

# Doctors' Attitude and Engagement in Research: A Survey from Two Emerging Regions

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## Abstract

**Background:** Research is an essential component in the advancement of medicine. Evidence indicates that developing regions have low research productivity and contribution to the international literature. It is unclear if physicians' attitudes and perceptions of research could be contributory. **Objectives:** This study examined the attitudes to research, perceived barriers to research, and experiences of prior participation in research projects among physicians from the Middle East and Africa. **Subjects and Methods:** A cross-sectional electronic survey was developed based on the published literature to address these questions and was E-mailed to a large sample of practising clinicians and academics. **Results:** A total of 283 responses received, 61.1% were men with a mean age of 48 years. Responses originated from 23 countries. The majority were from the Middle East (79.2%), whereas 29.9% were from African countries. Over half of physicians (51.1%) held high-level speciality qualifications and were senior clinicians or academics (50.9%). Regarding engagement in research, 41.3% were interested in research but not involved at the time of the survey, 38.5% were involved but not formally employed in a research role, 12.7% had formal research roles, and 7.4% were not interested in research. Majority conducting research held lead-investigator roles (44.2%) followed by co-investigator roles in 37.9% of respondents. Most of the research work was self-initiated original research (42.6%) followed by clinical case series (35.7%). Main motivators to conduct research were contributing to the practice and improving patients' care. Main deterrents to research were lack (41.7% of respondents) and/or difficulty in acquiring research funding (50.2%),

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in addition to the lack of research-protected time (40.5%). **Conclusions:** The majority of physicians interested and/or involved in research are not formally employed in a research role. The facilitators seem to stem from personal interest and professional recognition, whereas barriers result from lack of time, support, and expertise.

**Keywords:** Doctors, emerging regions, medical knowledge, practice-based learning and improvement, professionalism, research, systems-based practice

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## INTRODUCTION

Health research forms an important factor to the advancement of medicine. Advances in research help to foster a better understanding of disease causality and management.<sup>[1,2]</sup> The spin-offs from basic and clinical research lead to the development of new diagnostic methods, novel therapies, and effective ways of working, thus improving the health and quality of life for patients.<sup>[3]</sup> In addition, participating in research refines transferable skills that create better doctors such as improving knowledge of current literature, the ability to interpret and communicate risk, and professional skills such as team-working, mentoring, and communication.<sup>[4]</sup>

Institutions that are active in research have better patient outcomes than those who do not prioritise research and are more likely to benefit from earlier access to new treatments, technologies, and approaches.<sup>[1-3]</sup> Doctors in clinical practice should play a key role in the research process so that research does not become solely the domain of academic scientists.<sup>[4,5]</sup>

There are clear indications that developing regions of the world have low research productivity and contribution to the international literature.<sup>[6-8]</sup> This has been shown specifically for the MENA region and Arab countries with no clear trend for improvement in comparison with other global and regional trends.<sup>[9]</sup> Several factors of different nature have been proposed for such low scholarly productivity.<sup>[6-10]</sup> However, doctors' attitudes and perceptions of research could be a major contributory element, but there are limited data on this aspect. A few studies have addressed the knowledge, attitude, and practice of specific career stages<sup>[11-13]</sup> and members of a given speciality<sup>[14-16]</sup> regarding selected aspects of research such as knowledge of

statistics, ethics, or specific regions. The present study aimed to examine the attitudes to research, perceived barriers to research, and experiences of participation in research projects among physicians from the Middle East and Africa.

## SUBJECTS AND METHODS

A cross-sectional electronic questionnaire survey was conducted between July and December 2016. Despite the lack of risk to human subjects, the study was approved by the Institutional Review Board of SKMC, Abu Dhabi, UAE as per local convention. A web-based commercial software (Survey Monkey, Palo Alto, CA, USA) was used. The survey was sent to an institutional database of physicians based in the Middle East and Africa. An online electronic consent was obtained before the respondents could proceed to the actual survey questions. The privacy regulations of the provider enable respondents to participate, decline participation in the current survey or remove themselves permanently from the database. The survey was made available online for 6 weeks in August 2016–March 2017 and was open to a large convenience sample of doctors in all specialities and across all career stages. Their contact details were accumulated from prior to educational activities, databases of institutions, and professional bodies. It was promoted via three repeat electronic mail messages which explained the rationale of the study and its objectives.

The questions were developed by the authors based on a review of the literature. The questionnaire was mostly in the form of multiple choice questions. The contents were inspired by a recently published work with similar objectives.<sup>[17]</sup> Questions were phrased to avoid leading the respondent and ordered to avoid priming. The questions covered respondents' involvement in

research, degree, and drivers of interest in research, perceived barriers to research, and what respondents felt could be done about those barriers. Additional questions were used to define the respondents' demographic, professional, and academic profiles were captured [Supplementary Material: Appendix 1].

Data were summarized anonymously using the descriptive statistics. The results are presented as absolute and relative frequencies (%) to take account of any missing answers.

## RESULTS

### Respondents' demography

A total of 3951 surveys were dispatched; 330 were received of which 283 were complete and met the eligibility criteria. These constituted the basis of the analysis. Of the 283 respondents, 173 (61.1%) were male, mean age was 48 years, and the majority (79.2%) practised in the Middle East, while the remainder (29.9%) practised in Africa. Responses came from a total of 23 countries with the overwhelming majority originating from the United Arab Emirates (43.8%) and Saudi Arabia (15.5%). These were followed in decreasing order by Libya (21), Iraq (11), Egypt (10), Qatar (9), Oman (9), Nigeria (8), Lebanon (8), Kuwait (6), Morocco (6), Tunisia (5), Jordan (4), Pakistan (4), South Africa (4), Algeria (3), Sudan (2), Syria (2), and 1 each from Yemen, Senegal, Bahrain, Iran, and Palestine.

### Respondents' academic profiles

Over half of the respondents (51.1%) had speciality-level qualifications, such as Board Certifications, Certificate of Completion of Specialist Training UK (CSST), or an equivalent degree. The majority of the remainder held a doctorate degree (PhD or MD) (27.3%). More than half (56.3%) practised in internal medicine and its associated branches, whereas pediatrics, primary care, and surgery were represented by 10% of respondents each. The majority (80%) reported clinically predominant career paths, whereas only 20% reported full academic appointments [Table 1]. Of the academic ranks held, 87.9% were senior. Of the clinical grades held, the majority were either at consultant (50.6%) or sub-consultant/specialist level (32.8%) [Table 1].

**Table 1: The professional and academic profiles of respondents**

Characteristics (n)	n (%)
Highest academic or professional qualifications (282):	
Board/CSST/Specialty certificate (or equivalent)	144 (51.1)
Doctorate	77 (27.3)
Master (MA MSc MBA)	25 (8.9)
Bachelor/diploma/certificate	36 (12.7)
Medical speciality (277)	
Medicine	156 (56.3)
Pediatrics	32 (11.6)
Primary care	31 (11.2)
Surgery	27 (9.8)
Obstetrics and gynecology	16 (5.8)
Clinical sciences	15 (5.4)
Professional/career track (276)	
Clinical and scientific in health	221 (80.1)
Academic	55 (19.9)
Academic ranks (111)*	
Professor	33 (29.7)
Associate professor/reader	21 (18.9)
Assistant professor/senior lecturer	34 (30.6)
Lecturer/assistant lecturer	23 (20.7)
Clinical grades (259)*	
Senior (consultant)	131 (50.9)
Mid grade (subconsultant)	85 (32.8)
Juniors (in training)	43 (16.6)

\*Not mutually exclusive; Both approximately equivalent North American and British terminology used. CSST: Certificate of completion of specialist training UK, MBA: Master of business administration, MSc: Master of science, MA: Master of arts

### Engagement in research

Questions 11–15 assessed the extent of current engagement, degree and nature of such involvement, and time spent therein [Supplementary Material: Appendix 1]. 41.3% of respondents reported being interested in the conduction of research but were not involved at the time of the survey, 38.5% were involved in research without a formal employment role, and only 12.7% were formally employed in a research role [Table 2]. 44.2% were acting in lead research roles, while 37.9% were assisting as co-investigators at the time of response. Fewer were involved with co-authorship (26.3%) and supporting roles (21.2%) [Table 2]. Those who were involved in research stated that they were mostly involved in self-initiated, original research (42.6%), research describing clinical case series (35.7%), multi-center studies (mostly pharma sponsored) (22.7%), or basic science research (22.7%). Other research activities

**Table 2: Respondents' extent and nature of engagements in research and the type of research**

Characteristics (number of responses)	n (%)
The extent of engagement engaged in research (283)	
I am interested in research but not currently involved in research	117 (41.3)
I am involved in research but not formally employed in a research role	109 (38.5)
I am formally employed in a research role	36 (12.7)
I am not interested in research	21 (7.4)
The nature of involvement in research (240)	
Directing and leading clinical research (principal investigator)	106 (44.2)
Assisting with conduct of research (co-investigator)	91 (37.9)
Involved in authorship of research papers	63 (26.3)
Recruiting patients for clinical research studies (support)	51 (21.3)
Other roles	33 (13.8)
The type of research activity (216)	
Self-initiated original research (single center or multi-center)	92 (42.6)
Researching to describe a clinical case series	77 (35.7)
Participating in multi-center studies (pharma sponsored)	49 (22.7)
Basic research	49 (22.7)
Literature reviews	38 (17.6)
Clinical practice audits (quality assurance surveys with intent to publish)	34 (15.7)
Online professional surveys	29 (13.4)
Epidemiological research	28 (13.0)
Researching for writing of editorials and commentaries	18 (8.3)
Medical education research	11 (5.1)
Professionalism research	10 (4.6)

were also described [Table 2]. Over two-thirds of the respondents (68.3%) reported having a designated (even if not solely protected) research time in their weekly schedule but the remaining 31.7% confirmed having protected time. On average, 168 respondents would be spending a median of 6 h (range: 1–100 h) in research per week inclusive of time in the evening and weekends.

### Motivators and deterrents to research

Regarding interest in future research involvement, the majority (80.1%) indicated interest, while 5.9% were not interested and 14.0% were unsure. Lead self-motivators for conduction of research were: Contributions to the field of practice for the improvement of patient care (in 81.2% of respondents), intellectual stimulation (59.4%), enhancement of one's curriculum vitae or publication record (57.1%), a sense of betterment in their careers (53.0%), and broadening in sets of skills (52.6%) [Table 3]. Those who provided a possible

**Table 3: Respondents' perceptions of factors that motivate engagements in research or refrain from such activity**

Questions and responses	n (%)
Factors motivating participation in research (266)	
I am contributing to my field/improving patients' care	216 (81.2)
It is intellectually stimulating	158 (59.4)
It enhances my CV or publications record	152 (57.1)
It makes me a better doctor	141 (53.0)
It allows me to develop/use a wider set of skills	140 (52.6)
It brings more variety to my job	111 (41.7)
I can pursue a special interest more deeply	104 (39.1)
It is a way to distinguish myself among my peers	91 (34.2)
It is collaborative/collegial	83 (31.2)
It will help me to get onto the career path I want	66 (24.8)
It is recognized and awarded by my employer	39 (14.7)
It is financially rewarding	25 (9.4)
It is something many of my peers do	16 (6.0)
Others	12 (4.5)
Rationale for not being involved in research (113)	
Efforts are much better concentrated on implementing completed research and guidelines into clinical practice rather than trying to replicate it	37 (32.7)
Research is not relevant to many who are mainly providing services	35 (31.0)
Resources should all be directed toward patients care as a priority	31 (27.4)
Research is not a priority in my part of the world (country)	30 (26.6)
Research is not a priority; emphasis should be on patient care	30 (26.6)
Other	21 (18.6)
Others are doing a lot of good scientific research well; they do not need more of us	11 (9.7)

CV: Curriculum vitae

rationale for not being involved in research ( $n = 113$ ) argued that efforts were better concentrated on implementing completed research and guidelines into clinical practice rather than attempting at replicating it (32.7%), and that research is not relevant to those who are mainly providing clinical services (31.0%), with resources ought to be directed toward patients care as the top priority (27.4%) [Table 4]. The perceived impact of various barriers to getting more involved in research activities described in response to present statements [Table 4] and in the respondents' own words [Supplementary Material: Appendix 2].

### Barriers to greater engagement in research

Several barriers were identified as major disincentives to the conduction of research. Financial funding was the main deterrent, identified as "very significant" by the majority, with 50.2% of respondents reporting "too much effort is required when applying for

**Table 4: The barriers to a greater engagement in research identified by 266 respondents**

Barriers	Not significant (%)	Very significant (%)
Applying for funding requires too much effort (249)	11 (4.4)	125 (50.2)
The amount of funding I require is not available (242)	29 (12.0)	101 (41.7)
Clinical demands will undermine the protected time (247)	17 (6.9)	100 (40.5)
My employer will not grant me the protected time (246)	28 (11.4)	82 (33.3)
I do not feel that I can ask for the protected time (245)	23 (9.4)	81 (33.1)
Funding is not available for the type of research or specialty area (244)	37 (15.2)	70 (28.7)
Ethics approval is too complicated or takes too long (244)	30 (12.3)	58 (23.8)
I don't feel I have the statistical skills (250)	54 (21.6)	46 (18.4)
I do not know how to find out or apply for research funding (243)	44 (18.1)	44 (18.1)
It is too difficult to recruit patients for research trials (248)	32 (12.9)	40 (16.1)
I do not have a mentor (244)	76 (31.1)	34 (13.9)
I do not have a collaborator (242)	54 (22.3)	34 (14.0)
I do not think my employer wants me to be involved in research (241)	100 (41.5)	33 (13.7)
It is too difficult to access patients records or data (243)	64 (26.3)	25 (10.3)
I don't think I can get it published in peer-reviewed journals (245)	86 (35.1)	22 (9.0)
I don't know how to get ethics approval (247)	111 (44.9)	21 (8.5)
I do not feel I have the necessary skills for research design (248)	89 (35.9)	17 (6.9)
I don't feel I have adequate expertise in the specialty area (243)	92 (37.9)	17 (7.0)

For each statement “factors”, respondents identified the impact of given barriers on a scale of 0-4 where 0 is “has no impact “ and 4 is “has very significant impact” on engagement in research

funding” and 41.7% reporting its “nonavailability” in their fields of interest. Lack of research-protected time in light of increased clinical demands was also identified as a “very significant” barrier by 40.5% of respondents, with 33.3% reporting employers not granting them protected time even if specifically requested (reported in the latter by 33.1%). While external factors (funding, clinical demand, and time) were identified as significant obstacles to undertaking research, individual skill-related factors were not. As a matter of fact, <10% felt that having inadequate expertise or lack of research skills were “very significant” barriers to conducting research. The remainder of barriers identified is detailed in Table 4 and Supplementary Material: Appendix 2.

## DISCUSSION

This survey shed light on some of the issues that may contribute to a low level of engagement in clinical research in the MEA region. Majority of the respondents (80%) indicated a keen interest in engagement in clinical research, with 40% already in active research roles. Their motivation for research participation stems from intellectual stimulation, broadening of skills, and enhancing their careers and publication records. Despite their keen interest, they alluded to a number of

barriers that significantly impacted and hindered their involvement in research. Financial funding emerged as one of the most significant barriers cited by the respondents, an issue that was raised previously.<sup>[18]</sup> Acquisition of research grants is often challenging given the limited resources in the region and the lack of established institutional traditions in research.<sup>[10,18]</sup> Many of the government owned and independent medical schools consider teaching of undergraduate students to become doctors as the only mission. This was closely followed by the lack of protected time for research in light of increased clinical demands and lack of research methodology skills among senior physicians.<sup>[19]</sup> and consequent low literature productivity.<sup>[6-10]</sup>

The predominant demographic characteristics of respondents of this survey are noteworthy. Mean age was over 45 years, and the majority (>50%) were of senior standing. Junior level physicians-in-training comprised only 16.6% of respondents. It is well-known for the younger clinician that striking a balance between clinical work and research in the absence of protected time is of major concern. Despite the fact that research methodology is now an integral part of many training programs, the pressure to complete certification exams and residency

training often override any interest in engaging in research. In addition, those younger caregiver clinicians may have the added responsibilities of family, placing further constrictions on research time and effort. This concept is substantiated by two studies reported by Mitwalli *et al.*<sup>[13]</sup> that specifically targeted resident physicians in training in KSA and by Khan *et al.*<sup>[15]</sup> in Pakistan. The authors sought to examine the perceptions, attitudes, and practices of research among resident physicians and found that the majority agreed on the importance of research but only 30.4% of the residents in KSA were actively involved. The perceived barriers to conducting research included lack of research training, lack of time, and supervisors. Similar findings were reported by Khan *et al.* and the most significant barrier in their cohort was lack of knowledge on research methodology. Both groups emphasized on the need for their institutions to undergo a major transformation to accommodate for research training among resident trainees. On the other hand, a group from Mayo clinic,<sup>[4]</sup> demonstrated that residents who invested substantial efforts in research during their training were not compromised in their abilities to complete their curricula or care for patients.

Senior physicians, on the other hand, may have more support staff, less administrative tasks, and therefore, more dedicated time toward exploring the rewarding challenges of research. This, combined with the predominantly senior cohort of respondents, may explain the unexpectedly higher research engagement and/or interest compared to what we anticipated for the region, particularly when considering the low volume of publications originating from within it.

In addition, the gender imbalance in our cohort with a male majority (61% of respondents) may have also played a role in skewing the results toward more engagement than anticipated. In a recent survey by the Royal College of Physicians exploring barriers to doctors' engagement in research, there were significant discrepancies between genders.<sup>[17]</sup> Despite men and women being equally likely to be employed in research positions, men were more likely to engage in research with their clinical duties. In addition, women felt less confident about their skills in research, ability to secure protected time for research, and found it harder to fit

research with family life. Similarly, females in our region are likely to experience the latter at a similar if not more degree of discrepancy.<sup>[17]</sup>

It transpires that barriers pointed out in this survey are not unique to our region, as similar findings were reported in the previous survey by the Royal College of Physicians of London, UK.<sup>[17]</sup> Lack of time and funding were also seen as the biggest barrier to conducting research. Although the barriers identified by this survey are the same as developed countries, our region is perhaps further disadvantaged by a lack of a systematic infrastructure conducive for conducting research, coupled by clinicians' failure to recognize or seize opportunities to conduct research.<sup>[21-23]</sup> On the other hand, those that were not interested in conducting research were more inclined toward the provision of clinical care and were content in translating the results of clinical research into their practice. Our findings are similar to the survey of Al-Tannir *et al.*<sup>[20]</sup> where 9.6% of respondents indicated that they believed that there was no benefit to be gained from conducting clinical trials.

Several groups attempted to address the low levels of interest, commitment, and performance in research by clinicians at different specialties, career stages, and countries in settings similar and different from our regions.<sup>[24-32]</sup> For residents, designated research rotation with competency-based structured and novel approaches to research training, online resident research training programs have been proposed.<sup>[24,26]</sup> Evaluating the attitudes and compliance with research requirements and formal evaluation of satisfaction using anonymized questionnaires are needed to overcome barriers to resident research.<sup>[27-29]</sup> Furthermore, inclusion of thesis and integrating graduate degree training with specialty fellowships have been tried for formally incorporating high quality academic activities and research in clinical training.<sup>[30-32]</sup> All these forms of training enhancements can be readily in the MEA region where universities are either heavily involved or totally in charge of the clinical training programs. A minimal extension of the clinical training programs should be justified for gain of extra skills rather than loss training time. Encouraging and supportive public attitude toward biomedical research is of

paramount importance.<sup>[33]</sup> Any misunderstanding should be overcome by empathy and strict adherence to the principles of ethical principles and respect to the integrity of human participants in clinical research.

Some limitations of this study are noteworthy. The online nature of the survey study renders it susceptible to bias. Convenience sampling, a type of nonprobability sampling that allows for data collection from a group of people easy to contact and/or reach, may have introduced some bias where more interested than noninterested respondents may respond. This may dilute the problem. The disproportionate representation of the regions evidenced by the large number of respondents from the UAE and Saudi Arabia. In such countries of the Arabian Gulf, the availability of resources and financial support for conduction of research may be in greater abundance compared to other Middle Eastern countries with restricted resources. In addition, those interested in basic science research may have been underrepresented in our sample. However, the intended emphasis of the study was on clinical research. Future studies should introduce quota to respondents, employ other survey methods such as focused discussion groups and Delphi methods and even target more focused groups albeit smaller in numbers to allow conclusions to be made from studying more homogeneous samples such as recent authors or reviewers, teaching or clinical staff in a given facility.

## CONCLUSIONS

The low research engagement and literature productivity is well acknowledged in developing regions of the world namely Africa and the Middle East. This survey revealed that the majority of physicians interested and/or involved in research are not formally employed in a research role. The facilitators seem to stem from personal interest and professional recognition, whereas barriers result from lack of time, support, and expertise. The voluntarily and frankly reported perceptions from participants should be seriously considered by decision makers and strategic planners in academic

institutions and health-care facilities. Introduction to research through comprehensive training in research methodology coupled with continued mentorship to doctors throughout their early career stages are essential to lay the foundations of a culture of research.. Furthermore, incorporation of protected research time and provision of support to senior physicians in academic positions and clinical services are crucial to enhance research leadership and capacity building.

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## Authors contribution

SAB conceived the study and adapted and managed the survey questionnaire. All authors examined the data, developed, revised the manuscript, and approved its final version.

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Nil.

## Conflicts of interest

There are no conflicts of interest.

## Compliance with ethical Principles

Ethical approval was granted by the IRB of SKMC, Abu Dhabi, UAE. All participants provided consent prior to being able to proceed to the questionnaire. Data were extracted and analyzed anonymously.

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## SUPPLEMENTARY MATERIAL

### Appendix 1: Doctors' practices, attitudes and perceptions of research questionnaire items

Q1 Eligibility and consent: See text for details

Q2 In which region do you reside and practice normally? (Middle East, Africa)

Q3 Please specify the country where your practice (free text)

Q4 Please indicate your gender (Options: Male, Female)

Q5. Please indicate your age (Free text)

Q6 Please indicate your highest academic/Professional qualifications [Options: Specialty certificate or equivalent, doctorate (PhD MD), Bachelor, Master, diploma/certificate.

Q7. What is your specialty? [Options: medicine and branches, pediatrics and subspecialties primary care/family medicine, surgery and branches, women health, obstetrics and gynecology, clinical sciences

Q8. Please indicate your professional/career track: [Options: Clinical and scientific in health care and research or academic (full time university employee)

Q9. What is your academic title? [Options: professor; associate professor, assistant professor, lecturer, assistant lecturer

Q10. What is your clinical title? [Options: consultant, specialist, fellow/senior registrar, registrar/resident, intern

Q11. Are you currently engaged in research? to what extent? [Options: I am interested in research but not currently involved; I am involved in research but not formally employed in a research role; I am formally employed in a research role, I am not interested in research

Q12. What is the degree and nature of your involvement in research? [Options: Directing and leading clinical research (principal investigator), Assisting with conduct of research (co-investigator), Involved in authorship of research papers, Recruiting patients for clinical research studies (support), Other (please specify)]

Q13. If you have been involved in research in the last 2 years, please indicate the type of research activity: [Options: Self-initiated original research (single center or multi-center), Researching to describe a clinical case series, participating in multi-center studies (mostly pharma sponsored) (observational or interventional), basic research, literature reviews, clinical practice audits (quality assurance surveys with intent to publish), online professional surveys, epidemiological research, researching to write commentaries, editorials, medical education research, professionalism research]

Q14. If you have conducted research, please indicate if you have any designated research time (even if it is not protected) in your weekly schedule?[Options: No, Yes]

Q15. If you are involved in research, please indicate the number of hours you spend in research per week? (including your own time used for research evening and weekends)]

Q16. Please indicate if you are interested in being involvement more in research in the future? [Options: No unsure yes]

Q17. What aspect of research do you find is appealing? [see Table 3]

Q18. Please answer on a scale of 0-4 where 0 is "no impact" and 4 is "very significant impact on my engagement" [Figure 1]

Q19 If you are not interested in being involved in research currently; what is your rationale? [Options: See Table 4]

Q20. Please add any views you wish to express in the comments box [Free text Figure 2]

Questions 1-10 were for definition of the study population and 11-20 were the actual research survey

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## Appendix 2: Transcription of the free text comments on

Anyone who wants to do research does not get support from the colleagues or peers during all the stages of a clinical research including publication work. Mostly, an individual is involved in research due to his personal interest and does not get any recognition or rewards for any good work including publication work. However, when any paper is ready for publication, most of the colleagues fight and protest for authorship!

Chances to run a genuine research in my country are not available especially in my specialty

Employer not committed to research and undervaluing the contribution local clinicians can make to knowledge creation and innovation. Nonstandardized and inconsistent use of research outputs for recognition, appraisal, and promotions

Enough time and funding could be provided to advance in research

Funding and assistant personnel are not available or too few

Funding is the major problem

Have no enough time

If we can have some basic teaching sessions about how to design and do simple research

In our country, we have no funding for our research at individual level, in the whole country we have no ethical committees to give ethical approval, that is why we do only simple observational studies

International collaboration required

It needs to appoint competent and dedicated support personnel, especially in basic research to study so many diseases that are prevalent in this region and not in the west

Lack of protected time and heavy clinical workload are two most potent hurdles in the path of research. (Expat mentality” would I be working here next year? or “should I get my feet stuck in a long-term research project?” are other reasons to not engage in research)

The major issue is lack of protected time; clinical demands, and difficulty in enrollment of children in research trials

National funding must be improved

No enough resources to do research

No experience in research, but am interested in participating in research-related work

Very difficult to find motivations; No guidance

Not properly trained for research and no incentives

One of the main problems in clinical research is recruitment of patients and compliance of patients with protocol of research. This problem is particularly present in prospective, randomized, controlled trials. Another problem is a lack of fund. To conduct RCT trials, for example, we must have volunteers who are paid for their participation. Furthermore, lack of research statistician is problem

Poor patient follow-up!

Research is not a luxury but an essential part of improving what we do for our patients tomorrow. The west and far east have got that message. In the middle east where we were once leaders, we now make excuses

System failure

In the largest health facility, physicians perform a full time service job but they get asked about their research productivity at the end of the year

The last 12 questions are difficult to answer in the current form. The scoring cannot be used as valid for them

At the present time, involvement in clinical work does not allow me to do any other work. Research is too complicated to start with due to several obstacles. There is no person available to guide the research

There is no actual plan in some organizations

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