**Research Article**

# Individuals Living Rize in COVID-19 Pandemic Process Level of Empathy and Attitudes toward Nurses

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## ABSTRACT

**Background:** The opinion of the society on nursing affects both the status of the nursing profession and the attitude toward the profession. The negative perception of the nursing profession reduces job stress, job dissatisfaction, disappointment and job performance among nurses, and affects the quality of care. The study aims to determine the empathy levels and attitudes of individuals living in Rize toward nurses during the COVID-19 pandemic. **Methods:** The study is in a descriptive research design. The population comprised individuals over the age of 18. The data were collected using the snowball sampling method with the Attitude Scale toward Nurses and the Empathy Scale through social media tools. The data were analyzed with the Mann–Whitney U test, Kruskal–Wallis analysis, Tamhane's T2 *post hoc* test, and Spearman correlation. **Results:** About 61.8% of the participants were female, and the mean age was 38.5 ± 10.49. About 73.3% were university graduates, and 77.6% were married. While the mean score of participants' attitudes toward nurses' attentiveness in their profession was above the moderate level (43.77 ± 9.61), the mean score regarding the attitudes toward the sensitivity of nurses in their profession was close to a high level (36.03 ± 5.09). The empathy level mean score of the participants (53.51 ± 6.92) is also close to a high level. **Conclusion:** Participants' attitudes toward nurses were found to be positive, and their empathy levels were high. As the positive attitude toward nurses' attentiveness increases, the attitude toward their sensitivity and empathy level also increases.

**Keywords:** Attitude toward nurse, COVID-19, Empathy, Nurse

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## Introduction

COVID-19 disease, which first appeared in the Wuhan province of China and was declared a pandemic by the World Health Organization, is caused by the SAR-CoV-2 virus.[1,2] COVID-19, diagnosed in China on January 7, 2020, was first confirmed in our country on March 11, 2020.[3] COVID-19 has become a major public health problem worldwide with 149,216,984 cases and 3,144,028 deaths throughout the world and 4,751,026 cases and 36,398 deaths in Turkey.[4] Coronavirus is a large family of viruses that cause a variety of illnesses from the common cold to more serious diseases in humans such as Middle East Respiratory Syndrome and Severe Acute Respiratory Syndrome.[3,5]

Nursing, a part of health services, has multi-faceted roles such as protecting and improving the health of the individual, family, and society, providing care, applying treatment, and rehabilitation. Therefore, that a person needs health services means s/he also needs nursing.[6] Nurses play key roles in health service delivery

during the pandemic. Nursing is the principal active partner of primary and secondary infectious disease prevention efforts. Regardless of their socio-economic development, nursing is regarded to be the top profession in the prevention and relief of suffering during and after the treatment of any disease, including COVID-19, in every country.[7] The Health Education England e-Learning for Healthcare team recently integrated additional learning materials for nurses into an exclusive e-learning program designed to help the health and care workforce against the COVID-19 pandemic. England reported that they collaborated with Head Nurses of Scotland, Wales, and Northern Ireland on policy and guidance to support the recruitment of additional nurses to care for patients and families during the COVID-19.[8] Likewise, extra nurse appointments are also made in Turkey. Those who receive and provide nursing services are expected to exhibit awareness of the necessity of the nursing profession.[9] Societies have a way of perceiving every profession, and these perceptions of the society about nursing affect both the status of the nursing profession and the attitude toward the profession positively or negatively.[10] Studies have emphasized that society's negative attitude toward the nursing profession will not only lead to stress, disappointment, decrease in job performance, less concentration and negative emotions, medical errors, and prevent patient safety, quality of care, and patient satisfaction, but also hinder the development of competence and self-esteem of nurses.[11-15]

Attitude is a factor affecting interpersonal communication, and stereotyped attitudes based on information of doubtful validity can create interpersonal problems.[16]

Various studies on attitudes toward nurses noted that the nursing profession is perceived positively. The general attitudes of nurses,[9,17,18] nursing students,[19-22] non-nursing health-care personnel,[23,24] society and patients toward nursing were reported to be positive.[13,25] However, one study showed that nurses generally have negative attitudes toward their profession.[12]

Another variable, empathy, is the ability to correct understanding of a person's feelings and thoughts by putting yourself in his/her place. Empathy brings people closer to each other, facilitates communication, and makes the individual feel understood and cared for.[16] It is assumed that health-care personnel and nurses working under challenging conditions during the pandemic expect an empathic approach and positive attitude from society. Although the literature has some studies dealing with attitudes toward the nursing profession, there are no studies, to the best of our knowledge, evaluating the attitude and empathy level of the society toward nurses during the pandemic, which is a critical period of human life. Therefore, the study aims to determine the empathy levels and attitudes of individuals living in Rize toward nurses during the COVID-19 pandemic.

## Materials and Methods

### Study design and participants

The research is a descriptive study carried out in Rize between July 2020 and November 2020. The population included individuals over the age of 18 living in Rize. Due to the pandemic, the data were collected with social media tools using the snowball sampling method. Following obtaining the institutional permission, the university personnel was contacted via their corporate e-mail addresses, and the research link was shared, and they were asked to forward the link using social media tools. Finally, the study was conducted with a total of 353 people.

### Measurement

The data were collected using the Socio-demographic Information Form developed by the researcher, including descriptive information, symptoms, and protective measures against COVID19 disease, the Attitude Scale for Nurses, and the Empathy Questionnaire (EQ).

The socio-demographic information form consists of questions about gender, age, educational status, marital status, place of residence, income, employment status, smoking, chronic illness, having a nurse family member, health-care service utilization, change in attitudes toward nurses, and protective measures to be taken.

The attitude scale toward nurses is a Likert-type scale developed by Tezbaşaran and Yiğit to determine the attitudes of individuals over the age of 18 toward nurses.[26,27] It consists of 21 items and two dimensions. The first dimension measures the attitudes toward nurses' attentiveness in their profession and consists of 13 items, including positive expressions for nurses. The highest score to be obtained is 65, the lowest score is 13. High scores indicate positive attitudes toward nurses, and low scores indicate negative attitudes. The second dimension measuring the attitudes toward nurses' sensitivity in their profession toward patients and their relatives while performing their duties consists of eight items. These items are reverse-coded. The highest score to be obtained is 40, the lowest score is 8. In this dimension, high scores indicate a positive attitude toward nurses, and a low score indicates a negative attitude. The Cronbach's alpha values were found to be 0.948 and 0.866 for the attitudes toward attentiveness of nurses in their profession dimension, and the attitudes toward nurses' sensitivity in their profession dimension, respectively.

The EQ, developed by Lawrence *et al*. in 2004, is a Likert-type scale including 40 items with four options.[28] Turkish validity and reliability analysis were performed by Barış Kaya and Özgür Murat Çolakoğlu in 2015, it was reduced to 13 items, and Likert type was arranged as five options. Each item is scored between 1 (strongly disagree) and 5 (strongly agree) on the scale, which measures empathy within the context of social understanding. The lowest and highest scores to be obtained from the scale are 13 and 65, respectively, Higher scores refer to a higher level of empathy. Cronbach's alpha value of the scale was found to be 0.820.

## Statistical analysis

For the statistical analysis of the data, SPSS22 package program was used, and the descriptive data were presented as percentage, mean, and standard deviation. For statistical analysis of quantitative data, Mann–Whitney U test, Kruskal–Wallis analysis, Tamhane's T2 *post hoc* test, and Spearman correlation analysis were performed. In correlation analysis, 0–0.39 refers to a weak correlation, 0.40–0.69 moderate correlation, 0.70–0.89 strong correlation, and 0.90–1.00 every strong correlation. $P < 0.05$ was accepted as statistically significant.

## Ethically

The research was conducted after necessary permission was granted by the Non-Interventional Ethics Committee (2020/141) and the relevant institution. The informed consent was received from the participants.

## Results

Out of 353 people participating in the study, 61.8% were female, and their mean age was 38.5 ± 10.49. About 73.3% were university graduates, and 77.6% were married. About 43.3%, 32%, 13.3%, and 11.3% had monthly income between 5000–10,000₺, 2500–5000₺, below 2500₺, and over 10,000₺, respectively. The average number of family members was 4. 71.1% lived in the city center, 22.9% in the province center, and 5.9% in the village. About 77.3% were employed, 74.8% did not smoke, and 14.6% had chronic diseases. About 2.3% had heart disease, 6.2% had hypertension, 4.2% had diabetes, and 3.1% had lung disease. Health-care service utilization status of the participants showed that 12.5% were admitted to a health institution due to the symptoms of COVID-19, 0.6% were hospitalized with the diagnosis of COVID-19, 19.8% were admitted/hospitalized for a reason except for COVID-19, and 67.1% did not use any healthcare service. While 77.6% of the participants had no contact with someone diagnosed with COVID-19, 9.1% had close contact, and 13.4% had indirect contact. The ratio of having a nurse family member was 5.6%, and 2% of the participants were nurses. Regarding the item as to whether the pandemic has made any change in their attitudes toward nurses, 61% of them changed their attitude positively, and 37.8% had no change in their attitudes.

The most common physical symptom during the pandemic was a headache with 29.2%, and 2.8% had no symptoms. Other symptoms were 23.8% fatigue, 14.4% muscle/joint pain, 12.2% sore throat, 10.8% cough, 9.9% cold, 8.2% dizziness, 4.2% shortness of breath, 4.2% loss of smell, 4% vomiting, 3.4% abdominal pain, 3.1% loss of taste, 2.8% skin rash, 2% difficulty breathing, 1.4% fever above 38°C for at least 1 day, 1.1% conjunctivitis, 0.6% diarrhea, and 0.3% nausea.

Among the protective measures against COVID-19 disease in the normalization period, participants wash their hands regularly (94.3%), wear a mask regardless of the presence of symptoms (89.5%), cover their mouth when coughing/sneezing (87%), avoid close contact with sick people (85.6%), change their clothes after coming from outside (77.3%), do not go out unless it is for basic necessities (75.6%), wash outside clothes immediately when they come home (49.6%), do not order food delivery/eat outside (42.8%), isolate themselves for 14 days after traveling (27.5%), wear gloves when they go out (12.2%), and 2% do not apply any of them. The participants' mean scores of the attitude scale toward nurses and the empathy scale are given in Table 1. While the mean score of the attitudes toward nurses' attentiveness in their profession is above the moderate level, the mean score of the attitudes toward nurses' sensitivity in their profession is close to a high level. Likewise, the mean empathy score of the participants is close to a high level.

The analysis of the scores of the two dimensions in the attitude scale toward nurses and the empathy scale according to some variables is shown in Table 2. The analysis revealed no statistically significant difference between the two dimensions of the attitude scale toward nurses and empathy scale in terms of gender, marital status, employment status, place of residence, and health-care service utilization status. A statistically significant difference was found in the attitudes toward nurses' attentiveness in their profession dimension in terms of having a nurse family member and the attitudes toward nurses during the pandemic ($P = 0.005$, $P \leq 0.001$). In the *post hoc* analysis, the scores regarding the attentiveness of nurses in their profession were found to be significantly higher in those who were nurses than those who did not have a nurse family member ($P = 0.043$); and in those whose attitudes toward nurses changed positively during the pandemic than those whose attitudes did not change ($P = 0.001$).

In the participants' attitudes toward the sensitivity of the nurses in their profession, a statistically significant difference was found in terms of the presence of a chronic illness, the utilization of health-care services, and the changing status of the attitudes of nurses. This significant difference resulted from those with chronic disease ($P = 0.018$), those who were admitted to hospital for a reason except for COVID-19, those who did not use health-care services ($P = 0.028$), and those whose attitudes toward nurses changed positively during the pandemic ($P = 0.013$).

**Table 1:** The mean scores of the attitude scale toward nurses and the empathy scale

| Scales | *n* | Min-Max | Mean | ss |
|---|---|---|---|---|
| The attitudes toward nurses' attentiveness in their profession | 353 | 13–65 | 43.77 | 9.61 |
| The attitudes toward nurses' sensitivity in their profession | 353 | 16–40 | 36.03 | 5.09 |
| Empathy scale | 353 | 24–65 | 53.51 | 6.92 |

**Table 2:** Comparison of the participants' scores from the attitude scale toward nurses and the empathy scale with some variables

| Independent variables | *n* | The attitudes toward nurses' attentiveness in their profession | The attitudes toward nurses' sensitivity in their profession | The empathy scale |
|---|---|---|---|---|
| | | Mean rank | Mean rank | Mean rank |
| Gender | | | | |
| Female | 218 | 173.1 | 178.3 | 182.7 |
| Male | 135 | 183.3 | 174.8 | 167.8 |
| | | U=13866.00, Z=−0.933, P=0.351 | U=14429.00, Z=−0.320, P=0.749 | U=13472.50, Z=−1.335, P=0.182 |
| Marital status | | | | |
| Married | 274 | 176.5 | 180.2 | 174.3 |
| Single | 79 | 178.8 | 165.9 | 186.5 |
| | | U=10681.00, Z=−0.182, P=0.856 | U=9942.50, Z=−1.147, P=0.251 | U=10074.00, Z=−0.939, P=0.348 |
| Education level | | | | |
| Primary-high school | 93 | 195.3 | 162.4 | 195.2 |
| University | 260 | 170.4 | 182.2 | 170.5 |
| | | U=10385.50, Z=−2.066, P=0.039 | U=10735.00, Z=−1.672, P=0.095 | U=10401.00, Z=−2.002, P=0.045 |
| Employment status | | | | |
| Employed | 273 | 177.7 | 176.7 | 175.7 |
| Unemployed | 80 | 174.5 | 178.1 | 181.3 |
| | | U=10719.50, Z=−0.256, P=0.759 | U=10831.50, Z=−0.115, P=0.909 | U=10577.50, Z=−0.427, P=0.669 |
| Smoking | | | | |
| Yes | 89 | 171.1 | 166.9 | 198.2 |
| No | 264 | 178.9 | 180.4 | 169.9 |
| | | U=11221.50, Z=−0.647, P=0.517 | U=10851.00, Z=−1.123, P=0.262 | U=9862.50, Z=−2.268, P=0.023 |
| Presence of a chronic disease | | | | |
| Yes | 58 | 199.4 | 204.7 | 204.4 |
| No | 295 | 172.6 | 171.5 | 171.6 |
| | | U=7254.50, Z=−1.874, P=0.061 | U=6945.00, Z=−2.361, P=0.018 | U=6965.50, Z=−2.240, P=0.025 |
| Place of residence | | | | |
| City center | 251 | 176.9 | 183.1 | 181.9 |
| Province center | 81 | 178.4 | 164.5 | 162.9 |
| Village | 21 | 172.8 | 152.1 | 172.1 |
| | | KW X²=0.053, P=0.974 | KW X²=3.663, P=0.336 | KW X²=2.184, P=0.336 |
| Monthly income level | | | | |
| Below 2500 ₺ | 47 | 171.5 | 156.3 | 172.9 |
| 2500–5000 ₺ | 113 | 174.2 | 172.7 | 194.2 |
| 5000–10,000 ₺ | 153 | 174.8 | 186.6 | 156.5 |
| Over 10,000 ₺ | 40 | 199.8 | 176.8 | 211.4 |
| | | KW X²=2.389, P=0.496 | KW X²=3.781, P=0.286 | KW X²=14.039, P=0.003 |
| Having a nurse family member | | | | |
| Yes | 55 | 193.9 | 174.6 | 196.9 |
| No | 291 | 171.3 | 175.3 | 172.9 |

*(Contd...)*

**Table 2:** *(Continued)*

| Independent variables | *n* | The attitudes toward nurses' attentiveness in their profession | The attitudes toward nurses' sensitivity in their profession | The empathy scale |
|---|---|---|---|---|
| | | Mean rank | Mean rank | Mean rank |
| S/he is a nurse | 7 | 282.6 | 265.8 | 192.6 |
| | | KW X$^2$=10.426, *P*=0.005 | KW X$^2$=5.872, *P*=0.053 | KW X$^2$=2.740, *P*=0.254 |
| Attitudes toward nurses during the pandemic | | | | |
| A positive change | 213 | 189.6 | 184.9 | 175.3 |
| No change | 132 | 155.8 | 161.9 | 175.2 |
| A negative change | 4 | 32.3 | 78.0 | 149.8 |
| | | KW X$^2$=18.064, *P*<0.001 | KW X$^2$=8.650, *P*=0.013 | KW X$^2$=0.254, *P*=0.881 |
| Utilization of health-care services | | | | |
| Being admitted to a hospital/hospitalized due to COVID-19 symptoms | 46 | 165.2 | 147.4 | 163.6 |
| Being admitted to a hospital/hospitalized for a reason except for COVID-19 or not utilizing any health-care services | 307 | 178.8 | 181.4 | 179.0 |
| | | U=6519.50, Z=−0.859, *P*=0.390 | U=5698.50, Z=−2.200, *P*=0.028 | U=6445.50, Z=−0.956, *P*=0.339 |

As for the empathy scale, a statistically significant difference was determined in those who were primary-high school graduates, who were smokers, who had chronic diseases, and whose monthly income was 2500–5000 ₺ (*P* = 0.045, *P* = 0.023, *P* = 0.025, and *P* = 0.003).

The comparison of the protective measures taken by the participants with the attitude scale toward nurses and the empathy scale scores is shown in Table 3.

While there was no significant relationship between the measures taken by the participants and the participant attitude scores toward the attentiveness of nurses in their profession, a significant difference was seen in the attitude scores of the participants toward the sensitivity of nurses in their profession. Participants causing this difference were those who wore masks regardless of the symptoms, and who changed clothes after coming back from outside (*P* = 0.008, *P* = 0.006). The empathy level of the participants was found to be significantly higher in those who cover their mouth when they cough or sneeze, those who wear masks regardless of the presence of symptoms, those who wash the outside clothes immediately after they come home, who do not order delivery food/eat, and who isolate themselves for 14 days after traveling (*P* = 0.012, *P* = 0.005, *P* = 0.020, *P* = 0.022, and *P* = 0.010).

The correlation between the participants' age and the attitude scale toward nurses and empathy scale scores is shown in Table 4. A weak positive correlation was found between age and participant's attitude scores concerning the nurses' sensitivity in their profession (Rs. = 0.396, *P* < 0.01).

Regarding the attitudes toward the attentiveness of nurses in their profession, a positive weak relationship was observed according to the empathy levels (Rs. = 0.396, Rs. = 0.148).

**Discussion and Conclusion**

Nurses playing an active role in the pandemic are affected by the attitude of the society. Literature reports that the attitude toward nurses affects their quality of care.[12,13] The social structure of society,[24] perception of gender,[29,30] and challenging working conditions[31-33] contributes to the positive/negative perception of the nursing profession in society. The participants' attitudes toward the attentiveness of nurses in their profession were above the moderate level in the study and the attitudes toward the sensitivity of nurses in their profession were at a high level. Similar studies in the literature reveal a positive attitude toward the nursing profession in nursing students,[19-22] nurses,[9,17,18,29,34,35] non-nursing health-care professionals,[23,24] patients,[13] and the society.[25] In the present study, the positive attitudes of the participants toward the attentiveness of nurses in their profession were significantly higher in those who had nurse family members than those who did not; however, being a nurse did not make a difference. Similarly, in a relevant study, having a nurse relative did not make a significant difference in attitudes toward the nursing profession,[19] while another study found a significant difference in those who had a nurse family member or relative.[9] The reason for this significant difference can be explained by the awareness

**Table 3:** The comparison of the protective measures taken by the participants with the attitude scale toward nurses and the empathy scale scores

| Protective measures | The attitudes toward nurses' attentiveness in their profession | The attitudes toward nurses' sensitivity in their profession | The empathy scale |
|---|---|---|---|
| Covering mouth when you cough or sneeze | 177.09<br>U: 6856.5, Z: 0.289<br>P: 0.773 | 178.68<br>U: 6371.0, Z: 1.080<br>P: 0.280 | 181.77<br>U: 5425.5, Z: 2.509<br>P: 0.012 |
| Wash your hands regularly | 175.88<br>U: 2958.0, Z: 0.859<br>P: 0.390 | 179.32<br>U: 2556.0, Z: 1.819<br>P: 0.069 | 178.83<br>U: 2720.5, Z: 1.377<br>P: 0.169 |
| Avoid close contact with someone who is sick | 176.45<br>U: 7534.0, Z: 0.254<br>P: 0.800 | 180.14<br>U: 6752.0, Z: 1.467<br>P: 0.142 | U: 180.82, Z: 1.714<br>P: 0.086 |
| Wear a mask regardless of the symptoms | 177.32<br>U: 5734.5, Z: 0.179<br>P: 0.858 | 181.74<br>U: 4347.0, Z: 2.660<br>P: 0.008 | 182.26<br>U: 4183.5, Z: 2.834<br>P: 0.005 |
| Wearing gloves when you go out | 172.19<br>U: 6458.0, Z: 0.338<br>P: 0.735 | 164.37<br>U: 6122.0, Z: 0.902<br>P: 0.367 | 171.53<br>U: 6430.0, Z: 0.375<br>P: 0.707 |
| Not going out unless it is for bare necessities | 182.06<br>U: 1010.0, Z: 1.680<br>P: 0.0930 | 181.49<br>U: 10283.5, Z: 1.516<br>P: 0.130 | 179.93<br>U: 10699.0, Z: 0.951<br>P: 0.341 |
| Changing your clothes after coming from outside | 182.39<br>U: 9448.0, Z: 1.877<br>P: 0.061 | 184.73<br>U: 8809.0, Z: 2.740<br>P: 0.006 | 177.67<br>U: 10736, Z: 0.229<br>P: 0.819 |
| Washing outside clothes immediately after you come home | 179.92<br>U: 15064.0, Z: 0.546<br>P: 0.585 | 175.97<br>U: 15395.0, Z: 0.196<br>P: 0.845 | 189.75<br>U: 13343.5, Z: 02.331<br>P: 0.020 |
| Not ordering delivery food/eating out | 177.12<br>U: 15232.0, Z: 0.021<br>P: 0.984 | 177.14<br>U: 152300, Z: 0.023<br>P: 0.982 | 191.39<br>U: 13078.0, Z: 2.294<br>P: 0.022 |
| Isolating for 14 days after traveling | 182.17<br>U: 11744.0, Z: 0.655<br>P: 0.513 | 179.06<br>U: 12042.5, Z: 0.301<br>P: 0.764 | 199.36<br>U: 10093.5, Z: 2.584<br>P: 0.010 |

**Table 4:** The correlation between the participants' age and the attitude scale toward nurses and empathy scale scores

| | Age | The attitudes toward nurses' attentiveness in their profession | The attitudes toward nurses' sensitivity in their profession | The Empathy Scale |
|---|---|---|---|---|
| Age | 1 | 0.019 | 0.152** | −0.070 |
| The attitudes toward nurses' attentiveness in their profession | | 1 | 0.396** | 0.148** |
| The attitudes toward the sensitivity nurses show in their profession | | | 1 | −0.042 |

**P<0.01

of the professional roles and functions of their profession. Studies have shown that nurses consider their responsibilities as a national role during the COVID-19 pandemic and are satisfied to fulfill these roles[36] with more than half of the nurses having a high positive attitude toward the care of COVID-19 patients.[37] However, a study contradicts this positive attitude of nurses in their profession and emphasizes that nurses working in oncology units generally have negative attitudes toward their profession,[12] which may have arisen from the high probability of death of oncology patients and the despair of nurses caused by the arduous treatment process.

The literature demonstrates that until the COVID-19 pandemic, the majority of the population had little knowledge of the actual roles of nurses[14,34,38] and they were not aware that nursing is a science and theory-based independent profession.[39] In this study, 61% of the participants had a positive change in their attitudes toward nurses during the pandemic. The attitudes of the participants toward the attentiveness and sensitivity of nurses in their profession were found to be significantly higher in the participants whose attitudes toward nurses changed positively during the pandemic. The reason for this may be the increasing number

of patients due to the pandemic affecting the whole world, the importance of nurses' role in patient care and recovery, and the fact that nurses are needed more. The media have made the multiple roles and functions nurses have during the COVID-19 pandemic visible.

Bagnasco *et al*. (2020) investigated the media representations of nurses in the pandemic and stated that nurses are often portrayed by the media as heroes struggling with the COVID-19 pandemic, and the public was amazed by the roles played by nurses and appreciated them.[40] In the present study, those who were admitted/hospitalized for a reason except for COVID-19 or did not use health services received a significantly higher score in the sensitivity dimension of the attitude scale toward nurses. Although this group did not receive COVID-19-based nursing services during the pandemic, they think that nurses are sensitive in their profession, supporting the influence of the media on the shaping of the public attitudes toward the nursing. The attitudes toward sensitivity and empathy levels of nurses in their profession were found to be significantly higher in those with chronic diseases in this study, which is consistent with the literature reporting that individuals who are hospitalized and receiving nursing care have positive attitudes toward nurses.[13] Besides, a significant positive weak relationship was found between age and participants' attitude toward nurses sensitivity. The reason why people with chronic diseases and aging have a positive effect on attitudes toward nurses may be because they are in positive communication with nurses more frequently and that they experience nurses' knowledge, skills, and positive attitudes toward patients more. Consistent with the study conducted by Iatrou *et al*. (2017), the empathy level of smokers was found to be high in this study, which may be because they have more health problems, and they need to communicate with health-care staff more.[41]

Gender, marital status, and educational status did not make a difference in the attitudes toward nurses in the current study. In the literature, female nurses, and patients,[13,17] university graduates[13] and married nurses[17] have generally more positive attitudes toward nursing. However, a study argues that marital status and educational status do not make a difference in attitudes toward nurses.[18] The reason for this difference may be the high number of married and university graduate participants in this study.

No studies in the literature, to the best of our knowledge, have shown the relationship between the empathy level of society and attitudes toward nurses. In this context, the study results are believed to make a contribution to the literature. In this study, a significant positive weak relationship was found between the scores of empathy level and the attitudes toward attentiveness of nurses in their profession, but no significant relationship was found in the attitudes toward their sensitivity. The lack of a relationship despite the high two-score level suggests that there are other factors affecting people's attitudes more than empathy.

The relationship between the measures taken and attitude and empathy showed that the attitude score related to sensitivity and empathy level is high in those who wear masks regardless of the presence of symptoms. Those who change their clothes when they come home had higher sensitivity scores, while those who cover their mouth while coughing, wash outside clothes immediately after they come home, who do not order delivery food/eat out, and who isolate themselves for 14 days after travelling have high empathy scores. There was no difference in the measures taken in terms of attitude toward attentiveness. In parallel with this study, Pfattheicher *et al*. (2020) suggested a positive relationship between empathy and physical distance; and the maintenance of physical distance and wearing masks as preventive measures increases as the level of empathy increases.[42] In general speaking, it can be said that those with a high level of empathy follow the protective measures more. This may be because these people are more affected by this situation because they witness the health problems experienced by sick individuals.

Empathy, the ability to recognize the emotions of others, is effective to communicate well,[43] but also requires effort.[44] In our study, the empathy level scores of the participants were found to be close to high levels, and a statistically significant difference was found between the empathy levels depending on the education level, smoking status, chronic illness, and monthly income levels. The difference arises from the participants who are primary-high school graduates, smokers, those with chronic diseases, and those with a monthly income of 2500–5000₺. Likewise, the empathy level was reported to be significantly higher in individuals with middle-level income.[45] and those in the lower social classes made more correct inferences about the feelings of the people around them.[46] On the other hand, a relevant study found no significant relationship between income level and empathy level,[47] and it was emphasized that it was difficult to clearly determine the relationship between income level and empathic level.[48] Similarly, in this current study, the empathy level was found to be significantly higher in those with a monthly income of 2500–5000₺ than those with a monthly income of 5000–10,000₺, and the empathy level was found to be higher in those with a low education level. It is thought that kinship relations and social support in this group are mostly higher, and the empathic approach increased as the need for support during the COVID-19 pandemic increased. The comparison of empathy level and gender in our study revealed no statistically significant difference; however, literature cites that the empathy level is higher in women.[49-52] The fact that the nursing profession is predominantly female may be the reason why women in society have higher empathy toward nurses during the pandemic.

**Conclusion**

In the study, the attitudes, and the empathy levels of the people regarding the attentiveness and sensitivity of nurses

in their profession were found to be at a high level. A positive correlation was found between age and the attitude scale toward nurses. The fact that the participants find the nurses attentive means that they also find them sensitive, which increases their empathy level.

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