Original Article

The Association between Family Socio-Economic Status and Health Care Utilization in Ghaemshahr-Mazandaran, Iran

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Abstract

Background and purpose: Equity in access to health care has become a desirable policy objective. Therefore, accessibility to health care should be provided based on health needs rather than socio-demographic variables. This will lead to a better utilization of health care and improvement of equity in health. The aim of this paper is to examine the effects of family socio-economic status as an indication of individual's socio-economic status on the utilization of their health care.

Materials and Methods: This was a cross-sectional study conducted in Ghaemshahr County, Iran in early 2013. In this household survey, 807 individuals were randomly approached at their home. A self-designed questionnaire was applied. The parent or every individual above 18 years were asked to fill the questionnaire for themselves and other member of their family. Using SPSS software analyses were performed with employing correlation coefficient, Chi-square and t-test.

Results: About 47.9% and 52.1% of respondents were living at urban and rural area respectively. Respondents were from a quite different socio-economic and demographic background. Utilization of health care had only significant association with the location of respondents. Underutilization of health care has proportionately more evident in a rural area compared with the urban area.

Conclusion: Accessibility to and utilization of health care was lower in a rural area. There is a concern of inequity in health at rural area and is going to be expanded. Appropriate policy and intervention are required to improve the situation.

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***Key words*:** Socio-economic, Demographic, Utilization, Health care

1. Introduction

Equity in access to health care has become a desirable policy objective in almost all developed countries and many developing countries, which means adequate accessibility to health care by individuals based on their health needs rather than socio-demographic variables should be provided (1-4). Based on Andersen (2) point of view equitable health care utilization exists only when there is a correlation of health care provision with indicators of needs but not with socio-demographic or economic indicators of individuals. Individual socioeconomic status can affect the health care utilization and the type of care in different ways (5). There are evidences that socio-economic status such as income level, education, employment, ethnicity, and so on can cause horizontal inequity both in hospital and outpatient services (4,6-8). The influence of individual health status seems to be more powerful determinant of health care utilization compared to demographic and socio-economic status (9,10). Income and education levels are two of most important components of individual socio-economic status that found to affect health care utilization (11,4). Rather than individual factors or demand side factors there are also supply-side factors that affect the use of health care services particularly the intensity of treatment (12,13), but they are not as important as the patient factors in explaining the differential use of health services (4). The aim of this paper is to examine the effects of family socio-economic status as an indication of individual's socio-economic status on the utilization of their health care.

2. Materials and Methods

This was a cross-sectional study conducted in Ghaemshahr County in early 2013. At the time of study, the County had 61,458 households with 207,013 population at urban area and 33,479 households with 113,694 populations at rural area. With the recommendation of statistician and using Morgan table a total sample size of about 800 was drawn almost equally from both urban and rural areas. This was a household survey, which 807 individuals from rural and urban area were approached at their home. A self-designed questionnaire with 37 mixed questions of open and closed end was applied. It has focused on different dimensions, including general background of the location, family's socio-economic status, family's health status, and family's health care utilization. Face validity and content validity of the questionnaire were checked, and required changes were amended. The parent or every individual above 18 years were asked to fill the questionnaire for themselves and other member of their family. Assistant was available in the case of requirement. Collected data were extracted into Excel program. Using SPSS software analyses were performed with employing correlation coefficient, Chi-square and t-test.

3. Results

Average family size of respondents was 3.67 ranking from 1 as lowest and seven as highest. Among 807 individuals from 253 households, 50.4% were female and 49.6 percent were male. Average age of respondents was 32.4 years ranging from 1 as the lowest age and 89 as highest one. About 47.9% of respondents were living at urban area and 52.1% at rural area. Average family income of participants was 5,779,490/3 Iranian Rial changing from 400,000 as minimum and 30,000,000 as the maximum. Socio-economic and demographic status of respondents, as well as their health status, are presented in tables 1 and 2 as follows.

As table 1 indicates, respondents had different socio-economic and demographic background.

Table 1. Socio-economic, demographic and health status of respondents in Ghaemshahr 2013

Indicators/statistics	Frequency	Percentage
Socio-economic and demographic indicators		
Marriage		
Single	307	38.1
Couple	455	56.5
Divorce	6	0.7
Widow	38	4.7
Education		
Illiterate	104	13.6
Elementary	288	37.7
High school	185	24.2
Degree	167	21.9
Higher	20	2.6
Job status		
Employed	200	26
Jobless	126	16.4
Retired	42	5.5
Housekeeper	229	29.8
Other	171	22.3
Economic status		
Excellent	5	1.6
Good	55	18
Average	155	50.2
Weak	79	25.8
Very weak	12	3.9

The following table 2 assesses respondents in terms of their health insurance coverage, health status and utilization of health care.

As table 2 shows, respondents were different in terms of being covered by any types of basic and supplementary health insurance. About 33.5% of respondents had fallen ill in the last three months from the date of data collection. Based on the result of correlation test, we have found that the experience of illness among the respondents at 0.05 level of confidence interval had statistically significant association just with the age, education level, and their marital status. 28.1 percentages of respondents who had fallen ill did not utilize any care as treatment. Further analysis has shown that use of health care treatment had statistically significant association with just location of respondents as indicated in tables 3 and 4.

Table 2. Health insurance coverage, health status, and health care utilization of respondents in Ghaemshahr 2013

Indicators/statistics	Frequency	Percentage
Insurance coverage		
Social security insurance	449	55.6
Medical Services	112	13.9
Insurance Organization		
Rural insurance	132	16.4
Imam Khomeini	3	0.4
Foundation Relief		
Army insurance	32	4
Other type of insurance	7	0.9
Un-insured	72	8.9
Supplemental insurance		
Yes	234	29
No	572	70.9
Equity share distribution		
Yes	260	32.2
No	547	67.8
Health status indicators		
Ill-health background		
Yes	212	26.3
No	595	73.7
Recipient of routine care		
Yes	140	67
No	69	33
Illness in last 3 months		
Yes	270	33.5
No	535	66.5
Severity of diseases		
Light	21	7.8
Mild	148	54.8
Severe	91	33.7
Very severe	10	3.7
Use of any health care		
Yes	194	71.9
No	76	28.1

As the table 3 indicates, a bigger proportion of respondents had fallen ill in the urban area than in a rural area but this difference was not statistically significant. Table 4 compares patients in two locations in terms of the utilization of health care after falling ill.

As the data of table 4 shows, after falling ill people at rural area statistically significantly less utilize health care treatment compared with people living at urban area.

Table 3. The frequency of illness among respondents of different residential areas in Ghaemshahr 2013

Crosstab	Residential area			P value
	Urban	Rural	Total	
Illness in last 3 months				0.086
Yes				
Count	140	129	269	
Percentage within last 3 months	52.0	48.0	100.0	
Percentage within residential area	36.5	30.7	33.5	
Percentage of total	17.4	16.0	33.5	
No				
Count	244	291	535	
Percentage within the last 3 months	45.6	54.4	100.0	
Percentage within the residential area	63.5	69.3	66.5	
Percentage of total	30.3	36.2	66.5	
Total				
Count	384	420	804	
Percentage within last 3 months	47.8	52.2	100.0	
Percentage within residential area	100.0	100.0	100.0	
Percentage of total	47.8	52.2	100.0	

Table 4. A comparison of health care utilization in urban and rural area in Ghaemshahr 2013

Crosstab	Residential area			P value
	Urban	Rural	Total	
Utilization after falling ill				0.002
Yes				
Count	112	81	193	
Percentage within utilization	58.0	42.0	100.0	
Percentage within the residential area	80.0	62.8	71.7	
Percentage of total	41.6	30.1	71.7	
No				
Count	28	48	76	
Percentage within utilization	36.8	63.2	100.0	
Percentage within the residential area	20.0	37.2	28.3	
Percentage of total	10.4	17.8	28.3	
Total				
Count	140	129	269	
Percentage within utilization	52.0	48.0	100.0	
Percentage within the residential area	100.0	100.0	100.0	
Percentage of total	52.0	48.0	100.0	

4. Discussion

Access to and utilization of health care is now a universal policy objective. Therefore, they are usually use them as indicators of equity in the health sector (14). A desirable condition from policy makers point of view is that, the provision of health care should be independent of individuals' socio-economic status but rather should be based on individual health needs (2-4). It is in such situation that the most added value of health care will be achieved. However, the real world of health care setting is different from what is the best in terms of accessibility and utilization of health care services. Investigators and intellectuals pointed out different factors rather than health needs that affect demand for and utilization of health care (2,4-11,13,15-18). Therefore given the status quo of health care setting particularly in developing countries and as a concern of equity in health sector, it does worth to attempt for a better achievement in the accessibility and utilization of health care more influenced by

health needs of individuals rather than other factors. In this study as the data presented in tables 1-4 shows that, like many other studies the situation is not desirable. In table 1, it is evident that on average 33.5% of respondents had fallen ill during the past three months from the date of data collection. From this amount, about 28% did not use any health care treatment even they felt their health need. This finding is compatible with prediction of Pileroudi (19), that recommend four visits per population per year for the planning of human resources in Iran's health care system. Regardless of association between falling ill and other variables such as age, education level and marital status, that is compatible with findings of other authors (13,15,18), the utilization of health care treatment by those who felt illness had just significant association with the location of patients at 0.05 level of confidence interval. Based on table 3, the data show that the frequency of falling ill had less reported by respondents of rural population compared to the population living at urban area, however, the difference is not statistically significant at 0.05% level of confidence interval. This difference exists where people at rural area are usually living with poorer living conditions, and their essential needs are less met. Therefore, reporting falling ill with less frequency could be because of some socio-cultural environment making them to cope and accept many of ill-health condition as normal. However, the less demand for health care as a percentage of patients who fallen ill in urban and rural area is a sign that indicates underutilization of health care at rural area is more prevalent. Given the context and structure of Iran's health care system that most health care facilities (both public and private) are located at urban area where rural area are mainly covered with public primary health care facilities that normally work just in morning shift with low level of perceived quality particularly in curative care, therefore, this finding could be considered as a result of less accessibility to health care for rural area population that had led to inequity of health care utilization and unmet felt health need at this area. Given explained the situation where equity in access to health care has become an important issue for policy makers (2-4), therefore appropriate policy is required to improve accessibility to health care at rural area. Other researchers pointed out the impact of socio-economic factor that can in different ways cause the underutilization of health care and then lead to horizontal inequity (4). The finding of this study is supported by Van der Heyden et al. (4) who suggest that patient factors might be more important in explaining the differential use of health services than supply factors. Lower level of health care treatment still exists at rural area in Iran where from 2006 a reform of primary health care system in a rural area that usually has a monopolistic position of health care provider has implemented. In this reform, so-called family medicine and rural insurance scheme, a free insurance coverage has been offered to rural population that potentially could help their utilization of health care treatment with a defined copayment of different services. One of the objectives of this reform was to improve accessibility to health care at rural area in order to improve equity in health. How much improvement has been achieved so far, but the result of this study show the significant gap between urban and rural area. The inequity of health care utilization between urban and rural area is expected to be more as from second quarter of 2013, just after our data collection, a new reform so-called urban family medicine (20), has been introduced to urban primary health care system in Mazandaran province where the county of this study is affiliated to it. In this newly implemented reform more benefit has been provided to both consumers and health care providers compared with rural family medicine scheme and there is now a concern of excess demand for health care treatment by

urban population and increasing inequity between urban and rural area that already its existence explained.

Based on the finding of this research and the discussion made, it is evident that the felt health in a rural area is lower than the urban area. This has happened where people at rural area are usually faced with poorer living condition as a risk factor for falling ill. Therefore, their report about their illness in the last 3 months that stood below the rate in the urban area could be a concern of their awareness about their health situation affected from their socio-cultural background. It is also obvious that given the lower accessibility to public and private health care particularly curative care in a rural area of Iran has led to a lower level of health care utilization. This underutilization has concluded based on the felt health needs of respondents thus shows the level of unmet felt health need due to barriers of demand for health care. Therefore, inequity in health in terms of both accessibility and utilization of health care at rural area compared to the urban area exist. This inequity and gap between urban-rural is going to be wider as the recent reform of health care system in Iran known as urban family medicine scheme provide more accessibility to almost free health care for this population. All in all, based on the result of this study it could be concluded that inequity in accessibility and utilization of health care exist in Iran and going to be worse, therefore, appropriate policy intervention is required to alter the situation.

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