

Short Communication

Oral Health Knowledge and Attitudes of Community Health Workers in East Azerbaijan, Iran

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KEY WORDS

Community Health Worker;
Health;
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ABSTRACT

Statement of the Problem: Prevention is the key factor in acquiring dental and oral health. Community health workers, as a part of health care networks in Iran, play an important role in delivering primary care and their knowledge and attitude directly affect the population whom they interact with in their service scope.

Purpose: The aim of this research was to evaluate the knowledge and attitude level of community health workers regarding oral health.

Materials and Method: This descriptive analytical study was carried out on 1170 community health workers who were employed in health offices in East Azerbaijan to evaluate their knowledge and attitude level about oral health. Data were acquired through filled out questionnaires and were analyzed by SPSS software.

Results: There was no significant statistical relationship between knowledge and gender ($p=0.063$), level of education ($p=0.08$) and the period spent from the last continuing education course ($p=0.148$). However, by increasing age ($p=0.016$), work experience ($p=0.083$) and number of attended continuing education courses ($p=0.023$), the knowledge scores were reduced. No statistically significant relationships were found between attitude and any of research variables.

Conclusion: The level of knowledge and attitude of community health workers in East Azerbaijan regarding oral health was good. There was a reverse relationship between age, work experience, and frequency of participation in continuing education courses and knowledge scores which emphasizes the necessity of continuous training and revising the method of training in education of community health workers and other staffs of health care system.

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Introduction

The compartmentalization involved in viewing the mouth separately from the rest of the body is not acceptable anymore, because oral health affects general health by causing considerable pain and discomfort and by affecting mastication, speech and the person's quality of life and well-being. [1] Considering high expenses of dental care procedures, [2] it seems that prevention of oral diseases would be a cost effective solution to this issue. Thus, strengthening of preventive public health

programs that incorporate oral health into need assessments and target the common risk factors for health promotion are urgently needed. [1, 3]

Community health workers (called as 'Behvarz' in Iran) are male or female staff of the 'health houses' who deliver primary health care services to the population in first level of health care network. [4] Due to integration of oral health care into health care network, community health workers are responsible for providing oral health care to the target groups, including oral hygiene educati-

Table 1: Demographic data of the study population by gender

	Female	Male	Total
Number of Participants	750(65.2%)	400(34.8%)	1150
Mean Age	32.76±2.8	37.23±3.5	34.31±3.04
Range of work experience	1-27	8-18	
Mean years of work experience	12.73±4.3	13.8±2.7	13.1±3.7
Level of Education	5 th grade	310(41.7%)	200(50%)
	Secondary school graduate	250(33.3%)	110(27.5%)
	High school graduate	170(22.2%)	90(22.5%)
	Associate degree	20(2.8%)	0
			20(1.8%)

on, periodic examination of the teeth, supervision of sodium fluoride mouth rinsing, referrals to the higher levels and follow up of the outcome. [5-6]

Since health care personnel including community health workers are supposed to play a substantial role in preventive oral health care activities, their own oral health knowledge should be good and their oral health behavior should confirm their professional recommendations. [7] With proper knowledge and attitude toward oral health, they can play an important role in the health education of individuals and groups, [8-10] and act as role models for lay people and the community in large scale.

The aim of this study was to determine knowledge and attitude of community health workers toward oral health in East Azerbaijan, which is one of the Northwest provinces of Iran.

Materials and Method

For this cross-sectional study, a questionnaire was designed according to previous studies and the references used in continuing education courses for community health workers. [11-12] Subsequently, it was checked for face and content validity through a panel discussion with six dental specialists experienced in continuing education programs. The questionnaire was pretested on 20 subjects representative of the study population and the reliability coefficient (Cronbach alpha), ease of comprehension and relevance to the intended topics were evaluated. The final version comprised three parts:

a) Demographic data including age, gender, education level, work experience and number of continuing education courses that the subject has taken.

b) Knowledge about oral health care principles that included multiple choice questions on sequence and time of tooth eruption, signs of tooth decay, bacterial plaque, characteristics of mixed dentition, role of fluoride in caries prevention, role of sugar in caries, fissure

sealant, dental treatment for pregnant women, target groups of community oral health care, integrating oral health care in primary health care and oral hygiene instruction to children.

c) Attitude section including polar questions about importance of dental care in oral health, preventability of tooth decay, relationship between foods and caries, preference of prosthesis to natural teeth, bleeding on probing as a sign of gingival disease and complementary role of dental floss and toothbrush.

The researchers visited the health houses during fall 2015 and asked all 1170 community health workers to fill in anonymous questionnaires. 1150 of the participants returned the completed questionnaires for a response rate of 98%.

The data were analyzed using the SPSS software version 13. Independent-samples t-test was used to compare knowledge and attitude scores between two gender groups. The mean knowledge and attitude scores of different educational levels and different time lengths passed since the last session of continuing education were compared using one-way ANOVA. Bivariate analysis of the data was performed by Pearson correlation coefficient and $p < 0.05$ was considered as the level of significance.

Results

Respondents were 65.2% female and 34.8% male. Table 1 summarizes the demographic data and the differences observed among two gender groups regarding the number, mean age and years of work experience. Table 2 shows community health workers' knowledge and attitude towards oral health care according to their different educational levels. 82.5% of men and 88% of women were well informed about oral health care principles. The average level of knowledge was comparable in two gender groups ($p=0.063$). On the other hand, increase in age of the participants was in negative correlation with

their level of knowledge. (Pearson Correlation Coefficient = - 0.22 and $p=0.016$) Although the knowledge of community health workers increased with higher level of education, this increase was not statistically significant ($p=0.08$). Moreover, higher level of knowledge was in correlation with fewer years of practice ($p=0.0083$). In other words, older subjects and the ones with longer years of service obtained lower grades of knowledge.

Table 2: Mean score of knowledge and attitude according to level of education of participants

Level of education	Knowledge score	Attitude score
5 th grade	11.64±1.16	5.44±0.79
Secondary school graduate	11.77±1	5.49±1
High school graduate	12.27±1.37	5.54±0.58
Associate degree	12.5±0.7	6

The average number of the continuing education courses that community health workers had taken part was about 8 sessions. The average time passed since the last session in 92.5% of the cases was less than one month. Pearson correlation coefficient was -0.21 ($p=0.012$) indicating an inverse relation between number of the continuing education courses and the level of knowledge, suggesting that the more the frequency of participation in continuing education courses the less the knowledge regarding oral health care ($p=0.023$).

The mean level of knowledge in 1, 6 and 12 months periods after the last session of continuing education course did not differ significantly ($p=0.148$).

The average attitude score of the participants was 5.48±0.82. However, it was not affected by the gender of the participants ($p=0.08$). Considering the information in Table 2, it appears that higher level of education does not influence attitude of community health workers ($p=0.156$).

Pearson correlation analysis failed to determine any relationship between attitude and age or years of work experience or number of continuing education sessions. Comparing the mean weight of questions related to attitude of community health workers in 1, 6 and 12 months from the last continuing education session indicated that their attitude did not differ significantly with time ($p=0.43$). Attitude and level of knowledge of community health care workers were not associated ($p=0.06$).

Discussion

Community health workers are key members of integrated public health system, involved in primary prevention [4] and their knowledge and attitude may be important determinants of expected preventive behavior. This study investigated the knowledge and attitude of community health workers in East Azerbaijan. In our research, knowledge was defined as what community health workers know about oral and dental health and attitude meant to gauge the prevailing beliefs and ideas regarding oral health topics.

Contrary to the studies performed by Taghavi *et al.* [13] and Poorhashemi, [14] there was no statistically significant relationship between gender and the level of knowledge in the present study. Although Poorhashemi did not discuss this difference, it seems that the greater number of female subjects than males (nearly twice) would be a justified explanation.

In our study, the mean age of women was less than men ($p=0.001$). While this might have caused the higher level of knowledge in females, the equal work experience would explain the similarity in level of knowledge in two gender groups. In other words, it appears that the time passed since the graduation of community health workers is a more important determinant than their age in level of knowledge.

Our results showed that there is not a relationship between higher levels of education with more knowledge regarding oral health care. This might be due to lack of structured instruction on oral health care principles in the educational curriculum from 5th grade to the time of graduation from high school. Even the two subjects with associates degree, were educated in the field of public health without any instruction related to oral health care, resulting in a knowledge level similar to other community health workers. This result was in accordance with the study performed by Poorhashemi, which did not confirm a similar relation in female group.

The present study revealed that there was an inverse relationship between knowledge of community health workers and their age and also their work experience. Similar results were obtained in the investigations of Poorhashemi [14] and Taghavi *et al.* [13] The more time passed since graduation the less the ability of community health workers to remember the material learnt about oral health care and the less incentive and

opportunity to consider studying them again. These results are somehow similar to that of Petronson *et al.*, [15] which suggested the younger people were more aware of oral health principles and their own status of oral health than the elderly. [15] It may also be comparable to the study of Zhu *et al.* [16] that indicated adherence to mouth hygiene and awareness of its importance is stronger in younger age group.

The unanticipated fact of an inverse relationship between the number of continuing education courses and oral health knowledge may indicate the ineffectiveness and impracticality of the offered information. This also may be because these courses are being attended irregularly or as a compulsory need for score of sessions. Nevertheless, the age of community health workers may be considered as a confounding factor, since the older community health workers have participated in more continuing education courses.

The mean attitude score of community health workers in this study was 5.5, which is graded as a good level. Attitude was associated neither with the age, gender, educational level, number of continuing education courses nor with the level of knowledge. In other words, the level of knowledge is not necessarily the only effective factor on the attitude and it is rather influenced by individual concepts and understanding of the person.

Conclusion

It may be concluded that overall knowledge and attitude of community health workers in East Azerbaijan is in an acceptable level. However the lower scores of older and more experienced community health workers suggest the need for more rigorous plan for continuing education courses to maintain and increase the level of knowledge and attitude efficiently.

Conflict of Interest

None declared.

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