

BARRIERS TO THE USE OF BASIC HEALTH SERVICES AMONG WOMEN IN RURAL SOUTHERN EGYPT (UPPER EGYPT)

CHIFA CHIANG¹, SHOKRIA ADLY LABEEB², MICHIO HIGUCHI¹,
ASMAA GHAREDS MOHAMED² and ATSUKO AOYAMA¹

¹*Nagoya University Graduate School of Medicine, Nagoya, Japan*
²*Faculty of Nursing, Assiut University, Assiut, Arab Republic of Egypt*

ABSTRACT

This cross-sectional study examined potential demand-side barriers to women's use of basic health services in rural southern Egypt (Upper Egypt). Face-to-face interviews with a structured questionnaire were carried out on 205 currently-married women, inquiring about their use of health facilities: regular antenatal care (ANC) during the last pregnancy and medical treatment services when they suffered from common illness. Questions about their perceptions of barriers to the use of health services were categorized into three primary dimensions: structural, financial, and personal/cultural barriers. Distance and transportation to health facilities (structural barriers) prevented about 30 % of the women from seeing a doctor. Forty-two percent of them felt the difficulty paying for health services (financial barriers). Approximately a quarter of women answered that gaining family permission, allocating time to go to health facilities, or concern about lack of female physicians (personal/cultural barriers) was a big problem for them. After controlling for potential confounding factors, structural barriers showed an inverse association with the use of health services. Financial barriers indicated a strong association (OR=0.18, $P<0.001$) with the use of curative services (medical treatment), but not with the use of preventive services (regular ANC). Contrary to our expectation, personal/cultural barriers had no statistical significance with women's use of health services. Although the Egyptian government had successfully extended basic health service delivery networks throughout the country, women in rural Upper Egypt were still facing various barriers to the use of the services, especially structural and financial barriers.

Key Words: Women's use of health services, Demand-side barriers, Preventive services,
Curative services, Rural Egypt

INTRODUCTION

Access to health services has to be guaranteed for all people throughout the world; however, it is not yet fully achieved in many developing countries, particularly in rural areas. In addition, it is often difficult for women in developing countries, such as Pakistan, where gender-biased traditional values still prevail, to use health services unless the provided services are culturally acceptable in practice.^{1,2)}

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Corresponding author: Chifa Chiang

Department of Public Health and Health Systems, Nagoya University Graduate School of Medicine,
65 Tsurumai-cho, Showa-ku, Nagoya 466-8550, Japan

Tel: 81-52-744-2128, Fax: 81-52-744-2131, E-mail: keihatsu@med.nagoya-u.ac.jp

Egypt had reached the stage of developing an extensive basic health service delivery network: over 95 % of the population lived within 5 kilometers of a health facility.^{3,4)} Nevertheless, women's use of the services was still at a low level, especially in the underprivileged southern part of the country (Upper Egypt, as the region located upstream of the Nile River). According to the 2008 Egypt Demographic and Health Survey (DHS), maternal health service coverage in rural Upper Egypt was at the lowest level in the whole country: *e.g.*, regular antenatal care (ANC) attendance was 49 %; delivery assisted by skilled professionals was 59 %, while the national averages were 66 % and 79 % respectively.⁵⁾

Even though the health service provision, or the geographical access, is improved, local women may not use the services unless the provided services meet their demands in quality and cultural manners. In other words, demand-side barriers are as important as supply-side factors in deterring people from obtaining appropriate health services among vulnerable groups of population including rural women.⁶⁾

Our previous studies in northern part of Egypt suggested that increased access to maternal health services was positively related to the empowered status of women in the households (higher age at first marriage, higher education level of husbands, less experience of physical assault by husbands) and availability of family support (living with an extended family).⁷⁾ However, it was not related to economic independency or the decision-making power of women, contrary to the reports from previous studies in Nepal and India.^{8,9)} Since we studied access to the maternal health services, the results might be confounded by the facts that pregnancy and childbirths were not merely women's own health issues but important family events in Egypt. Moreover, the study suggested that women's behaviors and attitudes toward ANC (preventive aspect) were different from those toward delivery care (curative aspect).⁷⁾

The objective of this study is to identify possible demand-side barriers to the use of basic health services. The study investigated barriers to the use of preventive services (ANC) and curative services (medical treatment of common illness) among local women in rural Upper Egypt, where cultural constraints and economic conditions were much tougher than those in the northern part of Egypt, our previous study site.

METHODS

This cross-sectional study was carried out in 3 purposively selected villages adjacent to Assiut City in Upper Egypt in November 2009. The 3 villages were similar with respect to geographical and socio-demographic conditions. Although they were located in an agricultural area, the main sources of income for most households were from paid jobs, instead of traditional farming. The total population of the villages was close to 50,000.

A stratified sampling approach was adopted to recruit a total of 205 women for our study. Since accurate household maps were not available in the villages, we utilize the "health service sections" for the sampling, which were originally divided for health services, such as immunization. We randomly selected about 7 currently-married women with at least one child under the age of 5 years from each of the 30 sections across the 3 villages. Face-to-face interviews with all the participants were conducted with a structured questionnaire, which consisted of 3 major parts: (1) women's demographic and social backgrounds, including age, education, age at first marriage, parity, family structure and cash income, (2) the use of preventive and curative basic health services, and (3) perceived barriers to the use of the health services.

In this study, ANC was chosen as the proxy indicator of preventive health services for women, since it is commonly available at health facilities in rural Egypt and well known by local women.

Whether a participant had received ANC by trained health providers at least 4 times during her last pregnancy, which is regarded as regular ANC by the World Health Organization (WHO),¹⁰ was transformed into a dichotomous value for our statistical analyses.

To examine the use of curative health services, we designed questions asking about medical treatment of common illness as follows: when you felt very sick and suffered from (1) high fever, (2) long-lasting cough, and (3) persistent diarrhea, did you seek help from any medical professionals? Women were asked to give the answers according to their most recent experiences. If a respondent had no experience of such symptoms, she was asked to answer regarding the actions which would be taken in case of need. We defined respondents as having good access to curative health services if they chose two or more "yes" answers for these 3 symptoms. Those who chose one or less were defined as having poor access.

Although it has been acknowledged that there is no universally accepted model of access to health services, monitoring the use of health services is one of the most common ways to determine its level.^{11,12} We adopted a model of access to personal health care services proposed by the Institute of Medicine (IOM) Access Monitoring Project,¹² which categorized barriers to the use of health services into 3 primary dimensions—structural, financial, and personal/cultural barriers. In accordance with these 3 dimensions and the questionnaire of the Egypt DHS, we selected 6 potential barriers for this study: (1) distance to preferred health facilities (2) transportation to health facilities (3) payment for health services (4) time allocation (5) family permission (6) concern about lack of female physicians. We simply asked women whether it was a big problem or not for the 6 potential barriers respectively, when they were sick and desired to see a doctor.

Logistic regression models were used to compute odds ratios (ORs) and 95 % confidence intervals (CIs) to assess the association between the outcome (regular ANC and the use of medical treatment services) and each of the predictor (6 potential perceived barriers) variables. The final models were adjusted for potential confounding variables such as age, education, age at first marriage, parity, family structure and cash income. $P < 0.05$ was considered as statistically significant via the Wald test. All statistical analyses were performed with Stata statistical software (Release 12).

Ethical clearances for the study were obtained from the Ethics Review Committee of Nagoya University School of Medicine in Nagoya, Japan, and Faculty of Nursing, Assiut University in Assiut, Egypt. Written informed consent was obtained from all participants of the interviews after adequate explanations of the objectives and procedures of the study.

RESULTS

The 205 respondents ranged in age from 18 to 45, and the median age was 29 years old. Regular ANC attendance rate was 41 %, and about 29 % of women had good access to the use of medical treatment services across the 3 study villages.

Distance and transportation to health facilities were considered as barriers to the use of health services for about 30 % of the respondents (Table 1). More than 42 % of them complained about the high costs of health services, and approximately a quarter of the participants said that gaining family permission, allocating time to go and concern about lack of female physicians were big problems for them to seek basic health services.

After controlling for the potential confounding covariates, women who mentioned distance to preferred health facilities and the transportation as potential barriers were less likely to use both regular ANC and medical treatment services. Perceived financial barriers showed a significant association with the use of medical treatment services ($P < 0.001$) but not with regular ANC. With

Table 1 Characteristics of women who perceived the six potential barriers to the use of health services (N=205)

category	n	Structural barriers		Financial barriers	Personal/Cultural barriers			
		Distance to health facilities n (%)	Transportation to health facilities n (%)	Payment for medical services n (%)	Allocating time to go n (%)	Getting permission to go n (%)	Concern about lack of female physicians n (%)	
Age	≤25	58	15 (25.9)	15 (25.9)	24 (41.4)	15 (25.9)	15 (25.9)	15 (25.9)
	26–35	106	36 (34.0)	33 (31.1)	48 (45.3)	26 (24.5)	27 (25.5)	30 (28.3)
	36–45	41	11 (26.8)	11 (26.8)	15 (36.6)	9 (22.0)	10 (24.4)	9 (22.0)
Education	<full primary	91	21 (23.1)	18 (19.8)	43 (47.3)	16 (17.6)	27 (29.7)	27 (29.7)
	primary-preparatory	29	4 (13.8)	3 (10.3)	11 (37.9)	7 (24.1)	6 (20.7)	7 (24.1)
	≥secondary	85	37 (43.5)	38 (44.7)	33 (38.8)	27 (31.8)	19 (22.4)	20 (23.5)
Marriage Age	<18	71	18 (25.4)	15 (21.1)	29 (40.8)	15 (21.1)	17 (23.9)	24 (33.8)
	≥18	134	44 (32.8)	44 (32.8)	58 (43.3)	35 (26.1)	35 (26.1)	30 (22.4)
Parity	1	34	14 (41.2)	14 (41.2)	15 (44.1)	8 (23.5)	9 (26.5)	6 (17.6)
	2–3	75	24 (32.0)	21 (28.0)	32 (42.7)	17 (22.7)	17 (22.7)	19 (25.3)
	>3	95	24 (25.3)	24 (25.3)	40 (42.1)	25 (26.3)	26 (27.4)	29 (30.5)
	no answer	1						
Family Structure	extended	120	38 (31.7)	33 (27.5)	50 (41.7)	30 (25.0)	30 (25.0)	31 (25.8)
	nuclear	85	24 (28.2)	26 (30.6)	37 (43.5)	20 (23.5)	22 (25.9)	23 (27.1)
Cash Income	no	185	52 (28.1)	48 (25.9)	76 (41.1)	42 (22.7)	48 (25.9)	46 (24.9)
	yes	20	10 (50.0)	11 (55.0)	11 (55.0)	8 (40.0)	4 (20.0)	8 (40.0)
total	205	62 (30.2)	59 (28.8)	87 (42.4)	50 (24.4)	52 (25.4)	54 (26.3)	

regard to personal/cultural barriers, time allocation, family permission or concern about lack of female physicians was not statistically associated with both women's regular ANC and medical treatment services (Table 2).

DISCUSSION

Our findings showed that women who used regular ANC were merely 41 % and who had good access to medical treatment services were 29 %, even though public health facilities were located within accessible distance. Twenty-four to forty-two percent of women recognized that each of structural, financial, and personal/cultural barriers was preventing them from seeking health services. Furthermore, the 3 primary dimensions of barriers were shown to have different patterns of association with preventive (regular ANC) and curative (treatment of common illness) services in the current study.

It was reported that structural barriers, namely distance and transportation to health facilities, commonly impeded the use of maternal health services in many low- and middle-income countries.^{13,14} Our findings also indicated perceived distance to health facilities was associated with lower use of regular ANC and medical treatment services, and suggested an insufficiency of

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Table 2 Odds ratios derived from logistic regression models of women's use of health services with potential barriers

Potential Barriers	Regular ANC		Use of medical treatment services	
	Crude OR (95% CI)	Adjusted OR (95% CI) ¹⁾	Crude OR (95% CI)	Adjusted OR (95% CI) ¹⁾
<i>Structural</i>				
Distance to health facilities	0.53 (0.28–0.99)*	0.37 (0.18–0.76)**	0.37 (0.17–0.79)**	0.41 (0.18–0.93)*
	1	1	1	1
Transportation to health facilities	0.59 (0.31–1.12)	0.41 (0.20–0.86)*	0.47 (0.22–0.98)*	0.54 (0.24–1.22)
	1	1	1	1
<i>Financial</i>				
Payment for medical services	0.95 (0.54–1.67)	0.87 (0.48–1.57)	0.24 (0.12–0.49)**	0.18 (0.08–0.39)**
	1	1	1	1
<i>Personal/Cultural</i>				
Allocating time to go	1.31 (0.69–2.50)	1.26 (0.64–2.47)	0.46 (0.21–1.02)	0.54 (0.24–1.24)
	1	1	1	1
Getting permission to go	1.08 (0.57–2.04)	1.13 (0.58–2.18)	0.68 (0.33–1.41)	0.60 (0.28–1.30)
	1	1	1	1
Concern about lack of female physicians	1.21 (0.65–2.27)	1.21 (0.62–2.33)	0.72 (0.36–1.48)	0.71 (0.33–1.51)
	1	1	1	1

* $P < 0.05$, ** $P < 0.01$, ¹⁾ adjusted for age, education, age at first marriage, parity, family structure, cash income

geographical access to health services. Considering that the geographical access to public health units/centers was guaranteed in our target villages, the results might be caused by the fact that women did not often see a doctor at a nearby public health center, but visited preferred health service providers apart from their residential areas. Quality and contents of the health services provided by local public health units/centers might be poorly accepted by those health service users.¹⁵⁾

Our findings showed that the financial barrier was strongly associated with the use of medical treatment services, but not with regular ANC. Private health service providers played a major role in the Egyptian health service system, as shown in the fact that private providers cover more than half of the use of health services.^{15,16)} Although the services of public health centers were provided at a nominal fee, even the poor were increasingly seeking outpatient care in private facilities, of which services were perceived as better quality than those of public facilities.¹⁵⁾ This could explain the inverse association we found between the financial barrier and the use of medical treatment services. In contrast, regular ANC did not show statistical significance with the financial barrier. Similarly findings were reported from a previous study performed in South Africa, where a removal of user fees increased the use of medical treatment of common illness but not ANC. Congestion and long waiting time at clinics might have discouraged some women from attending for ANC.¹⁷⁾ Moreover, unlike the use of medical treatment services, women in Egypt might have preferred to go to public health facilities for ANC, or private ANC services were as affordable as public services.

Personal/cultural barriers to women's use of health services have been investigated in various studies, which pointed out that women could not always have access to appropriate health services because of social and cultural constraints.^{2,18)} In this study, we selected time allocation, family permission and concern about lack of female physicians as indicators of potential personal/cultural

barriers. Our findings showed that fewer women recognized personal/cultural barriers than those recognized structural and financial barriers.

Time allocation was not a main barrier which statistically associated with the use of health facilities, although women in developing countries often have difficulty leaving their daily work and sparing time to visit health facilities even if they feel sick.¹⁹⁾ Availability of family support might have helped women in our study to allocate time to visit health facilities. Extended families are common in rural Egypt, and even women who live in nuclear families usually have relatives living nearby. Our preliminary findings from concurrently conducted focus group discussions have also showed that family members were willing to support women by assisting their daily household chores during pregnancy or illness.

It was reported that women in India and Pakistan had to ask permission from husband or head of the household to leave their home, including making a visit to health facilities.^{1,20)} In Pakistan, lack of female health service providers had hindered women's use of appropriate and timely medical care.^{21,22)} However, our findings indicated that gaining permission and concern about lack of female physicians might not be the significant barriers to women's use of health service in the area. This may reflect changes of women's status in the Egyptian society, and accordingly further anthropological studies may be designed to clarify such social changes and the context behind.

This study was carried out on a small scale in 3 purposively selected villages; thus the results might not be generalized to a broader region. Barriers that prevent women from seeking health services are difficult to measure in a study. Although researchers commonly choose self-perceived indicators to estimate the situation, what women have responded to the questionnaires may not be always consistent with their actual behaviors and situations. Objective indicators, such as measured distance and time to health facilities need to be used for further studies.

Our results revealed that structural and financial barriers were standing in the way of improvement of women's access to basic health services in the rural Upper Egypt, while the associations between personal/cultural barriers and use of the services were not verified. The findings from our research might offer an insight into the problems of the health service delivery systems, and give the health policy makers some clues about how to make all population fully benefit from the health resources of the nation.

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