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# Evaluating the Behavior of Healthcare Workers


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**ABSTRACT**

*Objective: The aim of this study was to investigate and evaluate the behavior and attitudes of healthcare workers with a chronic disease or those who have a relative with a chronic disease who are also providing a healthcare service to patients with the same disease.*

*Materials and Methods: This study was performed at Inonu University Turgut Ozal Health Center located in Malatya (a provincial city in Turkey) in November 2012. A total of 1178 lecturers (physicians), research assistants (physician assistants) and nurses provide a health service in this center, and some of them completed a survey regarding this study. The answers to this survey were evaluated with Pearson Chi-Square, Yates Corrected Chi-Square and Fisher's Exact Tests in the SPSS 15.0 program. Values of P<0.05 were accepted as significant.*

*Conclusions: According to our results, the most important factors affecting a healthcare worker's attentiveness to patient with a chronic disease were gender (OR=2.35; 95% CI=1.06-5.17), working years (OR=0.53; 95% CI=0.32-0.88), and profession (OR=0.22; 95% CI=0.075-0.667), respectively.*


**KEYWORDS : Healthcare, healthcare worker, chronic disease, behavior.**

**Introduction:**

The behavior and attitudes of healthcare workers towards their patients is a subject that especially attracts the attention of patients and their relatives.[1] Patients and their relatives want to benefit from the most modern medical resources and want to be treated with care by the healthcare workers providing these resources.[2,3] If the patient has any doubts about the attitude of the healthcare worker, the patient may lose confidence in the ability of the healthcare worker to adequately perform his/her job. In these situations, patients with curable diseases may refuse treatment and may prefer to leave the healthcare center, which would negatively affect the outcome of the patient.[4,5,6]

Healthcare workers should try to serve and treat all patients equally.[5,6] However, a healthcare worker with a chronic disease or those who have a relative with a chronic disease may give patients with the same chronic disease more attention. There is no harm in giving certain patients more attention than others, but from a professional standpoint, all healthcare workers should treat their patients equally.

The aim of this research was to expose the differences in attitudes and behaviors of healthcare workers who have a chronic disease or those who have a relative with a chronic disease when treating patients having the same chronic disease. We hypothesized that patients with the same chronic disease as the healthcare worker and/or his/her relative would receive more attention and therefore better care than other patients.

**Materials and Methods:**

This study was performed at Inonu University Turgut Ozal Health Center located in Malatya (a provincial city in Turkey) in November 2012. A total of 1178 healthcare workers provided a service at this health center at the time of this study, including 172 lecturers (physicians) (14.6%), 256 research assistants (physician assistants) (21.73%), and 750 nurses (63.66%). Two hundred forty-nine of these healthcare workers participated in this study, including 48 lecturers (19.27%), 60 research assistants (24.09%), and 141 nurses (56.62%), all of whom took a survey regarding this study.

The survey consisted of 13 questions. The first 5 questions covered the demographic characteristics of the participants (age, gender, marital status, profession, working years), the 6th and 7th questions were related to whether they themselves had a chronic disease or if their relative had a chronic disease, and questions 8 to 13 were designed to assess the behavior of the health workers who had a chronic disease (or their relatives) towards patients with the same disease.

The answers to the 9th question of the survey ("What will your attitude be towards patients under your care who have the same disease as you or your relative with regards to being more attentive to such patients?") revealed the most important results of this study. Those who answered this question with "more or moderate" were accepted as "more attentive" and those who answered "less" were evaluated as "not more attentive".

The answers to this survey were evaluated with Pearson Chi-Square, Yates Corrected Chi-Square and Fisher's Exact Tests in the SPSS 15.0 program. Values of P<0.05 were accepted as significant.

Multiple Logistic Regression analysis was used in order to determine the factors (age, gender, marital status, profession, and working years) that could be related with healthcare workers that were "more attentive" towards their patients with chronic disease.

**Results:**

Forty-eight lecturers, 60 research assistants and 141 nurses participated in this study and filled out the survey (a total of 249).

| | PROFESSION | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | **Lecturer** | | **Research Assistant** | | **Nurse** | | **Total** | |
| | n | % | n | % | n | % | n | % |
| Does not have disease | 36 | 17.8 | 54 | 26.7 | 112 | 55.4 | 202 | 100.0 |
| Has disease | 12 | 25.5 | 6 | 12.8 | 29 | 61.7 | 47 | 100.0 |
| Total | 48 | 19.3 | 60 | 24.1 | 141 | 56.6 | 249 | 100.0 |

n-number, % - percentage in the row.

**Table 1: Lecturers, research assistants, and nurses who do/do not have a chronic disease.**

| | PROFESSION | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | **Lecturer** | | **Research Assistant** | | **Nurse** | | **Total** | |
| | n | % | n | % | n | % | n | % |
| Does not have a relative with disease | 14 | 15.6 | 20 | 22.2 | 56 | 62.2 | 90 | 100.0 |
| Has a relative with disease | 34 | 21.4 | 40 | 25.2 | 85 | 53.5 | 159 | 100.0 |
| Total | 48 | 19.3 | 60 | 24.1 | 141 | 56.6 | 249 | 100.0 |

n-number, % percentage in the row.

**Table 2: Lecturers, research assistants, and nurses who do/do not have a relative with a chronic disease.**

| | | More attentive | | | | | |
|---|---|---|---|---|---|---|---|
| **Does not have disease (him/herself) n** | | **Yes** | | **No** | | **Total** | |
| | | % | n | % | n | % | |
| | Lecturer | 20 | 55.6 | 16 | 44.4 | 36 | 100.0 |
| | Research Assistant | 43 | 79.6 | 11 | 20.4 | 54 | 100.0 |
| | Nurse | 81 | 72.3 | 31 | 27.7 | 112 | 100.0 |
| | Total | **144** | **71.3** | **58** | **28.7** | **202** | **100.0** |

n- number, % - percentage in the row; P=0.043; Pearson Chi-Square

**Table 3:** Attitudes of lecturers, research assistants, and nurses who do not have a chronic disease towards their patients with a chronic disease.

According to Table 3, there was a significant difference between the attentiveness of lecturers, research assistants and nurses who do not have a chronic disease towards their patients (P=0.043)

| | | More attentive | | | | | |
|---|---|---|---|---|---|---|---|
| **Has disease (him/herself) n** | | **Yes** | | **No** | | **Total** | |
| | | % | n | % | n | % | |
| | Lecturer | 8 | 66.7 | 4 | 33.3 | 12 | 100.0 |
| | Research Assistant | 5 | 83.3 | 1 | 16.7 | 6 | 100.0 |
| | Nurse | 21 | 72.4 | 8 | 27.6 | 29 | 100.0 |
| | Total | **34** | **72.3** | **13** | **27.7** | **47** | **100.0** |

n- number, % - percentage in the row; P=0.82; Pearson Chi-Square

**Table 4:** Attitudes of lecturers, research assistants, and nurses who have a chronic disease towards their patients with the same disease.

However, there was no significant difference between the attentiveness of lecturers, research assistants and nurses who do have a chronic disease towards their patients with the same disease (P=0.82).

No significant difference was found between the attentiveness of lecturers who did or did not have a chronic disease towards patients with the same disease (P=0.73 Yates Corrected Chi-Square). We obtained similar results for research assistants (P=1.0 Fisher's Exact Test) and nurses (P=1.0 Yates Corrected Chi-Square).

| | | More attentive | | | | | |
|---|---|---|---|---|---|---|---|
| **Does not have a relative with disease n** | | **Yes** | | **No** | | **Total** | |
| | | % | n | % | n | % | |
| | Lecturer | 7 | 50.0 | 7 | 50.0 | 14 | 100.0 |
| | Research Assistant | 13 | 65.0 | 7 | 35.0 | 20 | 100.0 |
| | Nurse | 41 | 73.2 | 15 | 26.8 | 56 | 100.0 |
| | Total | **61** | **67.8** | **29** | **32.2** | **90** | **100.0** |

n- number, % percentage in the row; P=0.22; Pearson Chi-Square

**Table 5:** Attitudes of lecturers, research assistants, and nurses who do not have a relative with a chronic disease towards their patients with a chronic disease.

According Table 5, there was no significant difference in the attentiveness of the lecturers, research assistants and nurses who do not have a relative with a chronic disease towards their patients (P=0.22).

| | | More attentive | | | | | |
|---|---|---|---|---|---|---|---|
| **Has a relative with disease n** | | **Yes** | | **No** | | **Total** | |
| | | % | n | % | n | % | |
| | Lecturer | 21 | 61.8 | 13 | 38.2 | 34 | 100.0 |
| | Research Assistant | 35 | 87.5 | 5 | 12.5 | 40 | 100.0 |
| | Nurse | 61 | 71.8 | 24 | 28.2 | 85 | 100.0 |
| | Total | **117** | **73.6** | **42** | **26.4** | **159** | **100.0** |

n- number, % percentage in the row; P=0.039; Pearson Chi-Square

**Table 6:** Attitudes of lecturers, research assistants, and nurses who have a relative with a chronic disease towards their patients with the same disease.

There is a significant difference in the attentiveness between the lecturers, research assistants and nurses who have a relative with a chronic disease towards their patients with the same disease (P=0.039).

No significant difference was found between the lecturers who did or did not have a relative with a chronic disease with regards to being more attentive to their patients with the same disease (P=0.66 Yates Corrected Chi-Square). Similar results were obtained for research assistants (P=0.083 Fisher's Exact Test) and nurses (P=1.0 Yates Corrected Chi-Square).

A significant difference was found between male and female health workers who did not have a chronic disease with regards to being more attentive to their patients (P=0.012 Yates Corrected Chi-Square). No significant difference was found between male and female health workers who had a chronic disease with regards to being more attentive to their patients with the same disease (P=1.0 Fisher's Exact Test).

A significant difference was found between male and female health workers who did not have a relative with a chronic disease with regards to being more attentive to their patients (P=0.034 Yates Corrected Chi-Square). No significant difference was detected between male and female health workers who had a relative with a chronic disease with regards to being more attentive to their patients with the same disease (P=0.24 Yates Corrected Chi-Square).

There was a significant difference between the behaviors of healthcare workers who did not have a chronic disease with regards to being more attentive towards their patients (P=0.036 Pearson Chi-Square). There was no significant difference in the behavior of healthcare workers with a chronic disease with regards to being more attentive to their patient with the same disease (P=0.094 Pearson Chi-Square).

No significant difference was found in the behavior of healthcare workers who did or did not have a relative with a chronic disease with regards to being more attentive to their patients (P=0.084, P=0.1, respectively, Pearson Chi-Square).

Multiple Logistic Regression analysis was used to determine the factors (age, gender, marital status, profession, and years of working) that were

related to healthcare workers "paying more attention to their patients with chronic disease". Results indicated that gender, years of working, and profession are related to "being more attentive to patients with a chronic disease". Age and marital status were not related.

The most important factors affecting "being more attentive towards patients with a chronic disease" were gender (OR=2.35; 95% CI=1.06-5.17), working years (OR=0.53; 95% CI=0.32-0.88), and profession (OR=0.22; 95% CI=0.075-0.667), respectively.

The compatibility level of the Multiple Logistic Regression model estimations was determined with a Hosmer and Lemeshow test, which indicated that the model is compatible with the data (Chi-Square=7.65, df=7, P=0.36).

**Conclusion and Discussion:**

During calculation of sampling size, the rate of health workers, having the same chronic disease as their patient, changing their behavior towards such patients has been taken as %50, and with accuracy range of %95 and %5 deviated, the extent of this study has been calculated as 249 people.

We found that gender, working years, and profession were related to the attentiveness of healthcare workers towards patients with chronic disease.

We also found that male healthcare workers are 2.35 times more attentive to their patients with chronic disease than are females.

In addition, lecturers are 0.22 times more attentive to patients with chronic disease than are research assistants. Among the nurses, who are from the health workers, with regards to being more attentive to their patient with a chronic disease, no reasonable result was found. These results indicate that lecturers are more concerned with being attentive to their patients with a chronic disease than are research assistants or nurses.

Also, according to our model, every additional working year in the healthcare profession causes an 0.5x decrease in being attentive to patients. This may be due to a decrease in enthusiasm in the workplace over the years. It may also be a result of taking a more professional approach, rather than a more emotional approach, with increasing experience.

Based on the results of our study, we recommend that managers of healthcare centers should analyze the behaviors of healthcare workers towards patients within specified intervals and take actions to ensure better healthcare service for patients.[2,7,8,9,10,11,12]

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