipation, depression, epilepsy, hypertension, skin problems, fever, and nasal polyps. There were users with health issues that were considered "incurable" by western medicine, either because they were chronic conditions or because both family and specialists had exhausted all available resources without success.

The elderly were the most important emerging category; there are many references to them as users. Not only are they more likely to suffer from chronic diseases, but they "don't miss a day. They ask S. for a cup of seawater or they get it for themselves. Either way, yes, they drink the water" (E02C-M: 11). [Like many other interviews, this one was conducted in a pool hall.]

Dispensaries

Dispensaries provide the link between the suppliers with their distribution and the supply centers and the final users. Although they are found in all areas of all districts, neighborhoods, and the town center, they are concentrated around the park where 8 of the 30 dispensaries are located. The dispensers can be business owners, employees, or managers who provide seawater for free; they also receive the seawater from the storage sites for free.

Access and supply

The development of seawater use can be thought of in four stages: 1) early use, 2) increase in demand, 3) shortage, and 4) the current stage of relative stability. Early use was characterized by unlimited access to seawater at all times and a general lack of regulation. As demand increased, overuse of seawater occurred; seawater was used not only for cooking but also for mopping, house cleaning, and bathing. Then came a period of shortage between approximately 2005 and 2008. Some dispensaries did not have seawater, and there were complaints about supply delays. This led to usage restrictions. One user reported being told: "Take your cup and drink it here" (DC290507: 44a); sometimes seawater was only available only with a doctor's prescription or from authorized dealers. The current period (2008 to the present) is characterized by relative stability: there is adequate supply but also concerns for the sponsor in terms of obtaining sufficient financial resources to ensure future supply.

Uses and preparations

Seawater usage follows certain rules concerning the daily quantity to be consumed, frequency of use, and acceptable uses, such as use in food preparation.

The most common reported daily regimens are: one or more shot glasses (recommended), one and a half or more cups, and one liter. When cooking foods with seawater, salt is not added for cooking; seawater replaces it. Oral ingestion occurs either directly (one drinks the water) or indirectly through food (particularly rice and soup). This form of use is observed more in institutions that provide food for adults or athletes and in a few homes. In addition to oral intake, we found other ways seawater used. Use of seawater intravenously is an extreme and risky practice that at the time of this study had been discontinued, fortunately, in La Ceja. It is important to remember that the seawater has also been used in agriculture and veterinary medicine.

Taste

Many users allude to the salty taste. Adults tolerate the taste better than children. Almost all preparations try to mitigate and counteract the "bad taste" by mixing seawater with various products, such as lemon, orange juice, brown sugar cane water, chocolate, or anything sweet. One participant commented:

> *Well, it's too salty, horrible when you first start drinking it.*
>
> *Q: Very awful? Too salty?*
>
> *Yes. We went back to L. and told him it was simply horrible, way too salty. He told us it would taste better if we put drops of lemon in it to kill the taste.*
>
> *Q: Did you dilute it with fresh water?*
>
> *At first we drank it straight. But it was too salty, too strong. He told us you can mix it with sugarcane water, fresh water, lemon or orange juice. (I21C-M: 172)*

Effects

Seawater users fell into three groups regarding its effects. Some felt it had negative effects. Others found it cured their complaints. A third group were either dubious or felt the seawater made no difference.

Concerning its initial effects, many users were surprised by its laxative power; some were even frightened. One participant noted: "The first time I took it, I drank a 'huge glass' [eight ounces] and it immediately sent me to the bathroom, very quickly. If you use a large enough dose, it can purge your system" (I02C-M: 10).

With regard to gastrointestinal effects, another parent reported an adverse outcome when her son used seawater: "He began with diarrhea, and we took him to the emergency room. The doctor ran

some tests. His colon was inflamed; he had to take medicine for parasites" (I12NC-M: 112).

An athlete told us: "I am amateur athlete and I jog every day. I participated in the Bogotá half-marathon. Don't believe what they say about seawater. I didn't see any change or anything beneficial" (I31C-M: 1).

In contrast, a high performance athlete stated, "This is how seawater works: it supplies many mineral salts, particularly those most commonly lost in training" (I57C-M: 440).

Medicinal uses of seawater

Users' ideas concerning the uses of seawater can be divided into three categories: conditions where it is generally accepted that seawater is beneficial; conditions where a benefit is claimed but cannot be explained by biomedicine; and utopian uses which are accepted but never quite materialize. This division reflects the views of users, not necessarily those of the researchers.

Users consider seawater beneficial in illnesses such as chronic gastrointestinal and respiratory problems, migraine, skin problems, and varicose ulcers: "CV recommended seawater to me because of my emotionality" (I01C-F: 1).

Because humans came from the sea, seawater is also thought to allow the recuperation of lost memories. Users referred to seawater's memory-enhancing abilities. One user mentioned changes in her sick child's "attention, sleep, and memory" (FN240807: 7). Another user noted that his neighbor's memory had declined with age; he was sure, however, that seawater could reverse this decline.

Following are typical comments regarding the medicinal benefits of seawater: Gastro-intestinal problems: "My gastritis improved" (I02C-M: 9). Migraine: "E. has been suffering from migraines for two years, and now that he is taking seawater, he doesn't feel dizzy when he wakes up and his headaches have decreased" (I46C-F: 342). Skin diseases: "The skin on my hand cracked to the point that I bled; I started using seawater and I am practically cured" (I03C-M: 17). Respiratory problems: "My mom always had a very stuffy nose, she sprayed a little bit of seawater. I do not know if doctors use it, but I do know that it acted like a nasal decongestant" (I25NC-M: 233). "[W]hen she is very ill from bronchitis, I've used seawater in the nebulizer, and she got much better" (I 8C-F: 441). Epilepsy: A father says of his son: "One month later we saw changes. He stood up [he had been bedbound]; he had energy again. We started it because we were with him all the time" (I14C-M: 121). Another told us of her sick child: "The moon affects everyone who is crazy. He was aggressive and angry before. After getting the seawater all that stopped. The improvement is dramatic and it's undeniably due to the seawater" (FN240807: 8). Varicose ulcer pain: "[ingested] it takes a lot of my pain away" (FN290507: 37). "His sister had a [varicose] ulcer and she began to use seawater to wash the ulcer. She also drank it." (I3C-F: 340)

Hypertension: Given the increased salt load on the kidney, negative outcomes occurred in patients with hypertension. Field notes indicated "another neighbor said that his blood pressure grew worse when he drank sea water" (FN150507: 6).

Utopian ideas are expressed in the following quotes: A soccer school hoped that seawater would help kids grow larger: "[They are] good kids but their arms and legs are too short" (FN290507: 53). One user saw seawater as a sort of an elixir of eternal youth: "[With seawater] he feels younger and happier" (FN310508: 6).

Finally, abuse may be a concern in some users: "I keep seawater by the side of my bed; I hope that it never leaves, oh no!" (FN170508: 6-7). Another benefit attributed, in a town where there is high consumption of liquor: "It is very good for hangovers" (I33C-H: 286).

Representations

The generalized use of seawater was linked to representations concerning the origin and memory of life, the sea, water, and salt. For example, Sea representations were found in a brochure disseminated at a thalassotherapy center; it alluded to the sea as "source of health and life." There are also beliefs and practices about the healing properties of salt water relieving all weariness, restoring balance to a body that has been "over-used." For those who are forced to work overtime or who work in the unhealthy climate of Antioquia, it is common practice

to "wash the feet or body with salted water." Salt is believed to act as an anti-inflammatory; it is used as nasal drops, infusions for respiratory disease, strokes, muscular problems, and even joint diseases.

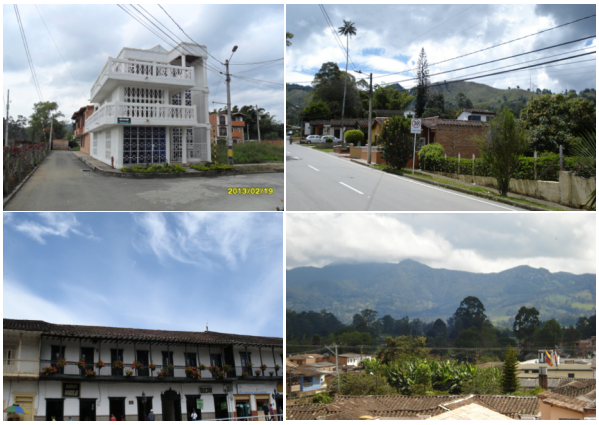
Healing was a cultural term used to describe a process of improvement that goes beyond the physical and encompasses body, mind, and spirit. Representations of seawater as a panacea and a miracle also emerged: "It works for everything, for health, for staying in shape, for laziness. It gives you a lot of energy" (FN290507: 36).

The following notice stands in front of all dispensaries: "The sea washes away all of man's illnesses. Euripides." We see here the Greek tragic poet quoted as a figure of high authority and credibility. A user (FN040607: 22) also evoked the Bible:

> *Then he went to the spring of water and threw salt in it and said, 'Thus says the Lord, I have healed this water; from now on neither death nor miscarriage shall come from it' (2 Kings 2:21).*

"The drink they use in La Ceja is believed to be blessed" (newspaper *El Colombiano*).[25] "In the town of San Pedro de Los Milagros, the holy water has salt in it" (FN220507: 2). "The elders say this water contains something special when it is blessed" (I14C-M: 132).

From the very beginning of our research we were confronted by a paradox: Why were 10,000 liters of seawater being consumed every three months in La Ceja, a town located in the western cordillera of the Andes, at 2,200 meters above sea level and about 500 km (310 miles) from the ocean? This paradox implied "bringing the sea to the mountains." The sea is a geography of flat territories and warm climates. Indeed, nothing is more foreign to the mountains than the sea's immensity, the seascape, the marine symbols, the marine terms, and the marine and coastal geography with its sea level vegetation and fauna. This world is completely foreign to a town in the western mountains, where – at the time of study – we found "marine colors" at the headquarters of the Aquamaris Foundation. The Foundation's three floors are painted in a combination of white and blue (sea) colors, which clash with typical architecture of a town in Antioquia, which is dominated by browns and greens. The various shades of brown are observed especially in wood and in clay tiles and the green colors come from the natural setting and neighboring mountains.



Scenes of Antiochia: The Aquamaris Foundation is in the upper left.
Source: Authors

Discussion

The representations we uncovered are related to beliefs and practices grounded in popular convictions regarding seawater usage. As Araya states, representations are tied to "how people think and organize their daily lives."[21] It is a specific type of knowledge: "common sense knowledge," which is intertwined with scientific concepts and faith.

Most users are involved with allopathic medicine, which they engage in various ways via health care services and therapists. They use the seawater as an independent supplemental, corrective, and alternative therapy; this demonstrates a favorable attitude towards allopathic medicine. While some therapists prescribed seawater, many did not. They seemed to see it either as a placebo or to have found studies supporting its use. In any case, they did not proscribe it.

Negative aspects of seawater identified in this study included the bad taste, adverse events and the radical procedures mentioned above (i.e., intravenous use).

Users of seawater maintain a level of autonomy. According to Menéndez[1] autonomy is a characteristic of the self-care model, which becomes a "political strategy" in the health/disease process. It means "people take over the reins of those processes that

directly or indirectly affect their health." This model includes "self-medication" and "resource mobilization to improve individual and collective living conditions." The consumption of seawater is one of these practices through which people seek to obtain and protect health, alleviate suffering, and fight disease. This study of an emerging phenomenon – the use of seawater in La Ceja – contributes to our understanding of the logic and rationality of self-care practices.

As noted by Luz, "The characteristics of modernity have been favored for over three centuries by the deterioration and loss of other ways of thinking."[3,p.111] In accordance with Luz, we found that "ideas that either compete with or are antagonistic to scientific rationality are at the base"[3 ,p.111] of the use of seawater in La Ceja. From the perspective of cultural relativism, we continue investigating the endless search for ways to improve health in a capitalist world.

On the other hand, the effects of seawater use have implications for the relationships between the population and Western medicine, specifically between users, health care personnel, and therapists. We must emphasize that we heard no complaints about the service at the municipal hospital during the study period. This suggests a coexistence and simultaneity of practices derived from different models.

We would like to express our support for the municipal health department, local hospitals, and public health authorities, while also calling for the recognition that people make use of seawater as an aid. Many users attributed beneficial effects to seawater for a variety of conditions. We recommend implementing a quality control system for seawater in order to provide safety for users and health authorities.

For their part, users must inform therapists when they use saltwater, continue to use allopathic treatments and consultations for their illnesses, and avoid any radical experiments that go beyond topical use and ingestion. Because of the potential sodium load, users must also use small amounts: three ounces daily is recommended, and users must reduce salt in foods when they are ingesting seawater. Moreover, we recognize the efforts of the sponsor to maintain the free supply.

As professionals responsible for the health of individuals and communities, we examined seawater as one way to combine diverse resources to care for and restore health to the users themselves and to the people they are care for. As Bertucelli and Depetris conceptualized, self-care practices "deploy and retract in continuous movement in the search for well-being."[26, p.17] These deployments may be related to sickness, misfortune, or suffering that can be – perhaps simultaneously – physical, social, and cultural.

The social and cultural relevance of this study as well as its pertinence for collective health lies in the theoretical reflection on logics and rationalities, agreements and disagreements, about adequacy of support services to respond to the need of residents and their particular epidemiological profiles. It also provides a methodology to study this and other collective phenomena related to health. Given that seawater may be a useful adjuvant for various conditions, we call for dialogue among professionals, within both our academic disciplines and our health services.

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