

Barriers to routine checkups use among Saudis from the perspective of primary care providers

A qualitative study

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ABSTRACT

الأهداف: إجراء مقابلات مع مقدمي الرعاية الصحية الأولية، وإستعراض آرائهم حول إنخفاض الطلب والعوائق التي تحول دون إجراء الكشف الدوري بين البالغين السعوديين.

المنهجية: تم إستخدام تصميم ظاهري نوعي لإجراء الدراسة البحثية. وأجريت المقابلات مع 19 طبيب من مقدمي الرعاية الأولية والعاملين في خمسة مراكز صحية تشرف عليها وزارة الصحة في مدينة مكة المكرمة بالمملكة العربية السعودية. بعد ذلك تم إجراء تحليل المحتوى الموجه لفحص الموضوعات الرئيسية، وتم إستخدام برنامج (ATLAS.ti) لتنظيم البيانات وتسهيل ترميزها.

النتائج: أوضح المشاركون من أطباء الرعاية الصحية الأولية عدداً من العوائق التي أدت إلى إنخفاض معدل طلب الكشف الطبي الدوري بين السعوديين. وتم تصنيف العوائق التي تحول دون إجراء الكشف الدوري إلى ثلاثة موضوعات رئيسية: العوائق المتعلقة بالمريض، العوائق المتعلقة بمقدمي الرعاية الصحية، والعوائق المتعلقة بالنظام الصحي. قلة المعرفة بالكشف الطبي الدوري، زيادة الإزدحام بمراكز الرعاية الصحية الأولية، وإنشغال موظفي الرعاية الصحية الأولية تعتبر أكثر العوائق التي ذكرها المشاركون والتي تعيق إجراء الكشف الطبي الدوري.

الخلاصة: هذه الدراسة إستعرضت إنخفاض معدل طلب الكشف الطبي الدوري بين السعوديين من منظور جديد ألا وهو وجهة نظر مقدمي الرعاية الصحية الأولية. بالرغم من أن نتائج هذه الدراسة أشارت إلى نقاط مهمة للتدخل وزيادة معدل طلب الكشف الطبي الدوري بين السعوديين، يوصى الباحثون بإجراء دراسات إضافية ولكن مع عينة أكبر تمثل مقدمي الرعاية الصحية الأولية ويتم إختيارها عشوائياً من النظام الصحي بأكمله، والتي ستفيد في إعطاء نتائج أكثر شمولية تدعم السياسات المستقبلية وتدعم صنع القرار لتحسين إستخدام الرعاية الدورية والمتاحة من خلال النظام الصحي السعودي.

Objectives: To explore the perspectives of primary care providers (PCPs) on the low use of and barriers to routine checkups among Saudi adults.

Methods: A qualitative phenomenological study design was used. Interviews were carried out between (December 2020 and February 2021) with 19 PCPs working at 5 primary healthcare centers (PHCs) operated by the Ministry of Health (MOH) in Makkah, Saudi Arabia. Descriptive statistics were performed to characterize participants, and a directed content analysis was carried out to examine major themes.

Results: Primary care providers identified a number of barriers that contributed to a low uptake of routine checkup among Saudis. These barriers to routine checkups were classified into 3 main themes: patient-related barriers, provider-related barriers, and healthcare system-related barriers. Lack of knowledge of patients, crowdedness at PHCs, and busy staff at PHCs were the most frequently mentioned barriers that hamper the use of routine checkups.

Conclusion: This study presented new insight into the low use of routine checkups by obtaining the perspective of PCPs. Although results point to potential targets for interventions to increase routine checkups, additional research is recommended with a representative sample of PCPs randomly selected from the healthcare system to inform future policy and decision making related to improving use of routine care available through the Saudi Healthcare System.

Keywords: routine checkups, routine checkups in Saudi Arabia, barriers to routine checkups use

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A routine checkup is a general physical evaluation and is not performed for a specific injury, illness or condition.¹ Routine checkups are beneficial for detecting diseases in early stages when treatments are most effective.^{2,3} In the Kingdom of Saudi Arabia (KSA), free-of-charge healthcare services are offered to citizens.⁴ However, studies are consistently finding that Saudi adults are not taking advantage of the free routine checkups. Two survey studies—one involving a nationally representative sample of Saudi adults and the other involving Saudi students studying in the United States of America (USA)—found that three-quarters of the participants had never had a routine checkup.^{5,6} A third study reported that 65.7% of Saudis had never had a routine checkup.⁷ Accordingly, it is important to understand more about the healthcare-seeking behaviors of Saudi adults.

A recent study among middle-aged and older residents of Riyadh, KSA reported that 30.4% of participants did not fully understand the importance of routine checkups.⁷ El Bcheraoui et al¹ reported that having routine checkups was positively associated with older age, higher education, being married, having chronic conditions, and daily consumption of fruits and vegetables. Another study found that those significantly more likely to have a routine checkup trusted their primary care providers (PCPs), believed routine checkups were important, were insured, had comorbid conditions, and engaged in physical activity.⁶ Unlike El Bcheraoui et al,⁵ this study⁶ also found that routine checkups were significantly lower among married individuals. Although these studies have contributed to the dearth of knowledge on use of routine checkups among Saudi adults, they focused on characteristics and perspectives of Saudi adult users of healthcare services and did not consider the perspectives of healthcare providers. Therefore, this study aimed to fill this gap by interviewing PCPs regarding the low use of and barriers to routine checkups among Saudi adults

Methods. This study applied a qualitative phenomenological design. A 2-part discussion guide was used to lead the interviews. The first part included a main question: “We are interested in hearing on your opinions regarding the low use of routine health

checkups by Saudi adults. By routine health checkups, we mean a general physical exam, not an exam for a specific injury, illness, or condition. How would you describe your experiences with low use of routine health checkups, and what are your perspectives on barriers and facilitators for routine health checkups?” Several predefined probing questions were available to facilitate discussion; however, spontaneous probing questions were also asked during the interviews to clarify the comments made by the participants. The second part of the guide captured participants’ age, gender, nationality (Saudi or non-Saudi), number of years in practice, and category of medical practice.

For a qualitative phenomenological study, a sample of 5 to 25 participants is recommended.⁸ Our recruitment goal was 20 participants. Our target participants were PCPs. To become eligible to participate, PCPs had to work as a general practitioner, family medicine specialist, family medicine consultant, community medicine specialist, or community medicine consultant, all medical practices likely to perform routine checkups. In addition, eligible PCPs had to work at one of the 5 PHCs operated by the Ministry of Health (MOH) in Makkah, KSA, as they offered the availability of all included types of medical practices. There were no other inclusion/exclusion criteria for participation.

The study protocol was submitted to the Makkah Health Affairs General Directorate’s Institutional Review Board (IRB) for review and approval. The IRB reviewed the study protocol and approved it (IRB Approval Number: H-02-K-076-1120-405). The study was undertaken following the principles of the Helsinki Declaration.

To recruit participants, the MOH staff prepared and sent letters to the managers of the PHCs. The letters described the purpose of the study and requested the managers’ help coordinating the researchers’ visits to the centers. Approximately 2 to 3 days after those letters were sent, researchers (AMA and BSQ) called the centers and invited the PCPs to participate in an interview. Those agreeing to participate were scheduled for an interview at a mutually convenient time.

Two researchers (AMA and BSQ) carried out the interviews in English with the participants in a private room at PHCs between December 2020 and February 2021. Seventeen participants were interviewed in person, and 2 who could not come for in-person appointments were interviewed using WebEx by Cisco. At the start of the interviews, the informed consent process was carried out using an MOH written informed consent form that covered the study purpose, voluntary nature of study participation, and

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notification that the interviews would be recorded for later transcription and all comments would be kept confidential to protect participants and minimize bias in responses. All participants had their questions on the study aims and interview procedures answered before the interviews began. The researchers led the interviews using the discussion guide and took field notes. At the conclusion of the interviews, the participants were asked regarding the sociodemographic and medical practice characteristics. Contact information was obtained from participants willing to be contacted at a later date for respondent validation.⁹ The interviews lasted for 20 to 30 minutes. No remuneration was offered. To protect the researchers and participants from COVID-19, all wore face masks during the interviews and maintained a distance of at least one meter between them.

Data analysis. Descriptive statistics were employed to characterize participants based on their responses to the sociodemographic and medical practice questions. Stata/SE 16.0 (StataCorp, College Station, Texas, USA) was used to calculate mean, standard deviation, frequency, and percentage). Also, a directed content analysis to examine major themes was carried out. This analysis method involves coding and reducing data to identify themes that relate to content categories established prior to data collection. This method helps and is most useful for expanding knowledge about a specific experience, such as low use of routine checkups.^{10,11} Prior to coding, the researchers (AMA and BSQ) developed an initial codebook with definitions for the predetermined content categories (knowledge, attitudes, and resources). They independently read the interview transcripts for overall gestalt and then used ATLAS.ti 22.0 (ATLAS.ti Scientific Software Development GmbH, Berlin, Germany) software to code to the predetermined categories and new categories developed as coding was underway for content that did not fit the predetermined categories. ATLAS.ti is a software used mostly in qualitative research to analyze a large body of textual, graphical, audio or video data.¹²

To ensure inter-rater reliability at the end of coding, 2 researchers reviewed assigned codes, discussed conflicting codes, and assigned final codes based on consensus. Then, 3 researchers (AMA, BSQ, and HCF) reviewed the final coded material, identified major and subthemes, interpreted themes, and discussed the implications of and recommendations emerging from the themes. Field notes taken by the researchers during the interviews were used to augment and support the findings. To protect the confidentiality of participants, data are reported in aggregate form, and quotes are masked using a randomly assigned number.

Table 1 - Sociodemographic characteristics of the study sample (n=19).

Characteristics	Min	Max	Mean	SD
Age, in years	26	53	36.3	1.8
Years in practice as a primary care provider	<1	24	7.4	1.3
Gender				
Female			9	(47.4)
Male			10	(52.6)
Nationality				
Saudi			16	(84.2)
Non-Saudi			3	(15.8)
Category of medical practice				
General practitioner			4	(21.1)
Community medicine resident			2	(10.5)
Family medicine resident			1	(5.3)
Family medicine specialist			7	(36.8)
Family medicine consultant			4	(21.1)
Preventive medicine/public health consultant			1	(5.3)
Values are presented as values and percentages (%). Min: minimum, Max: maximum, SD: standard deviation				

Results. Although our recruitment goal was 20 participants, we stopped recruiting with 19 because we reached data saturation, the point when more interviews do not generate new perspectives or new information.¹³

Table 1 presents the sociodemographic characteristics of the 19 participants. Barriers to routine checkups were classified into 3 main themes: patient-related barriers, provider-related barriers, and healthcare system-related barriers. Important subthemes were identified and defined under each main theme.

Theme 1: Patient-related barriers. Primary care providers identified many barriers related to patients getting routine checkups. These included lack of knowledge, attitudes/beliefs, resources, and patient demographics.

Lack of knowledge. Primary care providers identified 2 areas in which patients lacked knowledge that created barriers to routine checkups. Thirteen PCPs thought patients “are not educated” on their general health or current health conditions and how that relates to the importance of routine checkups. One PCP said, “[patients] cannot understand the concept of the disease...” (PCP13), while another said, “They don’t know they are at risk for certain problems” (PCP6). Several PCPs indicated that many patients do not understand the need for routine checkups or their benefits, saying patients “... do not have any idea of what is the benefit from [routine checkups] ... They do not have [an] idea [of] what labs mean and how they help them...” (PCP1) and “they do not know if they discover the disease early [through routine checkups], they will have less complications” (PCP14). Primary

care provider¹⁰ summarized the point, saying “they need more awareness on the condition, how to screen for it, how to detect, how to cure what diseases they will screen [for], and the screening will come with the benefit for us and them”.

Several PCPs suggested that patients also lack general knowledge of the KSA healthcare delivery system, including the services such as routine checkups available in PHCs. As an example, PCP5 said, “I think there [are] too many people [that do not] know about the primary healthcare or MOH’s options or facilities.”

Attitudes and beliefs. Several PCPs perceived KSA citizens as not believing it is necessary to use healthcare services unless they are sick; thus, they do not see the need for routine checkups. Primary care provider¹⁴ said, “[patients] do not visit the primary care if they do not have specific complaint[s].” Two participants provided examples of patients’ attitudes: “If I feel pain, I’m going to clinic [otherwise], I do not need” (PCP5) and “I am not complaining on anything, why I use [routine checkups]?” (PCP18). Moreover, some PCPs said that even patients with chronic conditions do not come for routine checkups because of their ignorance or neglect. Primary care provider¹⁶ said, “even though patients ... have chronic conditions and only request refilling medications [they are] ignoring the investigation and routine checkups”. Some PCPs thought that patients may be too lazy to come for routine checkups, even if they believe it is beneficial for them. One PCP said, “[patients] are not coming for routine checkups, I think due to laziness...” (PCP1), while another said, “maybe [patients] are lazy” (PCP13).

Primary care providers said that some screening procedures, such as colonoscopy and cervical screening, are not acceptable in the Saudi culture. Primary care provider³ said that “[patients] did not do routine checkups because sometimes it is an ethical issue...” and that “colorectal cancer [or] cervical screening is an ethical and a [cultural] problem, not acceptable in culture.” Several PCPs thought that patients do not have routine checkups because they are afraid to discover that they have a serious illness, saying, “[patients] are afraid [of] the result. They do not want to discover something they do not have symptoms of” (PCP14); “... I think they are afraid to discover disease” (PCP15); and “some [patients] are fearing the results. [They] do not want to know their lab results” (PCP1). Primary care provider¹⁵ also thought coronavirus may be a barrier to routine checkups, saying, “In the time now of coronavirus ... people [are] afraid from coming and getting infected”. Finally, some PCPs thought that patients had negative attitudes toward PCPs or PHCs.

PCPs said, “Some of them do not like the hospital/the primary healthcare center” (PCP18) and “... the [lack of] trust the patients or the community have in primary care doctors.” (PCP12).

Resources. Primary care providers identified patients’ available resources as another barrier to routine checkups. For example, PCP15 said, “... there is ... no transportation to come”; and PCP13 said, “... no one can help [the patients] to come here.” Additionally, several PCPs viewed time as a resource that some patients lacked. Related to time, PCPs said: “... a lot of patients coming in hurry, they do not have time to sit and talk and do more investigation” (PCP10); “some of [the patients] do not have a time” (PCP18); and “[patients] will not wait an hour for routine checkups” (PCP17).

Patient demographics. Being older and living alone were considered barriers to routine checkups. As an example, PCP13 said, “Most of them are ... old and they cannot walk, they need someone to help them, and they are living alone, no one can help them...”

Theme 2: Provider-related barriers. Provider-related barriers that hamper routine checkups were also identified by PCPs. These barriers were mostly related to PCPs’ knowledge and skills about routine checkups and their attitudes toward providing routine checkups to patients.

Primary care providers’ knowledge/skills. Several PCPs thought that other PCPs and clinic staff may lack knowledge on routine checkups or lack skills related to providing routine checkups. Primary care provider⁷ said, “Maybe some staff are not aware regarding routine checkups and its benefits,” while PCP8 said, “this could be because of some physicians [have] low experience in educating people [without] scientific experience”. Lack of general knowledge of the healthcare delivery system in the KSA, including guidelines for providing primary care services, was also viewed as a barrier. Primary care providers⁶ said, “... screening for diabetes, screening for hyperlipidemia, screening for these things, we do not have a protocol. This is an individual preference [to provide preventive care]. We do not have a continuous program. Otherwise, no certain programs running these days or even before, we do not have except the mammogram which is national.”

Primary care providers’ attitudes/beliefs. Primary care providers’ attitudes/beliefs were identified as barriers to routine checkups. One PCP thought PCPs’ attitudes on building relationships with patients or PCP personalities may limit the use of routine checkups (PCP8). Another PCP suggested the need for recommending preventive services: “We have to

request these screenings, so if we request these routine screenings, I think the higher authority will respond to such things. Maybe the defect from us, we [PCPs] do not ask for these although we have individual recommendations, but not all. There are many qualified family physicians. I hope all family physicians... ask for such screenings" (PCP6).

Theme 3: Healthcare system-related barriers.

Primary care providers reported barriers related to the healthcare system that hamper Saudis from having routine checkups. These barriers were classified into 2 main subthemes: lack of availability and lack of accommodation.

Lack of availability. Primary care providers highlighted 2 areas under this subtheme. Several PCPs mentioned shortages of PCPs/staff members at PHCs as a barrier to routine checkups, with one saying: "I think there is a shortage in the manpower (doctors, nurses), we need more staff." ... "I need to say again and again, we need enough manpower in the primary care center" (PCP2). Other PCPs mentioned an inadequate number of PHCs: "The number of clinics in the centers is still below the demand" (PCP12).

Lack of accommodation. The most frequently mentioned barriers under this subtheme were crowdedness at PHCs, busy staff, and shortage of equipment. One PCP noted, "But now with those numbers of patients, I think it is very difficult [to provide routine checkup]" (PCP13). Another PCP said, "...crowdedness and waiting time... a healthy person will not wait an hour for routine checkup" (PCP17).

Primary care providers suggested the range of services available at the PHCs affect the time for routine checkups: "Primary healthcare centers can help many people with chronic conditions, urgent care, people need dental care, and this can prevent us [PCPs] from seeing healthy people and doing screening" (PCP16), while another said, "Physicians also do not have enough time to do routine or general examination" (PCP2). Primary care providers also indicated that screening services were not always available: "In terms of the equipment, investigations are not available all the time" (PCP2); "They have the right for the free checkup, labs/examinations, but these days in this situation that we are in, we cannot do it. The lab is not always working" (PCP19).

Discussion. Routine checkups are crucial for early detection of diseases, when treatments are more effective.^{2,3} However, most citizens of KSA have never had routine checkups even though healthcare services are provided free of charge to them.⁴⁻⁶ We attempted

to elucidate why so few Saudi adults opt for routine checkups. Specifically, we explored barriers hampering the use of routine checkups among Saudi adults from the perspective of PCPs working at PHCs in Makkah city. Below, we discuss the 3 main barrier themes we identified (patient-related barriers, provider-related barriers, and healthcare system-related barriers).

Theme 1: Patient-related barriers. Primary care providers indicated that patients may lack knowledge or resources, have certain attitudes/beliefs, or have certain demographic characteristics that limit their ability to have routine checkups. Of these, patients' lack of knowledge of the importance and benefits of routine checkups, their general health, or their current health conditions was the most common barrier cited by PCPs under this theme. Our finding is consistent with other research, including 2 survey studies also carried out in KSA that found at least two-thirds of Saudi adults self-reported no to very low awareness of routine checkups.^{7,14} These studies also reported low rates of routine checkups among participants (<35%).^{7,14} These findings suggest the need to raise awareness of the importance of routine checkups and their benefit for early detection of chronic conditions. Use of a national awareness campaign, as undertaken in the KSA for other screening programs, may help educate the public about them and increase routine checkup rates.¹⁵ Future research should be undertaken to develop and test such a program. Additionally, more than half of Saudi adults who participated in a survey on routine checkups indicated that social and traditional media can be effective in educating the public on routine checkups.^{7,14}

Primary care providers also identified many patient attitudes and beliefs about their general health and on using healthcare systems that impact the use of routine checkups: believing routine checkups are unnecessary; and are not acceptable to the Saudi culture; fearing diagnosis of severe illness; or infection with COVID-19 from the routine checkup; and mistrusting the healthcare system. These attitudes and beliefs are common barriers, as indicated in studies from other countries. Many identified attitudes and beliefs of patients can be addressed through the previously mentioned national campaign.¹⁵

The third major barrier was the available resources of patients, including transportation and time. These 2 have been identified in other research as issues affecting patients' use of primary care and routine checkups in particular.^{20,24,25} Mobile health clinics have been used to address geographic barriers (such as, no transportation) to health care. A mobile clinic tested in a rural region of the KSA was found overall to be very satisfying among

the surveyed patients. More than half of surveyed patients rated the location of the mobile clinic as good, with its location, on average, 0.5–13 km from patients' homes.²⁶ Being close to patients' homes could also lower the time involved in getting routine checkups. However, there was some dissatisfaction with some of the services provided (such as, no electrocardiography).²⁶ Learning from the experience of this mobile clinic, research could test a new mobile clinic offering only annual checkups to address patient resource constraints.

The last set of barriers identified under the patient-related barriers was patient demographics of being old and living alone. However, most studies that examined the association between demographics and use of routine checkups, including a nationally representative study from the KSA, reported that people going for routine checkups tend to be older than those not going for routine checkups.^{1,27} Thus, this barrier appeared to be inconsistent and may be perceived as a facilitator to go for routine checkups. Future research should elucidate the influence of age on routine checkups.

Theme 2: Provider-related barriers. Primary care providers also indicated that PCPs may lack knowledge or have certain attitudes/beliefs that limit their ability to provide routine checkups. Under this theme, PCPs' lack of knowledge about routine checkups or on the healthcare system was a common barrier cited by PCPs. This finding is consistent with other research, including a study from Vadodara, India, that reported a lack of reliable doctors who can assess preventive health was a prominent factor influencing the use of preventive health checkups.²⁸ These findings suggest the need to increase PCPs' knowledge about routine checkup and its guidelines and availability in the healthcare system. A study systematically reviewed the literature to identify barriers and enablers that impact access to breast cancer screening found that informative PCPs, who have knowledge about screening services and the healthcare system, were significant enablers to implement screening services and increase mammogram use.²⁹

Primary care providers also identified PCPs' attitudes and beliefs (including lack of building relationships with patients and lack of recommending routine checkups) that impact the use of routine checkups. These 2 are common barriers as shown in previous research.^{28,29} Under the current healthcare delivery system, Saudi citizens are allowed to use primary care facilities that are closest to their homes and see whatever PCP is available. Assigning a group of patients to one PCP, as a usual source of care, might help strengthen the relationship between PCP and patients and increase continuity of care. Having a usual source of care was

found to be positively associated with access to and use of healthcare, including routine checkups.³⁰ Lack of PCPs' recommendations can also be addressed by raising PCPs' awareness of routine checkups. A recent study implemented an intervention to increase adult annual wellness visits.³¹ The intervention involved giving the PCP reminder notes to recommend routine checkups to patients and sending reminders to patients to schedule a routine visit, which resulted in a 28% increase in annual wellness visits.³¹ Future studies should evaluate whether assigning patients to PCPs and implementation of a reminder can improve the use of routine checkups in KSA.

Theme 3: Healthcare system-related barriers. Primary care providers also identified many system-related barriers that limit the use of routine checkups. The frequently mentioned barriers (including shortages in number of clinics or PCPs/staff members at PHCs, crowdedness at PHCs, and busy staff) are common as shown through other studies.^{14,28,32,33} Many identified system-related barriers can be addressed by increasing the number of PCPs at PHCs. Indeed, one additional PCP per 10,000 people can increase annual healthcare visits by 10%.³⁴ However, this requires considerable time for PCP training. The use of other healthcare providers able to provide routine checkups, such as nurse practitioners and physician assistants, whose training programs tend to be shorter than physicians, could ease the identified system-related barriers. Future research should investigate the integration of these PCPs into the KSA healthcare delivery system, as well as their acceptability among Saudi citizens.

Study limitations. The interviewed PCPs were recruited from five PHCs in Makkah. As such, findings may be limited to patients from that city and may not be generalizable to other parts of the KSA. Nevertheless, the findings provide insights from PCPs on barriers to routine checkups in KSA, findings which have previously been unavailable in the literature. Second, interviews were carried out in the PHCs during the working hours, which might have affected the ability of some PCPs to participate, as they may have been too busy. However, PCPs were able to participate in remote interviews, which may have reduced the risk of any selection bias due to time availability. Finally, some PCPs may have been unwilling to freely share their experience and opinions regarding barriers to use of routine checkups due to concerns that their comments may be considered disparaging of their employers. To minimize this concern, the participants were notified that their names would not be linked to their comments, and results would be presented in aggregate.

Study strengths. Our study explored PCPs' opinions regarding the low uptake of routine checkups among Saudi adults. Our findings that identified healthcare provider- and healthcare system-related barriers that hamper the use of routine checkups among Saudi adults contributes to the dearth of literature on this topic. Finally, this study provides the groundwork for future research to quantify the top barriers to routine checkups, which can inform work to develop and test policy and programmatic interventions to improve routine checkup use among Saudi adults.

Accordingly, there are some recommendations for future work. First, future studies should include a representative sample of PCPs randomly selected from the healthcare system all over the KSA to overcome the limited generalizability of our results. Generalizable findings will help to inform future policy and decision making related to improving the use of routine care available through the Saudi healthcare system. Second, the Saudi government controls all public services, including healthcare services. Therefore, the government can implement new policies to facilitate the use of routine checkups. The Saudi government could address the issues of lack of knowledge and belief in the importance of routine checkups through public education campaigns. Such a campaign was implemented among female healthcare students at a Saudi university to increase knowledge and screening for cervical cancer and was effective in increasing the frequency of Pap smear tests.³⁵ Third, this study only collected data from PCPs; future research should directly engage top decision-makers, such as those in the MOH and regional directorates of health or healthcare clusters and explore their opinions about barriers to the use of routine health checkups in Saudi Arabia. Engaging decision makers and policy makers will help identify not only what needs to be addressed but also what strategies may be most effective and politically receptive to adopt.

In conclusion, patients' and PCPs' lack of knowledge, cowardedness and busy staff at PHCs were the most frequently mentioned barriers hampering the use of routine checkups by Saudi adults.

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