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Original Article

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Comparison of the Socio-Economic Situation and Living Conditions of Syrian and Underprivileged Turkish Patients Receiving Hemodialysis

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Abstract

Objective: Turkey has nearly 2.5 million Syrian refugees, and it provides them healthcare, education, shelter, and food aid. This study aimed to determine some of the socio-demographic features, income status, shelter, and living conditions in Syrian and socially underprivileged Turkish patients receiving hemodialysis. This study also makes comparisons between the two groups.

Materials and Methods: We included 23 Syrian and 82 socially underprivileged Turkish patients receiving hemodialysis in this study. The questionnaires included queries on socio-demographic, income distribution, and living conditions.

Results: Syrian patients were younger (34.08±12.30 vs. 55.13±17.96 years; p=0.001) and better educated (p=0.009). Compliance with hemodialysis sessions was lower in refugees (p=0.002). Per capita income was lower among Syrian patients, although there were more employed persons in Syrian families (1.86±1.09 vs. 1.04±0.92; p=0.003). The mean number of household members was 7.4±3 and 4.5±2 in families of Syrian and Turkish patients, respectively (p=0.001). Most Syrian patients were living as tenants (p=0.002) without access to hot water (p=0.043). Having home appliances such as washing machines, dishwashers, and refrigerators was more common among Turkish patients (p=0.013; p<0.001; p=0.001). Syrian patients could not afford to repair old and worn furniture and could not pay their bills (p=0.011; p=0.001).

Conclusion: Socio-economic status of Syrian patients receiving hemodialysis is worse as compared to that of underprivileged Turkish patients receiving hemodialysis. Conducting effective intervention is of critical importance.

Keywords: Syrian, income, living conditions, patients receiving hemodialysis

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INTRODUCTION

It has been five years since the conflict in Syria began. More than four million individuals from Syria have fled to neighboring countries as refugees (1, 2) including 2.5 million in Turkey (3). Turkey ranks third, after Jordan and Lebanon, among countries with high rates of refugee immigration for these Syrian refugees having been forced to flee (4). The Turkish Government has established refugee camps in villages near the Syrian border, but most of the immigrants migrated from the border region to reach larger cities, namely Ankara, the capital city, Istanbul, and Izmir (5). Basic needs including not only shelter, food, and health care, but also education, social activity facilities, play areas, and employment opportunities are needed (6). These immigrants lack medical insurance and financial support. Moreover, the medical treatment of this population is further complicated by most not being able to speak Turkish or English (5). The Turkish people and Government are committed to providing social and medical care for Syrian refugees (7).

More than 55,000 patients in Turkey receive hemodialysis (8). Chronic renal failure and other medical issues influence the social and economic situation of the pa-

tients and their relatives. In Turkey, there are Turkish citizens who are not guaranteed by any social security institution, and they lack the financial means to meet the cost of health services. The state covers health costs of these people; but the living conditions are harsh, and they have socio-economic issues. This study aimed to determine and compare some of the socio-demographic features, income status, shelter, and living conditions between Syrian and socially underprivileged Turkish patients receiving hemodialysis.

MATERIALS AND METHODS

Patients

We included chronic patients receiving hemodialysis, aged 18 years and above, treated in two centers in Istanbul. Patients receiving hemodialysis consisted of 105 patients: 23 Syrian and 82 socially underprivileged Turkish patients.

Procedure

This is an observational, cross-sectional study. Survey applications were carried out face-to-face. Participants provided their written informed consent to participate in this study. They received no incentive for their participation. They were explicitly informed that they were free to abandon the study at any time. Thus, all of the participants voluntarily and individually contributed to the study. Case-by-case as deemed necessary, the interviews were carried out in one's native language, with the help of Syrian interpreters. Authors declared that the research was conducted according to the principles of the World Medical Association Declaration of Helsinki "Ethical Principles for Medical Research Involving Human Subjects", (amended in October 2013).

Instruments

The questionnaires consisted of 37 items: 16 initial questions related to socio-demographic followed by 7 related to income distribution, and 14 related to living condition (4 dwelling facilities, 2 possession of durables, 4 problems with the dwelling and environment, and 4 living condition indicators). The questionnaire was prepared benefiting from questions related to the "Income distribution and Living conditions" of the Turkish Statistical Institute (9). Patients were asked to choose suitable options.

The monthly income of the patients was asked. The monthly income of the family divided by the number of people living at the same home was hence divided into 30, which led us to determine the daily per capita income.

Statistical Analysis

Statistical analysis was performed using NCSS (Number Cruncher Statistical System) 2007 (Kaysville, Utah, USA). Descriptive statistical methods (mean, standard deviation, median, frequency, ratio, minimum, maximum) were used while evaluating the study data. The Shapiro–Wilk test and box plot charts were used to test the conformity of quantitative data to normal distribution. In normal age distribution variable, Welch t test was used by looking at homogeneity of variances. The Mann–Whitney U test was performed to compare two groups of other variables that did not exhibit normal distribution. Pearson's chi-square test, Fisher–Freeman–Halton exact test, and Fisher's exact test were used to compare the qualitative data. Significance was evaluated at least $p<0.05$.

RESULTS

Among 105 patients, 53 (50.5%) were female, and 52 (49.5%) were male. The median age was 50.52±18.96 (range 18-92) years. Twenty-three (21.9%) patients were from Syria. Eighty-two (78.1%) patients were socially underprivileged Turkish patients receiving hemodialysis.

Demographic Features

Syrian patients were younger (34.08±12.30 vs. 55.13±17.96 years; p=0.001), and better educated (p=0.009). Gender did not significantly differ between the two groups. Most of the Syrian and Turkish patients receiving hemodialysis were married (69.6% vs.63.4%; p=0.585) and had children (56.5% vs. 70.7%; p=0.198). While 39% of the Syrian patients receiving hemodialysis were living in Turkey since less than one year, 47.8% patients had been living since more than two years. Nine (39.13%) patients started hemodialysis in Turkey. The rest had started dialysis in Syria prior to their arrival in Turkey.

Dialysis vintage (median 36 vs. 48 months; p=0.039) was shorter, and temporary hemodialysis catheters were more frequent among Syrian patients (34.8%) than among Turkish patients (9.8%) (p=0.014).

In both groups, the number of weekly dialysis sessions was three in the majority of the patients (91.3% in Syrian vs. 91.5% in Turkish), but compliance with hemodialysis sessions was lower among refugees (78.3% vs. 98.8%; p=0.002).

While the majority of Syrian patients (47.8%) were using public transport for coming to dialysis center, the Turks (31.7%) were using municipal services. Demographic features of the patients are shown in Table 1.

Income Distribution

The mean number of household members was 7.4±3 and 4.5±2 in families of Syrian and Turkish patients, respectively (p=0.001).

Most patients receiving hemodialysis in both groups (87% in Syrian vs. 93.9% in Turkish) were not working. Though there were more persons working in Syrian families (1.86±1.09 vs. 1.04±0.92; median 2 vs 1; p=0.001), daily per capita income was lower (1±0.9$ vs. 4.5±2.8$; median 2.3$ vs 3.8$; p=0.001). The only income for Syrian families was salary or daily wage. They were not taking any social charity, while 14.6% of Turkish patients were taking this support (p=0.001) (Table 2).

Table 1. Demographic features of the patients

		Syrian patients (n=23)	Underprivileged Turkish patients (n=82)	p
Mean age (years); mean±SD		34.08±12.30	55.13±17.96	[t]0.001
Gender n (%)	Female	12 (52.2)	41 (50)	[b]0.854
	Male	11 (47.8)	41 (50)	
Education n (%)	Illiterate	3 (13)	32 (39)	[c]0.009
	Literate	1 (4.3)	13 (15.9)	
	Primary/Secondary school	14 (60.9)	31 (37.8)	
	High School/			
	Higher Education	5 (21.7)	6 (7.3)	
Married; n (%)		16 (69.6)	52 (63.4)	[b]0.585
Having children; n (%)		13 (56.5)	58 (70.7)	[b]0.198
Dialysis vintage (months) Median (Q1–Q3)		36 (9-72)	48 (24-84)	[a]0.039
Compliance of hemodialysis session n (%)		18 (78.3)	81 (98.8)	[d]0.002
Vascular Access; n (%)	Fistula	15 (65.2)	62 (75.6)	[c]0.014
	Graft	0 (0)	2 (2.4)	
	Temporary catheter	8 (34.8)	8 (9.8)	
	Permanent catheter	0 (0)	10 (12.2)	

[a]Mann–Whitney U Test [b]Pearson Ki-kare Test [c]Fisher–Freeman–Halton Exact Test
[d]Fisher's Exact Test t Welch t test

Table 2. Income distribution of the patients

		Syrian patients (n=23) n (%)	Underprivileged Turkish patients (n=82) n (%)	p
Household members Median (Q1-Q3)		7 (5-8)	5 (3-6)	[a]0.001
Working person Median (Q1-Q3)		2 (1-2)	1 (0-2)	[a]0.001
Daily Per capita income (US dollar) Median (Q1–Q3)		2.3 (1.6-2.9)	3.8 (2.4-5.5)	[a]0.001
Major sources of income	Not income	0 (0)	2 (2.4)	[c]0.001
	Salary	13 (56.5)	44 (53.7)	
	Daily wage	10 (43.5)	6 (7.3)	
	Social charity	0 (0)	12 (14.6)	
	Salary and social charity	0 (0)	11 (13.4)	
	Other	0 (0)	7 (13.4)	

[a]Mann–Whitney U Test [c]Fisher–Freeman–Halton Exact Test

Living Conditions

Dwelling facilities: number of rooms; heating form; and having kitchen, toilet, and bathroom were similar in both groups' households; but available hot water in the household was more frequent among Turkish patients (89%) than among Syrian patients (69.6%) (p=0.043) (Table 3).

Possession of durables: most of the patients (95.7% vs. 81.7%) in both groups did not have a car (p=0.185). Having a wash-

Table 3. Living conditions of the patients

			Syrian patients (n=23) n (%)	Underprivileged Turkish patients (n=82) n (%)	p
Dwelling facilities	Number of rooms; Median (Q1-Q3)		3 (2-3)	3 (2-3)	[a]0.729
	Heating form	Natural gas	15 (65.2)	59 (72)	[c]0.772
		Coal	7 (30.4)	17 (20.7)	
		Electricity	1 (4.3)	5 (6.1)	
		Other	0 (0)	1 (1.2)	
	Having kitchen		23 (100)	82 (100)	-
	Having toilet		23 (100)	82 (100)	-
	Having bathroom		23 (100)	82 (100)	-
	Hot water system		16 (69.6)	73 (89)	[d]0.043
Possession of durables	Having car		1 (4.3)	15 (18.3)	[d]0.185
	Having washing machine		17 (73.9)	77 (93.9)	[d]0.013
	Having dishwasher		2 (8.7)	46 (56.1)	[b]<0.001
	Having refrigerator		17 (73.9)	80 (97.6)	[d]0.001
	Having computer		3 (13)	16 (19.5)	[d]0.558
	Having phone				
Problems with the dwelling and environment	Tenant		22 (95.7)	80 (61)	[b]0.002
	Residential problems	Leaking roof	3 (13)	10 (12.2)	[d]1.000
		Rot in window frames	0 (0)	6 (7.3)	[d]0.335
		Rooms enough light	1 (4.3)	12 (14.6)	[d]0.289
Living conditions indicators	Repair worn furniture		10 (43.5)	59 (72)	[b]0.011
	Replacing worn furniture		2 (8.7)	11 (13.4)	[d]0.729
	Replacing old clothes with new ones		8 (34.8)	46 (56.1)	[b]0.070
	Not pay bills		9 (39.1)	7 (8.5)	[d]0.001

[a]Mann–Whitney U Test [b]Pearson Ki-kare Test [c]Fisher–Freeman–Halton Exact Test
[d]Fisher's Exact Test

ing machine, dishwasher, and refrigerator was more common among Turkish patients (p=0.013; p<0.001; p=0.001) (Table 3).

Problems with the dwelling and environment: most of the Syrian patients (95.7%) were tenants (p=0.002). Residential problems such as leaking roofs, rot in window frames, and rooms that were too dark or did not provide enough light were similar between both groups (p=1.000; p=0.335; p=0.289, respectively).

Living conditions indicators: capacity to replace worn furniture and old clothes with new ones were similar (p=0.729; p=0.070), but some of the Syrian patients could not pay their bills (39.1% vs. 8.5%; p=0.001).

DISCUSSION

Since the onset of the conflict in March 2011, The Republic of Turkey, with its historical, cultural, and neighborly ties, followed an open door policy to Syrian refugees (10). Consequently, an important social-economic problem has been encountered. In this study, information was obtained concerning some of the socio-demographic features, income status, shelter, and living conditions in Syrian and socially underprivileged Turkish patients receiving hemodialysis. Our study also aimed to compare socio-economic situations including income distribution and living conditions between Syrian and socially underprivileged Turkish patients receiving hemodialysis.

Of the Syrian refugees living in Turkey, most are young people. The most intense group is the 19-54 age group. A total of 42% of people living in camps and 45% of people living outside camps are in this age group (11). In Istanbul, 65.62% of refugees are among a relatively young age range (12). Syrian patients receiving dialysis are younger. The most common age category was 40-49 years, which is younger than what was reported in France and the USA (13). In this study, Syrian patients receiving hemodialysis were younger than Turkish patients. This could be because of Turkey having got a Syrian, larger younger generation or Syrian patients receiving dialysis being comprised of generally younger people.

The majority of Syrian refugees in Turkey have graduated primary school. A total of 21% of those living in the camps and 19% of those living outside camps had high school and higher education (11). In this study, Syrian patients were found to be better educated than underprivileged Turkish patients receiving hemodialysis.

Compliance to hemodialysis sessions was lower among refugees in Turkey. A reason for this could be that most patients had been dialyzed just twice a week while in Syria (14); but in Turkey, most patients were to have been dialyzed three times a week. It was observed that Syrian patients receiving hemodialysis with permanent vascular access experienced problems in Turkey. Temporary hemodialysis catheters were more frequent among Syrian patients (34.8%) than among Turkish patients; but in Aleppo city, 90.9% of patients were found with AV fistula, whereas 9.1% of patients had central vein catheter (13). This was mostly because of late presentation in Syrian patients. The second common cause was the preparation for kidney transplantation as Syrian patients were younger.

Refugee households are more crowded. It was reported that the average size of older Syrian refugee households was seven persons with 12% of households having 12 or more people (15). Also in Turkey, it was observed that several families were living together in homes, and the number of people per room per home is high (16). Among a significant portion of the Syrian refugee population, approximately 32%, it was found that two or more families were living in one household; approximately 62% of all households had seven or more people residing there. The average number of persons per household was around 8.6 (11). In this study, the mean number of household members was 7.4±3 and 4.5±2 in families of Syrian and Turkish patients, respectively.

Refugees also have problems with employment conditions in the countries where they live. It was reported that most Syrian refugees living in Turkey either did not work, could not find work, or were working in temporary employment under irregular or casual conditions (16). The rate of Syrian refugees receiving support from humanitarian aid agencies is very low (11). In study patients, most patients receiving hemodialysis did not work; the only income for Syrian families was salary or daily wage, and it was determined that they were not taking any social charity.

Syrians living in other countries receiving refugees face problems and issues with shelter. In Lebanon, these refugees live in various types of shelters, including rented rooms, apartments, garages, and in some areas, dilapidated tents on land rented from private landowners. Living conditions of these families are alarming, lacking access to potable water or sanitation facilities (for around 30% of refugees) (17). Older Syrian refugees lived in houses (39%), in tents (26%), in apartments (23%), and public buildings, unfinished structures, or other dwelling sites (11%) (15). In Turkey, refugee dwellings had poor physical conditions such as heating problems or hygiene issues, either no kitchens or bathrooms, or rather unhealthy ones; and it was reported that most homes had no refrigerator, washing machine, electric vacuum, and other such appliances (16). In this study, we found that the number of rooms per home; issues with having a kitchen, a toilet, and a bathroom; and proper heating; problems in the dwelling and environment were similar among Syrian and socially underprivileged Turkish patients receiving hemodialysis; but having washing machine, dishwasher, and refrigerator was more common among Turkish than Syrian patients.

This study has to be interpreted with some caution as it has numerous limitations. This was a sectional study, and the number of Syrian patients included in the study is small in terms of conclusive judgment. The other limitation is a fact that the patients' problems related to dialysis were not evaluated as well as income status, shelter, and living conditions.

CONCLUSION

Given the increase in the number of refugees worldwide, it is important to conduct effective interventions to both reduce individual suffering and prevent future conflicts in their respective communities. This paper highlights some of the existing challenges concerning income distribution and living conditions of Syrian refugees and the disadvantaged groups of the Turkish population. Socio-economic status of Syrian patients receiving hemodialysis is worse as compared to underprivileged Turkish patients receiving hemodialysis. The refugees are dealing with difficulties in starting a new life in a foreign country. They have not been successful in attaining sufficient or adequate living conditions.

Ethics Committee Approval: Authors declared that the research was conducted according to the principles of the World Medical Association Declaration of Helsinki "Ethical Principles for Medical Research Involving Human Subjects", (amended in October 2013).

Informed Consent: Written informed consent was obtained from the patients who participated in this study.

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