

## EXPERIENCES OF NURSES DURING THE CORONAVIRUS PANDEMIC AND EFFECT OF NEURO-LINGUISTIC PROGRAMMING ON NURSES' GREATEST FEARS: A QUALITATIVE STUDY

**Dr. Öğr. Üye. Aysel DOĞAN**

Toros University, Faculty of Health Sciences, Nursing Department, aysel.dogan@toros.edu.tr, Mersin/ Turkey, ORCID ID: 0000-0002-4721-0975

**Dr. Öğr. Üye. Fatma KARASU**

Kilis 7 Aralık University, Yusuf gerefoglu Faculty of Health Sciences, Department of Nursing, fatmakarasu@kilis.edu.tr, Kilis/Turkey, 0000-0002-7347-0981

**Dr. Öğr. Üye. Canan BİRİMOĞLU OKUYAN**

Sakarya University of Applied Sciences, Faculty of Health Sciences, Nursing Department, e-mail: cananbirimoglu@gmail.com Sakarya, Turkey, ORCID ID: 0000-0002-7339-6072

### Abstract

This study was performed to investigate nurses' experiences during the coronavirus pandemic and the effect of neuro-linguistic programming on nurses' greatest fears. The phenomenological research design was used to guide data collection and analysis. Ethical procedures were taken into account, and 11 nurses who provided one-on-one care and treatment to COVID-19 patients through semi-structured interviews were included in the study. Most of the nurses stated that their fears and worries are mostly due to the fear of infecting their families and death. In this process, the greatest fear experienced by nurses was reduced with NLP. Results of this study show that NLP techniques are effective in handling a threat that nurses face for the first time. Since this study is qualitative research, the consequences may only be generalized to only this group. Experimental studies investigating the effect of NLP techniques on nurses' greatest fears are needed.

**Keywords:** COVID-19 pandemic, fear, nurse, neuro-linguistic programming, Turkey.

## KORONAVİRÜS PANDEMİSİ SIRASINDA HEMŞİRELERİN DENEYİMLERİ VE NÖRO-LİNGÜİSTİK PROGRAMLAMANIN HEMŞİRELERİN EN BÜYÜK KORKULARINA ETKİSİ: KALİTATİF BİR ÇALIŞMA

### Öz

Bu çalışma, hemşirelerin korona virüs pandemisi sırasındaki deneyimlerini ve nöro-linguistik programlamanın hemşirelerin en büyük korkuları üzerindeki etkisini araştırmak amacıyla yapılmıştır. Veri toplama ve analizine rehberlik etmek için fenomenolojik araştırma tasarımı kullanıldı. Etik prosedürler dikkate alınarak, yarı yapılandırılmış görüşmelerle COVID-19 hastalarına bire bir bakım ve tedavi sağlayan 11 hemşire çalışmaya dahil edildi. Hemşirelerin çoğu korku ve endişelerinin daha çok ailelerine bulaşma ve ölüm korkusundan kaynaklandığını belirtmişlerdir. Bu süreçte hemşirelerin yaşadığı en büyük korku NLP ile azaltılmıştır. Hemşirelerde endişe ve kaygı gibi olumsuz etkilerin azaltılması ve mesleki yaşam kalitesinin artırılması için NLP uygulama programları önerilmektedir. Ayrıca hemşirelerin iş doyumunu artırabilir.

**Anahtar Kelimeler:** COVID-19 Pandemisi, Hemşire, Korku, Nöro-Linguistik Programlama, Türkiye.

## 1. INTRODUCTION

Currently, the global problem of coronavirus disease (COVID-19) is an infectious disease rapidly spreading around the world (1,2). The virus occurs with varying severity from spontaneously improving mild symptoms to severe pneumonia, acute respiratory distress syndrome, septic shock, and even systemic multiple organ failure. As of 11.06.2020, globally, there were 7.255.960 cases, including 412.583 deaths, while Turkey recorded a total of 173.036 cases with 4.746 deaths (3,4).

After the first virus case was identified in Turkey, the virus began to spread rapidly. It is possible for a virus rapidly spreading through the population to affect medical staff the most. The infection risk for medical staff increased when the virus first emerged due to insufficient knowledge about personal protection, problems with protective equipment and close contact, and long exposure durations to many infected patients. Additionally, work intensity and insufficient rest further increased the probability of infection for medical staff (5,6).

Though there are no clear figures about the transmission of the virus among medical staff in the world and Turkey, we believe that the number of nurses is highest among medical staff in one-to-one contact with COVID-19 cases. Nurses, working to reduce or prevent the spread of disease at the front lines, attempt to deal with stress experienced due to the pandemic and adjust to new working conditions; however, they are stated to encounter new difficulties during this adjustment process (7-9) found in their study that Turkish nurses had high levels of anxiety and death anxiety. In another study, it was stated that the negative emotional states and emotional exhaustion of the nurses during the epidemic were at a substantial level. As a result, neuro-linguistic programming (NLP) is thought to be key in rapid adaptation to these processes and especially in preventing psychological problems. NLP is an approach involving human behavior, cognitive processes and structures, linguistic models, and the human spirit. An individual's thoughts affect their activities, breathing, mood, and actions (10,11).

Similarly, body movements affect the form of thoughts. When an individual learns to change one, the other also changes (12). A meta-analysis by Zaharia, et al. (2015) used NLP in randomized controlled studies and found it was effective for snake phobia, claustrophobia, social phobias, posttraumatic stress disorder, psychotherapy, anxiety, depression, insomnia, and pollen allergy. A study by Sahebalzamani (2014) about the effect of NLP training on nursing and midwifery students' mental health showed that the NLP techniques positively affected developing mental health (13,14).

It is thought that many studies conducted during the Covid-19 process will contribute to the literature since they are qualitative studies. Therefore, the findings of this study are expected to produce new themes related to nurses working in the Covid-19 process. To the best of our knowledge, there is no qualitative research revealing the experiences of nurses during the COVID-19 pandemic in Turkey, and this study represents the first about this topic. Simultaneously, the NLP administration to reduce the negative effects of nurses' fears on nursing care quality will ease nurses' adjustment to the pandemic. From this aspect, this study investigates the experiences of nurses during the coronavirus pandemic and the effect of neuro-linguistic programming on nurses' greatest fears. Additionally, one of the strong and unique aspects of this study is the attempt to lessen nurses' greatest fears.

## 2. METHODS

### 2.1. Participants

The study was completed with a total of 11 nurses in three different cities with dense COVID-19 cases in May 2020; the ages of nurses ranged from 23 to 45 years with COVID-19 work experience

of 13 to 54 days. Two nurses rejected participation in the research. Eleven nurses had provided care and treatment for COVID-19 patients in their hospital of employment, while for some, this process continued. Three nurses worked in other wards/clinics in the same hospital and transferred towards/clinics with COVID-19 patients for support. The duration of interviews with nurses included in the study lasted from 25-60 minutes (mean 37.1).

Our descriptive qualitative study included 11 nurses involved in one-to-one care and treatment of COVID-19 patients from 20-26 May 2020 in order to reveal the experiences of nurses during the COVID-19 pandemic in detail.

Inclusion criteria for the study; volunteering to participate in the study, full-time employee as nursing, having a bachelor's or higher degree in nursing, nurses providing nursing care to confirmed COVID-19 patients in negative-pressure wards, not having any mentally diagnosed illness and not having received psychotropic medication.

## 2.2. Study Design

Our study used an empirical phenomenological approach to obtain detailed descriptions of nurses' experiences and feelings, providing one-to-one patient care during COVID-19. Such an approach offers detailed descriptions of a phenomenon about which little is known (15).

A qualitative study was completed involving video interviews with 11 nurses in the digital environment (sound and video recordings were taken of the video interviews). Participants were determined with targeted snowball sampling. The interviewers knew two nurses, and the remaining nurses were determined with the snowball method. Attention was paid to confidentiality with codes used instead of the nurses' names. Sound and visual recordings were made on a computer, codes were created and personal information was removed. In our research pattern, with no rule about sample size and sample size decided in line with the research question and targets (16), the sample size was expanded until data saturation was reached. The maximum diversity sampling method was used to choose the sample (17). This study abided by the Standards for Reporting Qualitative Research.

During NLP implementation, the individual's history was taken, feelings about events related to the perceived problem, and the individual's experience was analyzed. Humans behave according to their view of the world; in other words, according to their thoughts. This behavior brings them to be positive or negative results. Instead of behavior that does not provide results, NLP techniques use new behavior forms to achieve the target. NLP ensures the desired results are achieved quickly (11,18)). In order to obtain rapid responses from NLP, attempts were made to minimize the nurses' greatest fears during the pandemic.

Neuro-Linguistic Programming Implementation: After a semi-structured interview form was used to record the participants' feelings during the COVID-19 pandemic, nurses were questioned about their greatest fears. The fears of nurses were defined. They were asked to give points for these fears according to a visual analog scale. The points given by nurses were noted. The naming of these fears was ensured in representation systems according to the 'reframing technique' developed by Bandler and Grinder (2014a). With this aim, they were asked to imagine fear as an object. Questions like 'if your fear was a shape what would it resemble?' 'how big would this shape be?' 'how heavy would this shape be?' 'what is the temperature of this shape?' 'how does this shape move?' and 'what color is the shape?' were asked. After learning about the nurses' greatest fears, they were requested to change them with the reframing technique with the dimension of change left to the nurses. They were asked to give points to their fear again at the point they felt most comfortable. Points were recorded.

## 2.3. Data Gathering Process

In-depth interviews with the semi-structured question form were held with participants at suitable times from 20-26 May 2020. The 'question-centered interview' was chosen as a data-

gathering technique. Within the scope of literature screening in the study (19). A semi-structured interview form was created by researchers in accordance with the topic of the research. With the semi-structured interview form, attempts were made to learn the participants' experiences by asking about "what did you feel during the COVID-19 pandemic", "anxiety about yourself or your family," "staying somewhere else to protect family members," "positive COVID-19 test for you, colleagues or family members", "experiencing fear of death," "sufficiency of precautions taken," "situation affecting you most due to the pandemic," "meeting needs like rest and eating during working hours," "feeling inadequate to treat all patients," "how you felt outside of working hours or what you did" and "what is your greatest fear at present." To increase the depth of the data obtained, requests like "please give me more information about this" were made.

Interviews ensured sampling of nurses with different features from each other such as age, gender, educational level, years of employment, marital status, having children, and number of days working in the COVID-19 ward. During the data gathering process, video interviews, observations, and notes were taken during these observations were used. The interview duration was calculated to have a mean duration of 37.1 minutes.

## 2.4. Analysis of Data

Records and interview notes obtained from interviews with 11 nurses were decoded. Data collection co-occurred with data analysis. Sound recordings were transcribed within 24 hours of interviews and investigated by participants for accuracy. The notes taken were read repeatedly and attempts were made to comprehend statements in an integrated way.

Qualitative data analysis aims to reveal information after the investigated social reality (19). Codes were created and themes were determined with the MAXqda qualitative data analysis program. Additionally, to strengthen the accuracy of themes and content in the study and make it valid in unbiased observation of the case, they were read to two participants. The descriptive analysis method and inferential statistics (Wilcoxon test) were used to reveal the organized and interpreted findings in the research. With this aim, data were described systematically and openly, and these descriptions were explained and interpreted. Cause-outcome relations were assessed (Bandler & Grinder, 2016) and subthemes were obtained within this framework. Direct quotations were used where necessary in the results section.

**Table 1. Data analysis phase**

1. Introduction of data	Data were collected and copied by the researchers. The obtained data was read and deciphered.
2. Generating startup codes	Data were coded through the MAXqda qualitative data analysis program and data related to each code were collected.
3. Theme search	Each resulting code was sorted by potential theme.
4. Reviewing themes	The resulting codes have been reduced and new connections between the codes have been created.
5. Naming the themes	Re-read for codes and related texts to reduce the chance of errors.
6. Writing down the findings	After naming the themes, the findings were written.

## 2.5. Ethical Aspects

Ethics committee permission was granted for the study (2020/11). The study was completed in accordance with the principles of the Helsinki Declaration. Before beginning interviews, participants were given information about rights about the research topic, that information obtained

in the research would be kept confidential, that voice and video recording would be made and that participation in the research was based on volunteering. Topics like the research's aim and content were recalled before every interview and verbal consent was obtained from participants. Interviews with two participants who did not give sound and video recording were recorded in the researchers' written notes. Names of participants were coded as N1, N2, N3,...N11.

### 3. RESULTS

**Table 2: Basic features of nurses (n=11)**

	Age (years)	Gender	Duration working in profession (years)	Marital Status	Children	Unit of employment	Duration working in COVID-19 ward/clinic (days, before interview)
N1	35	Female	13	Married	2 children	Surgical clinics	44
N2	36	Female	11	Married	1 child	Internal Medicine clinics	39
N3	34	Male	10	Married	1 child	Internal Medicine clinics	40
N4	40	Female	22	Married		Intensive care	36
N5	23	Female	1	Single		Intensive care	13
N6	29	Female	12	Single		Surgical clinics	54
N7	45	Female	21	Married	1 child	Surgical clinics	38
N8	43	Female	20	Married	2 children	Surgical clinics	42
N9	31	Male	8	Married	2 children	Surgical clinics	48
N10	42	Female	18	Married	2 children	Internal Medicine clinics	35
N11	37	Male	12	Married	2 children	Internal Medicine clinics	29

Four main themes were revealed in our study: “effect of COVID-19 on nurses”, “the situation of nurses experiencing anxiety or fear of death due to covid-19, both for themselves and their families”, the situation of nurses staying somewhere other than home and finding sufficient measures to protect their families” and “minimizing nurses’ current greatest fears with NLP.”

#### 1st THEME: Effect of COVID-19 on nurses

There was worldwide fear in the face of the COVID-19 pandemic. However, the pandemic process was more difficult and stressful for healthcare professionals. They stated that the nurses participating in the research felt helpless and afraid in the face of the pandemic. For example, nurses stated the following;

*I felt hopeless against this virus spreading through my beloved country (N1).*

*I was very scared when the first case was identified, I can say it was the most difficult day of my professional life (N2, N4, N5).*

*I was scared and terrified, when the first case came to my hospital, I felt my stress levels increase. Then I asked myself, what am I still doing here. My answer to the question was very simple, just my duty. Humanity needed us (N3).*

*Medical staff are in the front line among virus transmission risk groups, and we nurses are in first place among medical staff. From this aspect I was frightened, I was very worried for both myself and my family (N6).*

They have faced a lot of negative situations during the COVID-19 pandemic process. For example, nurses stated the following:

*The thought of losing one of my family and loved ones affects me a lot (N1, N2, N11).*

*You work with body and soul in a hospital, shielding your patients with your body and people insensitively do not abide by the rules (N3).*

*Working in a very stressful work environment and the uncertainty about not being able to see the light at the end of the tunnel (N4).*

*People are dying, no one can say goodbye to the people they lose, they can't go to funerals (N5).*

*We were at war, but we didn't know who we were fighting against (N8).*

With the increase in the number of patients in hospitals during the COVID-19 pandemic process, nurses have had problems in meeting their needs, such as not being able to eat or rest due to busy working hours. For example, nurses stated the following;

*Unfortunately, no. I can't sit comfortably due to fear of catching the virus, even if I pay attention to clean-contaminated areas, I feel all places are infected as there are those who don't pay attention to this (N6, N11).*

*We panicked a lot as it was a situation we experienced for the first time, patients just kept coming and coming (N7).*

*My working hours didn't increase, but I had long and tiring shifts. They told us to rest, but we never had time. As patients had respiratory distress they needed frequent care, we couldn't rest (N8).*

*I didn't have enough time. They recommended we rest in order; however, we couldn't rest comfortably when our colleagues were working so intensely. I felt the need to help them (N9).*

During the COVID-19 pandemic, we have faced serious problems such as the increase in hospitalizations in hospitals, the fact that the patient beds are full, and the inability to find beds to hospitalize the patients. In this process, the feeling of not being enough for the patients developed in the working nurses. For example, nurses stated the following;

*It was painful but I felt a sense of inadequacy (N1, N2, N3, N5, N9).*

*We watched the virus spread around the world like watching a film and I am sad to say that I felt a sense of inadequacy in my heart (N4).*

*I learned that some countries just left the elderly and patients with poor status due to insufficient respiratory devices. I tried to understand what my nursing colleagues working in those countries felt as the case numbers began to increase in my country. I am sure one of the strongest feelings was inadequacy and that's what I feel now (N10).*



During the COVID-19 pandemic, it has been a matter of curiosity what nurses do outside of working hours due to intense work, being under intense stress, and being at high risk due to the transmission of the virus. For example, nurses stated the following;

*I felt restless and bad. I look after the children and try to distract myself by doing daily housework (N1, N2, N3, N10).*

*I don't feel comfortable, there are always thoughts in my head like when will it finish, will case and deaths increase, will my family or I get sick. I do sport at home in order not to think about these things (N4).*

*I go between going to work and not going to work and every morning I say - I should go to work, patients need me. At home, I have family members who are over 65 years and have a chronic disease. I am in a state of continuous worry (N7).*

*I feel tense and restless. I can't stay away from my family as I have two small children. I do daily housework; I rest and take care to do exercise and eat healthily to keep my immune system strong (N11).*

## **2nd THEME: The situation of nurses experiencing anxiety or fear of death due to COVID-19, both for themselves and their families**

Since the nurses participating in the study are at high risk during the pandemic process, it is predicted that they, their colleagues, or one of their family members will test positive for COVID-19, so the nurses were asked how they felt about this issue. During the study, one of the nurse's colleagues tested positive for COVID-19, while another had a COVID-19 test and is waiting for the result. These two nurses stated the following;

*I was very sad for my colleague with a positive COVID-19 test result. I think it was an unavoidable end, no matter how much protective equipment we wear or how much attention we pay to personal hygiene, we work in close contact with patients, sooner or later I think my other friends or I will catch the virus (N3).*

*I am waiting for my test result at the moment. I cannot express how worried I am and I don't know what to think; I have such complicated feelings (N8).*

Due to the COVID-19 pandemic, healthcare workers were more concerned for their families than for themselves. For example, nurses stated the following;

*We are more worried for our families (N1-N10).*

It was questioned whether the nurses participating in the study had fear of death, thinking that they might experience fear of death due to being at high risk during the pandemic process. Seven nurses stated that they had "fear of death" and one nurse stated that they did not "fear of death (N3)". The statements of other nurses are;

*I experienced the fear of death not for myself but for my family (N1).*

*I experienced fear of being separated from my child (N2)" and "I live with the fear of death or my mother (N5).*

## **3rd THEME: The situation of nurses staying somewhere other than home and finding sufficient measures to protect their families**

Due to the COVID-19 epidemic, nurses have started to stay outside the home in order not to risk their spouses, children, and loved ones. Although this was difficult, they stated that they did this to protect their families and loved ones in terms of health. For example, nurses stated the following;

*I stayed in hotels/dormitories allocated for medical staff by municipalities/governorships (N5, N7, N8).*

*I left my child with my mother but 13 days later my child couldn't cope so I brought them home again; however, I worry about virus transmission and continually think about it (N2).*

*My partner and I separated rooms, I eat meals separately, I stay only in my room, I try to keep social distance within the house, in fact, I try to protect my partner (N4).*

It is necessary to take measures to protect from the COVID-19 epidemic and to deliver the necessary protective equipment to health workers and its continuity. However, it was stated by the nurses included in the study that these measures and the necessary protective equipment were not delivered or supplied to the health workers. For example, nurses stated the following;

*I believe it is necessary to take more strict precautions in the country in general. At the moment, sufficient precautions are taken for medical staff; however, there was a lack of protective equipment at the start of the pandemic. Though the higher authorities in the state said there was no problem with the material, we were given limited numbers of masks, gloves, and overalls. We were asked to use this protective equipment repeatedly. When the virus infected medical staff and deaths occurred, sufficient amounts of protective material began to be given and this was a very sad situation (N7).*

*I definitely don't find them sufficient. I work in one of the hospitals and cities where the pandemic is most intense. I got protective equipment on my own at the start of the pandemic (N8).*

#### **4nd THEME: Minimizing nurses' current greatest fear with NLP**

In NLP sessions, nurses' current greatest fears were changed with the "submodality technique" developed by R. Bandler and J. Grinder (2014a).

The greatest fear of the nurses included in the study was questioned and NLP was applied for this fear. After the NLP session;

*"(N1) I fear losing my close family."* NLP session: They gave five points out of 10 to this fear. The feeling of fear was stated to be like a sharp, heavy, large, hard, moving black knife in the upper section of the chest. After the session, they gave this fear "one" point.

*"(N2) fear of death so I can't even say it and leaving my children without a mother as a result".* NLP session: gave "seven" out of 10 points for this fear and stated it felt hard like a stone, a large, immobile, black-colored feeling in the chest. The nurse (N2) felt chest pain and palpitations making it difficult to breath. On the day of the session, nasal swabs had been taken for COVID-19 and the result was negative; general examination and blood test results found no symptom of the physiological disease. After the session, this fear was given "four" points.

*"(N3) Fear of transmitting the virus".* NLP session: fear was given "nine" points out of 10 and was stated to be a feeling in the whole body but mostly in the throat preventing breathing, a funnel-like hard, heavy, large, immobile red-colored feeling. After the session, this fear was given "two" points.

*"(N4) fear of death".* NLP session: the nurse had difficulty breathing and felt palpitations. They gave this fear "eight" out of 10 points. They stated it felt like it had moderate hardness like a cloud, a light, large, mobile, grey-white-colored feeling in their head and heart. At the end of the session, they gave "four" points for this fear.

*"(N5) fear of losing my mother".* NLP session: they gave "seven" points out of 10 and stated it felt hard like a small, square, heavy, immobile, red-colored feeling at their lower back. At the end of the session, they gave "four" points to this worry. *"(N6) death".* NLP session: they felt palpitations during the session and gave the fear "eight" out of 10 points. They stated it felt hard like a stone, a



heavy, large, immobile, black-colored feeling in their chest. At the end of the session, they gave “five” points to this fear.

“(N7) catching the virus myself”. NLP session: they gave the worry “four” points out of 10. However, they stated that they might give it 10 points if they caught the virus. They stated that they did not feel the need to perform NLP at that time.

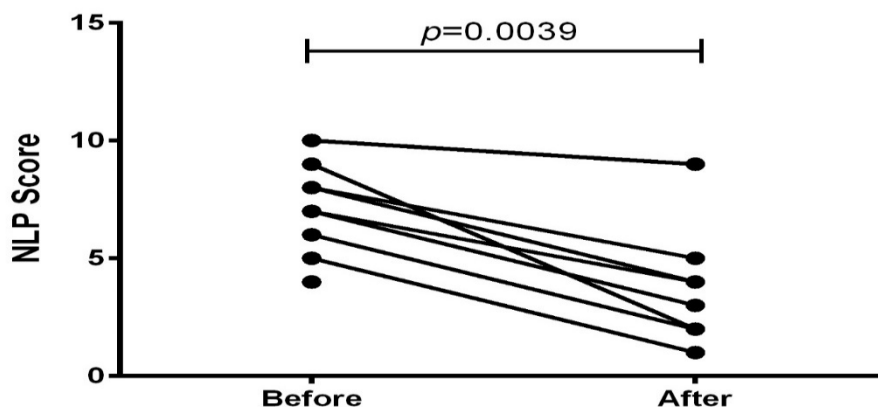
“(N8) fear of learning COVID-19 test results”. NLP session: stated they felt palpitations and wheezy chest, occasionally checked themselves to see if they were breathing. They gave this worry 10 out of 10 points. They stated it was hard like a volcanic mountain, heavy, large, mobile, and a blood-red feeling in their chest. After the session, they gave the worry “nine” points. They were very resistant to mood change. They were encouraged to seek psychological support. They stated they would do NLP again if desired.

“(N9) death”. NLP session: they felt chest palpitations and gave the worry “six” points out of 10. They stated it felt like a light, hard, small, mobile and red-colored feeling in the chest, thorny like a virus in their stomach. They gave “two” points to the fear after NLP sessions.

“(N10) infecting family with the virus”. NLP session: they gave this worry “four” points out of 10. They did not want to participate in the NLP session.

“(N11) transmitting the virus”. NLP session: they felt palpitations and gave the worry “seven” out of 10. They felt it as a massive, immense, immobile, blue-colored feeling that was hard like flat glass in their heart. After the session, they gave the worry “three” points.

**Figure 1. Comparison of between before and after of NLP training on Nurses**



**Wilcoxon test, NLP: Neuro-linguistic program**

A significant relationship was found between the fear levels of nurses before and after NLP (Figure 1).

#### 4. DISCUSSION

The nursing profession is accepted as on the front line among occupational groups, preventing disease and easing pain during or after treatment of any disease including COVID-19 without any differentiation worldwide (1). In this study, phenomenological methods were used to investigate nurses' experiences during the coronavirus pandemic and the effect of NLP on nurses' greatest fears was assessed. Our findings can be summarized in four themes of how nurses were affected by COVID-19, anxiety, and fear of death for themselves and their families, staying elsewhere outside the home and finding adequate measures, and minimizing their greatest fears at this time with NLP. Additionally, this study reveals the experiences, worries, and feelings of nurses during COVID-19, how living activities were affected, fears experienced during the process, and NLP's effect on these fears.

Most participants in our study felt fear and worry during the COVID-19 process; however, they stated that they felt humanity needed them and saw this as their professional responsibility. Additionally, while one nurse participant was not afraid usually, they stated they experienced fear of transmitting the virus to their family from the time they entered the ward where COVID-19 patients were located. Fear is an unavoidable result of a deadly virus pandemic (20). In the primary role of providing care, nurses experience worry and fear due to being in close contact with many coughing patients or generally having poor tableau during the pandemic. Witnessing colleagues being infected with the virus causes nurses to experience more fear and stress during this process. Studies have shown that health care personnel are faced with many occupational risks like stress, fear of catching and transmitting the virus during the pandemic, and the findings of our research support these results (21-23).

According to the literature, in spite of fears of being infected among medical staff during the pandemic, they continued to work due to professional and ethical responsibilities (24). In our study, one participant used a statement like "...humanity needs us (N3)" showing similar results to these studies. This statement may be interpreted as an indicator that our nurses have inherent professional responsibility and awareness. However, though this appears to be professional responsibility, naturally in situations where possible, nurses are considered to choose a virus-free environment for work. According to another study during the MERS epidemic, emergency service nurses experienced great worry due to fear of being infected and they stated they would have chosen not to care for MERS patients if another option was given (25). Based on this result, the necessity for nurses and hospital managers to prepare a plan about how nurses will cope with fear and worry comes to the agenda in order to prevent a reduction in effective and efficient quality care during an infection epidemic. Additionally, it is considered that this fear among nurses may be reduced by wearing quality and correct protective equipment (23) to prevent and protect against the transmission of the virus. However, one of our participants stated that no matter how much protective equipment was worn or attention paid to personal hygiene, in the situation of working in close contact with patients they stated: "it's an unavoidable end and sooner or later my other friends or I will catch the virus (N3)".

As a result, NLP is thought to be key to ensuring rapid adjustment and to reducing fears and worries during this process. It was emphasized that NLP is an effective method to resolve fears (14). According to reports of research by Bandler and Grinder NLP has positive effects on an individual's perception and thoughts, and these people were determined to display positive attitudes when faced with problems (26). In our research, attempts were made to reduce the fears experienced by nurses with the implementation of a single session of NLP during the pandemic. According to our findings, the greatest fears experienced by nurses during the pandemic were generally about death or transmission of the virus to themselves or their families. Before the NLP implementation, different fears and worries were given points of seven and above according to the visual analog scale, while points of four and six were observed after the single session of NLP. One of the nurses stated they "had a COVID-19 test and were afraid to learn the result (N8)", while another stated they experienced "fear of death." Though N8 was resistant to mood change, though only slightly their fear had reduced after the NLP session, while N9 stated the fear which was six before NLP had fallen to 2 after the session.

According to the results of a literature review about the effect of NLP on phobias by Karunaratne (2010), NLP was stated to be a successful treatment choice providing positive responses in a short period for phobias. Additionally, it was reported that an individual's thoughts in NLP sessions affect physiological processes (11,26). Fears appear to weaken resistance to mental health problems (27). It is considered necessary to spread positive energy to hospital workers in order to cope with negative feelings like excessive fear and worry during the pandemic process (6). Excessive fear may lower worker efficiency and care quality and also cause malpractice and this is an important mental health problem that should not be ignored. In this study, NLP was observed to reduce nurses'

fears by a large amount. This situation shows that implementation of NLP teaching strategies may provide rapid adaptation during critical processes, especially like the current COVID-19 pandemic, due to their positive effect.

### Limitations of the Research

Phenomenology research ensures a better understanding of a case; however, results should not be generalized and are not definite. The greatest limitation of this research is that our findings are limited to the nurses who were interviewed. Additionally, face-to-face interviews could not be performed with participants to prevent the spread of the disease, and interviews were performed in the digital environment. However, it is thought that our study will be a reference for qualitative research to be performed in the future.

## 5. CONCLUSION

Nurses participating in the study encountered an unknown situation they had not encountered previously and managed it. Nurses experienced intense levels of negativity and fear while making great sacrifices to prevent and control the pandemic during days when the COVID-19 pandemic was experienced most intensely. NLP was expected to reduce nurses' greatest fears and positive results were obtained after one NLP session.

Implementation of NLP was shown to be effective, especially during the pandemic process.

Our findings are limited to the nurses' experiences we interviewed and there is no motivation toward generalization. There is a need for more qualitative research to determine the effects of COVID-19 by including other medical staff and nursing managers. Additionally, adaptable interventions should be encouraged to support health workers during and after the pandemic process.

### Conflict of Interest

The authors state that there is no conflict of interest.

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