

Research

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Meaningful professional activities from family medicine practitioners' perspectives: a study from Saudi Arabia

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Abstract

Background: Family medicine practitioners (FMP) take care of a varied range of patients with undifferentiated conditions over a lifetime. Although it was inception in Saudi Arabia in 1980, limited data exists on FMP. This paper explores what family physicians deem relevant. **Methods:** A cross-sectional survey was conducted among FMP in Saudi Arabia in 2018–2019 who responded to an online questionnaire that listed 20 activities usually done by FMP asking them to rate their meaningfulness on a 5-point Likert Scale, and select the top 3 they would like to spend the most and the least time on. Chi-square statistics were used to compare preference for time spent on these six activities by participant characteristics. **Results:** Of the 415 survey participants, the majority were male (246) and had a Bachelor's degree (176). The management of risk conditions, follow-up of chronic illnesses and running preventive health clinics were listed as most meaningful. The majority wished to spend more time on managing health risks, handling daily common complaints and follow-up of chronic illnesses and less time on terminal care activities (46.8%), emergency care (32.3%) and addiction medicine (23.4%). Bachelor's degree holders wished to spend more time on emergency care compared to Diploma, Board-certified and Fellowship holders (63%, 21%, 10% and 5%, respectively; $P=0.01$). **Conclusions:** The activities preferred by FMP align with prevailing disease epidemiology. Variations in preferences of 'managing emergencies' reflect the varied format of training. Training of FMP should be standardized and further studies investigate reasons for specific preferences.

Background

Family physicians take care of a varied range of patients with undifferentiated conditions over a long period of time. Their scope of practice is, therefore, defined by the human needs rather than specific disease conditions (Phillips and Haynes, 2001). A survey in Europe and Britain showed that, out of 1000 adults in a community, within the span of one month, approximately 3 quarters suffered an episode of illness, 250 sought health care with only 1 person reaching a specialist. This underscores the importance of family medical practice. The roles of the family physician include clinic leader and manager, mentor and clinical teacher and researchers among others (Makwero *et al.*, 2017). Key among the many roles of a family physician are caretaker, consultant, expert in clinical governance and community-oriented care, clinical supervisor and capacity builder, etc. However, the focus of these roles may vary by individual preferences as well as with experience. Senior family practitioners may prefer to take on more complex administrative oversight roles over clinical care or go into sub-specialization (Mash *et al.*, 2015).

Due to the long-term relationship with the patients (1), the family physician plays a critical role in preventing illness, managing common complaints, identifying emerging illness, managing chronic illness and acts as a focal point to link patients to other specialized services while still providing primary health care. This supports patients in navigating the complex healthcare systems (RevereHealth, 2018). Research into family medicine centers around clinical issues as well as educational issues so as to ensure excellent care is provided (Bowman *et al.*, 2017).

Family medicine as a practice in Saudi Arabia was started in 1980. By 2014, there were three cadres of health workers providing family practitioners health services to address the increasing and varied needs of the indigenous populace with the epidemiological transition of disease (Albejaidi, 2010). The scope of practice of family medicine practitioners (FMP) is not well-defined (Osman *et al.*, 2011); additionally limited data exists on this practice (Albejaidi, 2010). It is with this background that we set out to explore what family physicians deem relevant and wish to prioritize among a broad range of common activities in daily practice with a view to

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provide information to support the national strategic vision of 2020 in Family Medicine (Al-Khaldi *et al.*, 2017).

Methods

Study design and setting

The study was a cross-sectional survey of FMP in Saudi Arabia.

Study population

The study population was a conveniently selected sample of 415 individuals of approximately 700 FMP in Saudi Arabia (Almalki *et al.*, 2011).

Data collection

The participants responded to an online questionnaire sent as an electronic link through email and distributed all over the country. Responses were collected between November 2018 and February 2019. The questionnaire was comprised of eight questions. The first five questions addressed demographic data, highest educational qualification, employer and duration of practice in a specific primary care center. The next 3 questions listed 20 activities usually done by primary care physicians, and asked them to rate their meaningfulness on a 5-point Likert scale; and select the top 3 they would like to spend the most time on and the top 3 they would like to spend the least time on. The Likert scale was graded as follows: 'strongly not meaningful', 'not meaningful', 'neither meaningful nor non-meaningful', 'meaningful' and 'strongly meaningful'.

The questionnaire was adapted from Halvorsen (2013) based on activities regularly conducted by FMP (Halvorsen *et al.*, 2013).

Data analysis

Reliability test was conducted using Cronbach's alpha test. Measures of central tendency and dispersion, as well as proportions, were used to summarize participant characteristics and proportions of participants that gave similar responses to the questions.

Responses on the 5-point Likert scale were summarized to a 3-point scale of meaningful (comprised of 'meaningful' and 'strongly meaningful'), neither meaningful nor non-meaningful and 'not meaningful' (comprised of 'not meaningful' and 'strongly not meaningful'). Proportions were used to summarize participant characteristics and proportions of participants that gave similar responses to the questions.

Each of the responses of the three activities that participants wished to spend the most time on or three the least time on were categorized into categorical outcome with three options; 'would like to spend more time', 'would like to spend less time' and 'no opinion' for those who did not select that option. Chi-square statistics were used to compare preference for time spent on these six activities by participant characteristics; a *P*-value of <0.05 was considered significant (Bruce, 2008). Data analysis was conducted using SAS version 9.2 (SAS Institute Inc., 2012).

Ethical considerations

Ethical approval to conduct this study was granted by the IRB committee of College of Medicine, Prince Sattam Bin Abdulaziz University. Return of the online, anonymous questionnaire was considered as consent to participate in the study

Table 1. Demographic characteristics of family practitioners in Saudi Arabia (*n* = 415)

Variables	Number	Percent (%)
Gender		
Male	246	59.3%
Female	169	40.7%
Highest education qualification		
Bachelor's degree (e.g., MBBS or equivalent)	176	42.4%
Diploma degree (e.g., Master's or equivalent)	50	12%
Board degree or equivalent	141	35%
Fellowship degree or equivalent	48	11.6%
Currently you are working under:		
Ministry of Defense	70	16.9%
Ministry of Health	195	47%
Ministry of National Guard	65	15.7%
Ministry of Education	85	20.6%

Results

Participant characteristics

Out of 700 FMP invited to participate in the study, 527 agreed to participate in the study and a total of 415 physicians returned completed questionnaires, with a response rate of 78.7%. The median age of the 415 practitioners interviewed was 35 years (IQR 32–38 years). The majority were male (59.3%; *n* = 246), had a Bachelor's degree (42.4%), worked at the Ministry of Health (47%). (Table 1). The median duration of work experience since qualification was nine years (IQR 5–14 years).

Reliability and validity test

Reliability test was conducted using Cronbach's alpha to test whether the data collected from the study was reliable. From the analysis, the Cronbach's alpha was found to be 0.864, and thus was considered acceptable and further tests were conducted.

Perceived relevance of different roles by family practitioners in Saudi Arabia

More than half of all the 415 practitioners interviewed, felt that all the listed activities were meaningful to them. The majority (>80%) listed that the management of risk conditions, follow-up of chronic somatic illnesses, preventive health clinics, dealing with psychosocial problems, quality assurance, teaching and supervision, the management of medically unexplained symptoms and school health services were meaningful to them (Table 2)

Activities family practitioners would like to focus on most

Each practitioner interviewed was asked to identify from the same list of 20 activities, which 3 activities he or she would like to spend the more time on. The majority indicated they would prefer to spend more time managing health risks (57.6%), daily common complaints (55.7%) and follow-up of chronic illnesses (55.7%). The selected activities in the order of the most preferred to the least preferred are shown in Table 3.

Table 2. Ranking of meaningfulness of specific duties by family practitioners in Saudi Arabia

Tasks	Scale 4 or 5 (Meaningful)	
	Number	Percent
Risk conditions (elevated blood pressure or cholesterol, low bone mass density)	391	94.2%
Follow-up of chronic somatic diseases (e.g., COPD, heart disease, diabetes)	385	92.8%
Preventive health clinics	370	89.2%
Quality assurance (e.g., development and maintenance of guidelines/procedure)	338	81.4%
Teaching and supervision of students and residents	328	79%
Medically unexplained symptoms (e.g., chronic fatigue, chronic pain syndrome)	325	78.3%
Recent everyday symptoms and complaints (infections, tendinitis, headache, dyspnea, chest pain, abdominal pain, etc.)	320	77.1%
School health service	312	75.2%
Research	302	72.8%
Meetings regarding individual patients	291	70.1%
Meetings with local health authorities	289	70%
Follow-up of chronic psychiatric diseases (e.g., schizophrenia, bipolar disorder, anxiety/depression)	270	65.1%
Health certifications (e.g., Joint Commission International – JCI)	265	63.9%
Nursing home medicine (home health care)	249	60%
Drug abuse/addiction medicine	236	56.9%
Psychosocial problems (e.g., marital crises, conflicts at work)	233	56.1%
Follow-up of persons certified unfit for work	208	50.1%
Practice administration/management (e.g., human resource management, bookkeeping, etc.)	206	49.6%
On-call emergency health care (e.g., trauma/accidents, acute, serious somatic and psychiatric diseases)	197	47.5%
Terminal care	189	45.5%

Table 3. Activities family practitioners in Saudi Arabia would prefer to spend time engaged in

Activities	Would like to spend more time		Would like to spend less time	
	Number	Percent	Number	Percent
Risk conditions (high blood pressure or cholesterol, low bone mass density)	239	57.6%	23	5.5%
Recent everyday symptoms and complaints (infections, tendinitis, headache, dyspnea, chest pain, abdominal pain, etc.)	231	55.7%	50	12 %
Follow-up of chronic somatic diseases (e.g., COPD, heart disease, diabetes)	231	55.7%	31	7.5%
Teaching and supervision of students and residents	134	32.3%	29	7%
Preventive health clinics	81	19.5%	13	3.1%
Research	50	12%	26	6.3%
On-call emergency health care (e.g., trauma/accidents, acute, serious somatic and psychiatric diseases)	50	12%	133	32%
Follow-up of chronic psychiatric diseases (e.g., schizophrenia, bipolar disorder, anxiety/depression)	47	11.3%	73	17.6%
Quality assurance (e.g., development and maintenance of guidelines/procedure)	39	9.4%	68	16.4%
Psychosocial problems (e.g., marital crises, conflicts at work)	28	6.7%	63	15.2%
Practice administration/management (e.g., human resource management, bookkeeping, etc.)	26	6.3%	63	15.2%
School health service	15	3.6%	29	7%
Terminal care	13	3.1%	194	46.8%
Nursing home medicine (home health care)	13	3.1%	31	7.5%
Medically unexplained symptoms (e.g., chronic fatigue, chronic pain syndrome)	13	3.1%	42	10.1%
Meetings regarding individual patients	10	2.4%	60	14.6%
Follow-up of persons certified unfit for work	8	1.9%	68	16.4%
Meetings with local health authorities	5	1.2%	44	10.6%
Health certifications (e.g., Joint Commission International – JCI)	5	1.2%	52	12.5%
Drug abuse/addiction medicine	2	0.5%	97	23.4%

Table 4. Chi-square test between gender and activities spent more and less time on

Activities most spent time on	Gender		Total	Chi-square	OR	95% CI		P-value
	Male	Female				Lower level	Upper level	
Risk conditions (high blood pressure or cholesterol, low bone mass density)								
No	110	67	177	.492	1.260	0.660	2.404	0.483
Yes	136	102	238					
Recent everyday symptoms and complaints (infections, tendinitis, headache, dyspnea, chest pain, abdominal pain, etc.)								
No	97	87	184	2.297	0.610	0.321	1.158	0.130
Yes	149	82	231					
Follow-up of chronic somatic diseases (e.g., COPD, heart disease, diabetes)								
No	107	77	184	0.044	0.934	0.493	1.769	0.833
Yes	139	92	231					
Total	146	169	415					
Activities spent less time on								
Terminal care								
No	131	89	220	0.000	1.003	0.531	1.895	0.993
Yes	116	79	195					
On-call emergency health care (e.g., trauma/accidents, acute, serious somatic and psychiatric diseases)								
No	158	123	281	1.608	0.638	0.318	1.281	0.205
Yes	89	45	134					
Drug abuse/addiction medicine								
No	197	121	318	1.329	1.545	0.736	3.243	0.249
Yes	49	48	97					
Total	246	169	415					

As regards preference for spending time on recent everyday symptoms and complaints (infections, tendinitis, headache, dyspnea, chest pain, abdominal pain, etc.), 231 (56%) responded they would like to spend more time, 50 (12%) responded they would like to spend less time and 134 (32%) did not respond. There was a significantly higher proportion of male participants who indicated they would wish to spend more time on recent everyday symptoms and complaints compared to female participants. Responses for preference for more time, less time and no response were 65%, 31% and 62% for male participants and 35%, 68% and 39% for female participants ($P = 0.3$). Preference for time spent on 'recent daily symptoms' did not vary by other participant characteristics. Preference for time spent on 'chronic care' and 'risk conditions' did not vary by participant characteristics as shown in Table 4.

Activities family practitioners would like to focus on the least

Each practitioner interviewed was asked to identify from the same list of 20 activities, which three activities he or she would like to spend the least time on. The majority indicated they would prefer to spend less time engaged in terminal care activities (46.8%), emergency care (32%) and addiction medicine (23.4%). The activities that were least preferred are highlighted in bold font in Table 5.

As regards preference for time spent on emergency care, 50 (12%) responded they would like to spend more time, 133 (32%) responded they would like to spend less time and 232 (56%) did not respond.

The proportions of participants who wished to spend more time on emergency care ($n = 50$; 12%) varied by educational

qualification; these were 63%, 21%, 10% and 5% for Bachelors, Diploma, Board-certified and Fellowship holders, respectively. This was statistically significant ($P = 0.01$). Preference for time spent on 'emergency care' did not vary by other participant characteristics. Preference for time spent on 'terminal care' and 'drug addiction' did not vary by participant characteristics.

Discussion

FMP in Saudi Arabia ranked management of health risk conditions, follow-up of chronic illness and running preventive health clinics as activities that were most meaningful to them. The same order prevailed when ranking activities that they would have preferred to spend more time except for the management of recent everyday symptoms that were ranked third in place of preventive clinics. Male practitioners preferred to spend time on running daily clinics compared to female practitioners. Additionally, they would prefer to spend less time on emergency care, terminal care and addiction medicine. Additionally, those with Bachelor's degree preferred to spend more time on emergency care compared to those holding other educational qualifications.

It is laudable that the activities ranked as meaningful by the family medical practitioners are aligned to the general prevailing conditions in the country. Among adults visiting primary care centers in Saudi Arabia, 38.3% were overweight and 27.6% were obese (Al-Qahtani, 2019). Additionally, among adults visiting primary healthcare centers in Riyadh, 21% and 12% had a Framingham risk score (FRS) of ≥ 10 indicating intermediate and 10-year risks for cardiovascular disease (AlQuaiz et al., 2019).

Table 5. Chi-square test between age and activities spent more and less time on

Activities most spent time on	Age		Total	Chi-square	OR	95% CI		P-value
	Less than 30 years	More than 30 years				Lower level	Upper level	
Risk conditions (high blood pressure or cholesterol, low bone mass density)								
No	37	139	176	0.120	1.150	0.522	2.535	0.729
Yes	44	195	239					
Recent everyday symptoms and complaints (infections, tendinitis, headache, dyspnea, chest pain, abdominal pain, etc.)								
No	34	150	184	0.088	0.887	0.401	1.963	0.767
Yes	47	184	231					
Follow-up of chronic somatic diseases (e.g., COPD, heart disease, diabetes)								
No	47	137	184	2.960	1.997	0.901	4.428	0.085
Yes	34	197	231					
Total	81	334	415					
Activities spent less time on								
Terminal care								
No	45	176	221	0.043	1.087	0.494	2.392	0.835
Yes	37	157	194					
On-call emergency health care (e.g., trauma/accidents, acute, serious somatic and psychiatric diseases)								
No	58	223	281	0.186	1.208	0.512	2.852	0.666
Yes	24	110	134					
Drug abuse/addiction medicine								
No	58	260	318	0.678	0.691	0.286	1.670	0.410
Yes	24	73	97					
Total	82	333	415					

The model of family medicine practice is structured similar to that of primary health care and could be used to improve primary health care (Al-Khalidi *et al.*, 2017). This is because it is centered on the needs and preferences of individuals and communities, addresses broader health determinants and provides comprehensive contextualized care throughout the lifespan of an individual (World Health Organization, 2019). By indicating their preference for attending to daily complaints of their patients which would be varied, family medical practitioners illustrated they were driven to care for the needs of their patients (Halvorsen *et al.*, 2013).

The variation in preference for time spent on emergency care by educational qualifications may point to differences in training program content and educational methodologies. As family medical practitioners in Saudi Arabia are frontline workers at primary healthcare centers, akin to middle-level healthcare workers in Africa, it is essential that training content and skills' professional development course are standardized to enable them provide uniform care (Couper *et al.*, 2018). The absence of unified standards in family medicine has been cited as one of the challenges faced in the development of the practice of family medicine in the Arab world (Al-Kurashi, 2002).

It is challenging to infer why more male practitioners preferred to spend more time on managing daily complaints compared to female practitioners in the absence of information regarding what actual tasks they are involved in on a day-to-day basis. In the literature, male and female physicians with the same skill set and level of experience usually have different career progression rates, which may denote different role assignments (Maynard *et al.*, 2015). It is possible that our sample that had a majority of male participants,

was biased or our sample was not representative of the population of FMP in the country (Ministry of Health, 2017).

Limitations

There were some limitations. In the literature, family medical practitioners have mentioned that challenges they face were workload, time pressures and meeting demands (Manca *et al.*, 2007). However, we did not collect information regarding what were the actual activities that family medical practitioners were involved in that were taking up their time in place of what they would prefer to do. Furthermore, we did not probe further to find out their reasons for preference of specific activities over others. Additionally, our sample was limited and there was a possibility of selection bias due to convenience sampling. Our inquiry was focused on a generic scope of service rather than a contextualized scope of service that addresses specific needs.

Conclusion

In conclusion, the activities that FMP find most meaningful correspond to the epidemiological patterns of disease in the country. These activities are also aligned to the World Health Organization's goals for primary health care that intend to achieve universal health care and attain the sustainable development goals (World Health Organization, 2018). The variations in preference of managing medical and surgical emergencies by different cadres of family practitioners in the country reflect the varied format and duration of

training of these practitioners who provide the same set of services on a day-to-day basis (Al-Khaldi *et al.*, 2017).

We, therefore, recommend that training of family medical practitioners be comparable across qualification types and specific contextualized scopes of services to be offered by family practitioners be developed. Further studies that compare the actual activities that family practitioners are engaged in versus a specific scope of service, and probe further to find out reasons for preference for certain activities over other activities should be conducted.

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Consent for Publication. Not applicable.

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