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CLINICAL INVESTIGATION

What are the Predictors of Health Services Utilization by Women in a City Center Located in the Eastern Part of Turkey ?: A Cross Sectional Study

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Abstract: The aim of this study is to evaluate factors influencing utilization of health services by women aged 15 years and older having any health symptoms within the previous 15 days in a city center located in the eastern part of Turkey. In this cross-sectional study, subjects (1,000 households) were sampled from the "city-information-system" based on household satellite photographs of the city. Nine hundred and thirty-five households out of 1,000 were included in the study (response rate: 93.5%), and 1,613 subjects were interviewed.

Seven hundred and eighteen women out of 1,613 participants reported at least one health symptom (44.5%), and of these, only 208 (29.1%) reported utilization of health services for these symptoms. The mean age of those 208 participants was 36.8 (± 14.1) years, with a range from 15 to 77. Most were illiterate (56.7%); 79.8% were covered by social insurance; 66.4% were married (legal and religious marriage); and only 3.4% worked outside the home. Those who utilized health services for their health symptoms within the previous 15 days were more likely to be highly educated, to be covered with a social insurance for health expenses, to have a chronic disease, and to use health services for check-ups.

Other factors such as economic conditions and type of the disease, etc. might have influenced health service utilization. Future studies in larger populations are recommended for further analysis (logistic regression modeling) in the same region.

Key Words: Health service utilization, Women, City center, Eastern Turkey

Introduction

There are a number of factors that influence utilization of health services, what Zola terms as the "pathways to the doctor": the availability of medical care, the affordability of the medical care, the failure or success of the treatments within the popular or folk sectors, and the perception of the problem by the patient and the other people around the patient (1). In addition, some other conditions have been explained regarding women's attendance at health care units, such as place of settlement, perceived health status, presence of health insurance, age, educational status, women's standing in public life and at household level, poverty, etc. (2). Poverty of women is critically linked to their health needs and ability to use health services. Of the 1.3 billion poorest

people in the world, 70% of them are women. The majority are within the household and bear an inequitable burden of inadequate health care and shelter (3).

Women's health care services usage may also be associated with their specific reproductive biology and conditions. They live longer than men. However, longevity does not guarantee a healthier life for them and they experience greater morbidity, especially in special age groups such as reproductive ages, the menopausal period, etc. (4-8).

The profile is quite similar in Turkey. The educational status of women and the place of residence (urban/rural/west/east) are determining factors, particularly in issues related to the attitudes towards fertility and utilizing health care services, receiving

antenatal care and giving birth in health care institutions. Additionally, factors such as the inadequate number of health care facilities, the imbalance in the distribution of personnel, lack of professional knowledge and skill, and the language barrier, particularly for women in the east, adversely influence utilization of these services (9).

In this study, we aimed to determine socio-demographic factors influencing utilization of health services by women aged 15 years and older having any health symptoms during the two weeks prior to the interview in a city center located in the eastern region of Turkey.

Material and Methods

Study sample and population

The source of data for this study was the cross-sectional household survey conducted in a city center located in the eastern part of Turkey. The total population of the city center was 184,913 inhabitants, of which 52,233 were women aged 15 years or older.

Subjects (1,000 households) were sampled from the "city-information-system" based on household satellite photographs of the city. All households in each district were designated on the maps. The sample was calculated using the "infant mortality rate for the eastern part of Turkey" and "person living per one household" parameters. Nine hundred and thirty-five households out of 1,000 were included in the study (response rate: 93.5%) and 1,613 women aged 15 years and older were living in the 935 households. Women were queried regarding any health symptoms within the previous 15 days, and 718 women reported at least one. Data analysis of this paper was drawn over 718, the number of women having at least one symptom.

Official permissions and required collaborations were completed before the study. Personal informed verbal consent of the participants was obtained before applying the questionnaire, and confidentiality was assured.

Data collection

An interview-administered face-to-face questionnaire consisting mainly of close-ended questions was applied. Trained interviewers administered the questionnaire, which was developed by the research team. It took approximately half an hour to complete the questionnaire.

Socio-demographic characteristics of the participants were examined by age, educational status, social insurance status for health expenses, marital status, employment status, and migration status. Women who stated that they had migrated to the city center within the last five years were accepted as immigrants.

Statistics

Statistical Package for Social Sciences (SPSS) 10.0 was used for statistical analysis. Analyses included frequency and percent distributions, and calculations of means, standard deviations, medians, and percentiles. Multivariate analysis included analysis of logistic regression modeling for utilization of health services. The logistic regression model included age, marital status, social insurance status, educational status, migration status, presence of chronic disease, utilization of health services for check-ups, and self-perception of health status. During analysis, other variables were adjusted for each. The following were used as reference groups: "Being 15-24 years of age", "being single/widowed or divorced", "having no social insurance for health expenses", "having a primary school or lower educational status", "having migrated to the city center", "not reporting a chronic disease", "not utilizing health services for check-ups within the last month", and "self-perception of health as well". Adjusted odds ratios with 95% confidence intervals were reported and a p value ≤ 0.05 was considered statistically significant.

Results and Discussion

The mean age of the women who had had at least one health symptom was 35.3 years, with a range of 15 to 81 years. Most of the women who reported health symptoms within the previous 15 days identified themselves as illiterate (56.7%); 34.9% were not covered by any social insurance system; 70.5% were married; 97.7% did not work outside the home, and 67.6% had migrated to the city center.

There were statistically significant differences regarding age and marital status between those who reported at least one health symptom and those with no health symptom ($P < 0.000$). Married and divorced/widowed women reported health symptoms more frequently than single women (Table 1).

Table 1. Socio-demographic characteristics of women aged 15 years and older (city center, 2002).

Symptom within the previous 15 days				
	No Number (%)	Yes Number (%)	Total Number (%)*	P***
Age groups				<0.001
15-24	369(63.1)	216(26.9)	585(36.4)	
25-34	239(56.4)	185(43.6)	424(26.4)	
35-44	125(49.2)	129(50.8)	254(15.7)	
45-54	84(49.4)	86(50.6)	170(10.6)	
55-64	41(39.4)	63(60.6)	104(6.5)	
65 and older	33(49.3)	34(50.7)	67(4.2)	
	891(55.5)	713(44.5)	1604	
mean (±ss)	31.5 (±14.9)	35.3 (±14.9)	33.1 (±14.9)	
median	27	31	29	
min-max	15-95	15-81	15-95	
Educational status				0.162
Illiterate/literate	542(53.7)	468(46.3)	1010(63.4)	
Primary	229(54.8)	163(41.6)	392(24.6)	
Secondary and above	112(58.9)	78(41.1)	190(12.0)	
Total	883(55.5)	709(44.5)	1592	
Social insurance for health expenses			0.297	
No	335(57.2)	251(42.8)	586(36.4)	
Yes	559(54.4)	467(45.6)	1026(63.6)	
Total	894(55.5)	718(44.5)	1612	
Marital status				<0.001
Married**	562(52.6)	506(47.4)	1068(67.1)	
Single	258(62.6)	154(37.4)	412(25.9)	
Divorced, widowed	54(48.2)	58(51.8)	112(7.0)	
Total	874(54.9)	718(45.1)	1592	
Employment status				0.472
Yes	25(60.9)	16(38.1)	41(2.5)	
No/home duties	869(55.3)	702(44.7)	1571(97.5)	
Total	894(55.5)	718(44.5)	1612	
Migration status				0.392
Did not migrate	306(56.9)	231 (43.1)	537(33.5)	
Migrated	584(54.7)	483(45.3)	1067(66.5)	
Total	890(55.5)	714(45.5)	1604	

*Column percentage, other are row percentage; ** Legal and religious marriages

*** Chi-square test p value

Respondents were asked about their frequency of health service utilization during the two weeks prior to the interview. The majority of the women (70.9%) reported that they had not visited any health institution. Women who reported that they had visited a health institution reported visiting the state hospital with the highest frequency (59.1%), followed by visiting private health services (15.4%), and primary health care institutions (11.5%) (Table 2).

The odds ratio of health service utilization (utilized/not utilized) was 2.229 times higher among women who were covered by a social insurance system versus those who were not ($P < 0.001$; 95% CI = 1.489-3.336). The odds of women with a secondary school or higher education utilizing health services was 1.962 times higher than for those with a primary school or lower education ($P = 0.012$; 95% CI = 1.161-3.316). Reporting any chronic disease was found to increase the

Table 2. Utilization of health services by women aged 15 years and older with any symptom during the two weeks prior to the interview (city center, 2002).

	Number (%)
Utilization of health services	
No	506(70.9)
Yes	208(29.1)
State hospital	123(59.1)
Private health services	32(15.4)
University hospital	29(13.9)
Primary health care institutions	24(11.5)
Total	714(100.0)

odds of utilization of health services versus not reporting ($P < 0.001$; 95% CI = 1.733-3.650).

The odds of health service utilization was 4.408 times higher among women who used health services for check-ups than for the women who did not ($P < 0.001$; 95% CI = 2.566-7.573) (Table 3).

This study, which was conducted in a city center located in the eastern part of Turkey, aimed to determine the utilization of health services by women aged 15 years and older. In our study, 1,613 women were interviewed and 718 of them reported at least one health symptom during the two weeks prior to the interview (44.5%); only 208 (29.1%) of these reported utilizing health services for these symptoms. Lack of awareness of some

Table 3. Factors associated with women's utilization of health services (city center, 2002)^a (n = 713).

	Health service utilization (%) ^b	Adjusted OR (95% CI)	P
Age group			
15-24	24.3	1.0	
25-34	31.1	0.988 (0.565-1.729)	0.967
45 and over	32.2	1.016 (0.650-1.588)	0.945
Marital status			
Single, widowed, divorced	25.1	1.0	0.076
Married	30.8	1.392 (0.923-2.099)	
Social insurance			
No	16.8	1.0	
Yes	35.8	2.229 (1.489-3.336)	<0.001
Educational status			
Primary and lower	27.1	1.0	
Secondary and higher	44.2	1.962 (1.161-3.316)	0.012
Migration status			
Yes	26.7	1.0	0.152
No	33.9	1.322 (0.903-1.937)	
Chronic disease			
No	22.6	1.0	
Yes	46.1	2.515 (1.733-3.650)	< 0.001
Utilization of health services for check-ups			
No	24.8	1.0	
Yes	65.8	4.408 (2.566-7.573)	< 0.001
Perception of health			
Well	25.7	1.0	
Not well	31.4	1.306 (0.889-1.919)	0.173

OR = Odds Ratio, CI = Confidence Interval

^a the logistic regression model included age, marital status, social insurance status, educational status, migration status, having chronic disease, utilization of health service for check-ups, and perception of health. During analysis, other variables are adjusted for each.

^b unadjusted percent values

diseases might have reduced the admission to health care institutions. Frequently reported symptoms such as fatigue and headache might have been underestimated due to lack of awareness, and this might have caused a decrease in women's admission to the health institutions. In a study conducted by Lau et al., the decision of students on whether to seek medical care depended on the type of illness suffered. Those who had asthma, cough, cold, and/or influenza, digestive disorders, and skin problems were significantly more likely to seek help from physicians, whereas those with chronic anxiety and/or insomnia were significantly less likely to consult a doctor (10). The perception of the symptom in the society may affect the admission to the health facilities. For example, a very common symptom may be considered as normal (though not necessarily good or desirable) even if it is the symptom of a fatal disease. Tiredness is a very common symptom and often considered to be normal, even though it is sometimes a feature of severe illness. Similarly, backache was considered to be a normal part of life, at least by the lower socio-economic groups (1).

Women who reported that they had visited a health institution reported visiting state hospitals most frequently (59.1%), followed by visiting private health services (15.4%), and primary health care institutions (11.5%). Admission to a primary health care institution accounted for only 11.5% of the total (Table 2). In Turkey, primary health care institutions are structured as the first level of the health system, and the majority of the services are provided either free or at very low cost. Almost 90-95% of the health problems of the users are solved at the first level. However, the participants' use of primary health care units in this study was lower than expected, and private health service admission was higher in frequency than the admission to the primary health care institutions. This result was quite confusing given their social insurance status for health expenditure. Among the study population, although a significant number of people were without health insurance for health expenses, they preferred to use the private sector for their health problems. Similar results have been reported from other regions of the world. For example, women living in rural Nigeria reported that they preferred private obstetric services to public services when private services were more accessible, because a doctor was more frequently available (11). In this study region (city center) there were many private institutions

and people could easily access these institutions. In contrast to the results of the Nigerian study, most of the doctors in the primary health care institutions in this study region are almost always available.

There is evidence that patients of lower socio-economic status are least likely to report health-seeking behavior (12). In our study, we found similar results. Women having social insurance for health expenses reported 2.2 times higher utilization of health care services compared to the utilization among the ones without any health insurance ($P < 0.001$; 95% CI = 1.489-3.336). Health care services admission frequency was 1.962 times higher among women with secondary school or higher education compared to the ones with lower education ($P = 0.012$; 95% CI = 1.161-3.316) (Table 3). In a study conducted by Almeida et al., it was reported that uninsured women faced more significant access barriers and utilized fewer services, particularly preventive care services, than women with either public or private coverage (13). A study from China highlighted that outpatient care use was higher among higher versus lower educated individuals (14). Having social insurance for health expenses and educational status can be accepted as two important determinants of socio-economic status. In order to reduce barriers to health care utilization, expansion of universal health coverage is recommended (4).

The odds of health service utilization was 4.408 times higher among women who used health services for check-ups versus women who did not ($P \leq 0.001$; 95% CI = 2.566-7.573) (Table 3).

"Utilization of health services for check-ups" may be indicative of a higher level of personal responsibility towards one's health care.

Utilization of health services changes according to the characteristics of the disease (chronic, acute, duration of the symptom, etc.). According to the results of our study, reporting any chronic disease was found to increase the odds of utilization of health services when compared with those not reporting a chronic disease ($P < 0.001$; 95% CI = 1.733-3.650) (Table 3).

A very important factor that influences utilization of health services is individual differences. A given symptom may be differently perceived, evaluated and acted upon by different individuals. This difference mainly concerns symptom identification and illness behavior phases. Level

of knowledge regarding health and the cultural background of the participants may direct the "utilization" behavior (15). A questionnaire designed to ascertain one's level of knowledge regarding health and other related factors could be integrated into future studies to better determine the associations.

This study had some limitations, in that it was conducted during the weekdays and thus working women could not participate. A second visit to the households for those cases not contacted was completed; however, the participation rate did not reach 100.0%. Furthermore, the logistic regression modeling included only limited possible influencing factors due to the number of subjects. Larger numbers are suitable for different logistic models in which more influencing factors can be evaluated. Finally, the fact that only women were investigated in this study was a limitation for assessing gender differences regarding health care utilization.

It is frequently reported that people of lower social class have poorer health and less access to health services and preventive care (16,17). This study region, geographically located in the eastern part of Turkey, has poorer socio-economic conditions compared to the western parts of the country (educational status, infant mortality rate, family planning usage percentage, indicators regarding nutritional status, etc.) (18). Women living in this city have more stressful life events as a result of all these conditions. In our study population, the percentage of women of lower socio-economic conditions (educational status, marital status, employment status)

was quite high. In addition to the effects of the lower socioeconomic conditions prevalent in the eastern region, social inequalities within the population itself exist and problems due to these inequalities may also have contributed to the lack of utilization of health services.

Women who utilized health services for their health symptoms within the previous 15 days were more likely to be higher educated, to be covered with a social insurance for health expenses, to have a chronic disease, and to use health services for check-ups. Other factors such as economic conditions and type of disease, etc. might also have influenced health service utilization. For a better understanding of the dynamics, qualitative components should be integrated into the quantitative data.

Contributions

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