A survey of the attitude and practice of research among doctors in Riyadh Military Hospital primary care centers, Saudi Arabia

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ABSTRACT

Objectives: To assess the attitude and practice of doctors in the Military Hospital Primary Care Centers in Riyadh (RMH) toward research and to identify the main barriers to conduct research. **Materials and Methods:** A cross-sectional study was conducted from March to April, 2010, at RMH primary care centers. The sample included all general practitioners (GPs) working in primary healthcare centers. A self-administered questionnaire was formulated from different sources and used as a tool for data collection. **Results:** The response rate was 75%. Among the respondents 96.9% agreed that research in primary care was important for different reasons. Most of the GPs had a positive attitude toward research: 68% had been influenced by research in their clinical practice and 66% had an interest in conducting research, and74.2% of the respondents had plans to do research in the future. Insufficient time was the most frequently cited barrier (83.5%) for participating in research, followed by the lack of support (58.8%). **Conclusions:** Many of the GPs had a positive attitude toward research, but had no publications or plan for new research. Lack of time, support, and money were the main constraints for carrying out research.

Key words: Family doctors, publishing, research

INTRODUCTION

The rapid changes in medical science compel physicians to keep abreast with the latest developments by gaining an understanding and using scientific principles and methods.[1]

Research not only improves medical knowledge, but also keeps practicing physicians in touch with changes in their field and encourages communication with their colleagues.[2] Therefore, evidence of research is a prerequisite to ensuring that patients are given the best possible care, in the most effective and efficient manner.[3]

The research activity of postgraduate medical trainees is important as it offers better clinical care, critical reasoning, and lifelong learning.[4] Health research training is therefore, an important part of medical education.[5]

Evidently practice-based research presents an ideal setting for primary care research,[1]as primary care is not just the best recruiting center for patients, it is a dynamic environment where GPs and other healthcare professionals are at constant work to understand and solve problems.[6]

Undoubtedly, research in general practice is vital for the improvement of patient healthcare outcomes[7] and primary care is critical to the overall provision of effective health care.[8] Compared to other clinical disciplines, however, general practice has produced significantly less published research in terms of both researchers and subjects.[9] There is, as yet, no strong culture of research in primary care and much of the existing research is conceived and undertaken by people outside primary care.[10]

Non-participation of GPs could make practice-based studies potentially biased and undermine the validity of the research results.[11]Consequently, a well-developed

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primary medical care system is needed.[12] This includes initiatives to develop new research and encourages service practitioners to take part in studies initiated by academics or the pharmaceutical industry.[6]

The training programs of the Academic Departments of Family Medicine offering postgraduate training may or may not have a research component. In countries such as Korea, South Africa, Nigeria, Philippines, Nepal, and Sri Lanka, physicians must complete a research project as part of family medicine training prior to registration or board certification. Such countries as Fiji, Croatia, several Caribbean nations, and Indonesia have ensured that associations of family physicians encourage practice-based research as a component of continuing professional development.[13]

Since the early 1980s there have been major changes in the primary healthcare system of Saudi Arabia. Today, the Ministry of Health (MOH) operates 2037 primary care centers throughout the country, each serving an average of 9530 people. Of the 6853 doctors in the system, 1441 are Saudis.[14] In Saudi Arabia, to my knowledge, no research has addressed this issue.

General practitioners who are interested in providing quality care to their patients are concerned about the best method for delivering that care. The use of research that results in the management of our patients in primary care will ensure effectiveness and efficiency.

The objective of this study is to assess the attitude of doctors in the Riyadh Military Hospital (RMH) Primary Care Centers toward research, assess their research practices, and explore the barriers that impede this research.

MATERIALS AND METHODS

A cross-sectional study was conducted from March to April, 2010, at the RMH Primary Care Centers in Riyadh, Saudi Arabia. The RMH primary care consists of 16 centers throughout the city of Riyadh to serve military staff and their families. The facility's staff ranges from two to three doctors in one center to more than 80 doctors of senior house officers, residents, registrars, senior registrars, and consultants in one large center. Some centers have a variety of services, such as general clinics, clinics for chronic disease, for well-babies, and well-women clinics.

After excluding the residents of family medicine, the sample included all the doctors working in primary health care in the RMH. The population size included all the working doctors numbering 130 doctors.

Data collection

Although there is no research committee at the RMH, permission was obtained from the authorities at the RMH primary care centers. The self-administered questionnaire contained a detailed description of the objectives of the study, and feedback processes were implemented, to fulfill the ethical issues. The questionnaire was modified from an existing one used in the previous studies[12,15,16] to serve as a tool for data collection. No statistical test was used to validate the questionnaire.

After that, a pilot study involving 10 primary care doctors was conducted before the main study. An internal validation of the questionnaire was done by three consultants. Approximately 10% of the sample questionnaires were repeated in order to ensure the quality of data collection. The questionnaire included the following:

- Demographic data: About age, sex, nationality, qualifications, and years of work as a GP, which represented the independent variables in this study.
- Attitude and practice: Regarding the importance of research, research experience, interest, published work, and plans for further research, which represented the dependent variables in this study.
- Determining the main barriers to participation in research, for example, no specific time, lack of resources, and lack of support.

Data analysis

The collected data was entered and a statistical analysis was performed with the aid of a statistician, using the statistical package for social science (SPSS). A chi-square test was used for comparison of categorical data. A *P*-value less than 0.05 was considered significant.

RESULTS

The overall response rate was 97 (75%). In an effort to increase the sample size of the study, doctors were allowed to complete the questionnaires at home. A follow-up letter and another questionnaire were sent to the remaining doctors who had not submitted the completed original questionnaires.

A total of 62 (63.9%) of the participating doctors were male, and 35 (36.1%) were female. Fifty-six (67%) were below the age of 45 years, and 63 (64.9%) were non-Saudis. The levels of qualification and experience varied considerably in the sample population [Table 1].

Only three GPs stated that research was not important for the GP. The majority of the respondents (96.9%) felt that primary care research was important for different

Table 1: Demographic data of the doctors in the Riyadh Military Hospital primary care centers in this study

Demographic data (N = 97)	No. (%)
Age	
24 – 45 years	65 (67.01)
> 45 years	32 (32.99)
Sex	
Male	62 (63.92)
Female	35 (36.08)
Nationality	
Saudi	34 (35.05)
Non-Saudi	63 (64.95)
Qualification	
MBBS	21 (21.65)
FMQ*	61 (62.89)
Non-FMQ*	15 (15.46)
Experience in work	
< 5 years	23 (23.71)
5 – 10 years	22 (22.68)
> 10 years	52 (53.61)

FMQ: Family medicine qualification

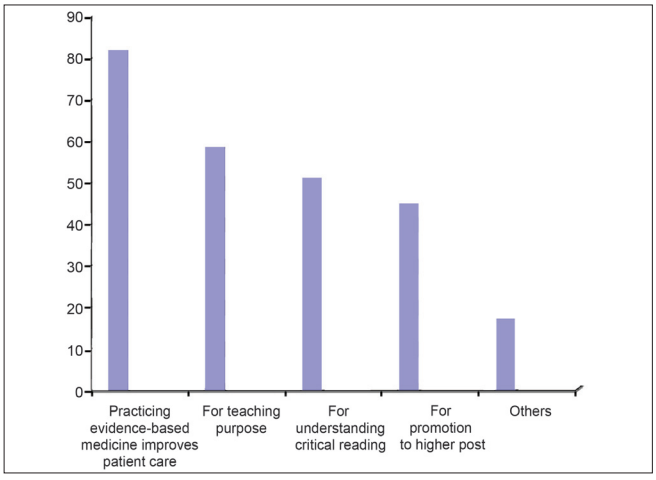

Figure 1: Reasons for importance of research among doctors in the Riyadh Military Hospital primary care centers (N = 97)

reasons. For instance, practicing evidence-based medicine improved patient care and it helped with teaching and critical reading [Figure 1]. Although their experience with previous research varied, most had conducted some previous research (72.2%), but 27.8% had not. Only 19 (19.6%) had published an article.

Most of the GPs had a positive attitude toward research. Sixty-six (68%) reported that they had been influenced by research in their clinical practice, and 64 (66%) had an interest in conducting research. Seventy-two respondents (74.2%) planned to conduct research in the future.

Insufficient time was the most frequently cited barrier for participating in research (83.5%). The second, most frequent reason mentioned, was the lack of support (58.8%). Not many GPs agreed that lack of funding (38.1%) or an insufficient number of patients (11.3%) were barriers to research. Six GPs specified such other barriers as the lack of qualified statisticians and lack of manpower.

Table 2: Association between interest in research and demographic data of the doctors in the Riyadh Military Hospital primary care centers (N = 97)

	Interest among GPs		
	Yes	No	Total
Sex			
Male	38 (39.2%)	24 (24.7%)	62 (63.9%)
Female	26 (26.8%)	9 (9.2%)	35 (36.1%)
Total	64	33	97
Chi-Square	1.68		
P-Value	0.195		
Nationality			
Saudi	21 (21.7%)	13 (13.4%)	34 (35.1%)
Non-Saudi	43 (44.3%)	20 (20.6%)	63 (64.5%)
Total	64	33	97
Chi-Square	0.414		
P-Value	0.52		
Qualification			
MBBS	13 (13.4%)	8 (8.3%)	21 (21.7%)
Family practice	43 (44.3%)	18 (18.6%)	61 (62.9%)
Non-family practice	8 (8.3%)	7 (6.3%)	15 (15.5%)
Total	64	33	97
Chi-Square	1.78		
P-Value	0.411		
Years of work			
< 5 years	13 (13.4%)	10 (10.3%)	23 (23.7%)
5 – 10 years	15 (15.4%)	7 (7.3%)	22 (22.7%)
10 years or more	36 (37.1%)	16 (16.4%)	52 (53.6%)
Total	64	33	97
Chi-Square	1.2		
P-Value	0.546		

No association ($P = 0.41$ and 0.55, respectively) was found when interest in research was compared with professional qualification and with work experience. There was no significant association between the interest of GPs in research, in terms of gender and nationality. In addition, there was no significant association between the GPs' plan for further research and gender, nationality, qualification or years of experience [Table 2].

DISCUSSION

Although no follow-up study was conducted to determine how non-respondents differed from respondents, our results concurred with the previous studies[12,13] indicating that most GPs had a positive attitude toward research.

The majority of GPs in our study considered research important, and most stated that research had influenced their clinical practice.

Very few respondents stated that primary care research was not important. Compared to other studies[12,13] it was disturbing to note that one-third reported that research was not directly influencing their clinical practice.[15]

The barriers against participation in research referenced in this study are in line with results from previous studies in other countries.[16]As a result, this article emphasizes what other researchers have mentioned regarding the three primary barriers: No specific time allocated, lack of resources (statistical, budgetary, and manpower), and lack of support.

Everything possible should be done to overcome the constraints of time and support. However, because of time constraints and overwhelming administrative work, it is essential to encourage participation by offering financial incentives.[2] The multidimensional nature of research requires the combined efforts of doctors in education, research, administration, and clinical practice to overcome these problems.

Although hospital doctors in general have been engaged in research for a long time, the emphasis on research in family medicine is relatively recent. There is the tendency to blame those with no obvious inclination to engage in research. The figures presented here seem to show that although there is a nascent interest in research, it is neither universal nor deep. Other studies in hospital practice, similar to this one, show that interest in research is also not universal, although the proportion of doctors taking part in research is higher.[17] The insistence on research publications as a measure for the promotion of hospital doctors is a factor that encourages greater involvement of hospital doctors in research. Despite the importance of research in family medicine, it is important not to overemphasize research at the expense of patient care. Although the response rate was 75%, this study had some limitations. Both the budget and sample size were small, being confined to only a single hospital. Therefore, the findings cannot be generalized.

Although a lower level of research activity may be expected in general practice than in hospital-based specialties,[18] it has been suggested that much of the evidence based on which future primary care-led health service will be built, can only be generated within primary care itself.[16]The discrepancy between attitude and practice revealed in this study is a cause for concern and merits further investigation.

Despite the short history of medical research in Saudi Arabia, a geographical analysis of the number of medical publications produced in 20 Arab countries from 1987 to 2001 has shown that Saudi Arabia and Egypt have the highest number of publications, together accounting for 58.4% of the Arab World's publications.[19]

Those in high authority are encouraged to give time off, provide statisticians, and expert supervisors to those doctors interested in doing research.

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