

Gender differences in health education needs and preferences of Saudis attending Riyadh Military Hospital in the Kingdom of Saudi Arabia

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ABSTRACT

Background and Aim: Health reforms that tend to increase the participation of clients in decision-making requires them to be health-literate; hence, the importance of health education. However, not much research has been done to investigate the differences in health education needs according to demographic characteristics of the clients. The aim of this study was to find out any possible gender differences there may be in health education needs and preferences. **Subjects and Methods:** This cross-sectional study was conducted at Riyadh Military Hospital, Saudi Arabia, on a convenience sample of adult Saudis attending its clinics. Data was collected from April 2009 to May 2010 using a self-administered questionnaire covering demographic data, history and needs of health education, methods, and preferred educator. **Results:** Of the 1300 forms distributed, 977 were returned completed (75.2% response). Most men (74.0%) and women (77.9%) had had health education, but more women reported that it had been helpful ($P = 0.014$). More men mentioned health education needs relating to primary prevention ($P = 0.027$), and unhealthy practices ($P = 0.003$), and considered the different language a barrier ($P = 0.002$) even after adjustment for age and education. The one-to-one method was the most preferred health education method for men (72.7%) and women (67.9%). More women preferred group health education ($P = 0.02$) after adjustment for age and education. Significantly more men preferred pharmacists and dietitians as health educators. **Conclusion:** The results point to a few significant differences between men and women regarding their health education needs, barriers, and preferences. These must be taken into consideration when planning health education programs.

Key words: Gender, health education, needs, preferences

INTRODUCTION

Healthcare systems, including those in prosperous and developed countries, are increasingly faced with huge challenges.^[1,2] With emerging needs vital for health reform, different approaches have been used to start programs in many countries. Underpinning these approaches is the role of the client, and his/her increased participation in decision-making, greater accountability and better governance in the healthcare system.^[3] To achieve this, the

client has to be health-literate, and here comes the role of health education.

Health education should go beyond traditional teaching to improve health behavior, empowerment, and increase the ability to participate in healthcare decisions at the individual and community levels.^[4] Therefore, health education and promotion was the first of three areas identified by experts in the academic and community Centre's of Excellence in Women's Health, designated by the Department of Health and Human Services as the most important future indicators of women's health.^[5]

Furthermore, it was felt that health education would help people to identify and prioritize their needs of the health services. These needs would be more valuable for planning and decision-making if they emanated from well-informed people. Thus, one main criterion for judging health reform

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programs at present is “health system responsiveness”,^[6] and the extent to which community needs are integrated.^[7]

Health education interventions have had many successes in various domains in improving knowledge and changing behavior. This has been shown in community interventions for primary prevention,^[8] school-based dental hygiene education,^[9] as well as community-based nursing education programs.^[10] This effectiveness has increased with the use of versatile methodologies and interactive techniques.^[11] Most importantly, the interventions with community participation have proved more effective.^[12,13] Moreover, recipients’ preferences of information and participation which differ according to time, setting, as well as their characteristics must be taken into account.^[14] Not much research has been done to investigate the differences in learning needs according to clients’ demographic characteristics.^[15] This is especially evident in our local situation. Therefore, the aim of this study was to find out if there were gender differences in the needs and preferences in the health education of Saudi patients attending Riyadh Military Hospital in the Kingdom of Saudi Arabia.

MATERIALS AND METHODS

This study was carried out at Riyadh Military Hospital (RMH), a 1000-bed hospital with 13 satellite primary health care Centers. The hospital provides health services at all levels of care to military personnel and their families, and to hospital staff. A cross-sectional analytic design was used to compare two groups, men and women.

The sampling population consisted of all patients attending of RMH during the time of the study. The inclusion criteria for the study participants were as follows: adult (18 years or older), ability to respond, and with a Saudi nationality in order to preclude any effect of nationality on the study outcomes. They were divided into two groups, men and women.

The sample size was calculated to detect any difference between men and women in health education needs, barriers, or preferences, with a prevalence of 5% or more and an Odds Ratio 2 at 95% level of confidence and 80% study power. Using Epi-Info computer software package, the required sample size was 474 per group. This was increased to 650 per group to compensate for an expected dropout rate of about 30%. A quota sampling technique was used in consecutive recruitment of the study participants to reach the required sample size. It was designed to include participants in proportion to the number of patients presenting at the outpatient and inpatient departments of the hospital and primary health care centers. This was done separately for men and women to obtain two equal groups representing the various settings.

Data were collected using a self-administered anonymous questionnaire comprising a total of 21 closed and open-ended questions. The questionnaire design was based on the review of pertinent literature,^[6,7,12] and revised by experts in family and community medicine, health education, and research. It was pre-tested in a pilot study on 50 patients and finalized. The final form included demographic data, health education history and needs, learning methods, and the preferred message provider.

The study protocol was approved by the department’s research committee. All principles of research ethics were applied, with informed oral consents obtained, along with ensuring participants’ rights to refuse or withdraw, and to confidentiality. The study maneuvers could not entail any harm to participants. Data were collected during the period from April 2009 to May 2010. Those who consented to participate were given forms to be completed and returned during the waiting time at the same sitting. Health education staff was trained to help illiterate participants to complete the questionnaire.

Data entry and statistical analysis were done using the Statistical Package for Social Sciences (SPSS) version 14.0. Chi-square test was used for comparison of categorical data. Mantel Haenszel adjustment for Odds Ratio was done for significant associations. The level of statistical significance was set at 95% ($P < 0.05$).

RESULTS

The study sample included almost equal numbers of men and women. Of the target sample of 1300 individuals, 977 forms were returned completed (response rate 75.2%). The response rates did not differ significantly between men and women.

The characteristics of men and women in the study sample showed statistically significant differences in their age, educational level, and marital status [Table 1]. There were more women in the youngest age group and more men in the oldest age group ($P < 0.001$). As regards education, there were more women at both extremes, i.e. illiterate and with university education, whereas the highest percentage of men (43.2%) had secondary education ($P < 0.001$). There were also more married women than men ($P = 0.002$). Although almost equal percentages of men (74.0%) and women (77.9%) indicated that they had been given some information on health education, significantly more women reported that the information had been helpful ($P = 0.014$).

Assessment of the health education needs showed more emphasis on subjects related to patient’s own illness, while issues relating to prevention were given little mention as

needs [Table 2]. Also, there was a statistically significant difference between the needs of men and women on health education related to primary prevention ($P = 0.027$), and unhealthy practices ($P = 0.003$). These needs were more expressed by men. The differences persisted after adjustment for age and education.

The most frequently mentioned barriers and obstacles that study participants face with regard to health education, were the use of medical and technical terms, the little time the provider had to answer questions, and the problem of a different language [Table 3]. This last obstacle was reported by more men than women, and the difference was statistically significant ($P = 0.002$), even after adjustment for age and education.

Regarding preferred methods of health education, the majority of both men (72.7%) and women (67.9%)

expressed their preference for the one-to-one method [Table 4]. On the other hand, group health education was the least preferred by men, while for women, it ranked third in preference, the difference being statistically significant ($P = 0.02$) even after adjustment for age and education. Concerning the preferred health education provider, about three quarters of both men and women chose doctors. The health educator came second in preference, but with much lower percentages of agreement, while nurses came fifth. Also, significantly more men than women preferred the pharmacist and the dietitian as providers of health education. The differences were significant after adjustment for age and education.

DISCUSSION

This study compared health education needs, barriers, and preferences between Saudi men and women attending the

Table 1: Characteristics of studied men and women, and health education messages received

	Men (n = 488)		Women (n = 489)		P-value (χ^2 test)
	No.	%	No.	%	
Age (years)					
16-25	102	20.9	161	32.9	
26-35	172	35.2	155	31.7	
36-45	108	22.1	87	17.8	
46-55	45	9.2	46	9.4	
56+	61	12.5	40	8.2	<0.001
Education					
Illiterate	44	9.0	79	16.2	
Elementary	34	7.0	43	8.8	
Intermediate	91	18.6	54	11.0	
Secondary	211	43.2	168	34.4	
University	108	22.1	145	29.7	<0.001
Marital status					
Married	380	77.9	419	85.7	
Single	108	22.1	70	14.3	0.002
Had message on health education before	361	74.0	381	77.9	0.150
Message was helpful	285	78.9	327	85.8	0.014

Table 2: Comparison of health education needs of studied men and women

	Men (n = 488)		Women (n = 489)		P-value (χ^2 test)
	No.	%	No.	%	
Medical information about own illness	230	47.1	227	46.4	0.824
Lifestyle (e.g. diet, exercise, weight loss)	217	44.5	214	43.8	0.825
Preventing complications of own illness	186	38.1	169	34.6	0.248
Coping with own illness	181	37.1	164	33.5	0.245
Taking own medications	158	32.4	169	34.6	0.470
Screening related to age/condition	170	34.8	150	30.7	0.166
Primary prevention of diseases and illness	156	32.0	125	25.6	0.027*
Use of medical equipment	116	23.8	92	18.8	0.058
Unhealthy practices (e.g. smoking)	103	21.1	68	13.9	0.003**

* Mantel-Haenszel weighted for: Education: Odds ratio 0.63 (0.45-0.88), $P = 0.006$ Age: Odds ratio 0.59 (0.42-0.84), $P = 0.004$ ** Mantel-Haenszel weighted for: Education: Odds ratio 0.73 (0.56-0.99), $P = 0.045$ Age: Odds ratio 0.74 (0.56-0.99), $P = 0.041$

Table 3: Comparison of obstacles faced in health education as reported by studied men and women

	Men (n = 488)		Women (n = 489)		P-value (χ^2 test)
	No.	%	No.	%	
Unexplained medical/technical terms	98	20.1	79	16.2	0.111
Insufficient time to answer questions	84	17.2	80	16.4	0.721
Different language	83	17.0	50	10.2	0.002*
Inadequate listening by teaching provider	71	14.5	64	13.1	0.508
Too much information to take in	62	12.7	52	10.6	0.313
Information not easy to understand	57	11.7	49	10.0	0.404
Contradictory messages from different providers	57	11.7	50	10.2	0.466
Teaching too fast	45	9.2	39	8.0	0.487
Attitude/approach of teaching provider	40	8.2	42	8.6	0.825
Uncomfortable place	31	6.4	35	7.2	0.616

* Mantel-Haenszel weighted for: Education: Odds ratio 0.56 (0.38-0.82), $P = 0.003$ Age: Odds ratio 0.55 (0.37-0.80), $P = 0.002$

Table 4: Comparison of preferred health education methods and sources as reported by studied men and women[#]

	Men (n = 488)		Women (n = 489)		P-value (χ^2 test)
	No.	%	No.	%	
Methods					
One to one	355	72.7	332	67.9	0.097
Written materials	91	18.6	93	19.0	0.882
Media	67	13.7	74	15.1	0.533
Video	66	13.5	72	14.7	0.590
Group	60	12.3	86	17.6	0.020*
Providers	31	6.4	30	6.1	0.888
Doctor	370	75.8	368	75.3	0.838
Health educator	146	29.9	160	32.7	0.345
Social worker	63	12.9	60	12.3	0.763
Pharmacist	42	8.6	22	4.5	0.009**
Nurse	20	4.1	24	4.9	0.542
Dietitian	18	3.7	7	1.4	0.025***
Other	14	2.9	11	2.2	0.540

[#]: responses not mutually exclusive * Mantel-Haenszel weighted for: Education: Odds ratio 1.46 (1.02-2.10), $P = 0.041$ Age: Odds ratio 1.51 (1.05-2.16), $P = 0.025$ ** Mantel-Haenszel weighted for: Education: Odds ratio 0.37 (0.16-0.91), $P = 0.020$ Age: Odds ratio 0.38 (0.16-0.97), $P = 0.039$ *** Mantel-Haenszel weighted for: Education: Odds ratio 0.56 (0.32-0.97), $P = 0.039$ Age: Odds ratio 0.51 (0.30-0.87), $P = 0.013$

Riyadh Military Hospital, KSA. The findings indicated statistically significant differences in some of the preventive aspects needs, language barriers, and the preferred methods and providers.

Although the majority of the study participants indicated that they had received a health education message, about a quarter had not, which points to the need for a greater effort in this service. Meanwhile, from the point of view of the women in particular, the benefits of the delivered information were high with a statistically significant difference. This gender difference might be attributed to the fact that language was less of a barrier for the women as the study findings indicated, but may also reflect a more attentive attitude among women, especially with regard to issues relating to their children. This is in agreement with Hopman-Rock *et al.* (2005)^[16] who found

that the female gender predicted participation in health education interventions, and actual participation. Similarly, Wiesemann *et al.* (2004)^[17] reported higher motivation in women.

As regards health education needs, men expressed significantly greater need for information on primary prevention issues and unhealthy health practices such as smoking. The lower expression of needs by women might be attributed to the presence of 'well woman' and antenatal care clinics, which provide them with primary prevention services. Besides, the 'well-baby' and vaccination clinics are mostly attended by mothers with their children, rather than fathers. A 'well man' clinic recently started, but not yet fully functional may achieve this unmet need for men. As for the unhealthy habit of smoking, it is primarily a men's problem in our community.^[18]

However, the wish for greater emphasis on preventive aspects expressed by men in this study is in contrast with Ray-Mazumder (2001)^[19] who found that female Chinese students in the USA and their mothers had a more positive attitude towards preventive care and practice than males. However, Meesters *et al.* (2009)^[20] did not find any gender difference in health education needs in the Netherlands. Therefore, it seems that gender-based differences in health education needs are influenced by factors relating to the setting such as culture and tradition, in addition to the extent to which new technologies like the Internet and other media are utilized.^[21]

Nevertheless, the present study demonstrated fewer unmet needs in health education relating to prevention compared to needs on disease management. Similarly, Peak *et al.* (2010)^[22] in the USA reported a low level of interest in preventive services. Our finding might have two opposing explanations. The first could be the good coverage given to primary prevention issues in our health education programs at the expense of patient education that relates to the patient's own illness. The second which is more plausible could be the less perceived need or importance of issues of primary prevention on the part of the clients. This second explanation is more probable since our health education programs are balanced in covering both prevention and control issues, with even more emphasis on patient education. Moreover, the importance of prevention is underestimated, for more resources even in developed countries, as reported in Austria^[23] are usually directed towards curative care services.

Concerning the barriers and obstacles that study participants face in health education, men and women agreed on all types of barriers. The only significant difference related to language, which was greater with the men. This difference could not be attributed to differences in age or education as it was present even after adjustment. The explanation could be that there were more non-Arab speaking male doctors than female doctors in the study setting. However, this language barrier cannot be separated from the effect of lack of race concordance between providers and consumers.^[24] Similar language problems were previously reported as a major barrier to health education and client satisfaction especially in settings with multinational providers and/or consumers.

Our study has also demonstrated significant differences in the preferences of men and women for the methods and providers of health education. The individualized face-to-face method was the most preferred by both groups. This is quite plausible since it allows personal interaction, using verbal and non-verbal communication, and providing a better chance to discuss personal needs.^[25] Therefore, interventions that use this approach have proved more

successful.^[26,27] However, this method demands that more time is spent by the provider with each client.^[28,29]

More women than men in the present study had a preference for group health education. The significant difference persisted after adjustment for age and education. The reason for this finding is that women naturally tend to socialize in groups.^[30] Also, the arrangement and scheduling of the process might take longer time, which men can ill afford, but which the women who were mostly housewives could.

Most men and women in the present study preferred to have a doctor as the provider of health education, with health educators, nurses, and other health professionals coming next in that order. Very few, but more men than women, agreed to receive health education from pharmacists and dietitians. These preferences reflect a low level of awareness of the roles of various members of the healthcare team, with the deeply-rooted belief in the doctor as the only source of trustworthy health information.^[31] This belief, as shown in previous studies seems to be universal and not simply related to the level of country's development.^[21,32] Nevertheless, other studies have indicated an increasing role of nurses^[33] and pharmacists^[34] in health education.

CONCLUSION

The study findings reveal a few significant differences between men and women regarding their health education needs, barriers, and preferences though there were areas of major agreement between the two groups. These must be taken into consideration when planning health education programs. The programs should also present solutions to the main barriers identified, especially with regard to the use of medical terms, the provider's lack of time, and the language problems by emphasizing the role of health educators, by recruiting Arabic speaking male educators, and by taking gender differences into consideration when designing health education programs.

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