

## Research Article

# Outpatient Health Service Utilization and its Related Factors Among Female Heads of Households

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## Introduction

Today, to determine the level of development in societies we need to consider the criteria that include the quality of health of people in society, the equal distribution of health among different social classes, and the protection of disadvantaged people against health-related factors [1]. Access to quality services to promote and maintain health, prevent and manage diseases, reduce mortality, and achieve health outcomes and equity is an essential principle for all. However, the use of health services is unsatisfactory in most countries [2]. Today, more than one billion people in the world do not have access to health care

## Abstract

**Background:** Access to quality services to promote and maintain health, prevent and manage diseases, reduce mortality, and achieve health outcomes and equity is a necessary principle for everyone. As a result, the aim of this study was to investigate the status of Outpatient Health Service Utilization (OHSU) among female heads of households.

**Materials and Methods:** This cross-sectional study was conducted from May to June 2022 on 462 female heads of households living in Tabriz, Iran. Logistic regression analysis was used to determine the relationship between independent variables and OHSU in the previous month. SPSS software (version 23.0; IBM) was used to analyze the data.

**Results:** OHSU among female heads of households was 62.3% (N = 288, CI: 58-67.1). In the multivariable logistic regression model, results showed a significant difference between those who reported OHSU and those who did not in terms of marital status, socioeconomic status, level of physical activity, out of pocket payment for health care, having a person with a disability in family, and number of dependents.

**Conclusion:** The results showed that in order to reach the global goals of health service utilization among female heads of households, policies should change in favor of unmarried women (widow, divorced, fugitive and imprisoned husbands, etc), women with low socioeconomic status, inactive and less physically active women, lower educated women, women with a disabled person in her family, and women with a dependent person. The governments should also provide free preventive and primary care services for these women in times of need.

**Keywords:** Benefit; Health service utilization; Outpatient health services; Women; Female heads of households

**Abbreviations:** HSU: Health Service Utilization.

services [3], and more than a third of the world's population cannot use health services for social, economic and cultural reasons [4]. Access to and utilizing health services in many people, especially vulnerable groups including women and children in developing countries, is a serious challenge for the health system [5]. Inequitable use of health services has been reported among the poor [6,7], and this disparity is common among women in countries with weak health care systems [8]. Health services utilization and the quality of health care provided to women in any society determines the health status in that so-

ciety [9]. As half of the world's population, women have a great contribution to the socio-economic development of families and societies. The World Health Organization emphasizes that women are the main foundations of families, and are the key educators of caring for family members [10].

Female heads of households, in addition to maternal duties such as taking care of children and doing household chores, are responsible for the finance of the family. They also take care of the physical and emotional needs of their family members, and most of them are required to work outside the home. Since women often do not have sufficient income and at the same time, they play the roles of both men and women in the family, they experience various stresses and problems. On the other hand, having to play different roles makes female heads of households, who try to do their jobs and take care of children, experience a role conflict, which affects their health.

The general consensus is that inequality in health service utilization is unfair, and health care systems must guarantee equal access to services based on the patient's needs [11]. Social and economic inequalities in the use of health services lead to an increase in the burden of disease and the intensification of social inequalities, which have adverse social and economic effects [12].

The previous literature has shown that the utilizing of health services depends on socio-economic and cultural factors, as well as individual factors such as age, gender, ethnicity, employment status, marital status, education level, proximity to the health service providers, place of residence (urban or rural), and its availability and affordability [13,14]. In countries where the resources needed for the health system are limited, it is necessary to measure the utilization of health services and implement the interventions effectively [15,16], because these measures can be helpful in the development or modification of health policies. Therefore, it is necessary to examine the status and determinants of health service utilization in vulnerable groups, including female heads of households, as it can contribute to the development of public health policies and increase social welfare.

Since the factors related to health service utilization among female heads of households have not been investigated and documented, the aim of the present study is to identify the determinants of OHSU among female heads of households. This study also intends to help gain an insight into factors affecting OHSU among female heads of households and help to better plan and design interventions to improve access and health service utilization in these women.

## Methodology

The current study is a descriptive, analytical and cross-sectional study that was conducted between May and June 2022 among 462 female heads of households under the financial support of Iran's Welfare Organization in Tabriz city (behzisty in Persian). Sampling was done by proportional method, so that after determining the number of women covered by the welfare organization, one out of every ten women referred to the welfare organization was randomly included in the study. The inclusion criteria were; being a female head of household, living in Tabriz city for at least one year prior to the start of study, having appropriate mental and cognitive health to answer the questions, and willing to participate in the study. The questionnaires were completed in a 30-minute interview with the participants.

## Outcome Variable

The outcome variable in the current study was the OHSU in the previous month, which included visiting a general practitioner or specialist (such as a gynecologist, ophthalmologist, orthopedist, otolaryngologist, and other specialists), dental and emergency services, and utilizing these services. The participants were asked whether they have needed to receive health services in last four weeks prior to the interviews. Other questions were also asked from the participants including: "Did you visit health centers to receive outpatient health services?" and "Did you receive health service upon your referral?", Data analysis was performed only on women in need of health services. The answer to this question: "Did you receive health services when needed?" was responded by options yes or no, which was entered in multivariable logistic regression analysis.

## Independent Variables

The variables included in the study as independent variables included age, marital status, employment status, education level, having basic health insurance (social security, medical services, universal health insurance), having supplementary insurance (private insurance), socioeconomic status, income level, home ownership, number of dependents, monthly cost of living, having people with disability or chronic illness in the family, smoking and alcohol consumption, having a family physician, having medication at home, perceived health status, familiarity with the official language of the country, per capita health costs of the household, out-of-pocket payment for health services, having catastrophic health expenditures in the last year, and the physical activity per week.

SPSS statistical software (version 20.0; IBM) was used to analyze the data. At the significant level of 0.05, bivariate analysis compared respondents who used outpatient health services with those who did not. In order to include the factors related to OHSU, bivariate analysis was carried out using Chi-square test and then, variables with a p-value of  $\leq 0.2$  were included in the multiple logistic regression model. The Odds Ratio (OR), adjusted odds ratios, and 95% confidence intervals were used as estimates of strength for related factors.

## Results

Most of the participants were 41-45 years old, divorced, housewives, live in rented houses, and also had high school diplomas, low socioeconomic status, and basic health insurance.

Our survey showed that the prevalence of OHSU was 62.3% (N = 288, CI: 58-67.1) among the participants. OHSU was also significantly correlated to age, marital status, education level, socioeconomic status, home ownership, having a person with a disability in the family, having a person with chronic disease in the family, smoking, having a family physician, having medication at home, perceived health status, familiarity with the official language of the country, number of dependents, health costs, out of pocket payment for health services, and amount of physical activity per week ( $p < .05$ ). On the other hand, OHSU was not significantly correlated to employment status, having basic health insurance, having supplementary insurance, family size, monthly cost of living, alcohol consumption, income level, and catastrophic health expenditures ( $p > .05$ ), (Table 1).

In the multivariable logistic regression model, results showed a significant difference between those who reported OHSU and those who did not in terms of marital status (widow versus

**Table 1:** Socio-demographic characteristics of the participants by health service utilization (n=462).

Characteristics	Categories	Health service utilization		P-value
		No (%)	Yes (%)	
Age	<36 years	44(25.3)	40(13.9)	0.008
	36-40	24(13.8)	38(13.2)	
	41-45	46(26.4)	68(23.6)	
	46-50	38(21.8)	84(29.2)	
	>50	22(12.6)	58(20.1)	
Marital status	Single, never married	8(4.6)	22(7.6)	0.05
	Widow	44(25.3)	100(34.7)	
	Spouseless due to divorce	92(52.9)	122(42.4)	
	Having a spouse (prisoner, fugitive, addicted)	30(17.2)	44(15.3)	
Education level	Illiterate	26(14.9)	48(16.7)	0.008
	1-6	40(23)	112(38.9)	
	7-9	32(18.4)	42(14.6)	
	10-11	26(14.9)	32(11.1)	
	12	36(20.7)	38(13.2)	
Socioeconomic status	University degree	14(8)	16(5.6)	0.05
	Higher than average	4(2.3)	28(9.7)	
	Medium	60(34.9)	76(26.4)	
Employment status	Medium to low	32(18.6)	68(23.6)	0.43
	Low	76(44.2)	116(40.3)	
Basic health insurance	Employed	48(28.6)	84(29.8)	0.49
	Housewife	120(71.4)	198(70.2)	
Supplementary health insurance	No	8(4.6)	12(4.2)	0.12
	Yes	166(95.4)	276(95.8)	
Family size	No	168(96.6)	284(98.6)	0.35
	Yes	6(3.4)	4(1.4)	
	1	28(16.1)	38(13.2)	
	2	68(39.1)	126(43.8)	
House ownership	3	44(25.3)	82(28.5)	0.006
	>4	34(19.5)	42(14.6)	
	Owner	28(16.3)	38(13.2)	
Monthly cost of living	Renter	90(52.3)	116(40.3)	0.22
	Living with family	54(31.4)	134(46.5)	
	<\$30	48(27.9)	102(35.7)	
Having a person with a disability in the family	30-80	68(39.5)	102(35.7)	0.009
	>80	56(32.6)	82(28.7)	
Having a person with a chronic disease in the family	No	150(86.2)	208(72.2)	0.001
	Yes	24(13.8)	80(27.8)	
Smoking	No	112(64.4)	152(52.8)	0.08
	Yes	62(35.6)	136(47.2)	
Alcohol consumption	No	164(94.3)	260(90.3)	0.6
	Yes	10(5.7)	28(9.7)	
Having a family physician	No	168(96.6)	278(96.5)	0.9
	Yes	6(3.4)	10(3.5)	
Having medication at home	No	80(47.6)	116(40.8)	0.03
	Yes	88(52.4)	168(59.2)	
Perceived health status	No	32(18.4)	26(9.1)	0.6
	Yes	142(81.6)	260(90.9)	
	Good	62(38.3)	142(49.7)	
Familiarity with the official language of the country	Moderate	62(38.3)	86(30.1)	0.15
	Bad	38(23.5)	58(20.3)	
	Not familiar	18(10.6)	32(11.3)	
	Good	80(47.1)	116(41.1)	
Number of dependents	Moderate	46(27.1)	56(19.9)	0.5
	Bad	26(15.3)	78(27.7)	
	1	54(31.4)	60(21.3)	
Income level	2	68(39.5)	124(44)	0.12
	>2	50(29.1)	98(34.8)	
	>\$30	88(50.6)	152(52.8)	
Health care cost	30-100	76(43.7)	106(36.8)	0.3
	101-150	10(5.7)	30(10.4)	
	0-10%	68(39.1)	84(29.2)	
	10-20	68(39.1)	146(50.7)	
Out of pocket payment for health care	20-30	28(16.1)	50(17.4)	0.01
	>40	10(5.7)	8(2.8)	
	0-10%	50(28.7)	50(17.4)	
	10-20	52(29.9)	134(46.5)	
Physical activity	20-30	28(16.1)	62(21.5)	0.24
	>40	44(25.3)	42(14.6)	
	0	90(51.7)	130(45.1)	
	1-2 hours per week	44(25.3)	64(22.2)	
Having catastrophic health expenditures	3 hours per week	28(16.1)	46(16)	0.24
	>3 hours per week	12(6.9)	48(16.7)	
	No	114(65.5)	178(61.8)	
	Yes	60(34.5)	110(38.2)	

**Table 2:** Binary logistic regression of factors related to health service utilization.

Variables	Categories	P	AOR	95% CI	
				LB	UB
Marital status	Single (Never married)	1			
	Widow	0.010	0.221	0.069	0.702
	Spouseless due to divorce	0.000	0.133	0.044	0.400
	Having a spouse (prisoner, fugitive, addicted)	0.009	0.201	0.060	0.673
Socioeconomic status	Moderate to high	1			
	Moderate	0.000	0.091	0.025	0.325
	Moderate to low	0.009	0.171	0.046	0.642
	Low	0.001	0.121	0.034	0.436
Physical activity	0 hours per week	0.037	2.001	1.042	3.841
	1-2 hours per week	0.245	1.499	0.757	2.967
	3 hours per week	0.001	4.563	1.829	11.382
	>3 hours per week	1			
Out of pocket payment for health care	0-10%	0.979	1.010	0.457	2.235
	10-20	0.001	3.341	1.658	6.734
	20-30	0.355	1.428	0.671	3.036
	>40	1			
Education level	Illiterate	1			
	1-6	0.216	1.610	0.757	3.428
	7-9	0.341	0.663	0.284	1.546
	10-11	0.026	0.323	0.120	0.873
	12	0.208	0.565	0.232	1.375
	University degree	0.008	0.221	0.072	0.679
Having a person with A disability in the family	Yes (REF)	0.000	4.061	2.044	8.068
Number of dependents	1 Individual	1			
	2	0.008	2.256	1.237	4.114
	>2	0.178	1.545	0.820	2.913

single or never married, OR = .22, 95% CI:.06–.7, spouseless due to divorce versus single, OR = .13, 95% CI:.04–.4, having a spouse (prisoner, fugitive, addicted) versus single OR = .2, 95% CI:.06–.67), socioeconomic status (moderate versus moderate to high OR =.09, 95% CI:.02–.32, moderate to low versus moderate to high OR =.17, 95% CI:.04–.64, low versus moderate to high OR =.12, 95% CI:.03–.43), level of physical activity per week (0 hours per week versus >3 hours per week OR =2.001, 95% CI:1.04–3.84, 3 hours per week versus >3 hours per week OR =4.56, 95% CI:1.82–11.38), out of pocket payment for health care (10-20 versus >40 OR =3.34, 95% CI: 1.65– 6.73), having a person with a disability in the family (yes versus no OR =4.06, 95% CI: 2.04– 8.06), and the number of dependents (2 people versus 1 person OR =2.25, 95% CI: 1.23– 4.14), (Table 2).

## Discussion

The aim of the present study was to examine the OHSU and its related factors among female heads of households. The results showed that the rate of health service utilization among female heads of households was 62.3%, which is similar to previous studies conducted in Iran [17,18]. The findings of the present study also showed that married women who were heads of households (widows, divorced women, women with fugitive husbands, and women with addicted husbands) had a lower level of health service utilization than single women. In general, it is expected that married individuals use health services more than single ones due to the presence of a supporting person. It

seems that the reason for this contradiction is the target group of this study, because it is possible that married female heads of households pay more for health services due to reasons, such as not having a spouse, guardian or supporters, low income, having dependents and having less free time, as a result they use health services less than other women. Contrary to the results of the present study, the OHSU in other studies was higher in widowed and divorced women compared to other groups of women [19–21]. Some studies also did not find a significant relationship between marital status and health service utilization [17,22–27].

The findings of the present study indicated that female heads of households with low socioeconomic status used fewer health services than the female heads of households with high socioeconomic status. In line with this finding, other studies have shown that women with higher socioeconomic status have more chances to receive health care services than other women [8,17,21,28,29]. Some studies have also revealed that poor women use fewer health services than wealthy women [19,23,28,30–32]. However, the study of Qian, et al [20] did not show a difference in the OHSU in the last two weeks by women with different socioeconomic status. In general, it can be said that various studies have documented different levels of health service utilization in favor of rich people [20,22]. In most studies, the level of wealth and better socioeconomic status were important factors in accessing and utilizing health services, as the rich have more ability and willingness to pay for medical services [20]. Also, living in poverty and in deprived areas is correlated to an increase in medical needs [33].

In the present study, we found that people who had less physical activity used more health services than others. This result can be justified by the fact that, physically active people have a healthier lifestyle, better nutrition, and care more about their health, so they need to receive fewer health services than less active people. This finding shows the importance of paying attention to exercise and physical activity, as other studies have shown that people with less physical activity use more health services [34].

The results of the present study showed that people who paid 10-20% of the health care cost out of their pocket, had more chances of utilizing health services than people who paid more than 40% of the health care cost out of their pocket. In other words, the lower the out-of-pocket payment for health services is, the more health service utilization would be by people. The female heads of households in the present study had a low income, so the higher share of out-of-pocket payments for health services had a negative effect on their use of health services. The findings of other studies show that women with higher socioeconomic status have more chances of utilizing health care services than poorer women [8,17,21,28,29]. Some studies have also shown that poor women use health services less than rich ones [19,23,28,30–32].

In the present study, people with higher education reported lower levels of health service utilization than people with low education. Contrary to this result, in other studies, people with low education had lower levels of health service utilization than more educated people [21,28,31,35]. Some studies also did not report a significant relationship between the level of education and the health service utilization [3,19,22,23,25]. In this regard, it can be said that people with higher education are expected to have more health literacy, higher socioeconomic status and healthier lifestyle and also have more physical activity, as a re-



sult, they have a better health status and need fewer health services. Some studies have also shown that women with higher education use more preventive health services and less curative services [5,8,17,24,26,28,29,36,37].

Having people with a disability in the family was associated with a higher level of health service utilization in the present study. People with disabilities are aware of the fact that, they have special needs and these needs force them to utilize more health services. In this regard, it can be said that having a person with a disability in the family can increase the chances of health service utilization. This is consistent with previous studies that showed having a person with a disability in the family increases the chance of using health services [2,22,38-40].

The findings of this study also showed that women with two dependents used health services more than women with one dependent. It seems that the presence of another person in the family can have a positive effect on the use of health services. However, the increase in the number of dependents can also be an obstacle to the level of health service utilization, because a higher number of people in the household is associated with additional costs, which will reduce the ability of households to pay for health services. In this regard, previous findings are contradictory to our results, as a study showed that bigger families are more likely to use health services [5].

Contrary to this result, another study revealed that bigger families are less likely to use health services [9]. It seems that an increase in the number of family members and their needs (such as cooking, cleaning the house and taking care of the children) creates problems for the female heads of household, causing them to pay less attention to their health status and not use health services when needed.

According to our knowledge, the present study is the first study that investigated the OHSU in Iranian female heads of households. Therefore, the findings of this study can add to the body of knowledge in this fields. One of the limitations of the present study was its cross-sectional nature, as we were not able to investigate the relationships between causes and effects, which can affect the results of this study. As a result, a longitudinal study is suggested to investigate the factors related to the health services utilization among female heads of households. The present study has also evaluated the OHSU in the previous month based on the participants' self-report, which can make the results less reliable. In the current study, we only examined OHSU, so it is necessary to study the inpatient and preventive service utilization in this vulnerable group in future studies.

## Conclusion

The results of the present study showed that in order to achieve the global goals of health care coverage and help female heads of household to utilize health services, health policies should be changed in favor of married women (widows, divorced, women with fugitive husbands and women with imprisoned husbands), women with low socioeconomic status, less physically active women, women with less education, women looking after a person with a disability in the family, and women with dependents. The governments should also provide free preventive and primary care services for these women when needed.

## Author Statements

### Ethical Considerations

The study protocol and procedures were reviewed and approved by the Ethics Committee and the Research Review Board of Tabriz University of Medical Sciences (IR.TBZMED.REC.1399.546).

### Ethics Approval and Informed Consent

This study was conducted following in accordance with the declaration of Helsinki. This study was approved by the Research Ethics Committee of Tabriz University of Medical Sciences, Tehran, Iran (IR.TBZMED.REC.1399.546).

### Availability of Data and Materials

All data generated or analysed during this study are included in this published article, and the datasets used and/or analysed during the current study available from the corresponding author on reasonable request.

### Conflict of Interests

The authors declare that they have no conflict of interest. The authors alone are responsible for the content and writing of the article.

### Author's Contributions

Study concept and design NSA, MA and SEK. Search, analysis and interpretation of data SEK and BZ. Drafting the manuscript SEK, NSA and MA. Critical revision of the manuscript MAMG, BZ, GK. Field investigation supervision SEK. All authors read and approved the final manuscript.

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