

Obstacles to preventive intervention

Do physicians' health habits and mind-set towards preventive care play any role?

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ABSTRACT

Objectives: To investigate the virtual importance of identified barriers to preventive interventions and to explore the association between physicians' characteristics and their attitudes towards prevention.

Methods: We conducted a cross-sectional survey of 182 randomly selected family and general physicians (164/182=90% response rate) from total of 385 general physicians from 5 health sectors of Riyadh, Kingdom of Saudi Arabia in 2005. A pre-tested questionnaire asking physicians to rate the general importance of 8 preventive health strategies was used.

Results: The ranking of different preventive intervention varies from 124 (75.6%) for colorectal cancer screening to 155 (94.5%) for blood pressure control. Lack of time was rated an important barrier by 100 (61%) physicians, and lack of patient interest by 125 (76.2%) of physicians. There were 4 characteristics of physicians, which predicted negative attitudes toward prevention, sedentary lifestyle (odds ratio [OR] = 3.4, 95% confidence interval [CI], 1.1-11.1), lack of awareness of their own blood pressure (OR = 2.0, 95% CI, 1.0-3.9), lack of training (OR=2.2, 95% CI, 1.5-2.9), and lack of evidence of benefits (OR=1.98, 95% CI, 1.7-3.9).

Conclusion: The influence of physicians' own health behaviors and the importance of preventive intervention barriers, indicates a need for development of an approach to reduce the dominance of risky behavior.

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The pledge to tolerant clinical prevention may require a considerable shift in practices and values of practicing physicians.¹⁻³ So far, many studies discovered the physicians' attitude towards prevention and tried to identify the obstacles for preventive intervention, but they are deficient in demonstrating the virtual importance of these obstacles.⁴⁻¹⁰ The data also demonstrated that the numbers of factors (for example, lack of time, inadequate reimbursement, and lack of training) are creating a barrier to delivering preventive care. In addition, the other literature has advocated that there are some characteristics of physicians, such as age, gender, specialization, licensing status, and attitudes, that can manipulate the likelihood of them delivering good preventive care.¹¹⁻¹⁴ Several studies have also depicted that physicians' own health habits may be one of the judgment criteria of the amount they tackle preventive health issues.^{11,12,15} However, it is suggested that educational interventions can improve physician behavior with respect to prevention.^{16,17} In the Kingdom of Saudi Arabia (KSA), it is also demonstrated from several studies,¹⁸⁻²⁰ that physicians' attitude towards preventive measures are positive. Nevertheless, there are several barriers present that can impede the whole scenario and affect the quality of primary care.²¹ We carried out a cross-sectional survey of physicians in 5 health sectors of Riyadh, Kingdom of Saudi Arabia in 2005. To add to the information compiled in earlier published studies,⁵⁻¹⁰ we aimed to determine the virtual importance of previously identified barriers as primary objectives, and to explore the association between characteristics of physicians' socio-demographic characteristics, personal health habits, and their attitudes towards preventive health care as an end point objective.

Methods. A questionnaire was designed through a process of focus group sessions and pilot testing. Broadly it contained 4 domains of physicians' socio-demographic and professional characteristics. The first portion of the questionnaire raised some questions

related to personal habits relating to smoking and exercise, and whether they were aware of their blood pressure, cholesterol level, or blood sugar. In the second and third domain, the questionnaire contained questions on the general importance (rated as agree or disagree and no opinion scales) of preventive strategies such as screening and counseling for alcohol abuse, counseling on stopping smoking, nutritional counseling, counseling on human immunodeficiency virus (HIV) disease, blood pressure control, and so forth. In the fourth section, the questionnaire asked physicians to rate the importance (again rated as agree or disagree and no opinion scales) of 7 potential barriers,⁴⁻¹⁰ such as lack of time for prevention, lack of training in aspects of prevention, lack of evidence for benefit from the various interventions, lack of patient interest, intrusion of patient privacy, absence of clear clinical practice guidelines, and insufficient financial compensation for time spent implementing preventive strategies. A group of 182 general physicians were selected randomly for the study from a total of 385 general physicians working at primary health care units in 5 health sectors (central, east, west, north, and south) Riyadh, KSA in 2005. Of the 182 health care professionals participating, 164 general physicians completed the questionnaire, which gave 80% power (with 95% confidence interval [CI]) to the study. This study population was identified from records maintained by each sector. The population of general physicians included both family physicians and general practitioners. An informed consent has been taken verbally and also a formal permission letter has been issued from the department.

Data analysis was conducted using the qualitative computer software program SPSS version 10. The socio-demographic statistics are presented through descriptive statistics such as proportion, mean and median, while chi-square tests and logistic regression was used to compare the characteristics of physicians with negative attitudes to prevention with those of physicians with more positive attitudes.

Results. The characteristics of the 164 (90%) physicians that participated in the study are presented in **Table 1**. The greater part of respondents were male. The majority (76.2%) were general practitioners. The mean \pm SD age was 45.7 (\pm 8.4) years, and years in practice was 15 (\pm 9) years. Eighty-two percent of physicians reported that they are not smoking, 18.3% reported current smoking, and 22% reported a sedentary lifestyle. More than 80% physicians were aware of their blood pressure, cholesterol level, and blood sugar. Most physicians agreed on the general importance of preventive health strategies (**Table 1**). The fraction of physicians rating each of the individual preventive

strategies as being important or somewhat important varied from 72% for colorectal cancer screening, to 94% for blood pressure control. Several did not have any opinion regarding breast-feeding counseling (11.6%), HIV counseling (6.7%), colon cancer (13.4%), and cervical cancer (11.4%). **Table 2** shows the extent which the physicians agreed with various attitudinal statements. Approximately 80% of physicians thought that patients judged their performance based on how they approach prevention, and a similar proportion agreed that patients may expect their physicians to be role models in their own health habits'. Almost all physicians (93%) acknowledged that prevention was one of their responsibilities as a physician, but than one third (29%) of them find it is difficult to incorporate it in their daily practice's. Most (86%) indicated strong motivation to implement prevention in their daily life. Responses to questions regarding other attitudinal issues are summarized in **Table 2**. We illustrated the physicians' perceptions regarding importance in **Table 3**, namely, lack of time (76%) and lack of patient interest (62%) are the obstacles most often considered important by physicians, however, absence of guidelines (59%), insufficient compensation (52%), and lack of training (55%) are also considered important obstacles. Several physicians, especially in 2 important obstacles could not determine whether they agree or disagree, and had no opinion as shown in the Table. Not surprisingly, these 2 obstacles are most important in counseling-based strategies. Out of the total participants, 25 physicians (15.2% of the respondents) gave low weight to screening and counseling for smoking, while 40 physicians (24% of respondents) differed with counseling for alcohol abuse. There were few characteristics of physicians, which predicted negative attitudes toward prevention, sedentary lifestyle (odds ratio [OR] = 3.4, 95% CI, 1.1-11.1, and lack of awareness of their own blood pressure (OR = 2.0, 95% CI, 1.0-3.9), while 2 other factors were also present: lack of training (OR = 2.2, 95% CI, 1.5-2.9) and lack of evidence of benefits (OR=1.98, 95% CI, 1.7-3.9). Age, gender, and smoking status were not significantly associated with negative physician attitudes towards prevention (**Table 4**).

Discussion. The present study illustrated that several physicians in Riyadh, KSA recognized the broad significance of preventive health care and were ready to take responsibility, but pointed out lack of motivation to implement preventive health interventions in their daily practices. A study¹⁸ in KSA also revealed the similar fact, for example 91% of physicians had favorable attitudes towards screening for hypertension, but most of them were handicapped with little knowledge of screening criteria. Despite this positive attitude, the physicians

pointed out many obstacles identified in earlier studies⁴⁻¹⁰ in other parts of the world as well as in the KSA.²¹ Specifically, these physicians most often identified a lack of time and a perceived lack of interest among patients as important obstacles to prevention. However, there are some obstacles present such as absence of clear cut guidelines and lack of training, which play a pivotal role in execution of preventive practices. Therefore, it is partly a problem of learning environment rather than their habits and attitude. Markedly, the value of these obstacles was not consistent across all preventive interventions demonstrated in the study. The literature shows,¹¹⁻¹⁴ physicians' characteristics and their health

habits can anticipate their attitudes towards prevention, however, our study depicts that personal habits such as smoking, frequency of exercise, and awareness of their own health status do not have significant association with their characteristics such as age, gender, and time of clinical practice.

Furthermore, this study adds to earlier work by addressing the importance of various problems for several precise health interventions. This type of analysis is essential because the nature of interventions differs noticeably, both in their effect on patients and in the efforts of physicians to maintain it. Hence, the primary health care services or type of interventions,

Table 1 - Physicians' opinions on the importance of various preventive health interventions (N=164).

Intervention	Is this intervention important? n (%)		
	Agree	Disagree	No opinion
Blood pressure control	155 (94.5)	9 (5.5)	
Evaluation of cholesterol level	128 (78.0)	32 (19.5)	4 (2.4)
Counseling on smoking cessation	139 (84.8)	17 (10.4)	8 (4.9)
Nutritional counseling	149 (90.9)	12 (7.3)	3 (1.8)
Breast feeding counseling	132 (80.5)	3 (7.9)	19 (11.6)
Screening for alcohol abuse	118 (72.0)	39 (23.8)	7 (4.2)
Counseling on human immunodeficiency virus prevention	148 (90.2)	5 (3.0)	11 (6.7)
Breast cancer screening	147 (89.6)	13 (7.9)	4 (2.4)
Colon cancer screening	118 (72.0)	24 (14.6)	22 (13.4)
Cervical cancer	124 (75.6)	21 (12.8)	19 (11.4)

Table 2 - Physicians' attitudes on various issues relating to the implementation of preventive health strategies in their medical practices (N=164).

Attitudinal statement	Level of agreement n (%)		
	Agree	Disagree	No opinion
Your patients consider prevention to be part of your usual activities	131 (79.9)	23 (14.0)	10 (6.1)
Patients expect their physicians to be role models in their own personal health habits (such as non-smokers)	145 (88.4)	9 (5.5)	10 (6.1)
Patients judge your performance not only on how you treat disease but also on how you approach prevention	132 (80.5)	17 (10.4)	15 (9.0)
You are motivated to implement preventive health interventions in your daily practice	150 (91.5)	5 (03.0)	9 (5.5)
You consider prevention to be one of your responsibilities as a physician	152 (92.7)	8 (04.9)	4 (2.4)
In general, you find it easy to incorporate preventive health interventions into your daily medical practice	104 (63.4)	48 (29.3)	12 (7.3)
Current postgraduate training provides you with the skills to be proficient in prevention and health education	116 (70.7)	38 (23.2)	10 (6.1)
You incorporate preventive health recommendations into your own life	141 (86.0)	17 (10.4)	6 (3.7)

especially those dealing with prevention, are most likely to succeed if they target the obstacles that are vital for that service.^{21,22} Moreover, it can be explained through the example of smoking cessation counseling. We can see in the results presented, that physicians pointed to lack of evidence for benefit as the most important barriers to this intervention followed by intrusion into patients' privacy and absence of clear guidelines. Perhaps a focused intervention to increase counseling on stopping smoking could then address the time factor by educating physicians in the use of brief counseling strategies that could be handled over a series of visits,

training physicians to assess patients' readiness for change objectively, and teaching them regarding the evidence for modest but important benefit from even limited counseling on stopping smoking.^{23,24}

Likewise, the physicians reported a lack of training and absence of clear guidelines to be a particularly significant hindrance to counseling in the areas of alcohol, nutrition, HIV, exercise, cholesterol, breast-feeding, and so forth. This signifies a need among physicians for improved formal training, particularly in these areas and it is also suggested in other places that educational interventions can improve physician behavior with respect to prevention.^{16,17} To

Table 3 - Physicians' opinions of the importance of specific barriers to each of 7 preventive interventions.

Obstacles	Percentage of physicians rating each obstacle as important									
	Alcohol	Smoking	Nut	HIV	HTN	Ex	Chol	BF	CRC	BC
Lack of patient's interest	110 (67.07)	93 (56.7)	86 (52.4)	129 (78.6)	112 (68.2)	78 (47.5)	115 (70.1)	104 (63.4)	109 (66.4)	120 (73.2)
Lack of time	99 (60.3)	97 (59.2)	91 (55.4)	112 (68.2)	101 (61.8)	91 (55.4)	115 (70.1)	99 (60.3)	110 (66.9)	108 (65.8)
Insufficient compensation	146 (89.2)	141 (86.0)	149 (90.8)	142 (86.6)	155 (94.5)	141 (94.5)	141 (86.0)	150 (91.4)	134 (81.7)	135 (82.3)
Lack of evidence for benefit	144 (87.9)	149 (90.8)	138 (84.1)	145 (88.4)	156 (95.1)	153 (93.2)	147 (89.8)	153 (93.6)	140 (85.4)	142 (86.6)
Absence of clear practice guidelines	116 (70.7)	123 (75.0)	132 (80.4)	134 (81.7)	147 (89.8)	147 (89.8)	148 (90.4)	148 (90.4)	120 (73.2)	128 (78.3)
Intrusion into patient's privacy	98 (59.9)	134 (81.7)	141 (86.0)	90 (54.8)	151 (92.4)	157 (95.7)	159 (96.9)	153 (93.3)	144 (87.9)	147 (89.8)
Lack of training	121 (73.9)	122 (74.5)	137 (83.5)	137 (83.5)	148 (90.4)	146 (89.2)	155 (94.5)	149 (90.8)	109 (66.4)	118 (72.0)

Nut - nutrition, HIV - human immunodeficiency virus HTN - hypertension, Ex - exercise, Chol - cholesterol, BF - breast Feeding, CRC - colorectal cancer, BC - breast cancer

Table 4 - Analysis of Physicians' characteristics those are associated with their personal habits and preventive measures.

Personal habits and preventive measures	Physicians' characteristics (P value)			
	Age	Gender	Specialization	Time in practice
Personal habits				
Smoking	0.6	0.7	0.8	0.7
Frequency of exercise	0.1	0.3	1.0	0.4
Awareness blood pressure	0.7	0.6	0.5	0.9
Awareness of blood sugar	0.6	0.8	0.4	0.8
Awareness of cholesterol level	0.3	0.9	0.7	0.1
Preventive measures.				
Lack of patient interest	0.8	0.7	0.9	0.6
Lack of time	0.3	0.3	0.1	1.0
Insufficient compensation	0.6	0.7	0.5	0.7
Lack of evidence for benefit absence of clear practice guidelines	0.4	0.9	0.6	0.1
Lack of evidence for benefit absence of clear practice guidelines	0.5	0.7	0.3	0.2
Intrusion into patient's privacy	1.0	0.3	0.3	0.1
Lack of training	0.5	0.6	1.0	0.1

P value > 0.05 is non-significant

act on this identified need for training, we can consider drawing from the successful work of others^{25,26} in educating physicians in these counseling domains.

As it is illustrated in other studies,¹⁰⁻¹⁵ physicians' characteristics can anticipate negative attitudes of physicians towards preventive counseling. Logistic regression analysis of this study showed that 4 characteristics of physicians, which predicted negative attitudes toward prevention, sedentary lifestyle, lack of awareness of their own blood pressure, lack of training, and lack of evidence of benefits. Maybe, it is surprising, but seems to be true that physicians who are careless of their own health will also be inattentive to health care issues of their patients.^{27,28} The other related characteristics is the lack of training, and so forth. To understand their approach towards prevention, this last finding leaves us somewhat pessimistic about the ability of the health system to get better in delivery of preventive services. Eventually, we need to get involved not only in the health care system at the level of individual physician practices, as has been shown to some extent successfully on many occasions,^{26,29-31} but also at a population level to reduce unhealthy life activities such as smoking.

However, it is not justified that we separate the physicians from our population and plan for them individually; rather we should plan a population-based approach as also mentioned in a previous study.²⁸ Certainly, the quite high rates of current smoking among these physicians propose a need for reducing these risk factors in the physicians particularly, and the public as a whole. Conceivably a paradigm shift occurs, and will be helpful in reducing the number of those physicians whose characteristics and personal habits towards prevention are negative. Though it is still debatable on how to intervene at a population level to change their behavior, there are few recommendations present in the literature such as, legislation, public awareness, and the availability of safer substitutes to their risky behaviors.

Despite the few potential limitations of our study, such as all physicians belonging to the same region and working in a similar environment, this study has enhanced our understanding of the relative importance of various hindrances to the implementation of preventive health services, and the impact of physicians' personal habits on these obstacles. However, the significance of these obstacles varies according to different interventions, a finding that points to a need for modified interventions aiming at specific hurdles that impede a given preventive service. Their negative attitude towards prevention reminds us that they are also the group that needs an urgent strategy focusing on how to reduce the magnitude of their negative behavior, and also requires some clear evidence of the benefits and guidelines for implementation of preventive care services.

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