

A comparative study of renal care in Brazil and Mexico: hemodialysis treatment from the perspective of ESRD sufferers

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Renal replacement therapy is the indicated treatment for individuals with chronic kidney disease (CKD) to survive. However, not all sick people have access to the same treatment. This study compares renal care in two developing countries with different health systems. Specifically, it explores hemodialysis treatment from the perspective of low-income individuals. A qualitative, comparative study was performed in Brazil and Mexico. Using purposive sampling, the research was based on open-ended interviews with nineteen participants with kidney failure undergoing hemodialysis treatment in public hospitals and ten relatives. According to our results, Brazilian participants perceived hemodialysis care as satisfactory because of health personnel courtesy as well as free access to dialysis treatment, prescription drugs, hospitalization and transportation. However, they reported deficiencies in the care they were receiving due to shortages of specialists, prescription drugs, laboratory tests and transportation. Mexican participants, in contrast, highlighted the catastrophic costs of medical care because they had no free access to renal therapy, nor adequate financial resources. Our findings suggest that low-income Brazilian CKD sufferers experience renal care differently, as they are more satisfied and face less obstacles with hemodialysis compared with those of Mexico. More studies on the topic are needed.

KEYWORDS

chronic illness, health inequity, health-care, inequalities in health, qualitative methods, service user perspectives

Chronic kidney disease (CKD) has become a topic of increasing interest worldwide due to its prevalence, incidence and costs (Schieppati & Remuzzi, 2005). Renal transplantation is considered the best treatment option (Ogutmen et al., 2006); however, inadequate supply and growing demand for organs makes this difficult to achieve (Garcia, Harden, & Chapman, 2012). Hemodialysis has therefore become the renal replacement therapy (RRT) most commonly used around the world (United States Renal Data System, 2014). In Latin America, for example, nearly 225,000 people receive dialysis regularly, most of them in Brazil and Mexico (Gonzalez-Bedat et al., 2015). This number is expected to rise sharply during the next decades due to population

ageing, type 2 diabetes mellitus and hypertension (Franco-Marina et al., 2011).

The availability and quality of dialysis programs depends upon prevailing economic, political and administrative conditions, as well as the national healthcare strategies employed. In all cases, RRT is an expensive treatment. The cost of CKD to the English National Health System (NHS) in 2009–2010 was estimated as £1.44 to £1.45 billion, or approximately 1.3% of all NHS spending in that year. More than half this sum was spent on RRT (Kerr, Bray, Medcalf, O'Donoghue, & Matthews, 2012). Treating ESRD patients in the United States cost over \$40 billion in public and private funds in 2009 (NIH, 2011).

In developing countries, the availability of renal replacement therapies is particularly limited due to lack of financial resources, putting governments under enormous pressure. Inadequate resources,

infrastructure and properly trained healthcare personnel present severe challenges for most of these countries. In South-East Asia, RRT costs are more than 10 times the annual per capita income of approximately USD 400, and health insurance coverage is rare or non-existent for RRT/CKD treatment (Nugent, Fathima, Feigl, & Chyung, 2011). In some cases, even if dialysis is locally available, transplantation is often not possible (Ortiz et al., 2014).

Even though sparse, unvalidated and heterogeneous data from developing countries on the CKD burden and renal replacement therapies make comparisons difficult (Jha, Wang, & Wang, 2012), some studies have compared RRT in such countries. Among them, hemodialysis therapy has been examined in Asia and Africa (Chugh, Jha, & Chugh, 1999), in South-East Asia (Jha, 2013) and in other regions of the world (Liyanage et al., 2015). Most of these studies, nevertheless, tend to emphasize structural variables, which implies the exclusion of the subjective world of those undergoing medical treatment (Blomqvist, Theander, Mowide, & Larsson, 2010).

Besides, some findings have reported that the greatest level of unmet need for RRT is found in middle- and low-income countries. For example, the prevalence of dialysis among low-income people is 16 (×1000), while it is 1,176 (×1000) among those with high income (Liyanage et al., 2015). Variations in the prevalence of these therapies seem to depend not only on social class, but also on the health system. Some countries have universal access to renal therapies, while others exclude several population groups from these benefits based on criteria other than their medical condition severity (Mizraji et al., 2007). In spite of these results, researchers interested in kidney disease have paid little attention to issues such as poverty, exclusion and social inequalities (Garcia-Garcia & Jha, 2015). To address these situations, this study compares renal care in two developing countries with different health systems. Specifically, it explores hemodialysis treatment from the perspective of low-income sick people and their families.

1 | HEALTHCARE SYSTEMS AND RENAL CARE IN TWO DEVELOPING COUNTRIES

We decided to compare the perspective of poor, renal patients in Brazil and Mexico. These countries constitute interesting comparative cases. Even though both are capitalist societies, they represent two conflicting health models: one, a single-payer health system (i.e., a unified tax-funded health system as an obligation of the State), and the other, an amalgam of voluntary or compulsory public or private forms of health insurance, in varying combinations (Heredia et al., 2015). Both systems are the product of different historic processes, which involved social, political and economic reforms implemented during decades (Pêgo & Almeida, 2002). As a result, since 1988, Brazil has a public system that offers universal coverage to its citizens. Meanwhile, Mexico has a cluster of distinct subsystems, each with different levels of care, for different groups of the population (OECD, 2016). Table 1 summarizes the main differences in the healthcare systems of the two countries.

The Unified Health System (Sistema Único de Saúde, SUS) of Brazil is the largest public healthcare program in the world (Paim et al.,

2011). The 1988 healthcare reform guaranteed the universal right to free health-care to all citizens. According to the Brazilian government, the SUS covers health procedures related to organ transplants, ensuring full access, universal and free coverage for the entire population. This coverage includes free access to renal replacement therapies, basic and specialty drugs, transportation, hospitalization and equitable treatment on the kidney transplant waiting list (Silva, Acúrcio, Charchiglia, Guerra Junior, & Andrade, 2011).

In contrast, the Mexican healthcare system is fragmented and inequitable. About half of the population has health-care through employment-linked social security, less than 10% have access to private health-care and the remainder have *Seguro Popular* (Popular Health Insurance), a voluntary welfare healthcare system (Laurell, 2011). Launched in 2004, its purpose was to provide a health-care and preventive measures package to the uninsured population and to reduce out-of-pocket expenses. By the end of 2012, nearly 52 million people (approx. 50% of the population) were enrolled in *Seguro Popular* (Comisión Nacional de Protección Social en Salud, 2012). However, the plan excluded coverage for the most expensive health conditions, including CKD (Mercado-Martínez et al., 2014).

2 | THE STUDY

2.1 | Aims of the study and perspective

To compare the perspectives of low-income people with kidney failure on hemodialysis care in Brazil and Mexico, we adopted a critical interpretative approach (Lock & Scheper-Hughes, 1990). This theoretical framework would help us to explore the point of view of social actors while taking into consideration the broader economic, political and cultural context.

2.2 | Design and participant selection

Employing qualitative methods, we conducted a comparative study (Van Teijlingen et al., 2015) in two public hospitals where low-income patients attended. In Brazil, it was a hospital attached to a federal university in a southern state, while in Mexico, it was a hospital attached to a public university in the western part of the country. Both hospitals had nephrology and hemodialysis services.

Using a purposive sample (Teddle & Yu, 2007), we selected 29 individuals with CKD who were on hemodialysis as well as their family members. In Brazil, ten patients and five relatives were interviewed. Six participants were women and four men; six were married, three were widowed and one was divorced. Their average length on dialysis was 4.3 years. Most suffered from other chronic diseases such as diabetes or hypertension. All participants lived in the metropolitan area of Gran Florianópolis. In Mexico, nine patients (five men and four women) and five relatives were interviewed. Most of them lived in the metropolitan area of Guadalajara or towns within the state. However, two lived in neighboring states. All of them were affiliated to *Seguro Popular*.

All participants were adults receiving hemodialysis during the morning hours. Reasons for not participating included time constraints

TABLE 1 Healthcare system and renal care. Brazil and Mexico

Brazil	Mexico
<i>Healthcare system</i>	
The system is comprised of two sectors (Paim, Travassos, Almeida, Bahia, & Macinko, 2011; Waitzkin, 2011): <i>Public Sector.</i> A single system (SUS) provides health-care to the entire population. Funded by federal, state and municipal resources. Parts of the constitutional principle of ensuring the right to universal, comprehensive, equitable and free health-care. The public health expenditure was 48.2% of total health expenditure in 2013 <i>Private sector,</i> including the Supplemental Healthcare System: Health insurance for businesses and families, medical co-operatives, self-administered or employer insurance and private individual plans. Out-of-pocket co-payment. Covers 25% of the population (nearly 50 million people). The out-of-pocket health expenditure represented 57.8% of private expenditure on health in 2013 (The World Bank, 2015)	The system is comprised of two sectors and several subsectors (Gómez Dantes et al., 2011; Waitzkin, 2011): <i>Public Sector.</i> Fragmented system. It provides healthcare benefits depending on the population. Parts of the constitutional principle that safeguarding of health is a right of all Mexicans. The public health expenditure was 51.7% of total health expenditure in 2013 <i>Social Security</i> serves employees, retirees and their families. Funded by employer, employee and government contributions. Covers 45% of the population <i>Government Health Services</i> serve the informal sector, the unemployed and people who are outside the labor market. It includes the <i>Seguro Popular</i> . Covers 45% of the population, that is, near 50 million people <i>Private sector</i> serves people with the ability to pay; 10% of the population has access to it. Out-of-pocket health expenditure represented 91.5% of private expenditure on health in 2013 (The World Bank, 2015)
<i>State of CKD and RRT</i>	
Approx. 10,000,000 individuals with CKD Nearly 115,000 people are receiving RRT All citizens have free access to renal treatment, guaranteed basic and specialty drugs, transportation, hospitalization, equal treatment in kidney transplant waiting lists and loans in the event of temporary or permanent disability leave	Approx. 10,000,000 individuals with CDK Nearly 110,000 people are receiving RRT (Gonzalez-Bedat et al., 2015) Social security covers medical-surgical care, drugs and hospitalization for insured persons and their families <i>Seguro Popular</i> excludes coverage for renal therapies
<i>Renal replacement therapies</i>	
<i>Hemodialysis</i>	
658 units nationwide	312 units nationwide
91,260 people receiving hemodialysis (est.)	43,000 people receiving hemodialysis (est.)
90.9% served by public health-care (Sesso, Lopes, Thomé, Lugon, & Santos, 2011)	63% served by public health-care (Tirado-Gómez et al., 2011)
74.8% of RRT patients employed	39.1% of RRT patients employed
<i>Peritoneal dialysis</i>	
9,136 people in treatment (est.)	54,500 people in treatment (est.)
3.1% of RRT patients employed	49.7% of RRT patients employed
<i>Renal transplantation</i>	
5,639 transplants (2014)	2,610 transplants (2014)
42,209 transplants (2004–2013)	23,087 transplants (2004–2013)
72.1% from deceased donors	28.8% from deceased donors
27.9% from living donors (Associação Brasileira de Transplante de Órgãos, 2014)	71.3% from living donors (Centro Nacional de Trasplantes, 2014)
21.9% of RRT patients are employed	11.0% of RRT patients are employed (Gonzalez-Bedat et al., 2015)

or dependency on public transportation offered by the municipality in Brazil, while others decided not to take part for unknown reasons. No financial incentives were offered to participants because it was not a common practice in either place.

2.3 | Data collection

We conducted individual open-ended interviews in both hospitals, at kidney patient associations and at participants' homes between July 2011 and March 2012. Two different research teams collected the

information. However, the first author participated in both groups, always accompanied by another member of the team. Both of the first two authors spoke Portuguese and Spanish, which facilitated communication, data management and analysis. At the beginning of the interviews, we asked participants to discuss their lives since their renal condition started and medical treatment was prescribed. Our goal was to let them freely tell their stories and emphasize those aspects they considered important. The following are examples of the open-ended questions we formulated: Could you tell me how life has been since your diagnosis? What have been the main problems you have faced

since starting hemodialysis? Could you explain in more detail the problem you mention? On average, the interviews lasted 1 hr. Additionally, we reviewed medical records and made observations of the social, economic, physical and relational context related to renal care.

2.4 | Data management and analysis

Aside from examining the medical records and taking notes during the observation, we digitally recorded the audio interviews. We transcribed them several days later following common pre-established rules. A Brazilian member of the team transcribed the interviews conducted in Portuguese, and another Mexican member of the team transcribed those conducted in Spanish. We captured the interview data using the *Ethnograph v6* program (Qualis Research, Colorado Springs, USA).

We employed conventional content analysis (Hsieh & Shannon, 2005). The process started in Brazil when the first author read every transcript in full to get immersed in the data, to have an overview of the information and to start identifying provisional themes. Afterward, we grouped the themes into emerging general themes according the renal care process in diachronic terms. The research team met several times to review the analytical process and improve the procedures. Afterward, we selected specific quotations to illustrate the emerging themes. After a training process, the same procedure was repeated in Mexico under the guidance of the third author. Later on, we proceeded to compare emerging general themes from both countries.

2.5 | Ethical considerations

This study complies with the ethical principles of the Declaration of Helsinki. The ethical review boards of both the Mexican and the Brazilian universities evaluated and approved the project. Both hospitals belong to the respective universities, and the approvals were accepted without the need for further action. Additionally, we provided information to the participants regarding the project and requested their consent to participate and to permit recording and transcription of the interviews. There was an agreement that the interview would stop or be postponed if the participant felt any discomfort or threat. Due to cultural norms, the informed consent from Mexican participants was verbal, while the one from Brazil was written. We handled all data with absolute confidentiality and anonymity.

3 | FINDINGS

The participants from Brazil expressed overall satisfaction with the health-care they received during hemodialysis care. They particularly pointed out the way they were treated by health personnel, referring specifically to doctors and nurses, both in the hemodialysis units and in basic clinics or hospitals. In addition, they emphasized that the treatment was free of charge, including medical consultation, hemodialysis sessions, drugs, laboratory tests, hospitalization and even meals after the sessions. However, such perception did not prevent the recognition of serious problems in some areas.

The opposite picture could be drawn from the discourse of the Mexican participants. The themes they highlighted refer to multiple and frequent financial problems related to the healthcare process, emphasizing their inability to afford the costs of hemodialysis because of inadequate financial resources and lack of coverage by *Seguro Popular*. Furthermore, they seldom mentioned any measures for which they felt satisfied or grateful toward any healthcare professional or for any aspect of hemodialysis care. Table 2 summarizes the topics expressed in both countries throughout the hemodialysis process.

3.1 | The Brazilian perspective

These participants made multiple references to topics related to the beginning of their treatment. Private physicians diagnosed half of them, while specialists in public hospitals diagnosed the others. In either case, most were not diagnosed early in the primary care setting. Instead, they had a late diagnosis when they arrived at emergency services with advanced kidney failure. Upon diagnosis, the doctors prescribed hemodialysis because of the severity of their condition. Instead of catheter placement, most patients clearly remember information about the fistula. This is because they disliked it, considering that it would get in the way of their work or look unsightly.

They encountered a number of obstacles to getting hemodialysis service at the university hospital. This was because there were only eight machines available, with a long waiting list. However, once enrolled in the service, they were guaranteed ongoing treatment at no cost. Some of them requested changes in their dialysis schedule; this was especially true for those with appointments scheduled in the afternoon. The most common reasons for this request involved access to transportation or the need to work in the morning. Such requests were granted when a spot became available in the dialysis service, either because someone had received a transplant or had deceased.

Over time, the participants began to face other problems, often related to visits with specialists, even with nephrologists in the hemodialysis service itself. The shortage of specialists forced them to wait for months between appointments and long waiting times during the appointment itself. In some cases, those able to pay actually consulted the same specialists at their private practices. One participant described the shortage of specialists at the hemodialysis service she attended:

We have to wait until a doctor is called (for the appointment) to come and see us. And we wait hours and hours. There used to be three doctors, but now there is only one... when we need a prescription, the order takes 2 or 3 days; sometimes we place the order on Tuesday and we don't get it until the following Tuesday.

Despite the prevalence of chronic renal disease, interviewed patients often did not receive their prescribed drugs because health centers,

TABLE 2 Issues perceived by individuals and their families on hemodialysis (HD)^a

Brazil	Mexico
CKD diagnosis	
Treatment initiated	
Late, at hospital emergency rooms	Late, at hospital emergency rooms
At emergency department	At emergency department
Free health care	Paid health care
Choice of treatment	
HD is the first dialysis option	PD ^b is the first dialysis option
	HD is started after PD fails
Catheter placement	
Catheter and placement free	Cost of catheter: approx. \$USD 160 ^c
Placement free	Cost of placement: approx. \$USD 80
HD therapy	
Access	
Difficulties obtaining hospital bed	Difficulties obtaining hospital bed
	Waiting list (80 people)
Referral to another public hospital	Referral to private medical services
Difficulty in changing time	
Cost	
Free	\$USD 70 (approx.) at public hospital
	\$USD 100 (approx.) at private hospital
Doctor visits	
Cost	
Free	Out-of-pocket. Variable
Waiting time	
Visits months apart	Long waiting hours
Long waits for visits	Many hours on day of appointment
Laboratory tests	
Free	Out-of-pocket, cost depends on test
Slow, prior to entry into hemodialysis unit	Fast, in private health-care
Fast, within service or in private health-care	
Drugs	
Free	Out-of-pocket payment \$USD 40 per month
Often out of stock at health centers and pharmacies	High cost of erythropoietin
Repeated visits to pharmacies or health centers	
Food	
Prescribed diet	

(continues)

TABLE 2 (continued)

Brazil	Mexico
Received under medical supervision	Rejection of prescribed diet
	High cost of prescribed foods
	Adapt according to available resources
During HD	
Free sandwich	Not allowed to eat during session
Sandwich and light meal in afternoon session	Out-of-pocket costs to buy food
Transportation	
Home location of CKD patients	
Gran Florianopolis	Guadalajara Metropolitan Area
	Other towns in state
	Also in neighboring states
Transportation service	
Municipal ambulances or cars	Public transport system
Free service	Pay with own funds
Problems	
Few cars and drivers	Long trip times
Long waiting times	
Single departure and return	Must pay four bus fares daily; in some cases, eight
	Taxis used when necessary

^aPrepared by authors.^bPeritoneal dialysis.

pharmacies and public hospitals usually did not have them. Those with the money often bought their drugs from private pharmacies to avoid interrupting their treatment. However, those who could not afford their medicines followed several alternative strategies. They might return to pharmacies or health centers repeatedly until they could obtain their medications, or they might ask other patients to lend them medicine, promising to repay them in kind when they obtained their own medications. One participant who could afford prescription drugs and laboratory tests said: "I spend a lot on medicines. My goodness! I'm not even going to tell you how much I've spent on drugs and tests."

Laboratory tests are also considered an essential part of disease management. These tests are performed promptly for patients in the hemodialysis service, but those waiting to start hemodialysis frequently said they had to wait several months for a test to be scheduled after it was ordered. Under such circumstances, the promptness of testing often correlated with their ability to pay. Those who could pay for tests could have them performed immediately at private health-care facilities; but those who could not afford had to wait for months for them under the public healthcare system. One participant who did have the money tells how he resolved the issue:

I had to pay for many tests that otherwise would have been delayed. Three, four months (they said it would be) ... I was sick and I said "I won't last." So I talked to the doctor ... "Doctor, I have a serious problem, what if I could get these tests done (somewhere else)? Would you accept that?" She said, "If you can do them, then do them." If you're going to wait to have them done (at the public hospital), you won't get them, you never get to the front of the line. When people have the ability to have them done somewhere else and speed things up, they do it.

Most of the participants lived in the city where they received hemodialysis, but a few lived in towns farther away in the same region. Only one of them had a car, while the rest had to resort to public transportation. In this case, municipal governments provided them with complimentary car or ambulance transport to the hospital two or three times a week through the *Fora do Domicilio* (Away from home Program). One family member talks about the transportation help from the municipal government:

The city's Department of Health is helping us a lot, bringing us (to the hospital) and taking us back. The Ministry (of Health) did not use to help; but now a car goes there (to our neighborhood), they pick us up and bring us. Now everything is working; everything is going well.

However, the transportation provided by the local government was often problematic because passengers had to wait a long time. Some municipalities had few cars and/or drivers, so they could not offer continuous transport. The most common arrangement involves one vehicle that goes to the hospital in the morning and returns in the afternoon. Those with hemodialysis scheduled in the morning have to wait until afternoon to go home, while those with afternoon appointments have to go to in the morning and then find another way to get home. A particular problem especially affecting the elderly is the length of the process. A woman almost 70 years of age receiving hemodialysis every other day said, "When you get home at eight in the evening (having gone out at ten in the morning) three times a week, it is sad for people who are old and sick. It is very sad."

Sick individuals rarely commented on the food. Throughout the interviews, this topic seemed to be a subject that no one was interested in talking about. The only mention of food concerned lunch provided by the hospital for both the one who was sick and the person accompanying them.

Another topic referred by some participants, especially women, is that hemodialysis care is perceived as being in a prison. One perspective was that it represented restriction and control of their whole life. This belief came from the three times weekly hemodialysis sessions, where they sat still on a couch for hours while connected to a machine. Their dependence on a machine and the control by health-care professionals extended as far as what their food, drink, travel and beyond.

3.2 | The Mexican perspective

These participants and their family members usually recall when a specialist at the urgency service diagnosed the disease. In all cases, hemodialysis has caused them numerous problems and demands, particularly economic ones. Problems related to family, health, food and transportation were also common. Besides, in contrast to their Brazilian counterparts, at no time did they offer any positive assessment of healthcare professionals, renal services or any aspect related to dialysis.

All participants emphasized the worsening of their economic troubles from the moment they started hemodialysis. This is because of the combined burden of the cost of dialysis treatment itself, and the fact that *Seguro Popular* does not cover the treatment. In addition, some had precarious and unstable jobs while others were forced to quit them because of the burden and discomfort caused by the illness and the treatment. Besides, employers often refused to hire people with their condition. One young man refers to such challenges below:

People (in hemodialysis) are in a bad state economically. It might sound bad, but patients even die from it; because they don't have enough money for the treatment of the disease. It is rather expensive and sometimes you're better off stopping (treatment) and letting go.

How expensive is hemodialysis treatment for the participants? As soon as they are diagnosed with kidney failure and hemodialysis starts, they and their families are under enormous pressure to pay for the catheter, consultation, hospitalization, hemodialysis sessions, prescription drugs, laboratory studies, food and transportation. According to them, the first step is the insertion of the catheter. The cost of surgery is approximately \$USD 80 and the catheter \$USD 160. After that come expenses for the thrice-weekly hemodialysis sessions. While costs vary, each one is approximately \$USD 65 at the hospital. However, because of the long waiting list and limited number of dialysis machines at that public hospital, all of them were referred to private services. Even though private health-care institutions offer a discount for these patients, the minimum cost is \$USD 85 per session, totaling an estimated \$USD 1,000 per month. All participants called this an impossible expense to sustain in the medium and long term. They coped by attending hemodialysis sessions only when they could pay for them. One participant stated:

Some of us can't afford the hemodialysis session and we don't go. So that brings more problems because of the toxicity that builds up in your body. You can't get rid of the uremia if they don't hook you up to the machine.

Participants also pay for doctor's consultations, laboratory tests and prescription drugs, even at the public hospital. A particularly problematic drug is erythropoietin, priced at approximately \$USD 40 a month. However, the expenses continue from there. For those living in the city, public transportation can require at least four buses a day, three times a week. If a family member accompanies them, the cost could reach \$USD

50 a month. Costs increase for those living outside the city, particularly those in neighboring states.

Food is not provided to the patients or family members in the hospital or the hemodialysis unit, and eating is not allowed during hemodialysis sessions. Therefore, additional funds are needed for food expenses during the extended travel, hemodialysis sessions and doctor's appointments. It is not uncommon to need an entire day especially when adding waiting and administrative time at hospital, government offices or private facilities.

Mexican participants and their families mention other difficulties, usually linked to money. These include the effects of reorganizing daily schedules and being ostracized by their families, partners or friends for the same reason. The mother of a young patient mentions in particular: "...Dads who leave their children... yes, they leave their wives because of the illness. Thank God that hasn't happened to us."

Finally, dieticians recommend that they eat certain foods and avoid others. However, the majority do not follow these instructions because the recommended foods are too expensive and are not part of their normal diet. For these reason, they usually eat culturally accepted foods such as tortillas or beans, even though they are told not to do so.

4 | DISCUSSION

Renal replacement therapy represents an important advance in health-care; nevertheless, not all individuals with kidney failure have access to the same treatment for different reasons. Our research contributes to the field of comparative studies by providing empirical evidence regarding health-care provided during hemodialysis treatment in two countries with similar level of development, but with different health systems. This investigation is in line with previous studies that have compared CKD therapies and their outcomes in developed and developing countries with different health systems. Among the former, when comparing the American and Canadian health systems in relation to CKD, Guyatt et al. (2007) found that Canadians have better quality of health-care, lower mortality and a higher likelihood of receiving a transplant. In the developing world, meanwhile, it has been reported that the prevalence of RRT increases in those countries with greater public health-care or social insurance coverage (Rosa-Diez et al., 2014).

To evaluate RRT from the perspective of poor sick people and their families' means, we have prioritized the point of view of social actors who traditionally have been excluded from the healthcare debate and the elaboration of public policies. Based on such a perspective, we have found marked differences, and similarities, in renal care in Brazil and Mexico. It is worth emphasizing in terms of similarities that most participants have received a late diagnosis of CKD, usually by specialists at the hospital emergency services department. These results indicate that despite improvements in preventive medicine and primary health-care in both countries, there remains the need to consolidate programs for timely detection and appropriate treatment of this condition as well as prevention through mitigation of risk factors (Rosa-Diez et al., 2014). However, in spite of such important topics, few data are

available in Latin America regarding primary healthcare professional's knowledge and practices on CKD or renal therapies (Mercado-Martínez, Padilla-Altamira, Diaz-Medina, & Sánchez-Pimienta, 2015).

Our results reveal important differences in how sick people and their families perceive health-care related to hemodialysis treatment in both countries. First, we note the contrast between the positive assessments by Brazilian participants and the negative assessments of renal care and health staff by those from Mexico. The main reason for this opposite view seems to be that Brazilians have free access to healthcare services, while the cost for the Mexican patients is circa \$USD 1,000 a month for hemodialysis treatment, compared to the monthly minimum wage of approx. \$USD 170 in Mexico (Comisión Nacional de los Salarios Mínimos, 2014). Financial burden is not only a cause of dissatisfaction for these low-income individuals and their families, but also a common reason for non-compliance with the medical treatment; in some cases, it may mean a once-weekly dialysis. In any case, the expenses are a continual concern because they can quickly drive them into financial ruin.

Having free access to the healthcare system does not mean that people with kidney failure in Brazil do not have to pay for adequate treatment. According to the evidence gathered in this study, they consistently face shortages of prescription drugs, postponement of laboratory tests and appointments with specialists and having to pay for transportation. Because of these, those with limited or no financial resources have to wait for weeks or months for all but the hemodialysis sessions, whereas those with some financial resources can cover the costs of timely health-care. This finding is consistent with those of other authors who report an increase in patients' out-of-pocket expenses both in Brazil and in other Latin American countries with universal free access to health-care (Boing, Bertoldi, Barros, Posenato, & Peres, 2014; Marinovich et al., 2012; Mizraji et al., 2007). In this context, the long wait-times to specialist care are a common occurrence in the public health system. This is the reason why patients unwilling to wait and able to pay will go to the private health system in opposition to those without resources. Similar results have been reported in other studies focused on hemodialysis treatment in Brazil (Fujii & Oliveira, 2011). Such findings lead to formulate other questions; one being whether such situation exacerbates existing social inequalities in countries like Brazil, especially in times of economic and political crisis; or if it is helping to consolidate the private health sector (Gramani, 2014).

The amount of money Brazilians have to pay is minimal when compared with the amount paid by Mexicans undergoing renal replacement therapy. This is because the cost of the Brazilian hemodialysis sessions is covered by the SUS, unlike that of the Mexicans which is self-paid since *Seguro Popular* refuses to cover chronic conditions such as CKD. The latter results are similar to those reported in some African and Asian countries (Hirachan, Kharel, Shah, & Ball, 2010; Yu & Petrini, 2010). This situation invites us to participate on the debate regarding topics such as public policies related to universal health-care, health-care for all or the role of the state in health-care. Our results, for example, disagree with Waitzkin (2015) when stating that health-care for all—as in the Brazilian case—provides equal services for the entire population regardless of an individual's or family's financial resources.

The findings of this study refer to the people living in poverty in two developing countries. As is widely known, poverty is still prevalent in Brazil and Mexico, despite progress in recent years (Lustig, Lopez-Calva, & Ortiz-Juarez, 2013). In such a context, poor sick people from Brazil do not perceive hemodialysis treatment the same way as those from Mexico. The former have limited pocket expenses because they have a social protection system in health that pays for dialysis sessions. Instead, sick poor people from Mexico are excluded from such a system. Consequently, these face a dilemma: to put their lives at risk by not attending the hemodialysis sessions or to put their families at risk of financial ruin by attending such sessions.

Low-income sick people in both countries have pocket expenses, but the differences between them are manifested in the short and long term. In the short term, sick poor people in Mexico go to dialysis according to available resources; meanwhile, those from Brazil attend regularly to their dialysis sessions regardless of their economic resources. All these could have long-term effects. Among them, it has been reported that people with CKD living in more deprived areas are likely to be at increased risk of poor health outcomes (Hossain, Palmer, Goyder, & El Nahas, 2012).

The cultural contexts should be taken into account to analyze these findings. Such aspects could be useful to explain the differing perceptions among participants on health-care in both countries. Unlike Mexican patients, Brazilian participants report that they are well cared for by healthcare professionals. However, statements such as this could be explored in-depth from a symbolic perspective. For example, it may be worth considering the possibility that Brazilian sick people may usually not criticize healthcare services or professionals due to cultural norms as has been reported previously (Backes et al., 2009). In this regard, it should be noted that low-income Mexican patients with an array of chronic conditions were satisfied with the *Seguro Popular* because they considered it a gift rather than a right (Hernández-Ibarra & Mercado-Martínez, 2013).

The results of this study suggest the need to explore other dimensions of health-care that have gone unnoticed. Among other issues, renal care could be compared in countries of the region with similar healthcare systems, that is, public or a mix of public-private. Additionally, RRT could be examined in a single country by comparing characteristics of patients and their families according to their access to and use of different models of health-care. While it remains important to examine the viewpoints of the population living with CKD, other specific dimensions could give further insights on the topic, among them, their experiences, meanings and practices of those undergoing renal therapies. Finally, it seems that poor Brazilian patients are more compliant with the prescribed renal treatment than are the Mexican ones. If this was true, the effects should be studied in the short and long term, focusing on medical complications, morbidity and even mortality.

Despite its strengths, this study has limitations. While it may appear that medical care in Brazil is better or more comprehensive than in Mexico, we want to draw attention to two factors that

should put such conclusions in perspective. First, the results of this study cannot be generalized to the whole population or to the entire healthcare system. The participants from Mexico belong to a sector of the population without social security. That is, they belong to the most vulnerable groups and those who have been excluded from the right to receive free health-care for their kidney condition. The results could be different if people with social security or seeking private treatment were studied. Furthermore, our findings cannot be presented as evidence that health-care is better in all countries in the Mercosur trading bloc as compared to all countries in the Pacific Alliance trading bloc (the two major trading blocs of Latin America). More comparative studies should be conducted on the topic in the future.

5 | CONCLUDING REMARKS

In this study, we examined renal care from the point of view of the social actors directly involved in the topic-in-question, people living with CKD and their families. Unlike other studies focusing on the standpoint of health professionals or using a structural approach, here we opted to privilege everyday empirical knowledge, based on everyday lived experience. Following Maffesoli (1993), this implies privileging a patient-centered agenda, one often excluded from formal healthcare debates.

Consequently, our findings identify different accounts of renal care, expressed by those with CKD living in poverty in countries which are located in the same region and with similar level of development. In opposition to assumptions which construct the poor in underdeveloped countries as a homogeneous group, our results demonstrate much greater complexity. All participants involved in this study live in poverty. However, they experience renal care differently; those from Brazil suggest greater satisfaction with hemodialysis treatment due to free access to it and, as a result, face less economic obstacles, while the opposite can be said of those living in Mexico. These results are a product of very different public health policies aimed at the most economically disadvantaged sector of the population. In the Brazilian case, we see the impact of a healthcare-for-all model, while in the Mexican case is underpinned by a Universal Health Coverage model. Even though these results refer to two specific national cases, they have wider application to a wide range of countries operating out of very different healthcare models.

Finally, it is also important to account for the increasing role and implications of private sector participation in the provision of renal therapies in both countries, as the participants' accounts suggest. In a similar sense, private sector involvement has been documented in most countries in Latin America, regardless of whether they have an integrated health system or a fragmented one (Giedon, Villar, & Avila, 2010). The importance of this issue is in relation to the subject of out-of-pocket costs, as these are an important source of private sector financing throughout the region, as well as a cause of economic impoverishment for many families. Therefore, more studies on the subject are needed.

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