

Attitude and Barrier towards Research amongst Health Care Professionals Working in Primary Care Service of Oman

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Abstract

Background and purpose

Primary Medical Care is first contact medical care concerned with the total health care of the individual and family in their community. Clinical encounter needs research to practice evidence based medicine. The ultimate purpose of primary care health workers is to provide high-quality patient care. There is a need for all health care providers to appreciate the value of research in their everyday practice and make healthcare efficient and cost effective. The purpose of this study was to identify attitude and barrier towards research amongst primary care health workers and to explore self-reported experience of research.

Methods

A cross sectional study conducted in primary health care set up in North Batinah region Oman. Data was collected with self-filled questionnaire incorporating important barriers and attitudes in research. Data was analyzed using Statistical Package for Social Sciences (SPSS) version 20.0. Data was expressed in frequencies and percentages for questionnaire responses. Mann-Whitney test was used to compare differences between groups.

Results

A total of 557 participants were enrolled in which 425 were from the Oman and 132 were non Omani with a mean age of 33.13 ± 6.16 years and age range of 20-61 years. Among all 23.2% (129) were males and 76.8% (428) were females More than half of the participants were nurses (54.9%) and rest were physicians (19.3%), pharmacist (6.6%), and lab and radiology technicians (16.7). Responses of male participants were not significantly different ($p=0.153$) to the females regarding perceived value of research. However, significant difference ($p=0.001$) was observed regarding barrier of research. 14.9% were currently involved in the research. Nearly one third of participants feel that research allotted time (31.8%), financial support (32.3%) and financial incentives (30.3%) are the main barriers of research. Participants who had undergraduate ($p=0.007$) and postgraduate ($p=0.001$) research training did differ significantly in their response about self-experience of research and barrier of research.

Conclusion

Majority participants were currently not involved in research and a very small proportion of them received any training. Research allotted time, financial support and financial incentives are the main barriers of research. Research output may improve if identified barriers are rectified. Further studies are recommended in this field.

Keywords: Primary care; Research; Attitude; Barriers

Background

Primary care is concerned with the total health care of the individual in the community involving the whole life cycle of human being [1]. Primary care and general practice is the first point of medical contact for patients with the health care system, and is a key component of primary care which has compassionate, comprehensive,

continuous, coordinated and personalized care to the patient. Healthcare systems led through primary care have better health outcomes at lower cost than other systems [2]. Primary care practice covers the full spectrum of patients and disease and research is equally diverse including health promotion, screening, prevention, diagnosis and management of diseases for all [3].

There is a need for all health care workers to appreciate the value of research for best and evidence based practice. Research is a critical

component and should be an integral part of primary care and general practice to the continued growth and development of the quality of primary care [4]. Some of the most important study areas in primary care are the prevalence and incidence of diseases, preventive care, geriatric, palliative care, health education and health promotion. This can include continuing education of general practitioners [5-6].

Research influences health care policy also, clinicians incorporate information from clinical research trials into their practices, which improves patient management and disease outcome. Critical thinking skills and capacity building of individuals are also greatly enhanced as a result of their involvement in research [7-8].

Primary care organizations should have sufficient research skills human resources, computer software and access to library databases. Moreover, primary care must be linked to academic institution and there should be regular training courses available for primary care health care workers. Arab world trying to improve research culture and publishing good quality articles [9]. There is very little published from Oman regarding the perception and attitude to participate in research. Oman has a very strong primary care set up and one of the best in the world. Health care system in Oman is divided in to different governorate and wilayat. There are 11 governorates and 61 wilayat altogether. Ministry of Health(MOH) Oman had established the Department of Research and Studies under the Directorate General of Planning since 1991 which draws the research policy and setting the research priorities from the "fifth 5-Year Plan for Health Development, 1996-2000" and onward. The research policy aims to spread of research culture and promotion of the scientific approach, development of research skills and infrastructures at different levels of health sector and utilization of research findings in planning and improving the effectiveness and efficiency of health system and decision making. North Batinah has 6 williyat and 24 primary health care institutions. Each center has staff development unit and CME every week. The purpose of the study was to identify attitude and barrier towards research amongst primary care health workers of Oman and self-reported experience of research.

Methodology

A cross sectional study was conducted on primary care health care workers working in primary health care set up in North Batinah region Oman. A structured questionnaire was designed incorporating important attitudes and barriers in research that were identified through an extensive literature search of the Pub Med database. After consensus of all study investigators, few questions were included, which were particularly important to local scenario. Questions about past research involvement and experiences were also included. Research proposal was approved by MOH Review committee North Batinah Oman.

Survey questionnaire has three components. The first part of the questionnaire was about the demography which includes age, gender, highest degree, designation; Second part of the questionnaire was about research attitudes, barriers. Third part is about participants' background information regarding research training, publications, projects and grant obtained. The format of all the responses is in Likert scale 1-5, by choosing appropriate responses among already given options. Face and content validity of the questionnaire was obtained through a review process with experts in the field. After incorporating the identified inconsistencies and inaccuracies, the questionnaire was piloted.

Data collection was performed by representatives from staff development unit (SDU) of primary health care institutions. The principal investigator (PI) ensured uniformity and two trained research assistants SDU assisted PI in data collection. After SDU representative communication with all health care workers explaining the importance and objective of the study in one of the CME and was asked them to fill the form after informed consent.

Data was analyzed using Statistical Package for Social Sciences (SPSS) version 20 for percentage, frequency and mean. Chi-square test was used to assess the association between the outcome variable (current involvement in research) and the variables related to study participant's work and training.

Results

A total of 557 participants were enrolled in which 425 were from the Oman and 132 were non Omani with a mean age of 33.13 ± 6.16 years and age range of 20-61 years. More than half of the participants were nurses (54.9%) and rest were physicians (19.3%), pharmacist (6.6%), and lab and radiology technicians (16.7). Among all 23.2% (129) were males and 76.8% (428) were females. Response of male participants was not significantly different ($p=0.153$) to the females regarding perceived value of research. However, significant difference ($p=0.001$) was observed regarding barrier of research. More than a half (54.8%) had received undergraduate research training, 30.2% had received postgraduate research training and 14.9% were currently involved in the research (Table 1).

	Frequency (n)	Percentage (%)
Gender		
Male	129	23.2
Female	428	76.8
Nationality		
Omani	425	76.3
Non Omani	132	23.7
Year of Practice		
<5years	117	21.0
5-10	189	33.9
>10	251	45.1
Research training undergraduate		
Yes	305	54.8
No	252	45.2
Research training postgraduate		
Yes	168	30.2
No	389	69.8
Research Involvement		
Yes	83	14.9

No	474	85.1
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Table 1: Demography.

Participants were asked multiple questions regarding research helps: perceived value and barriers of research. Their answers were coded from 1 to 5 where 1 is not helpful and 5 is the most helpful and 1 is no barrier and 5 is the maximum barrier. The most frequent response was

5 (37.3%) for research promotes critical thinking and 42.9% for improves patients' care (Table 2). Participants who had undergraduate research training did differ significantly in their response about their research perception ($p=0.02$) and barrier of research ($p=0.01$). In contrast participants who had postgraduate research training were not significantly different in their response about their research perception ($p=0.36$) and barrier of research ($p=0.07$).

Research Helps: perceived value	1 is not helpful and 5 is the most helpful				
Promotes critical thinking	48 (8.6)	97(17.4)	101(18.1)	103(18.5)	208(37.3)
Improves patients' care	28 (5)	65(11.7)	113(20.3)	112(20.1)	239(42.9)
Helps in promotion	70(12.6)	75(13.5)	125(22.4)	129(23.2)	158(28.4)
Helps professional enhancement	37(6.6)	79(14.2)	114(20.5)	125(22.4)	202(36.3)
Helps to changes health policy	51(9.2)	74(13.3)	116(20.8)	126(22.6)	190(34.1)
Barriers of Research	1 is no barrier and 5 is the maximum barrier				
Research allotted time	34(6.1)	126(22.6)	150(26.9)	70(12.6)	177(31.8)
Research training and skill	37(6.6)	108(19.4)	149(26.8)	111(19.9)	152(27.3)
Statistical support	45(8.1)	123(22.1)	152(27.3)	93(16.7)	144(25.9)
Mentorship and team work	45(8.1)	114(20.5)	158(28.4)	101(18.1)	139(25)
Financial support	63(11.3)	73(13.1)	142(25.5)	98(17.6)	180(32.3)
Technical and logistic support like computer and internet	77(13.8)	132(23.7)	134(24.1)	83(14.9)	131(23.5)
Self-interest and motivation	99(17.8)	126(22.6)	162(29.1)	74(13.3)	96(17.2)
Linked with promotion	43(7.7)	133(23.9)	180(32.3)	91(16.3)	109(19.6)
Linkages with other institution	43(7.7)	114(20.5)	138(24.8)	131(23.5)	131(23.5)
Financial incentives	51(9.2)	93(16.7)	142(25.5)	102(18.3)	169(30.3)

Table 2: Attitude and Barriers towards research.

Nearly one third of participants feel that research allotted time (31.8%), financial support (32.3%) and financial incentives (30.3%) are the main barriers of research. Response about research perception differed significantly ($p=0.004$) among Omani and non-Omani participants. Conversely, no difference ($p=0.17$) was observed about barrier of research.

In the questionnaire, participants were asked about their research self-experience using options 1 to 5 where 1 is no experience and 5 is very experienced. More than a half of the participants have no or

minimum experience of writing a protocol, research grant, literature review, manuscript submission and publication and presentation of research (Table 3). Response about self-experience of research was not significantly different among male and female ($p=0.24$) and Omani and non-Omani participants ($p=0.25$).

Participants who had undergraduate ($p=0.007$) and postgraduate ($p=0.001$) research training did differ significantly in their response about self-experience of research and barrier of research.

	1	2	3	4	5
Writing a protocol	219(39.3)	133(23.9)	114(20.5)	62(11.1)	29(5.2)
Writing and presenting a research report	171(30.7)	135(24.2)	157(28.2)	69(12.4)	25(4.5)
Critically reviewing literature	148(26.6)	144(25.9)	154(27.6)	78(14)	33(5.9)
Finding relevant literature	140(25.1)	138(24.8)	158(28.4)	81(14.5)	40(7.2)
Generating ideas	106(19)	130(23.3)	176(31.6)	96(17.2)	79(8.8)

Analyzing interpreting data	142(25.5)	127(22.8)	155(27.8)	95(17.1)	38(6.8)
Submitted for publication	208(37.3)	125(22.4)	123(22.1)	74(13.3)	27(4.8)
Publishing research	224(40.2)	123(22.1)	123(22.1)	63(11.3)	24(4.3)
Received Grant	255(45.8)	126(22.6)	105(18.9)	57(10.2)	14(2.5)
Abstract presentation in conference	204(36.6)	130(23.3)	117(21)	76(13.6)	30(5.4)

Table 3: Research Self-Experience: 1 is no experience and 5 is very experienced.

Discussion

Research is important in medical profession to improve healthcare that in variably needs skills to conduct valid and reliable research in primary care [10-11]. Doctors, nurses and other health care workers play an important role in research productivity and motivation in research [12-13].

In our study more than half participants are male and had received undergraduate research training but there is a lack of postgraduate research training (Table 1). Literature has been reported that there is a significant role of teaching in research principles. [14-15]. Nearly half of the participants are working more than 10 years and only 14.9% were currently involved in the research. Askew et al published the same result in general practice [16]. Response about research perception differed significantly among Omani and non-Omani participants. Conversely, no difference was observed about barrier of research.

More than one third participants of this study identified research promotes critical thinking, improves patient care (Table 2). Participants who had undergraduate research training did differ significantly in their response about their research perception and barrier of research. In contrast, participants who had postgraduate research training were not significantly different in their response about their research perception and barrier of research.

Nearly one third of participants feel that research allotted time, financial support and financial incentives are the main barriers of research. Literature also supports these findings, in the primary care insufficient time was the most frequently cited barrier for participating in research, followed by the lack of support, financial constraints, busy clinical practices and lack of interest are the significant barriers to clinicians' involvement in research. This is evidence based that financial incentives and infrastructure support as key factors in promoting research [17-18].

Health professionals need to improve knowledge and skills in research and must spent time and effort. Research training skill and statistical support is essential [19-20]. Age and gender differences in research interest were also seen with younger physicians showing more inclination towards research and a comparatively smaller involvement of female physicians [21-22]. Inadequate mentorship and lack of time have been other major barriers in research identified accessible resources, appropriate rewards, time allocation, promotion and tenure as stimulators for research and scholarly productivity [23-24]. Another main objective of our study was assessment of barriers of which, a lack of research training, allotted time and financial assistance were the main barriers which are also supported by a study done by Saniya et al. that faculty and students have positive attitude towards research but lack of undergraduate training in research and financial support [25].

More than a half of the participants of our study have no or minimum experience of writing a protocol, research grant, literature review, manuscript submission and publication and presentation of research (Table 3). Response about self-experience of research was not significantly different among male and female and Omani and non-Omani participants.

Participants who had undergraduate and postgraduate research training did differ significantly in their response about self-experience of research and barrier of research. Similar study finding has seen in one study published from Saudi Arabia, 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 [26]. Many studies reported the same results in terms of attitude and barriers [27-29]. Policy-maker recommendations regarding strategies for facilitating the uptake of research into policy is to perform relevant and focused research to achieve desired health outcomes in Oman and similar countries in the region [30].

Conclusion

It is encouraging that majority of health care workers considered research helpful for their profession and had positive attitudes towards research. However, not significant number of participants conducting the research, with the most common barriers being lack of time, research training, statistical support.

Recommendation

There must be a link to an institute or department, which is involved in primary care research and training which can provide the guidance to the research oriented general practitioners and links to other experts research oriented primary care physician, biostatisticians, material and logistic support has been provided for conducting research addressing the gaps and barriers identified by study participants with effective interventions. Primary care practice should be represented in medical schools as one of the compulsory disciplines in undergraduate medical education. Once research is done after utilizing resources it should get published to disseminate the result and to motivate others. There should be regular training courses available for primary care health care workers. Primary care practice should be represented in medical schools and providing some protected research time and participation in research methodology workshops and courses should be made readily available for faculty.

Study Limitation

This study is conducted in one region so the result cannot be generalized. Further research is required in different region at different level in a larger sample size.

Disclosure Statement

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