

General practitioners' encounters in rural and urban care centers in Isfahan with gynecological/obstetric and pediatric diseases

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ABSTRACT

Context: General practitioners should be competent to be accountable for patients' needs, but they do not acquire core competencies during education in medical schools. **Aims:** This study was aimed at determine the most usual obstetric and gynecological as well as pediatric diseases in rural and urban care centers in Isfahan province. **Settings and Design:** This is a cross-sectional descriptive study which was done in Isfahan province in 2011. Sixty-four physicians (general practitioners) in rural and urban health care centers in Isfahan province participated in this study. **Subjects and Methods:** Participants completed valid and reliable questionnaires for gynecological/obstetric and pediatric diseases. These questionnaires included some demographic data and diseases of each category (according to general medicine curriculum). Scales 1-5 for each disease referral times was determined respectively as: Rare, sometimes, weekly to monthly, daily to weekly and daily. **Statistical Analysis Used:** The data were descriptively analyzed by SPSS 11.5 (SPSS Inc. in Chicago). **Results:** Nearly 43.7% of participants were male. The mean age of participants was 39.0 ± 7.0 and their mean working experience was 11.3 ± 5.9 years. The highest referral times' score in rural and urban care centers in gynecological and obstetric group was vaginal discharge; in pediatrics, it was the common cold. **Conclusions:** In this study, the extent to which general practitioners encountered different gynecological/obstetric and pediatric diseases in rural and urban care centers in Isfahan province was determined. Although, these data are useful for decision makers to establish medical core curriculum, other factors such as seasonal load of diseases should also be observed to determine the differences between rural and urban care centers in most usual diseases of women and children.

Key words: Care centers, general practitioners, gynecological and obstetric, pediatrics, rural and urban

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Access this article online	
Quick Response Code:	Website: www.jehp.net
	DOI: 10.4103/2277-9531.154108

INTRODUCTION

Ministry of Health and Medical Education is accountable for the provision and maintenance of health within Iranian society. Training the required workforce takes place at medical schools. Physicians are part of such workforce who get trained at medical schools as general medicine, graduate and post-graduate programs. Physicians' final goal is to enhance the physical, mental and social conditions of the community in question;^[1] thus, they must get trained well to be competent when graduated, be able to understand society's needs, help solve individuals' and social problems and be able to adapt to and account for the changing expectations of the

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This article may be cited as: Omid A, Eghbali B, Javanmard SH, Ashoorion V. General practitioners' encounters in rural and urban care centers in Isfahan with gynecological/obstetric and pediatric diseases. *J Edu Health Promot* 2015;4:22.

society and advances in medicine.^[2,3] Social accountability of medical education is the will and capability of adapting to the needs of patients and the care system both nationally and globally.^[4] Prediction of society's health needs has been suggested as an operational strategy for medical schools to be accountable to the society^[5] and consideration of health priorities of the local community, the region and the country covered by medical schools has been emphasized when revising the educational, research and service programs of such schools.^[6] The fast speed of change in the health system and the needs of the society necessitate revision in medical education so that physicians can be suited and prepared to deal with the problems of the 21st century.^[7] To approach this goal, it is essential to count for the needs of society in medical education curricula (of different medical programs); this is especially true for the general medicine program because the graduates at this level are in more contact with patients than graduates of higher levels.

A study of the extent to which the current curricula overlap with the problems and diseases of patients visiting general practitioners can contribute to the process of decision-making about revisiting and change in the content of the curricula of general medicine program on the basis of accountability to social needs. In Manchester University in 1999, the required educational content was determined in two stages. First, a list of clinical occasions that general practitioners may have to deal with either alone, by guidance, or as a team was provided using general practitioners and professors' ideas. Later, the educational content, skills and the knowledge required by general practitioners for dealing with such occasions were determined by all clinical professors, health stakeholders and specialists collaboratively.^[8] In 2005, a list of diseases' clinical symptoms was first provided at Sheffield University using medical colleges' curricula and course references to determine the required educational content; then, the frequent cases were selected and prioritized on the basis of professors' opinions. At the next stage, the educational content required for educating general practitioners was specified using a two-dimensional table as well as ideas from professors of different departments.^[9] In Iran, also, revision of medical education curricula has been on the agenda and measures have been taken. Yet rather than applied, the measures taken are better proper for country-wide exams such as pre-internship and assistantship tests. A research project by the Medical University of Shahid Beheshti and with cooperation from the scientific staff of other universities around the country lead to more practical implications; course plans of general medicine were determined in great details including the tasks of general practitioners, educational needs and the references required.^[10] The study was based on specialists' ideas and those of general practitioners were not taken into account.

Due to the importance of needs' analysis of general practitioners, we decided to conduct this study considering the importance and role of women and children's health

indices in social health. The objective of the study was extent to which general practitioners in urban and rural health care centers of Isfahan province encountered with gynecological/obstetric and pediatric diseases on the basis of clinical syllabus of general medicine. The findings can be used to determine the core clinical educational content of general medicine, to make decisions as for the probable revision necessary in general medicine curriculum and also to revise the continued education programs of physicians working in urban and rural centers.

SUBJECTS AND METHODS

This cross-sectional descriptive study was done throughout Isfahan province in 2011. The population included general practitioners in rural and urban health care centers in Isfahan province; they all were 1906 physicians. Entry criterion was working experience of over 1 year and <20 years. Sampling was done throughout the province and through cluster sampling. Isfahan province was divided to 5 clusters; 20 samples of each cluster was selected using simple randomized method. To gather data, a set of questionnaires were prepared. The first section of the questionnaires included demographic information; the second section covered titles of gynecological/obstetric and pediatric diseases determined separately using medical education content of diseases of major wards from Shahid Beheshti University study and later revised by the scientific faculty members of Isfahan University. In all, in the two questionnaires [Questionnaires 1 and 2], there were 134 cases of pediatric diseases and 122 cases of gynecological/obstetric diseases. Validity of the questionnaires for each category of diseases was examined by 2 specialists of the relevant field, 4 general practitioners and 3 graduates in medical education. The frequency of encounter with the symptoms and diseases in question were specified according to 5-point Likert scale including rare, sometimes, weekly to monthly, daily to weekly and daily items. The items were allocated the marks 1, 2, 3, 4 and 5, respectively. In the pilot study, the reliability of the questionnaire was examined on 10% of the whole sample (Cronbach's alpha = 93%). A total of 100 questionnaires were distributed in the first half of 2011 by post (and after a phone call and agreement of the physician) or, in some cities, by help from continuing medical education staff. A set of gifts were taken into account in order to encourage participation. 64 out of 100 questionnaires completed and returned within a month. The data were analyzed by SPSS 11.5. The average score for a symptom or disease was taken as the criterion for the encounter rate of that symptom or disease. Thus, the average mark 5, for example, indicated the maximum encounter rate while the average mark 1 showed the minimum rate.

RESULTS

A total of 28 male and 36 female physicians completed the questionnaires. Demographic characteristics of participants and their workplace are mentioned in Table 1.

In rural care centers, the highest mean score for pediatric disease encounter was that of acute nasopharyngitis (4.11 ± 1.47) and the lowest belonged to acute myeloid leukemia (1.0 ± 0.0). Regarding gynecological and obstetric diseases, the highest mean encounter score was that of vaginal discharge (3.76 ± 1.12), and the lowest was related to choriocarcinoma (1.0 ± 0.0).

In urban health care centers, the highest mean score for pediatric disease encounter was that of acute nasopharyngitis (3.96 ± 1.40) and the lowest belonged to acute lymphoid leukemia (1.0 ± 0.0). Regarding gynecological and obstetric diseases, the highest mean encounter score was that of vaginal discharge (4.11 ± 0.89) and the lowest was related to early syphilis (1.0 ± 0.0).

Table 1: Demographic characteristics of participants and their workplace

Demographic characteristics	Results
Mean age	39.03±7 years
Mean work experience	11.31±5.94 years
Academic overall mean score	16.04±1.15
Mean daily referral times	29.89±14.86
Urban current workplace	30 (46.9%)
Rural current workplace	28 (43.7%)

The mean and standard deviation of pediatric and gynecological/obstetric diseases that had maximum and minimum encounter in urban and rural care centers are available in Tables 2 and 3 respectively.

DISCUSSION

The results of this research which tried to study the extent to which general practitioners encountered gynecological/obstetric and pediatric diseases in rural and urban care centers around Isfahan province show that the highest encounter in the first half of 2011 concerning pediatric diseases belongs to acute nasopharyngitis and the lowest to acute myeloid and lymphoid leukemia respectively. As for gynecological/obstetric diseases, the highest mean rate of encounter in rural and urban care centers was related to vaginal discharge and the lowest to choriocarcinoma and early syphilis. An examination of the 5 diseases with the highest mean encounter frequency [Tables 2 and 3] indicated that there is much similarity between frequent diseases of visitors to urban and rural care centers in both pediatric and gynecological/obstetric diseases.

In studies on the relationship between the education received by general practitioners as university students and their tasks

Table 2: Pediatric diseases of maximum and minimum mean score for encounter in rural and urban care centers

Maximum and minimum encounters	Rural care centers				Urban care centers			
	No.	Clinical symptoms/diseases	Mean	SD	No.	Clinical symptoms/diseases	Mean	SD
Maximum means	1	Acute nasopharyngitis (common cold)	4.11	1.47	1	Acute nasopharyngitis (common cold)	3.96	1.40
	2	Streptococcal pharyngitis	3.54	1.26	2	Acute sinusitis	3.25	1.35
	3	Viral gastroenteritis	3.47	0.93	3	Viral gastroenteritis	3.18	1.05
	4	Acute sinusitis	3.43	1.37	4	Streptococcal pharyngitis	3.00	1.30
	5	Allergic rhinitis	3.39	1.19	5	Allergic rhinitis	2.86	1.17
Minimum means	1	Acute myeloid leukemia	1.00	0.00	1	Acute lymphoid leukemia	1.00	0.00
	2	Ariboflavinosis	1.00	0.00	2	Kwashiorkor	1.00	0.00
	3	Disturbances of amino-acid transport	1.00	0.00	3	Ariboflavinosis	1.00	0.00
	4	Phynylketonuria	1.00	0.00	4	Ascorbic acid deficiency	1.00	0.00
	5	Gaucher's disease	1.00	0.00	5	Disturbances of amino-acid transport	1.00	0.00

SD=Standard deviation

Table 3: Obstetrics and gynecological diseases of maximum and minimum mean score for encounter in rural and urban care centers

Maximum and minimum encounters	Rural care centers				Urban care centers			
	No.	Clinical symptoms/diseases	Mean	SD	No.	Clinical symptoms/diseases	Mean	SD
Maximum means	1	Vaginal discharge	3.76	1.12	1	Vaginal discharge	4.11	0.89
	2	Dysmenorrhea	3.69	1.10	2	Pap smear screening	3.79	0.87
	3	Vaginitis and vulvovaginitis	3.52	1.37	3	Vaginal bleeding, excessive/irregular/abnormal	3.70	1.03
	4	Vaginal bleeding, excessive/irregular/abnormal	3.50	1.20	4	Contraception	3.67	1.14
	5	Ovarian dysfunction	3.27	1.31	5	Vaginitis and vulvovaginitis	3.57	1.26
Minimum means	1	Choriocarcinoma	1.00	0.00	1	Early syphilis	1.00	0.00
	2	Second-degree perineal laceration during delivery	1.00	0.00	2	Genital chancre	1.00	0.00
	3	Third-degree perineal laceration during delivery	1.00	0.00	3	Chancroid	1.00	0.00
	4	Fourth-degree perineal laceration during delivery	1.00	0.00	4	Shoulder dystocia	1.00	0.00
	5	Shoulder dystocia	1.04	0.20	5	Primary uterine inertia	1.00	0.00

SD=Standard deviation

and occupational requirements, the story is different. Javadi *et al.* conducted a study to identify the professional situation of medical graduates from Qazvin Medical Sciences University. Nearly 67% of graduates believed that studying at Qazvin Medical Sciences University prepared them relatively well to take social responsibility in future. The majority of them were in favor of change in health and care provision system and of limitation on admission of general medicine students at university.^[11] Gazanfari *et al.* studied the overlap between medicine education programs and occupational requirements of graduates from Kerman Medical Sciences University in terms of technical and communicative skills. Nearly 69% of physicians considered the overlap between technical skills education and their occupational requirements as sufficient. In their study, the overlap between the material taught and the frequency of diseases or visitors' problems was not examined.^[12] In O'Neill *et al.* study at Manchester University (1999), the core educational content was determined in two stages by opinions from general practitioners, clinical professors, health stakeholders and specialists collaboratively.^[8] Newble *et al.* at Sheffield University determined the core educational content after they had specified a list of diseases' clinical symptoms using medical schools' curricula and on the basis of professors' opinions.^[9] Tandeter *et al.* determined the minimum core content for apprenticeship of family medicine/general medicine programs using Delphi method. Forty family physicians and medical teachers participated in their study. After 3 stages of Delphi, 15 topics were determined as the main topics to be involved in curricula in question.^[12] These studies aimed to determine the relation between medical education and physicians' tasks in the real world from different aspects; we studied this subject by searching the maximum and minimum encounters of pediatrics and obstetrics/gynecologic diseases from the view point of general practitioners in and urban health care centers.

In this study, the maximum encounters in groups under scrutiny were related to diseases for which the preliminary levels of health provision (general practitioner's office, urban and rural care centers) were normally required. Medical students (who spend the majority of their clinical educational time) in specialized wards of educational hospitals deal to a lesser extent with such cases. The high frequency of a disease or its high influence on the life of patients has been accepted as determining criteria for core diseases' learning in general medicine curriculum.^[13] Thus, the results of this study can be used to revise core curriculum and also to determine the priorities of topics for continued educational programs of physicians working in urban and rural care centers. In addition, the results can be useful for educational decision-makers at medical schools to plan proper clinical learning opportunities for students to deal with diseases of high frequency. This way, a step can be taken to better prepare general practitioners to account for society's needs.

Limitations of the study

This study was carried out in Isfahan; hence there are some limitations in generalizing these results to all the country (Iran).

Despite preparations made for the study, lack of access to general practitioners and their insufficient cooperation in completing the questionnaires can be a limitation to the study. In addition, in the prepared questionnaires, focus was on physicians' encounter with diseases in general, and their seasonal encounter with some diseases was not taken into account. So, it is suggested for future studies to pay attention to seasonal incidence and severity of diseases in order to determine medical core curriculum, for training social accountable general practitioners.

ACKNOWLEDGMENTS

Researchers would very much like to acknowledge general practitioners and the staff working in the education development office of Isfahan Medical School who helped prepare and gather the questionnaires. Besides, this paper is the result of a research project approved of in the medical education research center of Isfahan University of Medical Sciences.

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Source of Support: Medical Education Research Center of Isfahan University of Medical Sciences, **Conflict of Interest:** None declared