PREFERRED HEALTH COMMUNICATION PATTERNS IN CARDIOVASCULAR DISEASE

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Abstract: The community based interventions for preventing CVD is generalizable and cost effective specially because of the use of mass communication methods. Unfortunately lower SES individuals appear to receive fewer healthy messages from mass media. This analysis includes men and women over 20 years who were interviewed in the third and fourth phase of IHHP Data were presented as percentiles. Statistical methods used were Chi-square test and multivariable logistic regression. Our results show that in both men and women the most preferred method for obtaining health information specially CVD were health personnel. This preferred route differed according to the education levels of the participants. In higher educational levels the preferred methods were TV and radio in both men and women, but in lower educational levels it was health personnel. Although printed media was the least desired method for health communication, higher educational levels had more tendency toward this compared to lower educational levels. Printed media in lower educational levels have limited effectiveness and this suggests the need for strategies designed for less literate.

Key words: Health communication, Cardiovascular disease, Media

INTRODUCTION

Cardiovascular disease (CVD) affects more than 12 million people in all the world each year. This could be cut to less than 50 percent by efforts in national and individual cardiovascular prevention levels [1]. The community-based interventions for preventing CVD is generalizable and cost effective specially because of the use of mass communication methods. Inclusion of mass media in these interventions not only provides information but also reinforces changes in behavior [2].

Many studies show a strong relationship between education and health and that people with the lowest literacy have lower levels of health, higher hospitalization and higher expenses for health care [3]. Unfortunately lower SES individuals appear to receive fewer healthy messages from mass media [4]. Previous researches have demonstrated that lower SES groups have less information processing skill and also limited information channel. [5].

Isfahan Healthy Heart program (IHHP) is a community based Program which adopted a multicultural approach involving government ministry of health and organization, health professionals employers, and community organizations. These sectors work together to provide information, skill training and social environment necessary to encourage healthy living by the Iranian people. The program included extensive use of the mass media to promote healthy life style, quit of smoking, and widespread school, workplace, and community health promotion programs. The program emphasized healthy diets physical exercise, and measures to discourage smoking [6]. In this article, we study the preferred methods used by participants in IHHP to
obtain cardiovascular health messages and there relation to the knowledge and attitude toward cardiovascular disease and the effect of education on these.

MATERIALS AND METHODS

Data are from the third and fourth phase of IHHP from Isfahan and Najafabad. IHHP includes data from five independent, cross-sectional surveys of randomly selected households in three cities of Isfahan, Najafabad and Arak from 2000-2006.

Detailed description of the study design and methodology have been published previously [6]. This analysis includes men and women over 20 years who were interviewed in the third and fourth phase of IHHP. All of them underwent a 30 minute home interview by trained health professionals to determine socioeconomic and demographic characteristics, medical and family history, health knowledge, cardiovascular risk related attitude and behavior including a food frequency questionnaire, smoking behavior, physical activity and use of medications.

Definition of variables: Education was selected as our measure of SES. Levels of education was recorded as the following categories for data presentation: low or Primary school education (below 5 years of education), medium or high school education (12 years or below), collage graduate (over 12 years of education).

CVD knowledge was based on multiple choice/true false questions and CVD attitude based on multiple choice/true false questions. Correct answers over 30% were considered high CVD knowledge or attitude.

Statistical analysis: Data were presented as percentiles in the form of table or graphs. Chi-square test was used for comparison of categorical variables. Multivariable logistic regression the association between CVD knowledge and attitude with the preferred media, education levels, sex adjusted for the area of location (urban or rural). P<0.05 was considered significant. All of the statistical analysis were performed by SPSS software version 13.

RESULTS

Our study was conducted on 5435 people participated in the IHHP program. 2779 (51.1%) of them were women and 2656 (48.1%) of them men. The preferred health communication pattern of the population studied for obtaining information about cardiovascular disease, its risk factors and its prevention are demonstrated in table 1. There was significant difference in men and women in obtaining information from printed media between men and women (p<0.05).

Also the preferred media for obtaining information about CVD according to education levels are displayed in figure 1. The preferred media differed according to education levels in both men and women (p<0.05). The most preferred method for both sexes in the low educational level was health personnel and in the high educational level was TV and radio. Also the high educational level in both sexes had more tendency toward the usage of printed media in comparison with other educational levels.

Table 2 presents the association between high and low levels of knowledge and attitude toward cardiovascular disease and the preferred media for obtaining information about CVD, education years, the sex of the participants adjusted for the area of residence. High levels of knowledge and attitude toward CVD were associated with the preference to use TV and radio as a source for getting information with an OR of 3.67 and 2.30 (in comparison to health personnel) respectively and also associated with education levels and the sex of the participants (p<0.05). High levels of CVD knowledge was associated with the preference to use printed media with an OR of 3.96 (in comparison to health personnel) (p<0.05).

DISCUSSION

Our results show that in both genders the most preferred method for obtaining health information specially CVD were health personnel. This preferred route differed according to the education levels of...
Table 2: The association between CVD knowledge and attitude as independent variables and the preferred health communication patterns, education levels and sex as dependent variables adjusted for the area of residence.

<table>
<thead>
<tr>
<th>Factors</th>
<th>Levels</th>
<th>CVD Knowledge</th>
<th>CVD Attitude</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Odds ratio(CI)</td>
<td>p-value</td>
</tr>
<tr>
<td>Preferred health communication patterns</td>
<td>Health personnel</td>
<td>R</td>
<td>R</td>
</tr>
<tr>
<td></td>
<td>Printed media</td>
<td>3.96(1.24,12.65)</td>
<td>&lt;0.05</td>
</tr>
<tr>
<td></td>
<td>TV and Radio</td>
<td>3.67(2.82,4.75)</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Education levels</td>
<td>0-5years</td>
<td>0.63(0.43,0.91)</td>
<td>&lt;0.05</td>
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<tr>
<td></td>
<td>6-12years</td>
<td>1.07(0.72,1.58)</td>
<td>&gt;0.05</td>
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<tr>
<td></td>
<td>&gt;12years</td>
<td>R</td>
<td>R</td>
</tr>
<tr>
<td>Sex</td>
<td>women</td>
<td>1.35(1.09,1.68)</td>
<td>&lt;0.01</td>
</tr>
</tbody>
</table>

Fig. 1: The preferred health communication pattern in the population studied according to sex and education. 1: TV and radio  2: health personnel  3: printed media  4: others

Fig. 2: The preferred health communication pattern in the population studied according to sex and education. 1: TV and radio  2: health personnel  3: printed media  4: others
the participants. In higher educational levels the preferred methods were TV and radio in both men and women, but in lower educational levels it was health personnel.

Although printed media was the least desired method for health communication, higher educational levels had more tendency toward this compared to lower educational levels. The results of our study are confirmed by a research conducted as a part of the Stanford Five City project on 2029 men of 20-64 years of age that showed that individuals with lower educational levels (had higher levels of CVD risk factors and) received less health information from printed media than individuals with higher educational levels [7,8]. Unfortunately low SES groups appear to have less exposure to health related messages and discuss health topics less often than higher SES groups [4]. Education is related to receiving health messages from printed media with the hypothesis that less educated men receive fewer messages than more educated men [9].

On the basis of our study and previous studies knowledge and attitude of individuals about CVD differ according to their educational levels [4]. Also prior findings from the National Health Interview Survey (NHIS) showed that white collar men had higher levels of knowledge about CVD than blue collar men [9]. On the other hands previous researches have demonstrated the higher level of CVD risk factors in lower educated individuals [10,11,12]. “Knowledge gap hypothesis “suggested by Freimuth suggests that intervention programs using mass media increase the knowledge gap between low and high educational levels on health issues [13] but although this is not supported by some of the other studies [7] our results suggest that high educated individuals have more tendency toward the usage of TV and radio and also printed media in comparison to lower educated and these information routes have more effect on increasing the knowledge and attitude about CVD. This shows the urgent need for reducing CVD risk factors in lower socioeconomic levels through approaches specially targeted for them [14,15]. Printed media in lower educational levels have limited effectiveness and this suggests the need for strategies designed for less literate [16].

REFERENCES