

# Understanding Mapuche-Williche Conceptions of Diabetes Mellitus and Arterial Hypertension from the Perspective of Intercultural Health

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## Abstract

**Background:** In order to create a culturally relevant health model, we examined how users from the Mapuche-Williche community, Chile's largest indigenous population, understood the causes of Diabetes Mellitus and hypertension.

**Objective:** To describe both popular conceptions and traditional therapeutic practices used by Mapuche-Williche patients with diabetes and hypertension.

**Setting:** Health clinics located in the Cacicado de Riachuelo Jurisdiction of Río Negro.

**Materials and Methods:** This is an exploratory/descriptive study using the techniques of Social Anthropology to incorporate elements of indigenous health concepts into the positivist logic of biomedicine. Recruitment was non-random. We employed both case studies and in-depth interviews. Interviews were analyzed by constructing categories which described the meanings and significance that the interviewees

themselves saw in their understandings and practice.

**Results:** As explained by our patients, the Mapuche-Williche cultural system involves a therapeutic process during which traditional Mapuche-Williche medicine may complement, alternate with, or substitute for traditional Allopathic Medicine.

**Conclusions:** Diabetes mellitus and hypertension are not recognized illnesses within traditional Mapuche-Williche medicine. This creates difficulties in terms of adherence to biomedical treatment. Patients substitute traditional healing for biomedicine. These considerations suggest the need to develop an intercultural health model within the commune of Río Negro.

## Introduction

Both official reports and a variety of studies on morbidity and mortality demonstrate that the health status and life expectancy of indigenous peoples are lower than that of the general population. (WHO / PAHO, 1998, IWGIA, 2006, FID, (2013) This reflects a structural inequality which has persisted despite governmental efforts to improve access to and quality of healthcare services.

During the past few decades in Chile, there have been important initiatives to investigate and more fully understand the epidemiological profile of indigenous Chileans. It is clear that their patterns of disease and death are different (inferior) to those of non-indigenous populations. In

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the Chilean province of Osorno, Mapuche-Williche health status has the following characteristics:

*Mortality:* The Mapuche-Williche population of Osorno has a higher overall mortality rate than the non-Mapuche population; this is typical for indigenous populations in Chile. However, mortality of the Mapuche in Osornio is the highest recorded among indigenous communities. (Pedrero, 2012: 76)

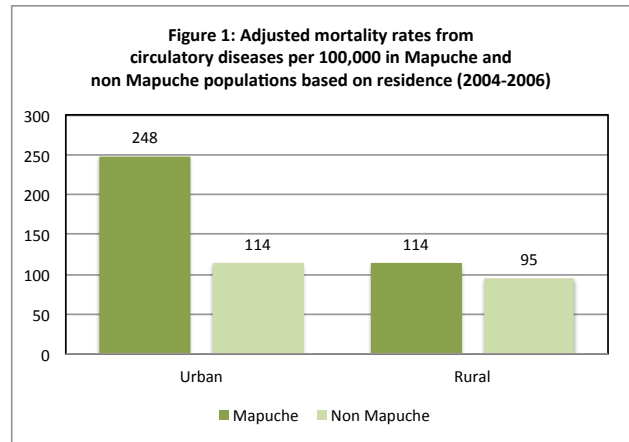
*Cardiovascular Diseases:* Based on survey data, the Osorio Mapuche population has a 60% higher risk of dying from cardiovascular disease when compared to non-Mapuches. Mapuches living in the capital have double the risk of those who live in rural areas. (Figure 1)

The leading causes of death among the Mapuche are Cerebrovascular disease, Coronary artery disease, and Hypertension. Death rates in the Mapuche population for these conditions are higher than in non-Mapuches. Compared to non-Mapuches, the Mapuche-Williche have a 80% increased risk of death from cerebrovascular diseases and a 30% increased risk of death from Cardiac ischemia and Hypertension.

34.3% of Mapuches die of cerebrovascular disease in comparison to only 29.9% of non-Mapuches. This would suggest that non-Mapuches have a better understanding of these conditions and are more adherent to allopathic treatments.

Pedrerros (2012: 53) argues that higher mortality from vascular diseases may be explained by "the loss of specific protective factors found in Mapuche culture and the harmful way that the Mapuches have been integrated into modern society." Protective factors might include cultural aspects of Mapuche identity such as their traditional lifestyle, the existence and acceptance of traditional authorities and healers, participation in spiritual events, access to sacred spaces, ties

to the land, etc. Ibacache, McFall and Quidel (2002:15) note that "within Mapuche medicine, the maintenance of Mapuche identity is an important health indicator. As individuals become more integrated into Chilean society (a process known as *wigkawün*<sup>\*</sup>) they become susceptible to diseases hitherto unknown within traditional Mapuche medicine."



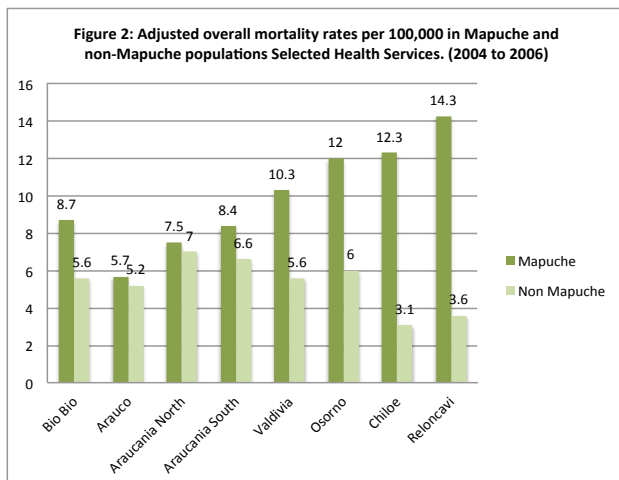
Source: Pedrero, 2012

Epidemiological studies of Chile's indigenous populations have clarified the differing epidemiological profiles of these groups when compared to non-indigenous Chileans. They also shed light on the sanitary conditions within the specific geographical areas served by various governmental health services. Epidemiological studies performed by the health authorities in Bio Bio, Arauco, Araucanía North, Araucanía South, Valdivia, Osorno, Chiloé, and Reloncaví, demonstrate that mortality rates are higher in the Mapuche population than in the non-Mapuche. Osorno had the third highest overall mortality rates. (Figure 2)

The UN Report on the Health Status of the World's Indigenous Populations drew attention to "alarming rates of diabetes. Worldwide over

\* *Wigkawün*: refers to a person who has adopted a lifestyle that alienates him or her from Mapuche society.

half of indigenous adults over 35 have type II diabetes. These numbers are expected to increase. In some indigenous communities diabetes has reached epidemic proportions and has threatened the very existence of the community. (p. 164). The International Diabetes Federation notes that while diabetes is present throughout the world, indigenous peoples have a greater disease burden than other populations.



Source: Data drawn from the Epidemiological Profiles Series of the Mapuche Population (2016)

We undertook this descriptive, exploratory study to better understand how Mapuche-Williche patients with diabetes and hypertension understood their illnesses and how they integrated concepts from traditional Mapuche medicine into their therapeutic itinerary. Our patients were drawn from the Cardiovascular Health Program (PsCV), provided by the Family Health Community Center (CECOSF) in Riachuelo and from the Rural Medical stations (EMR) in Millantue and Costa Rio Blanco. These were all primary care centers located in the territory of Cacical de Riachuelo.

† Monthly Statistical Review, Series P-4, June 2012.

## Materials and methods

Based on the June 2012 monthly census<sup>†</sup>, there were 320 diabetic and hypertensive patients enrolled in the Cardiovascular Health Program and thus eligible for the study.

**Inclusion and Exclusion Criteria:** All patients who had either diabetes and/or hypertension were eligible irregardless of their level of control. They needed to be enrolled in the SIGGES database in conformity with Law No. 19.966.<sup>‡</sup> They needed to have at least one Mapuche surname and/or be registered as an indigenous person by the CONADI.

This was a descriptive study and we used a convenience sample. Data was collected through structured surveys and semi-structured in-depth interviews. As noted by Rodriguez et al.: "Interviews allow one to access the knowledge, beliefs, and rituals of a society or culture in the language of the subject." (Rodríguez, Gil and García, 1999:168).

**Table: Distribution of the research subjects based on their pathology**

Sector	DM	HTN	DM& HTN	Total
Riachuelo	5	54	17	76
Millantue	0	4	2	6
Costa Blanco				
River	1	10	4	15
Total	6	68	23	97

57.3% of the subjects were women. In addition to these 97 subjects we also interviewed 3 *Lawenche* and 2 *Lawentuchefe*. *Lawenche* are individuals who have knowledge of traditional remedies but do not prepare them. *Lawentuchefe* are individuals who are not *Machi* (traditional

‡ [SIGGES stands for the *Sistema de Información para la Gestión de Garantías de Salud*, the Database to Manage Guaranteed Health Services]

healers) but know how to prepare and administer traditional remedies. They have training in Mapuche diagnosis and medical practice. All five of these individuals were from the study area.

Both the survey and the interviews were designed to capture data on the following questions:

1. What are the knowledges and practices of Mapuche-Williche medicine?
2. How were the knowledges and practices of traditional medicine conserved and passed down?
3. A description of the subject's therapeutic itinerary.
4. The subject's understanding of diabetes mellitus and hypertension.
5. The subject's relationship to the official healthcare system.

#### **Analysis of the in-depth Interviews:**

We initially developed categories for analysis; these were revised in the course of the analysis. We looked for similarities and differences in thematic content. This was an exploratory study whose conclusions require further investigation and confirmation.

#### **Results**

Thirty-two percent of the Cardiovascular Health Program's patients are Mapuche-Williche.

For 74% of the households, the main source of income are pensions. These included government supported old-age pensions,<sup>§</sup> savings from the pre-1988 social security system,<sup>\*\*</sup> and individually-funded pension funds.<sup>††</sup> Payments averaged \$ 85,000 per month (approximately USD \$130). Over 65% of subjects were classified in the first and second income quintiles,

based on rankings obtained from the Social Protection Classification of Social Vulnerability.

13.4% of survey respondents lived with a spouse or with children. The remaining 83.6% lived with other relatives, primarily grandchildren, nephews, or nieces. 76% had not completed a primary school education.

Among the 32.8% of Mapuche - Williche patients who are followed in the Cardiovascular Health Program (PsCV), 64.9% had consulted with a Mapuche-Williche healer and 67% admitted to using herbal remedies for various problems. Some of these patients had learned about traditional healing from their families as part of their general cultural upbringing. Others had specialized knowledge of traditional medicine that allowed them to address more complex problems; within the community they acted as *Machi*, *Lawenche*, *Lawentuchefe* and *Ngütamchefe*, etc.

All users identified diabetes and hypertension as diseases "that we didn't have previously." They attributed these diseases to the consumption of processed foods with high fat and sugar content and associate these foods with a modern lifestyle.

These diseases of modernity are not limited to indigenous communities. They cross ethnic barriers and threaten the general society. Bengoa (1996:7) has noted:

*The accelerated adoption of modern lifestyles throughout the world both challenges and threatens indigenous societies. Chile has experienced a decade of rapid economic development which has led to profound social changes whose local impact may be imperceptible within the larger society. Modernization, understood as the uncritical adoption of*

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<sup>§</sup> Law No. 20.255 enacted on March 11, 2008 reformed the Social Security system and established a Solidarity Guarantee. This includes a set of state benefits that subsidize payments into the Social Security System for those individuals who do not have sufficient savings or are not eligible for a Social Security Pension.

<sup>\*\*</sup> Law No. 18.689 enacted on January 13, 1988 merged multiple social security funds into the Instituto de Normalización Previsional.

<sup>††</sup> Law No. 3.500 approved on November 13, 1980 and its subsequent modifications established a Pension System based on individual savings.

*norms, behaviors, and products coming from "developed" countries, is now a universal reality.*

For Mapuche-Williche patients, the initial-consultation in health facilities, represents just the first step on a therapeutic journey. Patients attempt to use medical therapies as a complement to traditional therapies. Strategies are used in which traditional Mapuche-Williche treatments can substitute for, replace, alternate, or even be mixed with allopathic medicines. The attempt to maximize treatment outcomes involves a synthesis of therapeutics.

### **Discussion**

While the human experience of illness is universal, each culture has its individual approaches towards alleviating suffering and restoring health. These are expressed in disease models, in therapeutic interventions, and by the involvement of specialists. Within the Mapuche-Williche medical system disease is understood as a breakdown of an order that is natural, social, and spiritual. Individuals become ill when they upset their inner natural balance. This occurs when individuals violate the laws and norms that maintain harmony and balance between the earth (*ad mapu*, the law of the earth) and society (*ad che*, human law). Disease also occurs when individuals neglect traditional cultural practices. Following this logic, our patients understand diabetes and hypertension as being caused by an abandonment of their traditional diet. One of our subjects described how difficulties obtaining wheat forced a change the family diet. Cooked, hulled wheat grains were used by the Mapuche - Williche to prepare a food called "miltsrin" or "catuto" which was consumed instead of bread. As wheat became less available these foods were no longer prepared (this also occurred with foods based on potatoes and flour).

*My mother stopped making catuto when she could no longer do it. We didn't make it any longer because wheat became hard to find. In the old days, my grandfather cultivated wheat, and we ate this, but now we had to buy it. And we used potatoes to make milcao. We ate a lot of trutruyecó. We would roll it into a stick and eat it with honey.*

The International Diabetes Federation (2013: 80) has conducted various studies on the prevalence and incidence of diabetes in indigenous communities; these studies show that "some communities who still maintain a very traditional lifestyle have a relatively low prevalence of diabetes."

The socio-demographic profile, the low levels of education, and the difficult economic conditions of the Mapuche-Williche users who participated in this study suggest that they lack the appropriate social and family support to appropriately monitor and follow the treatments necessary for serious medical problems such as cardiovascular disease. Within the WHO's approach to the Social Determinants of Health, factors such as economic status, gender, and ethnicity serve to determine differential exposures to pathogens and different vulnerabilities to illness. These findings have been amply confirmed in studies of Chilean indigenous populations and represent a significant barrier to health equity.

Users with either diabetes and/or hypertension operate in a context of medical pluralism (Kazianka, 2012) which is not without conflict. Therapy may begin within one of several systems, each of which has its own methods of diagnosis, its own form of help-seeking, use of medications, therapeutic prescriptions, manners of addressing the illness, etc.

During this therapeutic itinerary – which Mercado (1998) has called a "trajectory of suffering" following the lead of Corbin & Strauss (1992) – we can uncover key behavioral aspects of both

the medical professionals and the users. Medical professionals tend to ignore the patient's historical and cultural context. They are primarily concerned with the use of biomedicine.

*The doctors never discussed using herbs with me. All they did was force me to take all these pills.*

Lerin (2007: 752) has examined the various cultural barriers between health personnel and their indigenous patients. To begin with the two groups use different languages. Matters are complicated by the high rates of illiteracy among indigenous groups, their lack of acculturation to modern medicine, and the dismissive attitudes shown by doctors towards traditional therapies.

Doctors will often present a new diagnosis in terms that are frightening to patients, explaining that if they don't faithfully follow orders the consequences could be disastrous. Patients are led to believe that if they are non-adherent to therapy (or use another form of therapy) there will be reprisals on the part of the clinic. As a consequence, they hide their non-compliance.

*If I were to die, they tell me they won't let me into the hospital. (...) Sometimes the doctors tell you that if you don't take the medications this or that will happen to you and you are frightened. For example, they say you will go blind. They are very cruel. They should find another way of talking to us. I was very scared my children would be left orphans.*

Such behavior on the part of allopathic practitioners violates Article 25 of Agreement 169 which obliges governments to "assure that adequate health care services are made available to interested peoples (...) so that they can enjoy the

highest possible level of physical and mental health." (OIT, 1989)<sup>‡‡</sup>

Although patients may attend their appointments and get their prescriptions filled on a regular basis, their behavior at home may be quite different. Once back in their own environment patients will independently make decisions about their medications, reducing doses, increasing doses, spacing out doses, or stopping the medication altogether. They justify this behavior by pointing out that they suffer the side effects caused by the pills. For those patients who continue their treatment this is more a matter of habit than of being truly convinced the medications are helpful. They point out that the doctors always have the final say. Patients cannot contradict the professionals "unless you get them to like you."

Some patients reported that their doctor didn't care if they used traditional medicines "as long as they continued to take their pills."

*"The doctor said nothing to me about it. Doctors don't discuss herbal medications. The only important thing is that I take their pills.*

*The last time I saw the doctor, he told me that I had to keep taking the pills even if they made me sick."*

Seppilli (2000: 38) describes this type of clinical behavior as one that involves a "pathological process, rather than focusing on the patient and his or her concerns. This leads to depersonalization and an emotional impoverishment of the therapeutic bond between the physician and the patient."

This positivist discourse is used as a strategy to perpetuate the biomedical model. This practice should be understood within the context of institutions which legitimize such knowledge and practice. This requires the creation of an

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<sup>‡‡</sup> The Convention concerning Indigenous and Tribal Peoples in Independent Countries was adopted by the International Labor Organization on June 27th, 1989

and ratified by Chile in September 2008. It became law in Chile on September 15th, 2009.

asymmetrical relationship of knowledges between doctor and patient. There are important barriers – both linguistic and cultural – that impede dialogue between providers and users. These barriers also affect the project of building intercultural health in areas with a significant presence of indigenous population who live in a complex world of beliefs and values, norms, knowledge and experience related to health and illness behaviors. Interculturalism in health has been described by Myrna Cunningham in these terms:

*All health systems have the potential to be practiced on terms of equality by those who have traditionally worked within them. But this requires the creation of spaces where different healing systems can share their knowledge, understanding, abilities, and practices in a way that serves to both develop and maintain these same systems. (2002:9)*

Wash (2010: 78) has argued that "multiculturalism" has been presented as a tool, a process, and a project that was built by the people; the reality, however, is evidently very different. What we see in practice is a biomedical model that instills in users the idea that health is a matter for officially-recognized professionals, primarily doctors. They alone have the knowledge and tools to diagnose illness and decide on treatments without exploring the user's own cultural understandings.

These ideas were also expressed by Ivan Illich (Illich 1975: 146): "the doctor controls through his use of language. The patient's own expression of distress is no longer meaningful. The use of language to mystify only heightens the patient's distress." The use of a positivist discourse within healthcare as a strategy to perpetuate the biomedical model entails the establishment of an asymmetrical relationship of knowledge, which further complicates dialogue and the building of intercultural health in areas with a large indigenous

population. A new model needs to overcome language and communication barriers and to respect the different conceptions of health/disease/care, that are part of the cosmovision of indigenous peoples.

## Conclusions

The Intercultural Approach to Cardiovascular Health was created as a theoretical model that incorporated cultural diversity into the health/illness process. This was done by recognizing diversity, understanding it, and respecting it.

The Mapuche-Williche culture has developed a body of knowledge to respond to the manifestations of acute human distress: pain, suffering, and death. The allopathic categories of diabetes and hypertension are not part of this cultural matrix. One way of recognizing this would be to reclassify users as "people with a chronic illness" and to understand their individual experience. This approach is part of sociocultural epidemiology as well as the traditional Mapuche-Williche practice of treating "the person" and not simply "the disease."

The fact that diabetes and hypertension do not fit into traditional Mapuche-Williche healing poses major challenges to long-term patient compliance with pharmacological treatment. Users expect treatments to restore their health rather than cause further damage (i.e. adverse effects); the role of drug therapy in these diseases needs to be reconceptualized and presented in a way that does not simply rely upon the dictates of allopathic medicine. We need to reassess the value of biomedical treatments for diabetes and hypertension in indigenous populations. In our particular case, it may be useful to mention Bonfil's (1987) concept of "cultural control." We would argue that Western allopathic medicine is part of an "imposed and hegemonic culture." Both the clinical entities of diabetes and hypertension, as well as the recommended drug treatments are

foreign constructs for those users who are part of the Mapuche-Williche culture.

It is true that there are important national and international agreements – ratified by the Chilean government – that set forth minimum standards for the healthcare of indigenous peoples. These minimum standards include the active participation of indigenous populations in the design and implementation of health programs. Nonetheless, the Cardiovascular Health Program (created in areas with a high indigenous population such as the Jurisdiction of Cacical de Riachuelo) seems to have given little attention to cultural questions, and it could be seen as "culturally inappropriate." (Montenegro & Stephens (2006:1865) To remedy this situation will require mainstreaming an intercultural approach. It will be necessary to consider the Ministry of Health's advice that "the Western scientific model is not the only desirable and valid model." (MINSAL, 2013) The Mapuche-Williche culture and its indigenous adherents have their own explanatory models which they use to order the health/disease/care process. Their cultural understanding is strongly anchored in their beliefs and values. Methods are needed to connect these models with those of allopathic medicine.

Health interventions should not be targeted solely to modifying risk factors; they need to offer a holistic approach to the person. Silvestre notes:

*It is well known that program implementation often fails because the local context and culture were ignored. Programs need to consider the contextual and cultural factors that mould people's daily lives. (2012: 156)*

Intercultural health, considered as a public health strategy in Mapuche-Williche communities, implies changing the allopathic paradigm of care delivery. Health teams need to develop intercultural skills that will allow them to function in different - often dynamic - cultural contexts.

Healthcare personnel must not only accept and acknowledge the existence of Mapuche healing therapies, but they must also consider the ideological bases which forms an inseparable part of the Mapuche-Williche medical system. (UN, 2007)

Intercultural health practice means implementing the Ministry of Health's mandate to "modify health programs ... so that they do not clash with the cosmovision and health practices of indigenous people." (MINSAL, 2012: p. 22) This approach opens up the culture of the patient using the tools of socio-cultural epidemiology and the Health Rights of Indigenous Peoples. It seems appropriate to conclude this paper with a quote from Fuenzalida:

*What does intercultural health look like in practice? Negotiation, consultation, and political engagement of the state with indigenous peoples. It is the State's duty to reform, restructure, refurbish, and/or create the necessary institutional structures to make intercultural health policies truly effective. [...] In addition, the State's functionaries must be trained in approaches that will allow them to understand, interact, and develop intercultural relations with indigenous peoples. (2015:123)*

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