

# Assessment of Community Pharmacist's Involvement in Health Promotion and Education Activities of Patients in Khartoum, 2020

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## Abstract

**Introduction:** Health promotion enables people to gain better control and improve their health and overall well-being. An important aspect of health promotion is community action and participation through health education which encourages socioeconomic and cultural activities and improves environmental determinants of health. **Justifications:** Sudan national guidelines for good pharmacy practice in community pharmacy 2016 state that community pharmacists should have a role in health promotion in community, so researches must be done to assess achievement in this issue. **Objectives:** The objective was to assess the extent of the pharmacists' involvement in counseling patients about health promotion and education topics, their preparation to counsel patients in health promotion and education topics, and their perceived success in changing the patients' health behavior. **Materials and Methods:** An observational cross-sectional study was carried out from March to April 2020 among community pharmacists in Khartoum locality. **Results:** A total of 150 community pharmacists who participated in the study showed that the most important purpose of consumers' visits to community pharmacy was related to seeking pharmaceutical advice about drug dosage, indication, availability, and side effects which were ranked first, second, third, and fourth, respectively. In the area of the pharmacists' perceptions on their preparedness to counsel patients on health-related behaviors, the perceived preparedness was highest for counseling on taking drugs as prescribed/directed (mean [standard deviation (SD)]; 4.5 [0.9]) and knowledge about drug contents and side effects (mean [SD]; 4.2 [1.1]). The community pharmacists perceived success in helping patients to change their health-related behaviors. **Conclusion:** The majority of participants have a positive attitude toward counseling the population on health behaviors and indicated their willingness to learn more about health promotion.

**Keywords:** Health promotion, involvement, pharmacist's

## INTRODUCTION

Health promotion enables people to gain better control and improve their health and overall well-being. An important aspect of health promotion is community action and participation through health education which encourages socioeconomic and cultural activities and improves environmental determinants of health. Diseases associated with lifestyle modifications such as diabetes and hypertension have been on the increase with a lopsided ratio of population to health-care staff. The high demand of care staff underscores the need for a move toward preventive strategies and health promotion activities by pharmacists in communities.

Through self-care advocacy, patients are becoming increasingly aware of various disease conditions which affect the quality of life and self-care management steps required to improve adherence or humanistic outcomes. Theoretically, a potential gap exists between a healthy individual and that same person in a diseased state. Since pharmacists are located within

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the community, enlightenment programs on quality use of medicines would help in promoting individual behavior that may delay chronic or debilitating state development and reverse subsequent progression from infectious to virulent disease conditions.

Health promotion for preventive, curative, and rehabilitative activities and care services has been encouraged by the government through the regional health sectors. The primary healthcare (PHC) can provide a collaborative platform for deliberate planning which involves the patient, community health worker, nurse, pharmacist, and physician or prescriber.<sup>[1]</sup>

Health promotion and preventive services refer to public health services, which relate to the improvement of the general health of the population through interventions aiming at promoting health and well-being (e.g., nutrition and physical activity), preventing diseases (e.g., smoking cessation, immunization, and travel health), identifying ill individuals (e.g., screening and case finding), and maintaining the health of those with chronic conditions (e.g., diabetes and hypertension). Public health interventions act on factors influencing the health of the population as a whole or subgroups of this population rather than separate individuals and generally take place before the onset of health problems.

Little information has been gathered on community pharmacists' perceptions of their role in health promotion and prevention. However, such data are essential to the development of public health programs in community pharmacy.<sup>[2]</sup>

Pharmacists are now considered important members of health-care teams involved in decisions about drug use and adverse effects, particularly in community and hospital pharmacies. This role necessitates improving clinical knowledge and skills toward patients and communicating with patients and other health-care workers.

Pharmacists provide a critical service to society and interact with people from diverse backgrounds and have an opportunity to participate in public health strategies, assist in decision-making, and support public health efforts.

Public health initiatives emphasize the prevention of disease and consider the health needs of the population as a whole. Community pharmacists have a role and responsibility to optimize medication use and improve patient outcomes and quality of life. Community pharmacists in Sudan have an important social obligation. They should be able to reach the community and provide extended services (i.e., cognitive services) during the state crisis. To date, there is little information in Sudan on community pharmacists' level of contribution as public health practitioners.<sup>[3]</sup>

### Justifications

An increased interest is observed in broadening community pharmacists' role in public health. Sudan national guidelines for good pharmacy practice in community pharmacy 2016 state that community pharmacists should have a role in health

promotion in the community, so this research conducted to assess involvement of community pharmacists in health promotion in Khartoum.<sup>[4]</sup>

To date, little information has been gathered in Sudan on community pharmacists' perceptions of their role in health promotion and prevention; however, such data are essential to the development of public health programs in community pharmacy.

### Objectives

#### General objective

The objective was to assess the extent of the pharmacists' involvement in counseling patients about health promotion and education topics, their preparation to counsel patients in health promotion and education topics, and their perceived success in changing the patients' health behavior.

#### Specific objectives

1. To investigate community pharmacist response to the purpose of consumer visit
2. To determine the community pharmacist understanding to the importance of health behavior changes
3. To determine community pharmacist preparedness to counsel patients in health-related issues
4. To indicate community pharmacist success in changing patient's health-related behavior
5. To assess community pharmacist involvement in the counseling process.

## MATERIALS AND METHODS

An observational cross-sectional study was carried out from March to April 2020 among 150 community pharmacists in Khartoum locality selected by a stratified random sample. Data were collected using electronic delivery and self-administered validated six sections' questionnaire. Data then were entered into the Statistical Package for Social Sciences (SPSS) version 23 (IBM SPSS Inc., Chicago, IL, USA), and descriptive analysis was conducted.

## RESULTS

Thirty-six percent of participants were male, whereas 64% were female. About 93.3% aged between 20 and 40 years, whereas 6.7% were aged between 41 and 60 years.

In the area of basic qualifications in pharmacy, 88.7% had B. pharm, whereas 11.3% had M. pharm. About 84.7% of pharmacists in the study had 10 years or less experience, whereas 15.3% had more than 10 years' experience. About 58.7% of pharmacists worked in central pharmacies, whereas 41.3% worked in peripheral pharmacies.

Pharmacists' opinions on the purposes of visits emphasized those related to drugs; drug dosage, indication, availability, and side effects were ranked first, second, third, and fourth, respectively, as stated in Table 1.

Pharmacists' opinions on the purposes of visits emphasized those purposes related to personal health behavior, stress

reduction, annual preventive medical examination, exercise habits, weight management, and diet were the highest ranked as stated in Table 2 which is parallel to Abdelmoniem study, they found that weight management and diet were the highest ranked were the highest ranked.

Table 3 shows the respondents' perception to the importance of the 12 health-related behaviors. Taking drugs as prescribed was ranked first. Of the 12 personal health-related behavior items, maintaining normal blood pressure, maintaining normal cholesterol level, stopping smoking, and be knowledgeable about drug contents and side effects were the highest ranked.

The pharmacists' perceptions on their preparedness to counsel patients on health-related behaviors are presented in Table 5. The perceived preparedness was highest for counseling on taking drugs as prescribed/directed (mean [standard deviation (SD)]; 4.5 [0.9]) and knowledge about drug contents and side effects (mean [SD]; 4.2 [1.1]). Of the rest tobacco use, stress reduction, weight management, and diet modification had the highest rankings as presented in Table 4.

The respondents' perceived success in helping patients change their health-related behaviors was higher for the take drugs as prescribed/directed, known drug content and side effects, and tobacco use to their success in helping patients change their personal health-related behaviors as presented in Table 5.

## DISCUSSION

The results showed that the most important purpose of consumers' visits to community pharmacy was related to

**Table 1: Responses to the main purpose of consumers' visits to community pharmacy: Related to drugs**

Health behaviors	Median	Mean (SD)
Drug dosages	5	4.3 (0.9)
Drug indications	4	4.2 (0.9)
Drug availability	4	3.9 (1.1)
Drug side effects	4	4 (1.2)
Drug identification	4	3.9 (1.1)
Drug interactions	4	4 (1.2)
Drug stability	4	3.7 (1.1)
Drug overdose	4	3.9 (1.2)

SD: Standard deviation

**Table 2: Responses to the main purpose of consumers' visits to community pharmacy: Personal health-related behavior**

Health behaviors	Median	Mean (SD)
Exercise habits	4	3.5 (1.1)
Tobacco use	4	3.2 (1.5)
Annual preventive medical examination	4	3.6 (1)
Weight management	4	3.4 (1)
Diet	4	3.4 (1.2)
Stress reduction	4	3.7 (1)

SD: Standard deviation

seeking pharmaceutical advice about drug dosage, indication, availability, and side effects which were ranked first, second, third, and fourth, respectively. This may be due to the fact that patients perceive pharmacists as drug experts providing services related to over the counter (OTC) drug counseling and delivery of prescription drugs. The strong agreement among respondents in relation to consumers' visits to seek advice regarding personal health-related behaviors was low. This could be due to the possibility that people accessing health advice from convenient sources other than pharmacists, and they may be less inclined to discuss these issues with a pharmacist.<sup>[5]</sup> This is parallel to the study conducted by Awad *et al.* which stated that pharmacists' opinions on the purposes of visits emphasized those related to drugs; the use of medications, drug dosage, indication, and availability were ranked first, second, third, and fourth, respectively.<sup>[6]</sup>

As stated by Ogbonna *et al.* which concluded that the shortage of health-care providers in public health facilities, especially in rural areas, could be leveraged by pharmacists who are adequately trained to educate or train the community toward a particular end or attaining set goals.<sup>[1]</sup>

The results showed that pharmacists' opinions on the purposes of visits emphasized those purposes related to personal health behavior, stress reduction, annual preventive medical examination, exercise habits, weight management, and diet were the highest ranked; the study conducted by Abdelmoniem found that weight management and diet were the highest ranked.<sup>[6]</sup>

Health behaviors related to the proper use of drugs were ranked first. Of the 12 personal health-related behavior items, maintaining normal blood pressure, maintaining normal cholesterol level, stopping smoking, and be knowledgeable about drug contents and side effects were the highest ranked. This was shown by Awad *et al.* which were stated that health behavior related to the proper use of drugs was considered the most important area, followed by maintaining normal blood pressure and cholesterol level, the food balance with physical activity to maintain or improve weight, stopping smoking, and choosing a diet with plenty of cereals and low in saturated fat and cholesterol.<sup>[6]</sup>

Labiberté *et al.* believed that they should be very involved in health promotion and prevention, particularly in smoking cessation (84.3%); screening for hypertension (81.8%), diabetes (76.0%), and dyslipidemia (56.9%); and sexual health (61.7% to 89.1%).<sup>[2]</sup>

Yousuf *et al.* conducted a study that aimed to evaluate the attitudes and practices of community pharmacists regarding their participation in public health activities and barriers to their participation in these activities.

Yousuf *et al.* stated that 62.3% of the pharmacists had a positive attitude toward participation in public health activities. Providing education to stop tobacco chewing, smoking, alcohol drinking, and improve oral hygiene was an important

**Table 3: Responses to the importance of the promotion of health-related behaviors**

Health behaviors	Median	Mean (SD)
Take drugs as prescribed/directed	4	3.8 (0.5)
Maintain normal blood cholesterol level	4	3.5 (0.5)
Maintain normal blood pressure	4	3.7 (0.5)
Balance the food he/she eats with physical activity to maintain or improve weight	3	3.1 (0.6)
Stop smoking	3	3.4 (0.6)
Be knowledgeable about drug contents and side effects	3	3.4 (0.6)
Choose a diet low in saturated fat and cholesterol	3	3.2 (0.6)
Maintain ideal weight	3	3 (0.7)
Choose a diet moderate in sugars	3	3.1 (0.6)
Engage in exercise (basic walking) three or more times a week	3	3 (0.7)
Have an annual medical examination for preventive screenings	3	3.1 (0.6)
Choose a diet moderate in salt and sodium	3	3.1 (0.7)

SD: Standard deviation

**Table 4: Respondents' involvement in counseling patients on health-related behaviors**

Health behaviors	Median	Mean (SD)
Take drugs as prescribed/directed	5	4.5 (0.9)
Know drug contents and side effects	4	4.2 (1.1)
Weight management	4	3.6 (1.1)
Diet modification	4	3.4 (1.1)
Stress reduction	4	3.7 (1)
Exercise habits	4	3.3 (1.3)
Tobacco use	4	4 (1.2)
Annual medical examination for preventive screenings	4	3.7 (1)

SD: Standard deviation

**Table 5: Respondents' preparedness to counsel patients on health-related behaviors**

Health behaviors	Median	Mean (SD)
Take drugs as prescribed/directed	5	4.2 (1.2)
Weight management	4	3.6 (1.2)
Know drug contents and side effects	4	4.2 (1.1)
Diet modification	4	3.5 (1.1)
Stress reduction	4	3.6 (1.2)
Exercise habits	4	3.5 (1.2)
Annual medical examination for preventive screenings	4	3.5 (1.1)
Tobacco use	4	3.9 (1.1)

SD: Standard deviation

activity of the community pharmacists. Blood pressure measurements (86%) and glucose tests (45%) were commonly conducted for clients.<sup>[3]</sup>

In the area of the pharmacists' perceptions on their preparedness to counsel patients on health-related behaviors, the perceived preparedness was highest for counseling on taking drugs as prescribed/directed (mean [SD]; 4.5 [0.9]) and knowledge about drug contents and side effects (mean [SD]; 4.2 [1.1]). Of the rest tobacco use, stress reduction, weight management, and diet modification had the highest rankings. As stated by Awad *et al.*

study which are stated that the pharmacists' preparedness was highest for counseling patients on taking drugs as prescribed, knowledge about drug contents and side effects, weight management and diet modification.<sup>[6]</sup>

In Laliberté *et al.* study, fewer respondents reported actually being very involved in providing such services (5.7% from pharmacists provide [lifestyle, including smoking cessation services], screening for hypertension, diabetes, and dyslipidemia; and sexual health services (44.5%, 34.8%, 6.5%, and 19.3%, respectively).<sup>[2]</sup>

The pharmacists' perceived success in helping patients to change their health-related behaviors was higher for the following services, take drugs as prescribed/directed, known drug content and side effects and tobacco use to their success in helping patients change their personal health-related behaviors. Awad *et al.* stated<sup>[6]</sup> that the respondents' perceived success in helping patients change their health-related behaviors was higher for the use of medications compared to their success in helping patients change their personal health-related behaviors.

## CONCLUSION

The role of community pharmacists in Sudan in health promotion and education is primarily concentrated on pharmaceutical issues rather than health behavior modification. The majority of participants have a positive attitude toward counseling the population on health behaviors and indicated their willingness to learn more about health promotion.

The perceived preparedness needs to be improved and supported by various activities.

The pharmacists participated in the study perceived success in helping patients change their health-related behaviors.

## Recommendation

The increasing need for quality health-care services places a huge demand for preventive services, disease management, and health promotion activities. Scaling up community pharmacists' involvement with health promotion activities

will help to accelerate universal health coverage while maintaining access to many public health services in the communities.

Concerned bodies must provide training, workshops, continuous professional education programs, regular forums or meetings for guidance and motivation and introducing health promotion concept in pharmacy faculties' curriculum.

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### **Conflicts of interest**

There are no conflicts of interest.

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