

RESEARCH ARTICLE

# Health promotion practices as perceived by primary healthcare professionals at the Ministry of National Guard Health Affairs, Saudi Arabia

Samar Altamimi<sup>1</sup>, Feda Alshoshan<sup>1</sup>, Ghada Al Shaman<sup>1</sup>, Nasser Tawfeeq<sup>2</sup>, May Alasmay<sup>3</sup>, Anwar E. Ahmed<sup>4,5</sup>

Address for Correspondence:

**Anwar E. Ahmed**

<sup>1</sup>College of Medicine, Al-Imam Muhammad Ibn Saud Islamic University, Riyadh, Saudi Arabia

<sup>2</sup>Department of Anesthesia, College of Medicine, King Saud bin Abdulaziz University for Health Sciences, Ministry of National Guard, Riyadh, Saudi Arabia

<sup>3</sup>Department of Epidemiology, King Saud bin Abdulaziz University for Health Sciences, Riyadh, Saudi Arabia

<sup>4</sup>College of Public Health and Health Informatics, King Saud bin Abdulaziz University for Health Sciences, Riyadh, Saudi Arabia

<sup>5</sup>King Abdullah International Medical Research Center, Riyadh, Saudi Arabia

Email: ahmeda5@vcu.edu; altamimi.44@gmail.com

<http://dx.doi.org/10.5339/qmj.2016.4>

Submitted: 29 September 2015

Accepted: 19 May 2016

© 2016 Altamimi, Alshoshan, Al Shaman, Tawfeeq, Alasmay, Ahmed, licensee HBKU Press. This is an open access article distributed under the terms of the Creative Commons Attribution license CC BY 4.0, which permits unrestricted use, distribution and reproduction in any medium, provided the original work is properly cited.

Cite this article as: Altamimi S, Alshoshan F, Al Shaman G, Tawfeeq N, Alasmay M, Ahmed AE. Health promotion practices as perceived by primary healthcare professionals at the Ministry of National Guard Health Affairs, Saudi Arabia, Qatar Medical Journal 2016;4 <http://dx.doi.org/10.5339/qmj.2016.4>

## ABSTRACT

**Introduction:** In recent years, several research studies have investigated health promotion practices in Saudi healthcare organizations, yet no published literature exists on health promotion practices of primary healthcare professionals working for the Ministry of National Guard Health Affairs (MNG-HA).

**Methods:** A cross-sectional study was conducted in a convenience sample of 206 primary healthcare professionals at the MNG-HA. A self-reporting questionnaire was used to investigate the attitudes, awareness, satisfaction, and methods regarding health promotion practices of primary healthcare professionals.

**Results:** Of the 206 primary healthcare professionals surveyed, 58.1% reported awareness of health promotion programs conducted in the hospitals and 64.6% reported that the health promotion system in the hospitals needs to be improved. Language barriers and cultural beliefs were viewed as obstacles to carrying out effective health promotion by 65% and 64.6% of primary healthcare professionals, respectively. The majority (79.9%) of the primary healthcare professionals perceived themselves as having the necessary skills to promote health and 80.6% believed that printed educational materials are the most prevalent method of health promotion/education, whereas 55.8% reported that counseling was the most preferred method of health promotion.

**Conclusion:** The awareness level of health promotion policies, strategies, and programs conducted in the hospitals was not found to be satisfactory. Therefore, widespread training programs are recommended to improve the health promotion system in the hospitals. These programs include facilitating behavioral change,

introducing health promotion policies and strategies in hospitals, mandatory workshops, and systematic reminders.

Keywords: health promotion, health education, primary healthcare professionals, Saudi Arabia

## INTRODUCTION

The dramatically increasing rates of communicable diseases within the Middle East such as the Middle East respiratory syndrome coronavirus and the non-communicable diseases in the Kingdom of Saudi Arabia necessitate the study of current health promotion practices within a healthcare setting.<sup>1,2</sup> This is of particular importance when dealing with a population that tends to seek medical attention only after the development of disease.<sup>3</sup> Effective health promotion is considered as one of the fundamental requirements to prevent outbreaks and manage chronic diseases.<sup>4,5</sup> The health promotion responsibility is shared among individuals, community groups, health professionals, health service institutions, and governments (WHO, 1986). The role of healthcare professionals including physicians and nurses has been emphasized in the literature.<sup>6–11</sup> Moreover, nurses play an important role in health promotion by encouraging patients and their families to be part of the decision-making process regarding problems related to their health, improving adherence of patients to long-term therapies, and improving their quality of life.<sup>7–9</sup> Despite the tendency of physicians to focus on diagnosis and treatment of illness after its occurrence, they also have an essential role in incorporating health promotion and disease prevention at all levels, including health improvement, risk reduction, early identification of disease, and reduction of complications.<sup>11</sup> Their role can be effective through providing counseling services where they are required to be updated with relevant guidelines, and ensuring that their recommendations are supported by the best evidence.<sup>12</sup>

Over the years, there has been increasing debate on whether health promotion revolves only around health education and disease prevention. Clinical health promotion has been chosen for this study because of its broader definition, including patient counseling.<sup>13</sup> Clinical health promotion involves delivery of healthcare services, whether it be in the office, hospital or community setting.<sup>14</sup> Herbert and Visser indicate that it "predisposes, enables and reinforces patients to

take greater control of the non-medical determinants of their own health."<sup>15</sup> Health promotion and education activities are a fundamental requirement for all health professionals.<sup>4,16,17</sup>

Evaluation of the obstacles and constraints of health promotion are essential to the effective implementation of the practice; especially in the primary healthcare setting where the objectives of the healthcare professionals may not always meet those of the patients.<sup>18</sup> Various interventions exist when it comes to health promotion/education methods. However, there is no consensus on the most effective method of delivery in patient education with regard to patient clinical outcome, satisfaction, and efficacy.<sup>19</sup> In our study, we investigated the most widely available methods of health promotion/education and the methods most preferred by healthcare professionals. The study was designed in such a way to allow further study on a larger scale in an attempt to build on what has been used and practiced.

On reviewing the literature, we found that health promotion in a clinical setting has been widely investigated in Western communities.<sup>20–21</sup> The attitudes of physicians and nurses toward disease prevention and health promotion activities in primary care settings have recently been investigated in a large multicenter study in Spain. It revealed an acceptable attitude towards prevention and health promotion (PHP) activities, but recommended that healthcare organizations increase health promotion activities to improve professional skills and provide appropriate care.<sup>20</sup> A study that was conducted in Saudi Arabia concerning the perceived practice of health promotion among nurses identified language barriers and cultural competencies as great obstacles in the process of delivering effective health promotion in the region.<sup>22</sup> However, little is known about the practice of health promotion in Saudi Arabia.<sup>22–24</sup> Thus, we found that there is a need for such a study that assesses the practice of health promotion locally.

The purpose of this study was to describe the perceived health promotion practices among primary healthcare professionals (physicians and nurses) in the primary healthcare setting of the Ministry of National Guard Health Affairs (MNG-HA). The current investigation intended to address the following research question: what are the attitudes, awareness, and satisfaction levels of primary healthcare professionals on health promotion practices and methods? The study attempted to provide an

overview of the perceived practices of health promotion in the MNG-HA, and to reveal the need for training programs in the context of the increasing rates of communicable and non-communicable diseases in the country.

## METHODS

A descriptive cross-sectional study was conducted between 22 June and 8 July 2014 across five polyclinics in the MNG-HA, which belong to the governmental sector in the Riyadh Province. The selected clinics included Health Care Specialty Center "Khashm Al Aan" ( $n = 64$ , 31.1%), Iskan AlYarmouk Clinic ( $n = 44$ , 21.4%), National Guard Comprehensive Specialized Clinic ( $n = 46$ , 22.3%), King Saud Housing Clinic ( $n = 40$ , 19.4%), and King Khalid Military Academic Housing Clinic ( $n = 12$ , 5.8%). The study was approved by King Abdullah International Medical Research Center (KAIMRC). The consent form was attached to the questionnaire, and it contained information related to the study including the purpose of the study and confidentiality of the data. The targeted participants represented a convenience sample of primary healthcare professionals working at MNG-HA hospitals, including general practitioners, family physicians, pediatricians, obstetricians, gynecologists, and nurses working with them in the primary healthcare setting. The minimal required sample size was 196 with  $\pm 5\%$  margin of error at 95% confidence intervals. Of the 240 questionnaires that were distributed to primary healthcare professionals who agreed to participate in the study, 206 were completed and returned, giving a response rate of 85.8%. We collected the following sociodemographic data of the primary healthcare professionals: age, sex, occupation, nationality (Saudi/non-Saudi), and Arabic native language speaker (yes/no).

## Measures

English-based questionnaires were accompanied by a consent form that explained the purpose of the study and ensured the confidentiality of the data. The study questionnaire was developed from two previously validated and published questionnaires.<sup>13,18</sup> Permission to use these questionnaires were obtained from the original authors. The study questionnaire focused on five areas of health promotion practice: attitude toward health promotion, attitude toward health promotion practices in the hospital, awareness

of and satisfaction with such health promotion, and methods of health promotion.

The first part of the questionnaire used a scale to measure attitude toward health promotion, perception, awareness, and satisfaction of the primary healthcare professionals towards health promotion. The scale included 19 items using a 5-point Likert scale, which ranged from "strongly agree = 5" to "strongly disagree = 1". Due to the descriptive nature of the study, we reported frequency distributions of the agreement responses (strongly agree or agree). In our study, "strongly agree = 5" or "agree = 4" were combined into a favorable response. For instance, the primary healthcare professionals were asked to rate (strongly disagree to strongly agree) the following statements: "most physicians and nurses are willing to participate in health promotional activities", "I keep up to date with the latest health promotion-related activities", "I have enough time to carry out health promotion effectively", "I have the necessary skills to promote health", and "the language barrier is an obstacle to carrying out health promotion effectively". In the second part of the questionnaire, the primary healthcare professionals were asked to answer two questions regarding the most used methods for health promotion in MNG-HA hospitals and the most preferred methods from their point of view. These questions included 1) printed educational materials (PEMs), 2) counseling, 3) online educational materials such as websites, 4) social media materials such as Twitter, YouTube, Facebook, or email, 5) mass media such as television, radio, advertising campaigns, SMS messages, newspapers, etc.

Before the administration of the questionnaire, it was assessed for content and face validity. The reliability of the questionnaire was examined by 14 primary healthcare professionals. This pilot sample was not included with the final sample. The questionnaire was found to be reliable with a Cronbach's alpha of 0.89 (19 items). The subscales were found to be reliable. Cronbach's alpha was 0.869 (11 items) for the attitude toward the health promotion subscale, 0.874 (four items) for the attitude toward health promotion practices in the hospital subscale, 0.951 (two items) for the awareness subscale, and 0.653 (two items) for the satisfaction subscale.

## Statistical analyses

Statistical analyses were conducted using the IBM Statistical Package for the Social Sciences for

Windows, version 22.0 (SPSS® Inc., Chicago, IL, USA). Sample characteristics of the healthcare professionals are presented with descriptive statistics, *n* (%) and mean  $\pm$  standard deviation where appropriate (Table 1). Counts and percentages were used to describe attitude, perception, awareness, and satisfaction of the primary healthcare professionals towards health promotion practices in the MNG-HA (Table 2). Counts and percentages were used to summarize the most common/preferred healthcare promotion methods of the primary healthcare professionals (Figure 1).

## RESULTS

Analysis of the findings included data from a total of 206 healthcare professionals (65 physicians and 141 nurses). Of the 206 healthcare professionals, 82% were females, 78.2% were non-Saudis, and 56.1% were non-Arabic speakers. The mean age of participants was  $42.0 \pm 9.1$  years. Table 1 lists other sample characteristics and Table 2 reports the attitude, perception, awareness, and satisfaction of primary healthcare professionals on health promotion practices in MNG-HA. Of the 206 primary healthcare professionals, the majority (79.9%) perceived themselves as having the necessary skills to accomplish health promotion/education and 77.7% as able to keep up to date with its activities. A majority (89%) of primary healthcare professionals reported the willingness of their colleagues to participate in health promotion/education activities and 53.2% showed a good attitude toward patients wanting and accepting

health promotion services. More than half (52.2%) of the primary healthcare professionals reported that they have enough time to carry out health promotion effectively.

Approximately 39% of the primary healthcare professionals reported that providing a detailed explanation to the patient about his/her health-related behavior tends to worry him/her rather than it reassuring them. On the other hand, only 44.2% considered health promotion services provided by the hospital as being effective in influencing the behavior of patients. Regarding barriers in the practice of health promotion/education, 65% and 64.6% of the primary healthcare professionals considered language barriers and cultural beliefs of patients, respectively, as obstacles in carrying out effective health promotion. Regarding health promotion practices within the hospitals, 64.6% believed that the health promotion system needs to be improved; 44.2% of the primary healthcare professionals reported that health promotion services provided by the hospitals are effective in influencing the behavior of the patients; and 75.2% reported that they could promote health effectively if there were a system in place, such as reminders for promotional activities that may benefit patients.

Awareness of the health promotion programs, policies, and strategies applied in the hospital among the primary healthcare professionals accounted for 58.1% and 66.5% of the sample, respectively.

A majority (83%) of the healthcare professionals reported that they considered the opinions of the

**Table 1. Sample characteristics (*n* = 206).**

| Characteristics levels    |  | <i>n</i>       | %    |
|---------------------------|--|----------------|------|
| Age (range 24–62 years)   | Mean $\pm$ SD                                | 42.0 $\pm$ 9.1 |      |
| Sex                       | Male   | 37             | 18.0 |
|                           | Female                                       | 169            | 82.0 |
| Primary healthcare center | Khashm Al Aan Clinic                         | 64             | 31.1 |
|                           | Iskan AlYarmouk Clinic                       | 44             | 21.4 |
|                           | National Guard Clinic                        | 46             | 22.3 |
|                           | King Saud Housing Clinic                     | 40             | 19.4 |
|                           | King Khalid Military Academic Housing Clinic | 12             | 5.8  |
| Occupation                | Physician                                    | 65             | 31.6 |
|                           | Nurse  | 141            | 68.4 |
| Nationality               | Saudi  | 45             | 21.8 |
|                           | Non-Saudi                                    | 161            | 78.2 |
| Native language           | Arabic                                       | 90             | 43.9 |
|                           | Non-Arabic                                   | 115            | 56.1 |

**Table 2. Perceived practice of health promotion among primary healthcare professionals (n = 206).**

| Items  | n   | %    |
|--|-----|------|
| Attitude toward health promotion:  |     |      |
| - Most physicians/nurses are willing to participate in health promotional activities   | 184 | 89.8 |
| - I keep up to date with the latest health promotion-related activities  | 160 | 77.7 |
| - I have enough time to carry out health promotion effectively   | 107 | 52.2 |
| - I have the necessary skills to promote health  | 163 | 79.9 |
| - The patient is totally responsible to promote his/her health   | 83  | 40.5 |
| - Most patients want and accept health promotion services  | 109 | 53.2 |
| - Providing a detailed explanation to the patient about his/her health-related behaviors tends to worry him/her rather than reassure | 79  | 38.5 |
| - Language barrier is an obstacle to carrying out health promotion effectively   | 132 | 65.0 |
| - Patients' cultural beliefs are an obstacle to carrying out health promotion effectively  | 133 | 64.6 |
| - I consider patients' opinion regarding his/her preferred method of health promotion  | 171 | 83.0 |
| - Patients with complications will rarely change their behavior on the basis of my advice  | 156 | 75.7 |
| Attitude toward health promotion practices in the hospital:  |     |      |
| - I could promote health effectively if there were a systematic way like reminders for promotional activities that the patient needs | 155 | 75.2 |
| - I think the health promotion system in the hospital needs to be improved   | 133 | 64.6 |
| - Health promotion services provided by the hospital are effective in influencing patients' behavior                                 | 91  | 44.2 |
| - The hospital should make health promotion-related lectures and workshops mandatory for all healthcare providers                    | 160 | 78.8 |
| Awareness:   |     |      |
| - I am aware of the health promotion programs conducted in the hospital  | 118 | 58.1 |
| - I am aware of the health promotion policies and strategies applied in the hospital   | 135 | 66.5 |
| Satisfaction:  |     |      |
| - I am satisfied with my current knowledge in conducting an effective health promotion   | 185 | 91.1 |
| - I am satisfied with the current method(s) of health promotion provided by the hospital   | 144 | 71.3 |

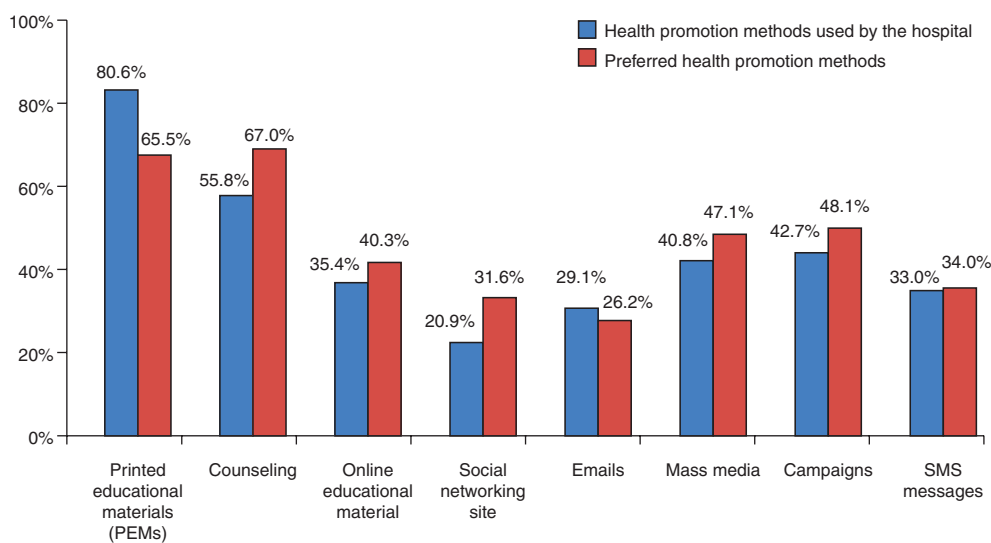
patients about his/her preferred method of health promotion, and 71.3% were satisfied with the current method(s) of health promotion provided by the hospital. Figure 1 shows the perceived methods of health promotion among the primary healthcare professionals. A majority (80.6%) of the healthcare professionals believed that PEMs are the most used methods of health promotion/education, followed by 55.8% for counseling, 42.7% for campaigns, 40.8% for mass media, and 35.4% for online educational material. However, counseling was found to be the most preferred method of health promotion among the primary healthcare professionals (67%), followed by PEMs (65.5%), campaigns (48.1%), mass media (47.1%), and online educational material (40.3%).

## DISCUSSION

This study provided an opportunity to examine the overall practice of health promotion in five different primary healthcare centers affiliated with a major hospital in Riyadh, KSA. Generally, the overall attitudes of the participants were positive. The findings of this study are consistent with those in the literature.<sup>20,22,25,26</sup>

Success in the practice and implementation of health promotion requires a sustained positive attitude of physicians, patients, and those employed in the healthcare setting. More than half of the study sample showed a good attitude towards patients wanting and accepting health promotion services.





**Figure 1. Perceived methods of health promotion among the primary healthcare professionals.**

In addition, a minority of the sample believed that patients have total responsibility to promote his/her health. Nonetheless, similar findings have been noted elsewhere.<sup>20</sup>

In this study, the language barrier and cultural beliefs of patients were considered as strong factors in impeding health promotion by 65 and 64.6%, respectively. This finding is supported by most studies evaluating health promotion barriers in countries relying on migrants as the primary workforce.<sup>22</sup> Aldossary et al.,<sup>22</sup> suggested that relying on trained interpreters could be a potential solution for this problem. We believe that while it could solve the language barrier, the cultural barrier would still exist. The cultural barrier was addressed in another study conducted in relevance to Saudi Arabia, which recommends following transcultural care based educational programs and suggests goals, factors, and some adult-learning principles that can be helpful when designing these educational programs.<sup>27</sup> Time constraints were considered as a consistent finding observed in similar studies in Western societies.<sup>18,28</sup> More than half of our sample reported that they have enough time to carry out health promotion effectively. The latter finding proves that health promotion barriers can greatly vary among institutions and countries and should be assessed individually.

The literature shows that the main role of physicians in the practice of health promotion/education is promoting healthy behavior. Surprisingly, three quarters of healthcare professionals did not believe that patients can change their behavior on the basis of

their advice, despite reporting very high rates of satisfaction towards current knowledge and perceiving themselves as possessing the necessary skills to provide effective health promotion. This contradiction may be explained by the lack of confidence of physicians. As has been noted, that lack of confidence correlates with the failure to attempt behavioral change, but it was revealed that confidence increased with the level of training. Bowler and Gooding<sup>29</sup> emphasized the importance of training programs following a trans-theoretical model of behavioral change in the context of lack of confidence. A similar study by Herbert<sup>15</sup> has noted that physicians might be hesitant to spend time on behavioral change when incentives are not given as a reward, and seven principles of learning and behavioral change were suggested for stakeholders to consider when implementing training programs.

Having a good attitude towards health promotion is not enough,<sup>30</sup> because the lack of self-efficacy (confidence levels) or the presence of other barriers can restrict any healthcare provider from promoting healthy behavior, even those with a good attitude. They are recognized as major constraints in implementing an effective health promotion practice in even the best institutions.

Regarding the attitude towards health promotion services provided by the hospital, less than half of the healthcare professionals believed that health promotion services provided are effective in influencing the behavior of patients, and 64.6% believed that improvement is needed. Rubio-Valera et al.,<sup>18</sup> noted

the importance of reminders for promotional activities that the patient needs, along with guidelines and financial incentives to improve the practice of health promotion in the primary healthcare setting. In addition, providing easy access to patient support services such as smoking cessation and support groups have been shown to be helpful. As expected, more than two-thirds of the healthcare professionals expressed agreement regarding the provision of mandatory health promotion-related lectures, workshops for all healthcare providers, and reminders for promotional activities that patients need. The majority of the healthcare professionals considered the opinions of their patients regarding the most preferred method of health promotion/education as there is no single effective method applicable to all patients.<sup>19</sup> In this study, PEMs were the most common method of health promotion/education used by the MNG-HA, as reported by healthcare professionals. In addition, our findings are consistent with a similar study conducted among attendees of a large primary care center in Riyadh city.<sup>23</sup> Evidence from previous studies shows that PEMs have an impact on patient knowledge<sup>31,32</sup> in terms of outcome, time saving, and also decrease in the demands on the healthcare provider.<sup>33,34</sup> On the other hand, others have debated that PEMs do not always meet the literacy demand, reading comprehension, and cultural relevance of the patient.<sup>35–37</sup>

### Recommendations

We believe that to improve the health promotion system and make it effective in the hospitals, recommendations should be tailored to the existing challenges. Systematic reminders for promotional activities that patients need, health promotion-related lectures, and mandatory workshops are recommended and supported by the majority of the respondents to improve the health promotion system in the hospitals. We also recommend widespread training programs that include facilitating behavioral change and introduce to staff the hospital's current health promotion policies and strategies. Moreover, the following health promotion services have been shown to be helpful: trained interpreters to address any language barriers, transcultural care based educational programs to address any cultural barriers, easy access to patient support services, and incentives facilitating adherence to health promotion practices and activities.<sup>18,22,27</sup>

The effectiveness of PEMs have been widely investigated in Western communities.<sup>19–33</sup> However, little is known about their effectiveness in primary healthcare centers within Saudi Arabia. Further research is recommended to explore this important measure and to study the use of standard guidelines in the development and assessment of the most prevalent method, that is, PEMs. One-to-one counseling was the most preferred method of health promotion/education among healthcare professionals. The same held true among attendees of primary healthcare centers in related studies conducted in Saudi Arabia.<sup>23,24</sup> This may be attributed to the fact that counseling can be tailored to a patient's specific condition, which facilitates reflection and more personal interaction.<sup>23,24</sup> Overall, the majority of the healthcare professionals were satisfied with the current methods of health promotion/education provided by the hospital.

### Limitations

Our study has several limitations. First, the data were obtained from a cross-sectional survey, and consequently causality cannot be determined. Second, the study only took place in the city of Riyadh; therefore, the results are not representative of the provision of health promotion as a whole in the Kingdom of Saudi Arabia and possibly in the selected population as convenience sampling was used. Third, due to time constraints, we were unable to 1) explore the quality of health promotion services provided by the hospitals, 2) examine the overall satisfaction with health promotion services for patients attending the primary healthcare centers, 3) track the health outcomes of patients receiving condition-specific health promotion and education, and 4) assess whether the health promotion/education was provided with consideration of cultural relevance and the literacy demand among the targeted population. The literature does not provide insight into the most effective methods and approaches in the provision of health promotion among patients. Therefore, further large-scale research in this area is required to address some of these concerns.

### CONCLUSION

The attitudes and perceptions of primary healthcare professionals towards health promotion and its practice in the MNG-HA hospitals were generally

positive, but not to the level of influencing behavioral change. The awareness level of health promotion policies, strategies, and programs conducted in the hospitals was not satisfactory. Therefore, widespread training programs are recommended to improve the health promotion system in the hospitals. These programs include facilitating behavioral change, introducing health promotion policies and strategies in hospitals, mandatory workshops, and systematic reminders.

## ACKNOWLEDGEMENTS

The authors would like to thank King Abdullah International Medical Research Center (KAIMRC) for approving this research. The authors would also like to thank Dr Naila A. Shaheen for her support and valuable advice, and Dr Maryam Al-Owairy, from National Guard Comprehensive Specialized Clinic, for her contribution in facilitating the data collection, and all those who helped to conduct this research.

## FUNDING

None.

## REFERENCES

- World Health Organization (WHO). Eastern Mediterranean Regional Office (EMRO), Cairo, Egypt. MERS-CoV SITUATION UPDATE 2015. Available from: [http://www.emro.who.int/images/stories/csr/MERS-CoV\\_31\\_July\\_Web.pdf?ua=1](http://www.emro.who.int/images/stories/csr/MERS-CoV_31_July_Web.pdf?ua=1)
- World Health Organization. Noncommunicable Diseases (NCD) Country Profiles 2014. Available from: <http://www.who.int/nmh/countries/en/>
- El Bcheraoui C, Tuffaha M, Daoud F, Kravitz H, AlMazroa MA, Al Saeedi M, Memish ZA, Basulaiman M, Al Rabeeah AA, Mokdad AH. Access and barriers to healthcare in the Kingdom of Saudi Arabia, 2013: findings from a national multistage survey. *BMJ Open*. 2015;5(6):e007801.
- Whitehead D. Health promotion and health education: Advancing the concepts. *J Adv Nurs*. 2004;47(3):311–320.
- World Health Organization. Health education: theoretical concepts, effective strategies and core competencies: a foundation document to guide capacity development of health educators. Available from: [http://applications.emro.who.int/dsaf/EMRPUB\\_2012\\_EN\\_1362.pdf](http://applications.emro.who.int/dsaf/EMRPUB_2012_EN_1362.pdf) 2012.
- Kemppainen V, Tossavainen K, Turunen H. Nurses' roles in health promotion practice: An integrative review. *Health Promot Int*. 2013;28(4):490–501.
- Hopia H, Paavilainen E, Åstedt-Kurki P. Promoting health for families of children with chronic conditions. *J Adv Nurs*. 2004;48(6):575–583.
- Bosch-Capblanch X, Abba K, Pictor M, Garner P. Contracts between patients and healthcare practitioners for improving patients' adherence to treatment, prevention and health promotion activities. *Cochrane Database Syst Rev*. 2007 Jan 1;2:CD004808.
- Keleher H, Parker R, Abdulwadud O, Francis K. Systematic review of the effectiveness of primary care nursing. *Int J Nurs Pract*. 2009;15(1):16–24.
- Whitehead D. Health promotion in nursing: A Derridean discourse analysis. *Health Promot Int*. 2011;26(1):117–127.
- Canadian Medical Association. The role of physicians in prevention and health promotion. *Can Med Assoc J*. 1995;153:208A–208D.
- ama-assn.org. American Medical Association. Opinion 8.075 Health Promotion and Preventive Care. Available from: <http://www.ama-assn.org/ama/pub/physician-resources/medical-ethics/code-medical-ethics/opinion8075.page>
- Caraher M. Patient education and health promotion: Clinical health promotion – the conceptual link. *Patient Educ Couns*. 1998;33(1):49–58.
- Green LW, Cargo M, Ottoson JM. The role of physicians in supporting lifestyle changes. *Med Exerc Nutr Health*. 1994;3:119–130.
- Herbert C, Visser A. Clinical health promotion and family physicians. *Patient Educ Couns*. 1995;25:223–226, Available from: [http://dx.doi.org/10.1016/0738-3991\(94\)00667-B](http://dx.doi.org/10.1016/0738-3991(94)00667-B)
- Whitehead D. Health promoting hospitals: the role and function of nursing. *Journal of Clinical Nursing*. 2005 Jan;14(1):20–27. DOI: <http://dx.doi.org/10.1111/j.1365-2702.2004.01012.x>. Available from: <http://onlinelibrary.wiley.com/doi/10.1111/j.1365-2702.2004.01012.x/abstract>
- Eriksen MP, Green LW, Fultz FG. Principles of changing health behavior. *Cancer*. 1988;62(8):1768–1775.
- Rubio-Valera M, Pons-Vigués M, Martínez-Andrés M, Moreno-Peral P, Berenguera A, Fernández A. Barriers and facilitators for the implementation of primary



- prevention and health promotion activities in primary care: A synthesis through meta-ethnography. *PLOS ONE*. 2014;9(2):e89554.
19. Friedman AJ, Cosby R, Boyko S, Hatton-Bauer J, Turnbull G. Effective Teaching Strategies and Methods of Delivery for Patient Education. Program in Evidence-Based Care 2009 Dec 10:20 – 22.
  20. Ramos-Morcillo AJ, Ruzafa-Martinez M, Fernandez-Salazar S, del-Pino-Casado R, Armero BD. [Attitudes of physicians and nurses towards health prevention and promotion activities in primary care]. *Atencion Primaria/Sociedad Espanola de Medicina de Familia y Comunitaria*. 2014;46(9):483 – 491. Available from: doi: 10.1016/j.aprim.2014.02.002
  21. Tomasik T, Windak A, Domagala A, Dubas K, Sumskas L, Rosinski J. An evaluation of family physicians' educational needs and experiences in health promotion and disease prevention in Poland and Lithuania – a qualitative study. *BMC Fam Pract*. 2011;12(1):13. Available from: doi: 10.1186/1471-2296-12-13
  22. Aldossary A, Barriball L, While A. The perceived health promotion practice of nurses in Saudi Arabia. *Health Promot Int*. 2013;28(3):431 – 441. Available from: doi: 10.1093/heapro/das027
  23. Asiri N, Bawazir AA, Jradi H. Patients' satisfaction with health education services at primary health care centers in Riyadh, KSA. *J Community Med Health Educ*. 2013;4(268):2161 – 0711. Available from: <http://dx.doi.org/10.4172/2161-0711.1000268>
  24. Al-Khashan HI, Almulla NA, Galil SA, Rabbulnabi AA, Mishriky AM. Gender differences in health education needs and preferences of Saudis attending Riyadh Military Hospital in the Kingdom of Saudi Arabia. *J Family Community Med*. 2012;19(3):172. Available from: doi: 10.4103/2230-8229.102317
  25. Peltzer K. Knowledge and attitudes of primary care nurses and midwives towards health promotion in rural South Africa. *Curationis*. 2001;24(4):46 – 51, Available from: doi: 10.4102/curationis.v24i4.887
  26. Shoqirat N, Cameron S. Promoting hospital patients' health in Jordan: Rhetoric and reality of nurses' roles. *Int J Nurs*. 2012;1(1):27 – 36, Available from: <http://www.ijnonline.com/index.php/ijn/article/view/16>
  27. Luna L. Culturally competent health care: A challenge for nurses in Saudi Arabia. *J Transcult Nurs*. 1998;9(2):8 – 14.
  28. Yarnall KS, Pollak KI, Østbye T, Krause KM, Michener JL. Primary care: Is there enough time for prevention? *Am J Public Health*. 2003;93(4):635 – 641.
  29. Bowler I, Gooding S. Health promotion in primary health care: The situation in England. *Patient Educ Couns*. 1995;25(3):293 – 299.
  30. Solberg LI, Brekke ML, Kottke TE. How important are clinician and nurse attitudes to the delivery of clinical preventive services? *J Family Pract*. 1997;44(5):451 – 461.
  31. Paul CL, Redman S, Sanson-Fisher RW. Print material content and design: is it relevant to effectiveness? *Health Educ Res*. 2003;18(2):181 – 190. Available from: <http://her.oxfordjournals.org/content/18/2/181.full>
  32. Tuot DS, Davis E, Velasquez A, Banerjee T, Powe NR. Assessment of printed patient-educational materials for chronic kidney disease. *Am J Nephrol*. 2013;38(3):184 – 194. Available from: doi:10.1159/000354314
  33. Giguère A, Légaré F, Grimshaw J, Turcotte S, Fiander M, Grudniewicz A, Makosso-Kallyth S, Wolf FM, Farmer AP, Gagnon MP. Printed educational materials: effects on professional practice and healthcare outcomes. *Cochrane Database Syst Rev*. 2012 Jan 1;10:CD004398. doi: 10.1002/14651858.CD004398.pub3
  34. Queen Elizabeth II, Murray A. Guidelines for the development of patient education materials, 2004. Available from: <http://medicine.osu.edu/sitetool/sites/pdfs/ahecpublic/GuidelinesDevelopmentPtEduMaterials.pdf>
  35. Badarudeen S, Sabharwal S. Assessing readability of patient education materials: current role in orthopaedics. *Clin Orthop Relat Res*. 2010;468(10):2572 – 2580. Available from: doi:10.1007/s11999-010-1380-y
  36. Atkinson T. Plain language and patient education: a summary of current research. *The Centre for Literacy-Research Briefs on Health Communications*. 2003;1:1 – 4. Available from: <http://www.centreforliteracy.qc.ca/health/briefs/no1/no1.pdf>
  37. Helitzer D, Hollis C, Cotner J, Oestreicher N. Health literacy demands of written health information materials: an assessment of cervical cancer prevention materials. *Cancer Control*. 2009;16(1):70 – 78.